VOGEL®
GERMANY

Measuring Solutions

EDITION 75

VERSION 2

vogel-germany.de

Overview

Length Measurement 

Calipers 

Micrometers 

Dial Indicators and Stands 

Marking, Scribing Devices, Protractors 

Squares 

Test Equipment 

Digital Measuring Instruments 

Miscellaneous 

- Rules with etched graduations • Rules with laser-engraved graduations
- Circumference Measuring Tapes • Assembly Rules and Straight Edges
- Electr. Digital Scales • Measuring Tapes
- Electr. Digital Measuring Wheels and Laser Distance Meter

- Digital Calipers • Analog Calipers
- Groove and Brake Disc Calipers • Depth Calipers
- Height Calipers • Special Calipers and Sets

- Digital Micrometers • Analog Micrometers
- Accessories for Micrometers • Depth Gauge Micrometers • Internal Micrometers
- Bore Gauges • Thickness Gauges and Quick Test Gauges

- Dial Indicators • Machinery Setting Devices
- Measuring Stands and Accessories

- Ink Markers and Scribers • Dividers and Compasses • Marking Gauges
- Protractors and Spirit Levels • Blocks, Prisms and Parallel Sets

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- 90° Squares • Precision Squares • Workshop Squares • Bevel Edge Squares
- Squares with Scaling • Angle Squares • Special Squares • Center Squares

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- Feeler Gauges • Plug Gauges and Ring Gauges
- Precision Pins and Gauge Blocks • Control Plates

- Hardness Tester • Thickness Gauges • Vibration Meters
- Hand Tachometers and Stroboscopes • Thermometers
- Surface Roughness Measuring Devices • Photo/Video Endoscopes
- Voltage Tester • Multimeters • Scales • Dinamometers

- Magnifiers, Lamps and Inspection Tools • Liquid Measuring
- Stopwatches • Stroke Counters • Handpiece Counter and Length Counter
- Data Processing and Batteries • Digital Equipment

FERVI GROUP

Machinery and Tools for MRO

LOOKING AHEAD IS IN THE DNA OF THE INNOVATOR

The path embarked upon, and one that management is strongly committed to, is the growth of technical expertise and the digital transformation of services in order to offer its customers cutting-edge support that will back them up in their day-to-day business.

All this has been made possible by firmly uniting the professionalism and skills of all the companies that today make up the **FERVI GROUP**.

A synergy of key players in the MRO sector, ready to expand further, which today lays the foundations for a future that will be increasingly attuned to market developments and the protection of resources and people.

FERVI	RIFLEX	VOGEL GERMANY	SITGES	Rivit
Founded in 1978, its range includes machine tools, hand tools and abrasives. More than 8,600 products are available for maintenance and repair professionals in the industrial, craft, automotive and advanced DIY sectors.	Since 1982, an Italian producer of high quality abrasive flap discs using automatic machines designed and manufactured in-house. The automatic systems for the production of flap discs are sold worldwide.	Founded in 1949, it manufactures and sells high-end measuring instruments, marketed through local agents and a worldwide network of distributors.	It was in 1952 that Fervi's historic Spanish distributorship, based in Barcelona, was founded. Distribution is direct and via its own sales network.	Since 1973, Rivit has been the perfect partner for the production and distribution of fastening systems, bolting tools and machines for sheet metal working and assembly.
fervi.com	**riflex.com**	**vogel-germany.de**	**sitgesmaq.es**	**rivit.it**

A range that is becoming more and more complete and reliable.

The development strategy adopted by the company has thus made it possible to achieve a connotation such as to be able to boast the title of the first Italian group in the MRO sector, allowing it to be alongside customers in every situation.

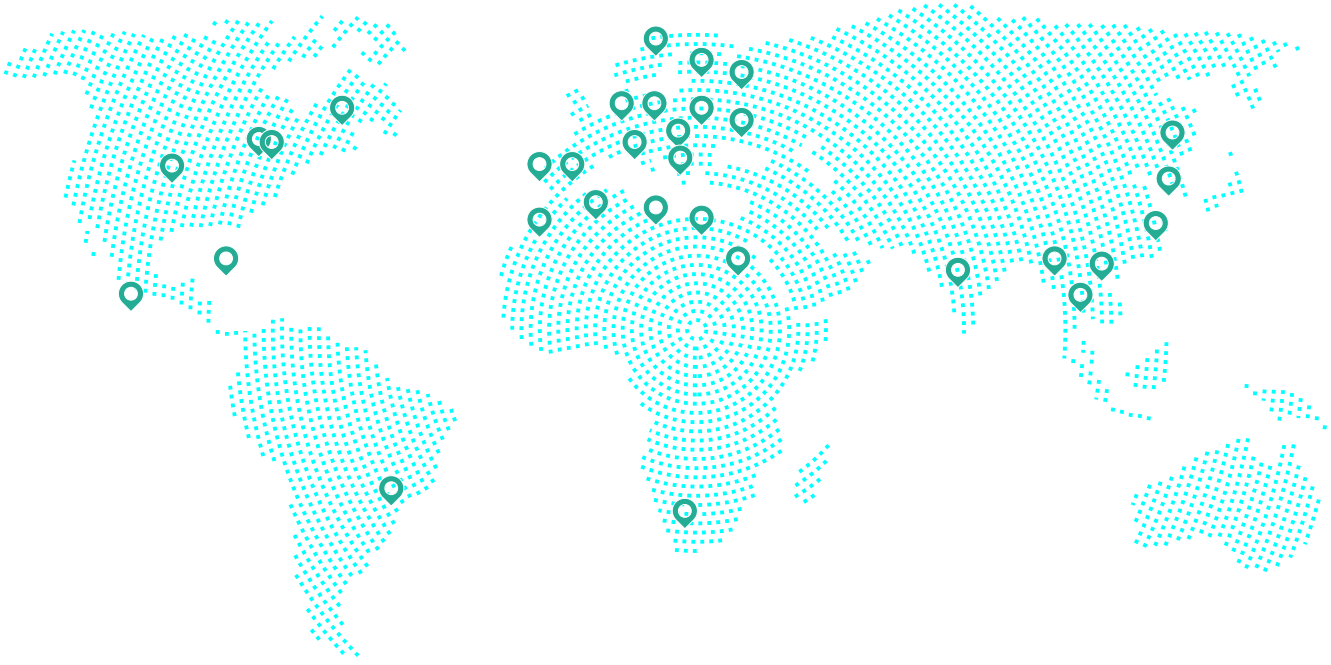
EXTENSIVE COVERAGE. INTERNATIONAL CONFIDENCE.

Our distribution and customer support.

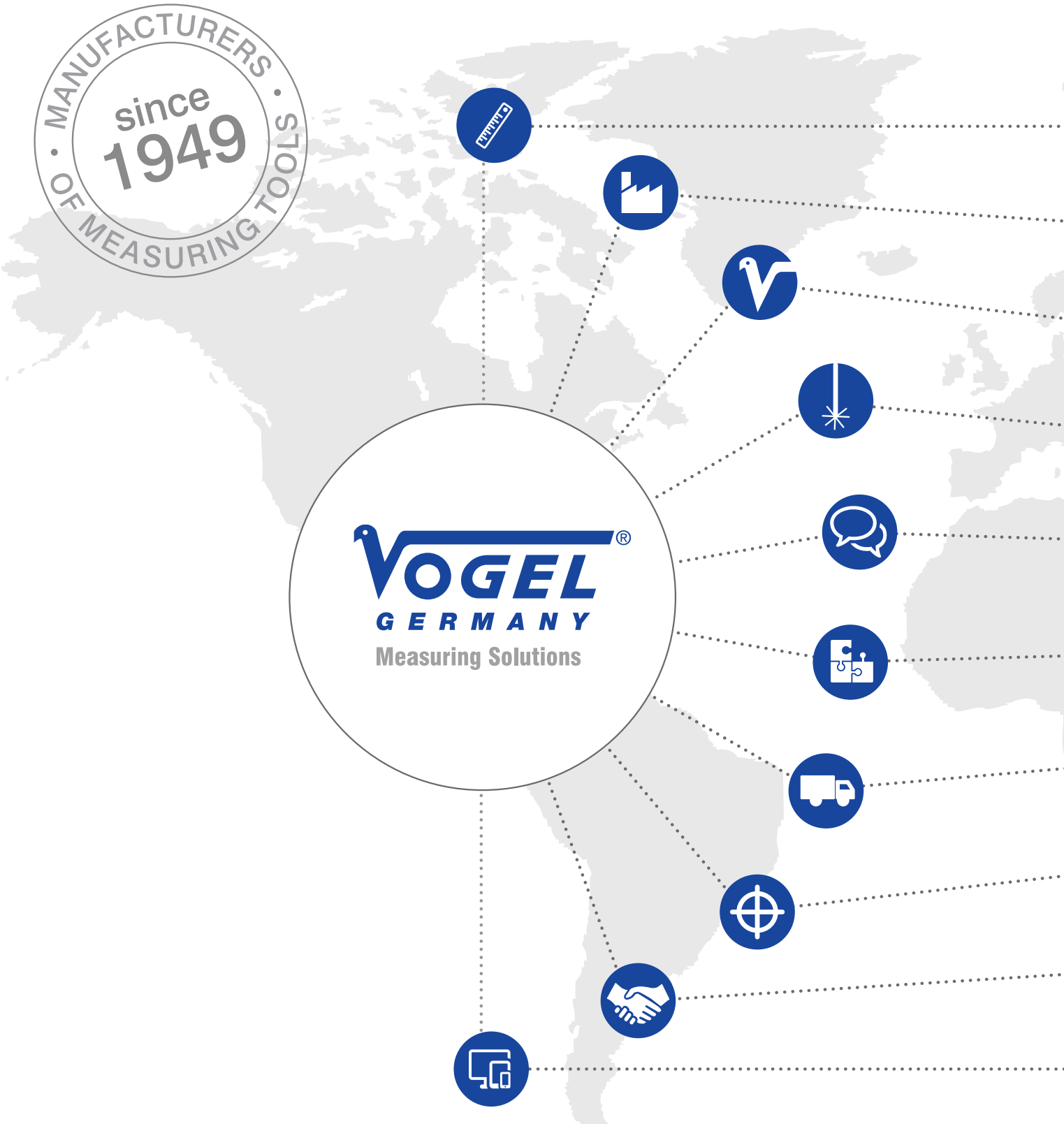
With over **4,500 points of sale in Italy, a presence in more than 50 countries around the world and more than 8,000 customers**, the Fervi Group has today assumed a clearly defined position: that of being ever closer to its customers, to guarantee them daily support for business development.

The Group is geared towards constant commercial expansion, always supported by excellent technical back-up to ensure that the complete range of products and services is available throughout the world.

Our highly skilled technicians offer support and an efficient in-house repair service as well as advice on equipment installation and maintenance.



A single address, personalized solutions.


MANUFACTURERS OF MEASURING TOOLS
since 1949
VOGEL®
GERMANY
Measuring Solutions

Product Range
You will find more than 4500 precision measuring tools e.g. for purposes of length measuring technology and material testing in our catalogue and online shop.

Production
In our own production we manufacture steel rules, thickness gauge foils, bevel squares, mitre squares and squares - 100% Made in Germany.

Measuring Solutions
We constantly try to offer you the right solution. Custom-made products are welcome and our daily business.

Laser Engravings
We engrave special scales, trademarks, logos etc. according to your specifications on our measuring tools.

Support
Our technically experienced sales team is characterized by speed and flexibility.
We are happy to visit you and demonstrate our services and measuring tools on site.

Suppliers
Thanks to long-term partnerships with our reliable suppliers, we can guarantee you the highest quality and availability of our products.

Shipping Service
Our articles are available from our warehouse in Kevelaer (Germany) and can be sent worldwide, whether to Europe, Asia, Africa, Australia or North and South America.

Calibration
You need a factory calibration or DAkkS calibration? We offer an uncomplicated calibration service for almost the entire product range. When ordering, please indicate which calibration you require.

Stability
Thanks to the backing of our strong parent company Fervi, we can be there for you and support you even in difficult times. Trust is a principle of our business.

Digital Media
Current information on new products, trade fairs and offers can be found on our website and on Facebook.
A current digital version of the catalogue is available as well.

Timeline

1949
Foundation Gebr. Vogel
Manufacturer of Measuring Tools
by B. Vogel Senior and Karl Vogel



1958
Catalogue Gebr. Vogel
Manufacturer of Measuring Tools



1970
Part of the production facility



1980
Relocation to the commercial area
(Ossenpass 4)



1989
The company name
is changed to
Vogel Germany Messwerkzeugfabrik

1997
KeSS Innovation Award from RWE



75th Anniversary

VOGEL GERMANY

2024

2019

The company was handed over to FERVI S.p.A. Italia.
The name of Vogel Germany and the headquarters in Kevelaer remain unchanged.



2012

Extension of the administrative and training center



2009

Marketing Award of the city Kevelaer



VOGEL® GERMANY Measuring Solutions + Saliger-Gruppe GmbH

Strong Partnership

Vogel Germany and the Saliger-Gruppe have agreed on a far-reaching cooperation in the procurement and calibration of measuring equipment. With this cooperation, Vogel Germany is strengthening its offer of having measuring equipment tested in an independent calibration laboratory.
The Saliger-Gruppe offers a cross-industry and manufacturer-independent DAkkS-accredited calibration service. In addition to factory calibrations, DAkkS calibrations can be offered for the almost complete range of Vogel Germany.

In order to be able to offer its customers an accelerated and simplified process flow, Vogel Germany has chosen this further route of combining calibration service with the procurement of new measuring equipment. In cooperation with the Saliger-Gruppe, the procurement of measuring equipment for the customers of the Saliger-Gruppe is taken over by Vogel Germany.

Riccardo Pellegrini, Managing Director of Vogel Germany: “We are pleased to have this strong partnership with the Saliger-Gruppe. The focus of the cooperation is an improved service for all aspects of measuring equipment. This will be reflected above all by a strong simplification in the complex procurement of measuring equipment and its calibration for the customer, as this service is available from a single source. The Saliger-Gruppe offers a variety of calibration options that gives our customers real added value.“

Ulrich Saliger, Managing Director of the Saliger-Gruppe: “Looking for a way to redesign our Saliger measuring equipment sales department, we are happy to have entered into close cooperation with Vogel Germany. In times of increased demands on the calibration business, our main concern is to be able to continue to offer our customers a comprehensive range of services. The cooperation with Vogel Germany enables us to concentrate on our core competencies and at the same time to expand the product portfolio for our customers.“

Inquiries can now be submitted to your usual contact person
or by email to info@vogel-germany.de or by telephone on +49 2832 9239-0.

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 instrumen/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.

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.

Norms, Accuracy Classes, Regulations

I	Article fulfils the standard of the tolerance class I
II	Article fulfils the standard of the tolerance class II
III	Article fulfils the standard of the tolerance class III
E1	Article fulfils the respective verification standard
CC	Workshop calibration certificate, inclusive
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
ANSI	Article fulfils the respective American standard
BS	Article fulfils the respective British standard
JIS K	Article fulfils the respective Japanese standard
DIN	Article fulfills 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

Several Icons

ART NO	Article-Number
	Reading / Resolution
	Cross section of the article
max.	Max. total accuracy(±)
	Repeatability (±)
	Individual measuring range
mm	Article dimension
UNIT	Measuring- and weighing-unit selectable or swichtable
	Optical tolerance signal
	Corresponding battery included
	Corresponding battery included
LR41 1,5V	Corresponding cell battery included
LR44 1,5V	Corresponding cell battery included
CR1632 Lithium 3V	Corresponding lithium battery included
CR2032 Lithium 3V	Corresponding lithium battery included
	Accu
~ 230V	Power supply
	Laser protection class
	Magnet power
	Induction
	Laser wavelength
	Shock proof
	Stand out
mm/inch	Reading in mm and inch
cm/inch	Reading in cm and inch
cm	Reading in cm
mm	Reading in mm
ABS/INC	Article with ABS/INC measuring system
ABSOLUTE	Article with ABSOLUTE measuring function

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

IP 40	Protected against solid particles Ø > 1 mm
IP 44	Splash water resistant
IP 51	Drop water resistant
IP 52	Drop water resistant
IP 53	Dust and spray water resistant
IP 54	Dust and spray water resistant
IP 65	Dust and jet water resistant
IP 67	Water and oil resistant (at times)
	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
	Carbide measuring faces
INOX	Stainless steel

Prices and Delivery

	We charge transport and packing costs
CC	Certificate inclusive (no additional costs)

Product Specifications

	Caliper jaw length
	Measuring internal dimension
	Caliper jaws (cross shape)
	Caliper jaws (knife shape)
	Depth Gauge
	Fine adjustment
	Measuring Bridge
	Thread pitch
	Measuring inside
	Measuring outside
	Pointer rotation
	Setting gauge

Icons for Data Process

RS232 C	RS232 data output by data cable
OPTO RS232 C	Opto RS232 data output
PROXIMITY	Proximity data output, inductive, contactless
	Data output by USB and data cable
Duo-Datenausgang	Data output by USB and Mini USB (compatible with Mitutoyo Digimatic)
	wireless communication (WiFi / WLAN) possible
Bluetooth	wireless communication via Bluetooth® possible
	Software on CD-Rom
ORIGIN	Setting the absolute zero point

Advantages of our Stainless Steel Rules

We use very high quality German steel from steel plants

- steel code 1.4310
- due to the high chromium content has this steel best stainless steel attributes

Our stainless steel rules are permitted in food industry and medical technology

- because we only use high quality steel (1.4310)
- because we have a special process for scaling / marking (etching technology)

Our etching technology does not require aggressive acids and no toxic paints.

Our environmental friendly etching technology is developed in 1993 by our own engineers.
For this reason we do have the permission to supply our stainless steel rules to the food industry and medical technology.
Other steel rule standards are not approved for these field in Europe.

Many manufacturers etch the scales and steel rules with aggressive acid. Afterwards the graduation is colored with toxic paint (mainly in black and red). But the color may be dissolved slowly in liquids.
That means these steel rules are not permitted in the tank construction and boiler industry: not for the drinks-, food industry and not for medical technology at all.

Unique in the world: Lengths from 4 -16 meter in one piece, with high repeatability, acc. to workshop standard

- due to our unique production process we can provide you with extra ordinary lengths, with a high grade of repeatability

Production of special-scales

- we offer interesting special scales for e.g. mechanical engineering, shipbuilding, container, tank- and boiler construction
- scales as desired, e.g. reading from bottom to top or from top to bottom
- scales according to your specifications and drawings

Accuracy of our steel rules and scales

- We manufacture according to tolerance classes I and II (similar to MID 2014/32 / EU), or acc. to workshop grade

Calibration Certificates on request

Any questions?
We are pleased to advise!

Factory standard

total length graduation in ± mm	500	1000	1500	2000	3000	4000
permitted tolerance in ± mm	0.80	0.80	1.20	1.20	2.0	2.0

Tolerances according to accuracy class I

total length graduation in ± mm	500	1000	1500	2000	3000	4000
permitted tolerance in ± mm	0.15	0.20	0.25	0.30	0.40	0.50

Tolerances according to accuracy class II

total length graduation in ± mm	500	1000	1500	2000	3000	4000
permitted tolerance in ± mm	0.40	0.50	0.60	0.70	0.90	1.10
Accuracy class II according to DIN 2014/32 / EU (MID)	0.70	0.70	0.90	0.90	1.10	1.30

Tolerances according to British Standard (BS 4372:1968)

total length graduation in ± mm	150	300	500	1000
permitted tolerance in ± mm	0.10	0.10	0.20	0.25

Flat and assembly rules made of aluminium and steel

Aluminium rulers are particularly light and handy compared to steel rulers. Our aluminium rulers get their particularly high wear resistance and corrosion resistance through the special hard coating.

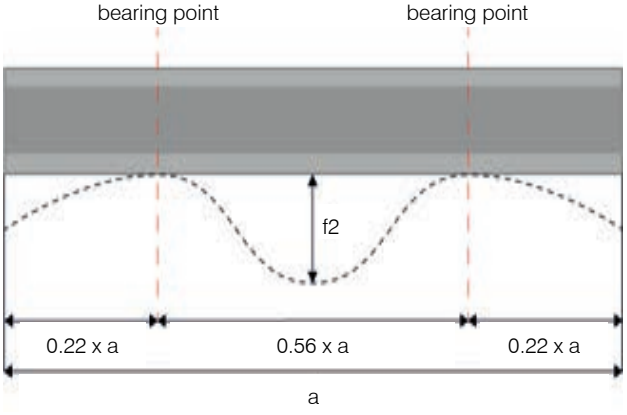
Coat properties

- Coat thickness approx. 50µ
- Hardness 500 – 55HV

Flatness tolerances for straightedges according to DIN 874

The formulars given in the basic form the basis for the calculation of the flatness tolerances. (Rounded tolerances)
The sketch below shows the optimal support points for storage. Please note that the tolerances specified according to DIN are only valid if the support points are met. Double values apply for the parallelism of the measuring surfaces to one another.

a = mm	GG 0 (2+a/100) µ	GG 1 (4+a/60) µ	GG 2 (8+a/40)µ
300	5.0	—	—
500	7.0	12	21
750	9.5	17	27
1000	12.0	21	33
1500	17.0	29	46
2000	22.0	37	58
2500	27.0	46	71
3000	32.0	54	83
4000	42.0	71	108
5000	52.0	87	133
6000	62.0	104	158



Length tolerances

Length tolerances of folding rules, measuring tapes and roller tapes, are as per EC accuracy class.

a = mm	0.5	1	2	3	5	10	15	20	25	30	50
EU I / mm	0.2	0.2	0.3	0.4	0.6	1.1	1.6	2.1	2.6	3.1	5.1
EU II / mm	0.5	0.5	0.7	0.9	1.3	2.3	3.3	4.3	5.3	6.3	10.3
EU III / mm	1.0	1.0	1.4	1.8	2.6	4.6	6.6	8.6	10.6	12.6	20.6



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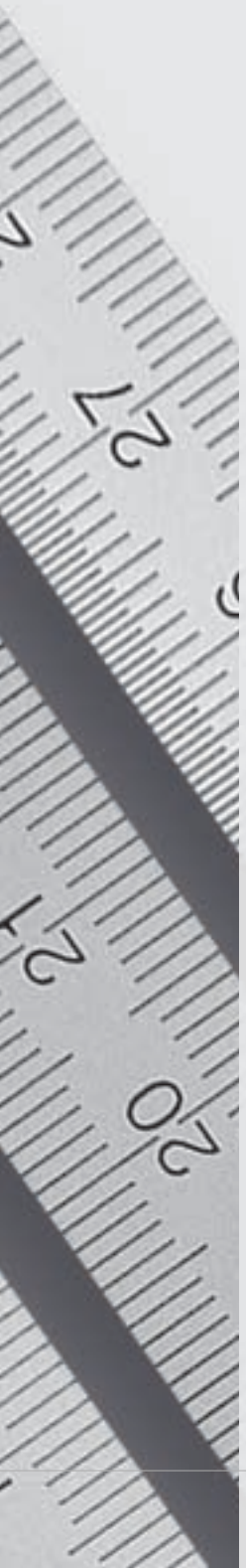

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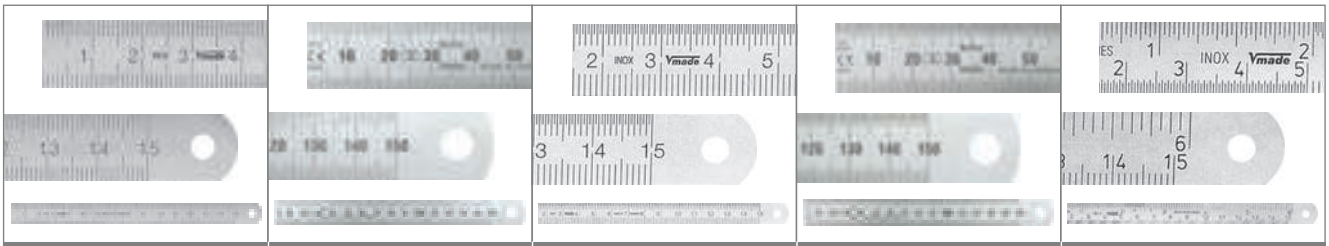
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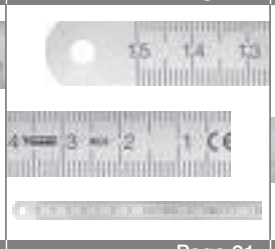
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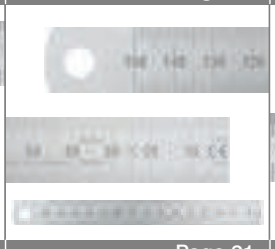
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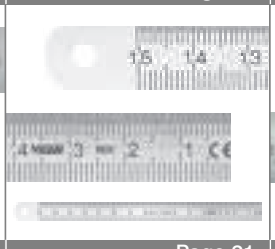
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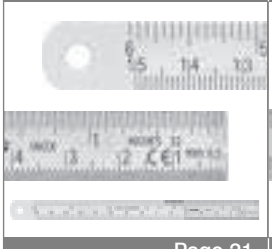
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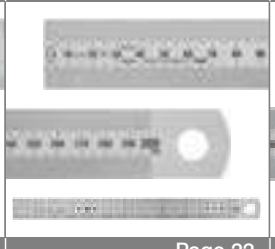
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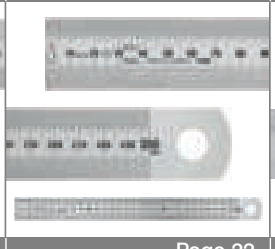
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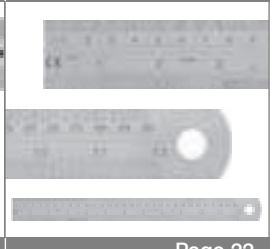
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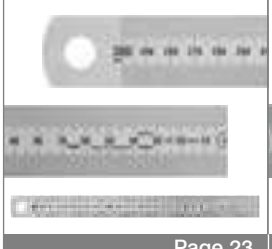
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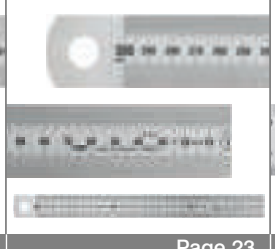
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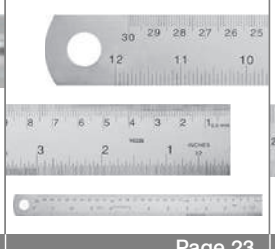
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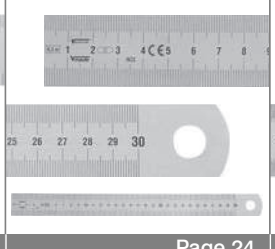
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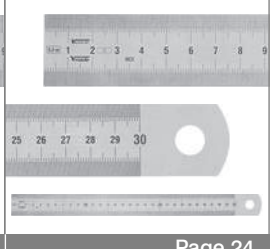
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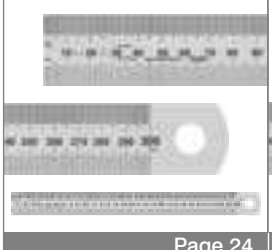
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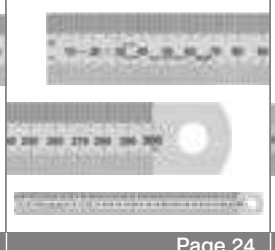
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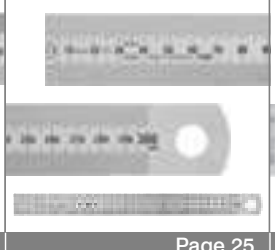
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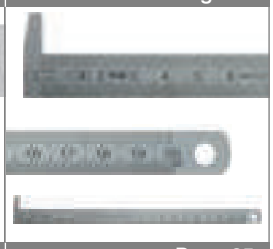
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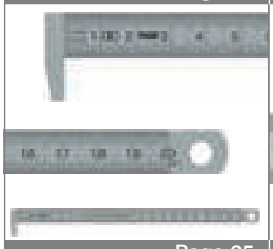
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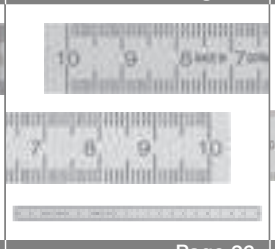
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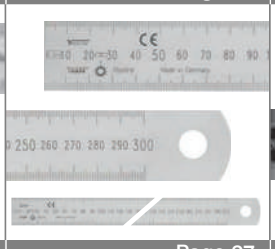
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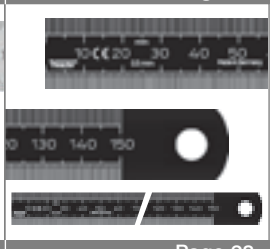
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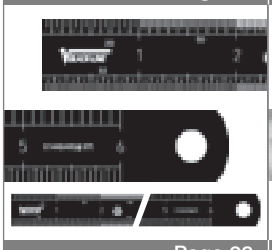
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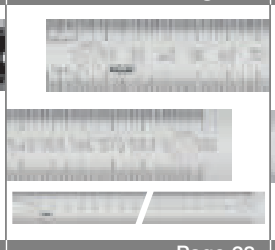
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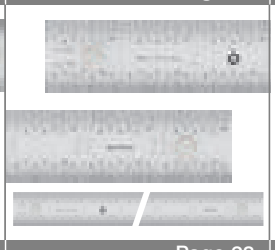
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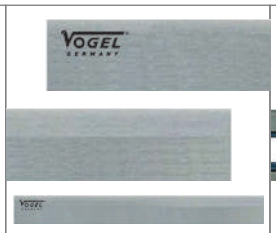
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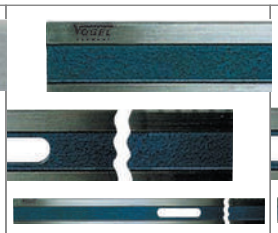
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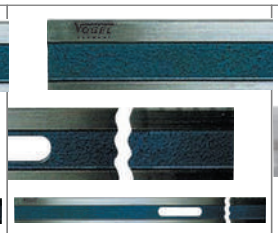
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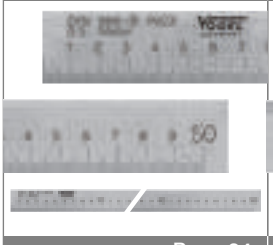
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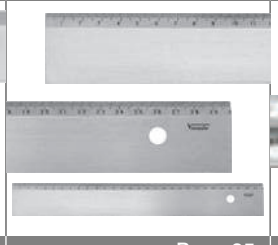
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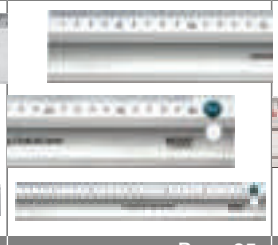
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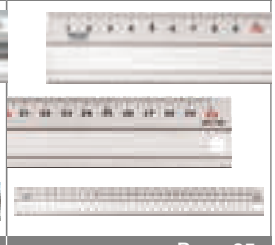
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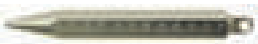
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Flexible Steel Rules, Left to Right

Flexible Steel Rules

- **reading from left to right**

- flexible version, small section
- stainless spring steel
- non glare, matt surface
- etched graduation for a clear reading
- CE classification at type A and type B

type A= mm / mm top and bottom 1/1 mm graduation

type B= ½ mm / mm top ½ mm and bottom 1/1 mm graduation

type C= inch / mm top 1/64 ; 1/32 and 1/16 inch graduation, bottom ½ mm and 1/1 mm,

type A

ART NO 1010010015



ART NO 1012010015



type B

ART NO 1010020015



ART NO 1012020015



type C

ART NO 1010030015



ART NO 1012030015



Numbering up to 500 mm lenght with continuing mm numbering at type A and type B.
With a cross section of 13.0 x 0.5 with cm numbering.
The rules from 1000 mm up to 4000 mm lenght with continuing cm numbering at type A and type B.
The rules up to 4000 mm length according to tolerance class II are qualified as reference pieces.
Therefore please order our calibration certificate together with the rule.
Steel Rules type C and more than 4000 mm lenght are made according to workshop standard.

DIN | CE | INOX

ART NO type A	ART NO type B	ART NO type C	mm		CC
1010010010	**1010020010**	**1010030010**	100	13 x 0.5	on request
1010010015	**1010020015**	**1010030015**	150	13 x 0.5	on request
1010010020	**1010020020**	**1010030020**	200	13 x 0.5	on request
1010010025	**1010020025**	**1010030025**	250	13 x 0.5	on request
1010010030	**1010020030**	**1010030030**	300	13 x 0.5	on request
1010010035	—	—	350	13 x 0.5	on request
1010010040	—	—	400	13 x 0.5	on request
1010010050	—	—	500	13 x 0.5	on request
1012010015	**1012020015**	**1012030015**	150	18 x 0.5	on request
1012010030	**1012020030**	**1012030030**	300	18 x 0.5	on request
1012010040	**1012020040**	**1012030040**	400	18 x 0.5	on request
1012010050	**1012020050**	**1012030050**	500	18 x 0.5	on request
1012010060	—	—	600	18 x 0.5	on request
1012010080	—	—	800	18 x 0.5	on request
1012010100	**1012020100**	**1012030100**	1000	18 x 0.5	on request
1012010150	**1012020150**	**1012030150**	1500	18 x 0.5	on request
1012010200	**1012020200**	**1012030200**	2000	18 x 0.5	on request
1012010250	**1012020250**	**1012030250**	2500	18 x 0.5	on request
1012010300	**1012020300**	**1012030300**	3000	18 x 0.5	on request
1012010350	**1012020350**	**1012030350**	3500	18 x 0.5	on request
1012010400	**1012020400**	**1012030400**	4000	18 x 0.5	on request
1012010500	**1012020500**	—	5000	18 x 0.5	on request
1012010600	**1012020600**	—	6000	18 x 0.5	on request
1016010030	—	—	300	20 x 1	on request
1016010050	**1016020050**	**1016030050**	500	20 x 1	on request
1016010100	**1016020100**	**1016030100**	1000	20 x 1	on request
1016010150	**1016020150**	**1016030150**	1500	20 x 1	on request
1016010200	**1016020200**	**1016030200**	2000	20 x 1	on request
1016010250	**1016020250**	**1016030250**	2500	20 x 1	on request
1016010300	**1016020300**	**1016030300**	3000	20 x 1	on request
1016010350	**1016020350**	**1016030350**	3500	20 x 1	on request
1016010400	**1016020400**	**1016030400**	4000	20 x 1	on request
1016010500	**1016020500**	—	5000	20 x 1	on request
1016010600	**1016020600**	—	6000	20 x 1	on request

Flexible Steel Rules

- **reading from right to left**

- flexible version, cross section
- stainless spring steel
- non glare, matt surface
- etched graduation for a clear reading

type A= mm / mm top and bottom 1/1 mm graduation

type B= ½ mm / mm top ½ mm and bottom 1/1 mm graduation

type C= inch / mm top 1/64 ; 1/32 and 1/16 inch graduation, bottom ½ mm and 1/1 mm,

Numbering up to 500 mm lenght with continuing mm numbering at type A and type B.
With a cross section of 13.0 x 0.5 with cm numbering.
The rules from 1000 mm up to 4000 mm lenght with continuing cm numbering at type A and type B.
The rules up to 4000 mm length according to tolerance class II are qualified as reference pieces.
Therefore please order our calibration certificate together with the rule.
Steel Rules type C and more than 4000 mm lenght are made according to workshop standard.

type A ART Nº 1011010015



ART Nº 1013010015



type B ART Nº 1011020015



ART Nº 1013020030



type C ART Nº 1011030015



ART Nº 1013030015



DIN CE INOX

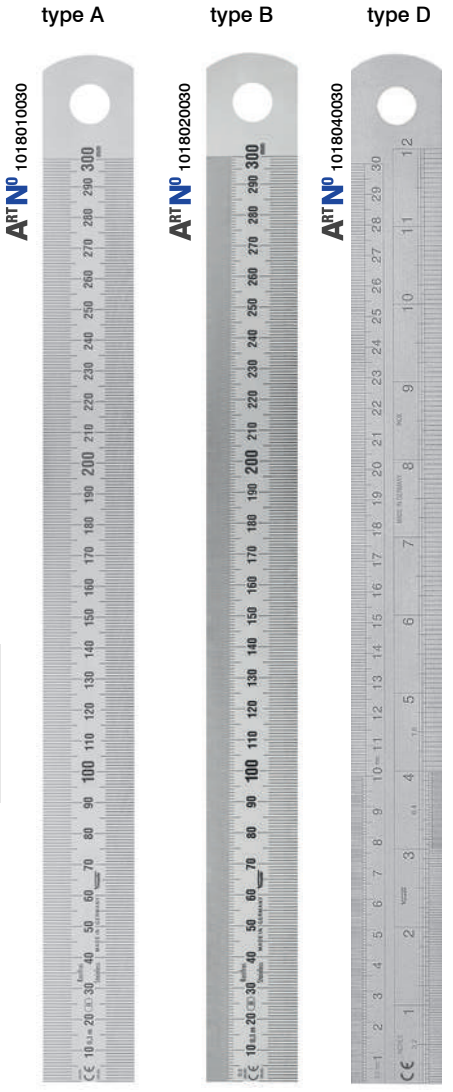
ART Nº type A	ART Nº type B	ART Nº type C	mm		CC
1011010010	**1011020010**	**1011030010**	100	13 x 0.5	on request
1011010015	**1011020015**	**1011030015**	150	13 x 0.5	on request
1011010020	**1011020020**	**1011030020**	200	13 x 0.5	on request
1011010025	**1011020025**	**1011030025**	250	13 x 0.5	on request
1011010030	**1011020030**	**1011030030**	300	13 x 0.5	on request
1011010035	—	—	350	13 x 0.5	on request
1011010040	—	—	400	13 x 0.5	on request
1011010050	—	—	500	13 x 0.5	on request
1013010015	**1013020015**	**1013030015**	150	18 x 0.5	on request
1013010030	**1013020030**	**1013030030**	300	18 x 0.5	on request
1013010040	**1013020040**	**1013030040**	400	18 x 0.5	on request
1013010050	**1013020050**	**1013030050**	500	18 x 0.5	on request
1013010060	—	—	600	18 x 0.5	on request
1013010080	—	—	800	18 x 0.5	on request
1013010100	**1013020100**	**1013030100**	1000	18 x 0.5	on request
1013010150	**1013020150**	**1013030150**	1500	18 x 0.5	on request
1013010200	**1013020200**	**1013030200**	2000	18 x 0.5	on request
1013010250	**1013020250**	**1013030250**	2500	18 x 0.5	on request
1013010300	**1013020300**	**1013030300**	3000	18 x 0.5	on request
1013010350	**1013020350**	**1013030350**	3500	18 x 0.5	on request
1013010400	**1013020400**	**1013030400**	4000	18 x 0.5	on request
1013010500	**1013020500**	—	5000	18 x 0.5	on request
1013010600	**1013020600**	—	6000	18 x 0.5	on request
1017010030	—	—	300	20 x 1	on request
1017010050	**1017020050**	**1017030050**	500	20 x 1	on request
1017010100	**1017020100**	**1017030100**	1000	20 x 1	on request
1017010150	**1017020150**	**1017030150**	1500	20 x 1	on request
1017010200	**1017020200**	**1017030200**	2000	20 x 1	on request
1017010250	**1017020250**	**1017030250**	2500	20 x 1	on request
1017010300	**1017020300**	**1017030300**	3000	20 x 1	on request
1017010350	**1017020350**	**1017030350**	3500	20 x 1	on request
1017010400	**1017020400**	**1017030400**	4000	20 x 1	on request
1017010500	**1017020500**	—	5000	20 x 1	on request
1017010600	**1017020600**	—	6000	20 x 1	on request

Rigid Steel Rules, Left to Right

Stainless Steel Rules

- **reading from left to right**

- semi rigid version, with wide cross section
- stainless spring steel
- non glare, matt surface
- etched graduation for a clear reading



type A= mm / mm top and bottom 1/1 mm graduation

type B= ½ mm / mm top ½ mm and bottom 1/1 mm graduation

type D= inch / mm top ½ mm and 1/1 mm
bottom 1/64 ; 1/32 and 1/16 inch graduation,

Numbering up to 500 mm lenght with continuing mm numbering at type A and type B.
The rules from 1000 mm up to 4000 mm lenght with continuing cm numbering at type A and type B.
The rules up to 4000 mm length according to tolerance class II are qualified as reference pieces.
Therefore please order our calibration certificate together with the rule.
Steel Rules type D more than 4000 mm lenght are made according to workshop standard.

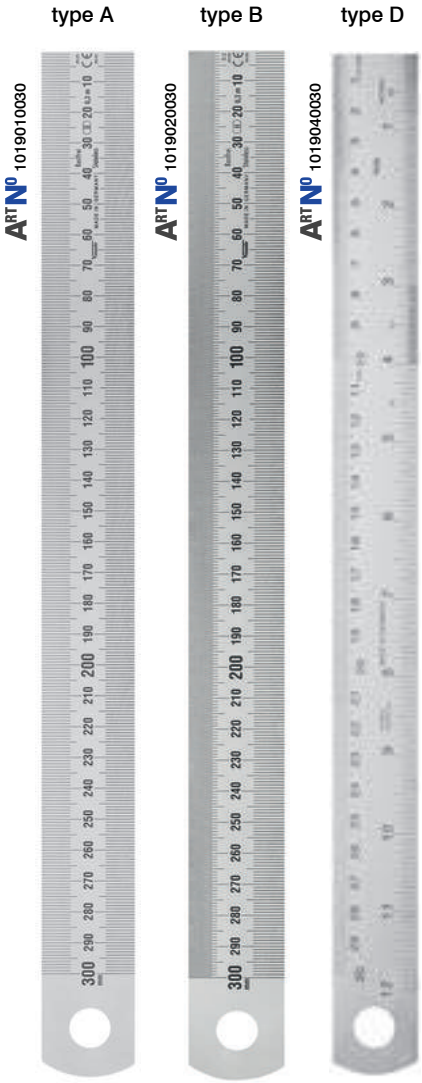
INOX CE

ART N° type A	ART N° type B	ART N° type D	mm		CC
1018010030	1018020030	1018040030	300	30 x 1	on request
1018010050	1018020050	1018040050	500	30 x 1	on request
1018010060	1018020060	1018040060	600	30 x 1	on request
1018010100	1018020100	1018040100	1000	30 x 1	on request
1018010150	1018020150	1018040150	1500	30 x 1	on request
1018010200	1018020200	1018040200	2000	30 x 1	on request
1018010300	1018020300	1018040300	3000	30 x 1	on request
1018010400	1018020400	1018040400	4000	30 x 1	on request
1018010500	1018020500	—	5000	30 x 1	on request
1018010600	1018020600	—	6000	30 x 1	on request
1018010700	1018020700	—	7000	30 x 1	on request
1018010800	1018020800	—	8000	30 x 1	on request
1018010900	1018020900	—	9000	30 x 1	on request
1018011000	1018021000	—	10000	30 x 1	on request
1018011100	1018021100	—	11000	30 x 1	on request
1018011200	1018021200	—	12000	30 x 1	on request
1024010050	1024020050	1024040050	500	40 x 2	on request
1024010100	1024020100	1024040100	1000	40 x 2	on request
1024010150	1024020150	1024040150	1500	40 x 2	on request
1024010200	1024020200	1024040200	2000	40 x 2	on request

Stainless Steel Rules

- **reading from right to left**

- semi rigid version, with wide cross section
- stainless spring steel
- non glare, matt surface
- etched graduation for a clear reading



type A= mm / mm top and bottom 1/1 mm graduation

type B= ½ mm / mm top ½ mm and bottom 1/1 mm graduation

type D= inch / mm top ½ mm and 1/1 mm
bottom 1/64 ; 1/32 and 1/16 inch graduation,

Numbering up to 500 mm lenght with continuing mm numbering at type A and type B.
The rules from 1000 mm up to 4000 mm lenght with continuing cm numbering at type A and type B.
The rules up to 4000 mm length according to tolerance class II are qualified as reference pieces.
Therefore please order our calibration certificate together with the rule.
Steel Rules type D more than 4000 mm lenght are made according to workshop standard.

INOX CE

ART N° type A	ART N° type B	ART N° type D	mm		CC
1019010030	**1019020030**	**1019040030**	300	30 x 1	on request
1019010050	**1019020050**	**1019040050**	500	30 x 1	on request
1019010060	**1019020060**	**1019040060**	600	30 x 1	on request
1019010100	**1019020100**	**1019040100**	1000	30 x 1	on request
1019010150	**1019020150**	**1019040150**	1500	30 x 1	on request
1019010200	**1019020200**	**1019040200**	2000	30 x 1	on request
1019010300	**1019020300**	**1019040300**	3000	30 x 1	on request
1019010400	**1019020400**	**1019040400**	4000	30x 1	on request
1019010500	**1019020500**	—	5000	30x 1	on request
1019010600	**1019020600**	—	6000	30 x 1	on request
1019010700	**1019020700**	—	7000	30 x 1	on request
1019010800	**1019020800**	—	8000	30 x 1	on request
1019010900	**1019020900**	—	9000	30 x 1	on request
1019011000	**1019021000**	—	10000	30 x 1	on request
1019011100	**1019021100**	—	11000	30 x 1	on request
1019011200	**1019021200**	—	12000	30x 1	on request
1025010050	**1025020050**	**1025040050**	500	40 x 2	on request
1025010100	**1025020100**	**1025040100**	1000	40 x 2	on request
1025010150	**1025020150**	**1025040150**	1500	40 x 2	on request
1025010200	**1025020200**	**1025040200**	2000	40 x 2	on request

Steel Rules, matt surface

Stainless Steel Rules, matt chromed

Accuracy class acc. to tolerance class II

- **graduations on front and back**

- graduation deeply etched
- matt chromed, non glare surface
- stainless spring steel
- cm graduation

front top and bottom 1/1 mm graduation

back top ½ mm and bottom ½ mm graduation

INOX | II | CE

ART NO	mm		CC
1001040010	100	13 x 0.5	on request
1001040015	150	13 x 0.5	on request
1001040020	200	13.x 0.5	on request
1001040030	300	13 x 0.5	on request
1001240050	500	18 x 0.5	on request
1001240100	1000	18 x 0.5	on request
1001260030	300	30 x 1	on request
1001260050	500	30x 1	on request
1001260100	1000	30 x 1	on request

ART NO 1001040030

front *back*



Stainless Steel Rules, double-sided

Accuracy class acc. to tolerance class II

- **with identical reading on front- and backside**

- etched graduation
- non glare surface
- stainless spring steel
- cm graduation

top ½ mm graduation

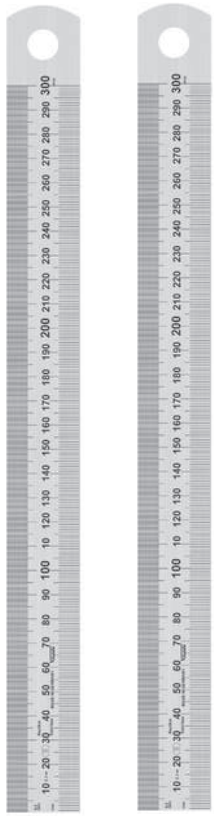
bottom 1/1 mm graduation

INOX | II | CE

ART NO	mm		CC
1010020010D	100	13 x 0.5	on request
1010020015D	150	13 x 0.5	on request
1010020020D	200	13 x 0.5	on request
1010020025D	250	13 x 0.5	on request
1010020030D	300	13 x 0.5	on request
1012020050D	500	18 x 0.5	on request
1012020100D	1000	18 x 0.5	on request
1018020030D	300	30 x 1	on request
1018020050D	500	30 x 1	on request
1018020100D	1000	30 x 1	on request

ART NO 1018020030D

front *back*



Stainless Steel Rules

Accuracy class acc. to tolerance class II

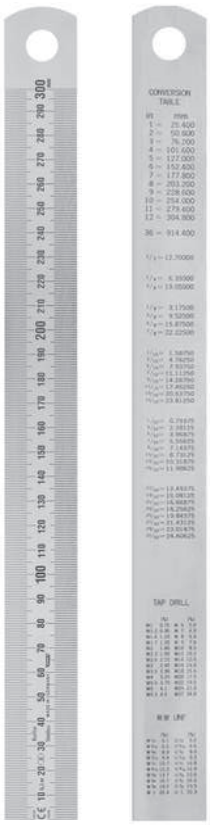
- **reading from left to right**
- **with conversion table on the backside**

- etched graduation for a clear reading
- non glare, matt surface
- stainless spring steel
- top and bottom 1/1 mm graduation

INOX | II | CE

ART NO	mm		CC
1055030030	300	30 x 1	on request
1055030050	500	30 x 1	on request
1055030100	1000	30 x 1	on request
1055030200	2000	30 x 1	on request

ART NO 1055030030



Stainless Steel Rules with Hook 90°

Accuracy class acc. to tolerance class II

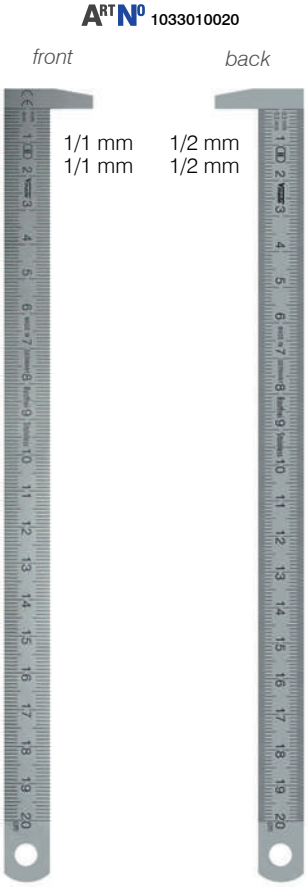
- **with hook 90°**
- **reading from left to right**

- flexible design because of narrow cross section
- stainless spring steel
- non glare, matt surface
- front: top 1/1 mm and bottom 1/1 mm graduation
- back: top 1/2 mm and bottom 1/2 mm graduation
- laser-engraved graduation for a clear reading
- cm graduation

INOX | II | CE

ART NO	mm		CC
1033010020	200	13 x 0.5	on request
1033010030	300	13 x 0.5	on request
1034010050	500	18 x 0.5	on request

ART NO 1033010020



Rules with 0 point in the middle

Stainless Steel Rules with zero-point in the middle

acc. to workshop grade

- **suitable for craftsmen and industry**

- stainless spring steel
- non glare, matt surface
- etched graduation for a clear reading
- graduation reading with zero-point in the middle
- top and bottom 1/1 mm graduation

ART NO 1018010030-0-



ART NO 1010010020-0-



INOX

ART NO	mm		CC
1010010010-0-	50 – 0 – 50	13 x 0.5	on request
1010010015-0-	75 – 0 – 75	13 x 0.5	on request
1010010020-0-	100 – 0 – 100	13 x 0.5	on request
1010010030-0-	150 – 0 – 150	13 x 0.5	on request
1010010040-0-	200 – 0 – 200	13 x 0.5	on request
1010010050-0-	250 – 0 – 250	13 x 0.5	on request
1010010060-0-	300 – 0 – 300	13 x 0.5	on request
1010010080-0-	400 – 0 – 400	13 x 0.5	on request
1010010100-0-	500 – 0 – 500	13 x 0.5	on request
1012010010-0-	50 – 0 – 50	18 x 0.5	on request
1012010015-0-	75 – 0 – 75	18 x 0.5	on request
1012010020-0-	100 – 0 – 100	18 x 0.5	on request
1012010030-0-	150 – 0 – 150	18 x 0.5	on request
1012010040-0-	200 – 0 – 200	18 x 0.5	on request
1012010050-0-	250 – 0 – 250	18 x 0.5	on request
1012010060-0-	300 – 0 – 300	18 x 0.5	on request
1012010080-0-	400 – 0 – 400	18 x 0.5	on request
1012010100-0-	500 – 0 – 500	18 x 0.5	on request
1016010010-0-	50 – 0 – 50	20 x 1	on request
1016010015-0-	75 – 0 – 75	20 x 1	on request
1016010020-0-	100 – 0 – 100	20 x 1	on request
1016010030-0-	150 – 0 – 150	20 x 1	on request
1016010040-0-	200 – 0 – 200	20 x 1	on request
1016010050-0-	250 – 0 – 250	20 x 1	on request
1016010060-0-	300 – 0 – 300	20 x 1	on request
1016010080-0-	400 – 0 – 400	20 x 1	on request
1016010100-0-	500 – 0 – 500	20 x 1	on request
1018010010-0-	50 – 0 – 50	30 x 1	on request
1018010015-0-	75 – 0 – 75	30 x 1	on request
1018010020-0-	100 – 0 – 100	30 x 1	on request
1018010030-0-	150 – 0 – 150	30 x 1	on request
1018010040-0-	200 – 0 – 200	30 x 1	on request
1018010050-0-	250 – 0 – 250	30 x 1	on request
1018010060-0-	300 – 0 – 300	30 x 1	on request
1018010070-0-	350 – 0 – 350	30 x 1	on request
1018010080-0-	400 – 0 – 400	30 x 1	on request
1018010100-0-	500 – 0 – 500	30 x 1	on request
1018010120-0-	600 – 0 – 600	30 x 1	on request
1018010150-0-	750 – 0 – 750	30 x 1	on request
1018010200-0-	1000 – 0 – 1000	30 x 1	on request
1018010250-0-	1250 – 0 – 1250	30 x 1	on request
1018010300-0-	1500 – 0 – 1500	30 x 1	on request
1018010400-0-	2000 – 0 – 2000	30 x 1	on request
1018010500-0-	2500 – 0 – 2500	30 x 1	on request

Stainless Steel Rules, with laser engraving

acc. to tolerance class I

- **reading from left to right or right to left**

- precise, deep laser engraved graduation, continuing numbers
- non glare, matt surface
- stainless spring steel

ART NO 1018060030



Numbering up to 500 mm lenght with continuing mm numbering. The rules from 1000 mm up to 2000 mm lenght with continuing cm numbering. The rules according to tolerance class I and are qualified as reference pieces. Therefore please order our calibration certificate together with the rule.
Because of the deep graduation, due to the laser marking of the numbering, these scales are particularly suitable where high demands are placed on the scale.

INOX

I CE

ART NO	mm		CC
graduation in mm/mm from left to right			
1010060015	150	13 x 0.5	on request
1010060030	300	13 x 0.5	on request
1010060050	500	13 x 0.5	on request
1012060030	300	20 x 0.5	on request
1012060050	500	20 x 0.5	on request
1012060100	1000	20 x 0.5	on request
1018060030	300	30 x 1	on request
1018060050	500	30 x 1	on request
1018060100	1000	30 x 1	on request
1018060150	1500	30 x 1	on request
1018060200	2000	30 x 1	on request
graduation in mm/mm from right to left			
1011060015	150	13 x 0.5	on request
1011060030	300	13 x 0.5	on request
1011060050	500	13 x 0.5	on request
1013060030	300	20 x 0.5	on request
1013060050	500	20 x 0.5	on request
1013060100	1000	20 x 0.5	on request
1019060030	300	30 x 1	on request
1019060050	500	30 x 1	on request
1019060100	1000	30 x 1	on request
1019060150	1500	30 x 1	on request
1019060200	2000	30 x 1	on request

Steel Rules

Steel Rules, black anodizedmetric graduation

ART Nº 1026431015

acc. to tolerance class II or BS

- **graduation on front- and rearside**
- **reading from left to right**

- precise, deep laser engraved scale
- carbon spring steel, with black anodized surface



frontside



backside

frontside 1/1 mm and 1/2 mm

backside 1/10; 1/16; 1/20; 1/32; 1/64; 1/50; 1/100 inch

ART Nº	mm / inch		CC
1026431015	150 / 6	18 x 0.5	on request
1026431030	300 / 12	30 x 1.0	on request
1026431045	450 / 18	30 x 1.0	on request
1026431060	600 / 24	30 x 1.0	on request
1026431100	1000 / 40	30 x 1.0	on request

Stainless Steel Rules, with magnetic inserts

ART Nº 1026433060

metric graduation acc. to tolerance class II or BS

- **graduation on front- and rearside**
- **reading from left to right**

- with two straight ends without whole
- precise, deep laser engraved scale
- non-glare, matt surface, with clear reading
- with detachable magnetic inserts



frontside: 1/2 mm and 1/1 mm



backside: 1/32 and 1/64 inch





with magnetic inserts

ART Nº	mm / inch		CC
1026433015	150 / 6	20 x 1	on request
1026433030	300 / 12	20 x 1	on request
1026433060	600 / 24	20 x 1	on request
1026433090	900 / 36	20 x 1	on request
1026433120	1200 / 48	20 x 1	on request

You would like to have a Rule with Special Scale? You are exactly right with us!

Use this form to send us your request:

1. **download and fill out this form on the following link: www.vogel-germany.de/request-rule-with-special-scale.pdf**
2. **send the form via eMail to info@vogel-germany.de or send by fax to +49 2832 3621**
3. **get our offer**

Any questions? We are pleased to advise!

Inquiry Form • Rule with Special Scale

Your data

Customer Number: If already exist

Company Name:

Contact Person:

Phone:

Mail:

Information on your desired Rule with Special Scale

Quantity:

Standard length in mm: (if applicable, please check)
○ 150 ○ 300 ○ 500 ○ 1000 ○ 1500 ○ 2000 ○ 2500
○ 3000 ○ 3500 ○ 4000 ○ 4500 ○ 5000 ○ 5500 ○ 6000

Special length: Please specify the desired length in mm, we manufacture up to a length of 16,000 mm

Cross section (width): ○ 13 x 0.5 ○ 18 x 0.5 ○ 20 x 1 ○ 30 x 1 ○ 40 x 2

typee of scaling:
○ left – right ○ right – left ○ bottom – top ○ top – bottom
○ double-sided ○ only left ○ only right

if double-sided:	frontside			backside		
	○ mm	○ cm	○ inch	○ mm	○ cm	○ inch

Tolerances: ○ Workshop standard ○ EC I ○ EC II ○ BS ○ MID

You would like to send us a draw to your desired Rule with Special Scale? Send by email to info@vogel-germany.de or by fax to +49 (0) 2832 3621.

Circumference Measuring Tapes

Circumference Measuring Tape „UFM“

acc. to tolerance class II

- **with etched or laser engraved scale**
- **for measuring diameters and circumferences**
- **application areas are among others manufacturers of: pipelines, boiler and tank construction, tire industry, forestry, etc.**

- accuracy of total length with etched metric and laser engraved metric graduation according to EC II
- hardened spring steel or stainless spring steel

ART NO 181601





Graduation: **mm**
Version: **etched**

ART NO stainless	ART NO carbon steel	circumference mm	diameter mm	mm		CC
181601	**181611**	60 – 950	20 – 300	0.1	16 x 0.20	on request
181602	**181612**	940 – 2200	300 – 700	0.1	16 x 0.20	on request
181603	**181613**	2190 – 3460	700 – 1100	0.1	16 x 0.20	on request
181604	**181614**	3450 – 4720	1100 – 1500	0.1	16 x 0.20	on request
181605	**181615**	4710 – 5980	1500 – 1900	0.1	16 x 0.20	on request
181606	**181616**	5960 – 7230	1900 – 2300	0.1	16 x 0.20	on request
181607	**181617**	7220 – 8500	2300 – 2700	0.1	16 x 0.20	on request
181608	**181618**	8480 – 9760	2700 – 3100	0.1	16 x 0.20	on request
181609	**181619**	9730 – 11010	3100 – 3500	0.1	16 x 0.20	on request

Graduation: **mm**
Version: **laser engraved**

ART NO stainless	ART NO carbon steel	circumference mm	diameter mm	mm		CC
181801	**181811**	60 – 950	20 – 300	0.1	16 x 0.20	on request
181802	**181812**	940 – 2200	300 – 700	0.1	16 x 0.20	on request
181803	**181813**	2190 – 3460	700 – 1100	0.1	16 x 0.20	on request
181804	**181814**	3450 – 4720	1100 – 1500	0.1	16 x 0.20	on request
181805	**181815**	4710 – 5980	1500 – 1900	0.1	16 x 0.20	on request
181806	**181816**	5960 – 7230	1900 – 2300	0.1	16 x 0.20	on request
181807	**181817**	7220 – 8500	2300 – 2700	0.1	16 x 0.20	on request
181808	**181818**	8480 – 9760	2700 – 3100	0.1	16 x 0.20	on request
181809	**181819**	9730 – 11010	3100 – 3500	0.1	16 x 0.20	on request

Graduation: **continuous in mm**
Version: **raised markings and figures in bright natural steel colour on a dark, etched background**

ART NO 183001



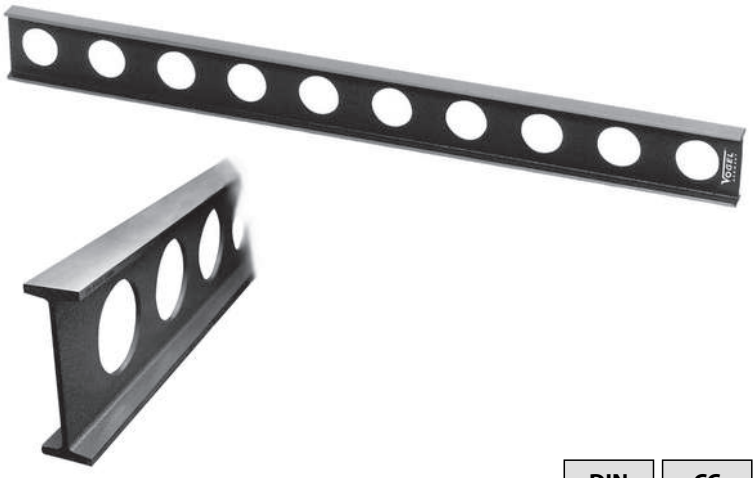
ART NO	circumference mm	diameter mm	mm		CC
183001	60 – 950	20 – 300	0.1	13 x 0.20	on request
183002	60 – 2200	20 – 700	0.1	13 x 0.20	on request
183003	60 – 3780	20 – 1200	0.1	13 x 0.20	on request
183004	60 – 4720	20 – 1500	0.1	13 x 0.20	on request
183005	60 – 5980	20 – 1900	0.1	13 x 0.20	on request
183006	60 – 7540	20 – 2400	0.1	13 x 0.20	on request
183007	60 – 8500	20 – 2700	0.1	13 x 0.20	on request
183008	60 – 9760	20 – 3100	0.1	13 x 0.20	on request
183009	60 – 11310	20 – 3600	0.1	13 x 0.20	on request

Precision Straight Edge

DIN 874

- **accuracy acc. to DIN 874 page 1, accuracy GG 0**
- **made of steel**

- shaped in I-form
- with weight reducing holes
- measuring surfaces extra fine ground
- with wide flat sides for resting spirit levels
- incl. calibration certificate



DIN CC

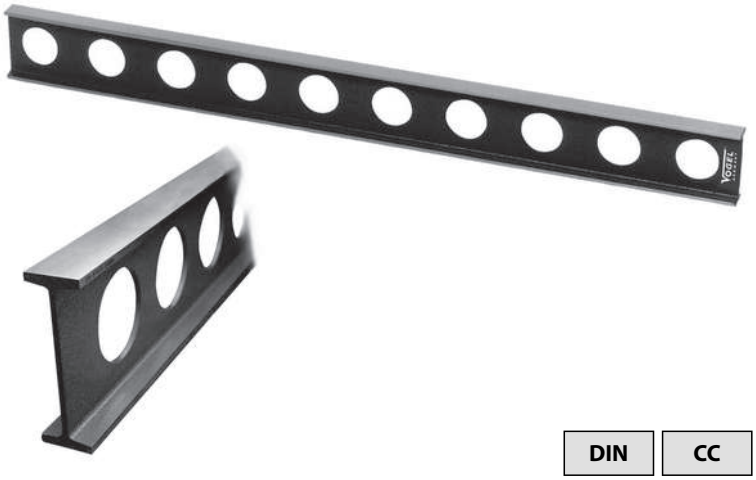
ART NO DIN 874 GG 0			CC	ART NO transport case
1580010100	1000	160 x 50	inclusive	15998100
1580010150	1500	160 x 50	inclusive	15998150
1580010200	2000	160 x 50	inclusive	15998200
1580010250	2500	160 x 50	inclusive	15998250
1580010300	3000	180 x 60	inclusive	—
1580010400	4000	180 x 60	inclusive	—
1580010500	5000	200 x 80	inclusive	—

Precision Straight Edge

DIN 874

- **accuracy acc. to DIN 874 page 1, accuracy GG 1**
- **made of steel**

- shaped in I-form
- with weight reducing holes
- measuring surfaces extra fine grinded
- with wide flat sides for resting spirit levels
- incl. calibration certificate



DIN CC

ART NO DIN 874 GG 1			CC	ART NO transport case
1581010100	1000	100 x 30	inclusive	15998100-1
1581010150	1500	100 x 30	inclusive	15998150-1
1581010200	2000	120 x 40	inclusive	15998200-1
1581010250	2500	120 x 40	inclusive	15998250-1
1581010300	3000	140 x 40	inclusive	—
1581010400	4000	140 x 40	inclusive	—
1581010500	5000	160 x 40	inclusive	—

Straight Edges

Precision Straight Edge

DIN 874

- **Quality DIN 874 page 1, accuracy GG 0, made of steel:**

- edges and flat sides extra fine ground
- stainless and carbon steel quality available
- from up 2000 mm length shaped in I-form, with hand slots
- incl. calibration certificate

- **Quality DIN 874 page 1, accuracy GG 1, made of steel:**

- edges and flat sides finely ground
- stainless and carbon steel quality available
- from up 2000 mm length shaped in I-form, with hand slots
- incl. calibration certificate

- **Accuracy acc. to DIN 874 page 1, accuracy GG 2, made of steel:**

- edges finely ground and flat sides ground
- stainless and carbon steel quality available
- from up 4000 mm length shaped in I-form, with hand slots
- incl. calibration certificate

ART N° 1590000050 form A



ART N° 1590000200 form B



DIN | CC

ART N° DIN 874 GG 0 INOX	ART N° DIN 874 GG 0	form			CC	ART N° transport case
1590000050	1590010050	A	500	50 x 10	inclusive	15990050
1590000100	1590010100	A	1000	60 x 12	inclusive	15990100
1590000150	1590010150	A	1500	70 x 15	inclusive	15990150
1590000200	1590010200	B	2000	80 x 15	inclusive	15990200
1590000300	1590010300	B	3000	120 x 18	inclusive	—
1590000400	1590010400	B	4000	140 x 20	inclusive	—
1590000500	1590010500	B	5000	140 x 20	inclusive	—
DIN 874 GG 1 INOX	**DIN 874 GG 1**					
1591000050	1591010050	A	500	40 x 8	inclusive	15990050-1
1591000100	1591010100	A	1000	50 x 10	inclusive	15990100-1
1591000150	1591010150	A	1500	60 x 12	inclusive	15990150-1
1591000200	1591010200	B	2000	70 x 15	inclusive	15990200-1
1591000300	1591010300	B	3000	100 x 16	inclusive	—
1591000400	1591010400	B	4000	120 x 18	inclusive	—
1591000500	1591010500	B	5000	140 x 20	inclusive	—
DIN 874 GG 2 INOX	**DIN 874 GG 2**					
1592000050	1592010050	A	500	30 x 6	inclusive	15990050-2
1592000100	1592010100	A	1000	40 x 8	inclusive	15990100-2
1592000150	1592010150	A	1500	50 x 10	inclusive	15990150-2
1592000200	1592010200	A	2000	60 x 12	inclusive	15990200-2
1592000300	1592010300	A	3000	80 x 15	inclusive	—
1592000400	1592010400	B	4000	100 x 16	inclusive	—

Precision Straight Edge

DIN 874

- cross-section in I-form
- made of aluminium



characteristics and advantages compared to steel:

- very light, good handling, midsection lacquered
- high accuracy- and pliability-values
- HC-coated and compressed, coating thickness 50μ ± 5μ
- high grade of abrasion resistance, high grade of corrosion resistance
- hardness 500 – 550 HV, top gliding, low thermal conductivity
- for grade 0 and 1 from 2000 mm with hand slots, grade 2 from up 2500 mm
- incl. calibration certificate

quality DIN 874 page 1, accuracy GG 0
quality DIN 874 page 1, accuracy GG 1
quality DIN 874 page 1, accuracy GG 2

DIN | CC

ART NO			CC	ART NO transport case
DIN 874 GG 0				
1593000050	500	60 x 12	inclusive	**15991050**
1593000100	1000	60 x 12	inclusive	**15991100**
1593000150	1500	100 x 15	inclusive	**15991150**
1593000200	2000	100 x 15	inclusive	**15991200**
1593000250	2500	100 x 15	inclusive	**15991250**
1593000300	3000	150 x 20	inclusive	—
1593000400	4000	150 x 20	inclusive	—
1593000500	5000	150 x 20	inclusive	—
DIN 874 GG 1				
1593010050	500	60 x 12	inclusive	**15991050**
1593010100	1000	60 x 12	inclusive	**15991100**
1593010150	1500	100 x 15	inclusive	**15991150**
1593010200	2000	100 x 15	inclusive	**15991200**
1593010250	2500	100 x 15	inclusive	**15991250**
1593010300	3000	150 x 20	inclusive	—
1593010400	4000	150 x 20	inclusive	—
1593010500	5000	150 x 20	inclusive	—
1593010600	6000	150 x 20	inclusive	—
DIN 874 GG 2				
1593020050	500	60 x 12	inclusive	**15991050**
1593020100	1000	60 x 12	inclusive	**15991100**
1593020150	1500	60 x 12	inclusive	**15991150**
1593020200	2000	60 x 12	inclusive	**15991200**
1593020250	2500	100 x 15	inclusive	**15991250**
1593020300	3000	100 x 15	inclusive	—
1593020400	4000	100 x 15	inclusive	—
1593020500	5000	150 x 20	inclusive	—
1593020600	6000	150 x 20	inclusive	—

Precision Graduated Straight Edges

Precision Graduated Straight Edge

DIN 866

- **Quality DIN 866 form A**

- mm graduation on bottom edge
- 5 mm protection space on both ends
- flat side finely ground
- vertical edges finely ground, can be used as a rule
- stainless or carbon steel quality available

- **Quality DIN 866 form B**

- mm graduation on bottom edge
- without protection-space end, at left side
- flat side ground
- vertical edges ground
- stainless or carbon steel quality available

form A ART NO 1691000050



form B ART NO 1692000050



DIN

ART NO DIN 866 / A INOX	ART NO DIN 866 / A			CC	ART NO transport case
1691000050	**1691010050**	500	30 x 6	on request	**1699050-A**
1691000100	**1691010100**	1000	40 x 8	on request	**1699100-A**
1691000150	**1691010150**	1500	40 x 8	—	**1699150-A**
1691000200	**1691010200**	2000	50 x 10	—	**1699200-A**
1691000300	**1691010300**	3000	50 x 10	—	—
1691000400	**1691010400**	4000	60 x 12	—	—
1691000500	**1691010500**	5000	70 x 15	—	—
DIN 866 / B INOX	**DIN 866 / B**				
1692000050	**1692010050**	500	25 x 5	on request	**1699050-B**
1692000100	**1692010100**	1000	30 x 6	on request	**1699100-B**
1692000150	**1692010150**	1500	30 x 6	—	**1699150-B**
1692000200	**1692010200**	2000	40 x 8	—	**1699200-B**
1692000300	**1692010300**	3000	40 x 8	—	—
1692000400	**1692010400**	4000	50 x 10	—	—
1692000500	**1692010500**	5000	60 x 12	—	—

Tolerances according to DIN 866

total length graduation mm	500	1000	1500	2000	3000	4000	5000
tolerance (mm) form A	0.04	0.04	0.06	0.06	0.08	0.10	0.12
tolerance (mm) form B	0.10	0.10	0.15	0.15	0.20	0.25	0.30

Straight Edge with bevel

- **for simple workshop use**
- **made of steel**

- chromed version
- A = laser-etched, without graduation,
  B = etched, with mm graduation
- graduation black etched, bevel edge matt chrome finish

type A ART NO 1794200030



type B ART NO 1794300030



ART NO type A	ART NO type B	mm	mm
1794200030	**1794300030**	300	40 x 5
1794200040	**1794300040**	400	40 x 5
1794200050	**1794300050**	500	40 x 5
1794200080	**1794300080**	800	40 x 5
1794200100	**1794300100**	1000	40 x 5
1794200150	**1794300150**	1500	40 x 5
1794200200	**1794300200**	2000	40 x 5

Straight Edge with bevel

- **for technicians**
- **made of hard aluminium, anodized quality**

- anodised quality
- with black printed mm graduation
  and cm numbering





ART NO	mm	mm
1795300030	300	50 x 5
1795300060	600	50 x 5
1795300100	1000	50 x 5
1795300180	1800	50 x 5

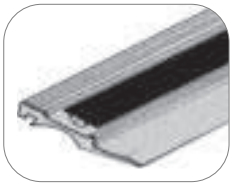
Straight Edge with bevel

- **e.g. for school, education, DIY and craftsmen**
- **made of hard aluminium, anodized quality**

- made of hard aluminium, anodised quality
- with mm graduation, printed
- backside covered with anti-slip foam rubber







ART NO	mm	mm
1796300030	300	35 x 3.5
1796300060	600	35 x 3.5
1796300100	1000	35 x 3.5

MASTER-LINE® Digital Distance and Positioning Measuring System incl. VGA Camera with Zoom Factor • IP54

- **electronic unit and LCD fixed on the sliding parts**
- **stainless steel, hardened rail**
- **feet with magnet inserts, rubber caps (non-slip) and positioning arrows**
- **large color display with crosshair and zoom function**
- **LED light units with 4x white and 4x UV / black light, switchable**



Elektronic
- large LCD with clear reading, digit height 14 mm
- On/Off switch, zero setting at any position, data hold function
- Preset, Origin switch
- unit switchable in mm/inch
- data transfer via WiFi or Bluetooth®
- incl. 2x 3 V battery (type CR 2032, art. no.: 90112), with operation manual

Camera (art. no. 601251)
- VGA camera sensor, Camera rechargeable
- focus manually adjustable via handwheel
- 10x zoom function (10 % steps)
- 3.5"colour display, 720 pixels
- video format AVI, photo format JPG
- Mini USB port for charging cable
- Mini SD card slot
- incl. Micro SD card, 4 GB
- incl. Micro SD card adapter for transfer to PC

Option
- transmitter and receiver for wireless communication as a set, art. no.: 2040101, see page 272

LED lighting units
- 4x white light
- 4x UV/black light
- switchable

VGA camera



bottom



Option
art. no.: 2040101,
2023106 and 209000

INOX ~ 230V CE CC CR2032 Lithium 3V IP 54

ART NO	mm / inch	mm / inch	mm	max. mm	total length mm	CC
103052	135 / 5	0.01 / 0.0005	0.01	0.03	275	inclusive
103053	185 / 7	0.01 / 0.0005	0.01	0.03	325	inclusive
103054	285 / 11	0.01 / 0.0005	0.01	0.03	425	inclusive
103055	480 / 18	0.01 / 0.0005	0.01	0.04	625	inclusive

MASTER-LINE® Digital Distance and Positioning Measuring System incl. VGA Camera with Zoom Factor • IP40

- **electronic unit and LCD fixed on the sliding parts**
- **extremely hardened rail made of aluminium**
- **feet with rubber caps (non-slip)**
- **large colour display with crosshair and zoom function**
- **LED light units with 4x white and 4x UV / black light, switchable**



Elektronic
- large LCD with clear reading, digit height 14 mm
- On/Off switch, zero setting at any position, data hold function
- Preset, Origin switch
- unit switchable in mm/inch
- data transfer via WiFi or Bluetooth®
- incl. 2x 3 V battery (type CR 2032, art. no.: 90112), with operation manual

Camera (art. no. 601251)
- VGA camera sensor, camera rechargeable
- focus manually adjustable via hand wheel
- 10x zoom function (10 % steps)
- 3,5“colour display, 720 pixels
- video format AVI, photo format JPG
- Mini USB port for charging cable
- Mini SD card slot
- incl. Micro SD card, 4 GB
- incl. Micro SD card adapter for transfer to PC

Options
- data transfer via WiFi, art. no.: 2040101
- data transfer via Bluetooth®, art. no.: 2023106 + 209000, see page 272



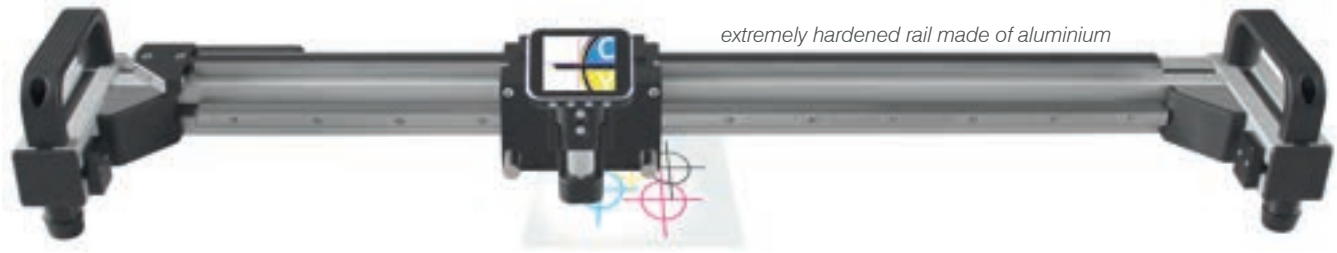


LED lighting units
- 4x white light
- 4x UV/black light
- switchable

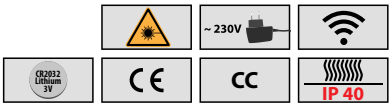
VGA camera



bottom



extremely hardened rail made of aluminium



ART NO	mm / inch	mm / inch		mm	max. mm	total length mm	CC
102806	600 / 24	0.01 / 0.0005	1 mW	0.01	0.05	920	inclusive
102807	1000 / 40	0.01 / 0.0005	1 mW	0.01	0.06	1320	inclusive
102808	1500 / 60	0.01 / 0.0005	1 mW	0.01	0.10	1800	inclusive

Digital Measuring Magnifiers

Digital Measuring Magnifier

- **with parallax-free reading**
- **large colour display with scaling**
- **each LED light unit with 4x UV/black light and 4x white light, switchable**

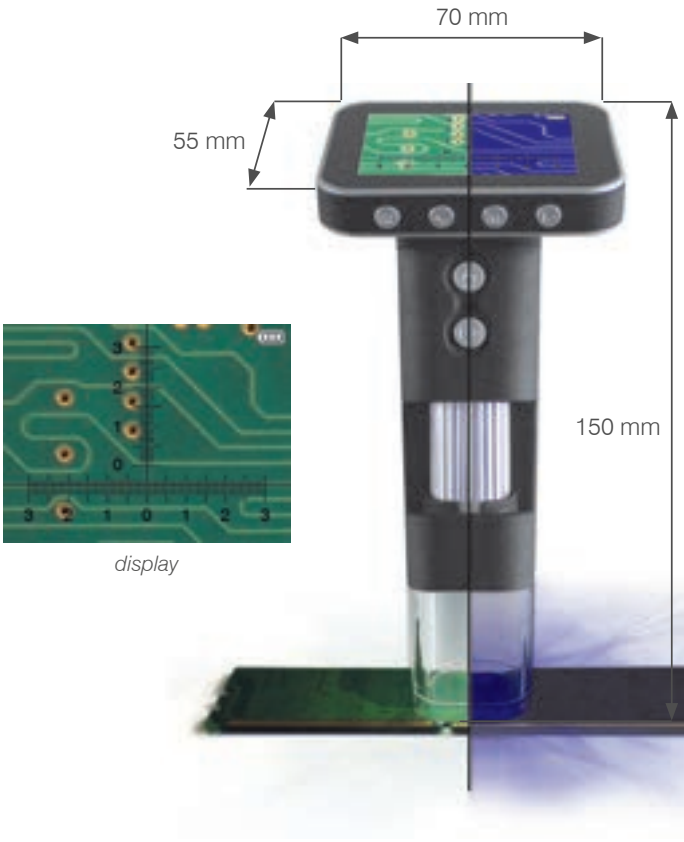
- VGA camera sensor, camera rechargeable
- focus manually adjustable via hand wheel
- 3.5“colour display, 720 pixels
- video format AVI, photo format JPG
- Mini-USB port for charging cable
- Mini SD card slot
- incl. Micro SD card, 4 GB
- incl. Micro SD card adapter for transfer to PC

Suitable for professional applications

- printing and circuit board industry
- tool and mechanical engineering
- textile manufacturing
- facade and window construction
- automotive industry
- building appraisal
- and many other technical applications

Option

- accessories: Stand, art. no.: 601255



display



Option: Stand art. no.: 601255



LED lighting units

- 4x white light
- 4x UV/black light
- switchable

VGA camera



bottom

ART NO	mm / inch	mm	height in mm
601250	3 – 0 – 3	0.10	160
Option: Stand			
601255	—	—	170

Electr. Digital Scale • IP67 (only scale)

- **for horizontal and vertical use**
- **stainless steel, hardened rail**
- **with electronic unit and separate LCD display**
- **for mounting on machine tools, milling-, drilling machines and for many other purposes**
- **with data output, top model (connectivity also for Digimatic measuring devices)**

- large LCD display with clear reading, digit height 18 mm
- rugged plastic housing, with built-in magnet on the backside
- incl. fixture for wall mounting of the LCD display, with accessories
- flexible application, in horizontal and vertical position
- expandable with additional electronic units and LCD displays
- On/Off switch, zero setting at any position, data hold function
- Preset-, Origin-, ABS / INC button
- unit switchable in mm/inch/fraction in inch
- incl. 2x 3 V battery (type CR2032, art. no.: 90112), with operation manual

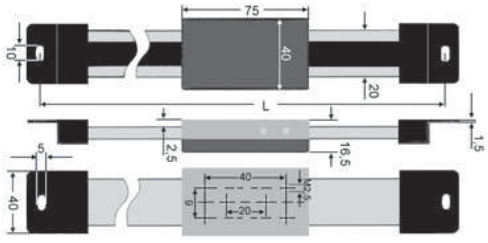
Options
- data box with USB port, art. no.: 2420194
- footswitch for data box, art. no.: 209011
- transmitter and receiver for wireless communication as set, art. no.: 2040101, see page 272

ART NO 102920





Option: Sender + Receiver
Art. No.: 2040101





INOX | IP 67 | ABS/INC | UNIT

ART NO	mm / inch	mm / inch	mm	max. mm	L mm	CC
102920	150 / 6	0.01 / 0.0005	0.01	0.06	284	on request
102921	200 / 8	0.01 / 0.0005	0.01	0.08	334	on request
102922	300 / 16	0.01 / 0.0005	0.01	0.10	436	on request
102923	600 / 24	0.01 / 0.0005	0.01	0.15	735	on request
102924	1000 / 40	0.01 / 0.0005	0.01	0.20	1135	on request

Electr. Digital Scale • IP67

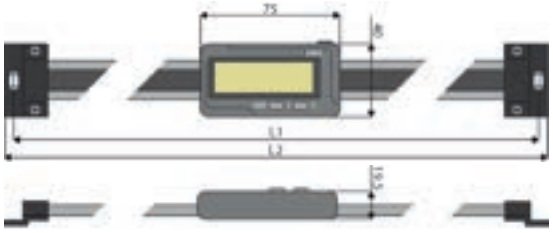
- **in horizontal and vertical version**
- **stainless steel, hardened rail**
- **with LCD display on the rail**
- **for mounting on machine tools, milling-, drilling machines and for many other purposes**
- **with integraded Bluetooth® technology**

- large LCD display with clear reading, digit height 10 mm
- flexible application, in horizontal and vertical position
- On/Off switch
- zero setting at any position
- unit switchable in mm/inch
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

Option
- data transfer via Bluetooth®, art. no.: 2023106, see page 272

ART NO 102960 (type H) | ART NO 102930 (type V)









INOX | IP 67 | CR2032 Lithium 3V | CE | Bluetooth

ART NO type H	ART NO type V	mm / inch	mm / inch	mm	max. mm	L 1 mm	L 2 mm	CC
102960	**102930**	150 / 6	0.01 / 0.0005	0.01	0.02	277	286	on request
102961	**102931**	200 / 8	0.01 / 0.0005	0.01	0.03	317	326	on request
102962	**102932**	300 / 12	0.01 / 0.0005	0.01	0.03	417	426	on request
102963	**102933**	500 / 20	0.01 / 0.0005	0.01	0.05	637	646	on request
102964	**102934**	1000 / 40	0.01 / 0.0005	0.01	0.06	1137	1146	on request

Pocket Measuring Tapes

Pocket Measuring Tapes

tolerance class II acc. to MID

- **exceptional tape stability**
- **suitable for craftsmen and industry**
- **ergonomic design, lies save and non slip in your hand**
- **in a practical sales box, including hanging cards**

- rugged and rubber covered housing with stainless metal clip and lanyard
- yellow coated blade, high rubb-off resistant and kink resistant
- self adjusting end-hook, with magnetic dots
- long-life spring made of special steel, automatic blade return and blade stop
- black/red figures, black scale
- with two-point magnetic fixing



Package as sales display usable



with hanging cards

ART NO	Package quantity Piece		max. ± mm	mm	mm	mm
graduation in mm						
141003-24	24	3 m	0.90	16	65 x 65 x 35	1400
141005-12	12	5 m	1.30	19	65 x 73 x 35	1750
141008-12	12	8 m	1.80	25	80 x 85 x 40	2100
141010-12	12	10 m	1.80	25	80 x 85 x 40	2100
graduation in mm/inch						
141103	1	3 m / 122 inch	0.90	16	65 x 65 x 35	1400
141105	1	5 m / 197 inch	1.30	19	65 x 73 x 35	1750
141108	1	8 m / 315 inch	1.80	25	80 x 85 x 40	2100

Pocket Measuring Tapes, in stainless steel metal housing

tolerance class II acc. to MID

- **exceptional tape stability**
- **ergonomic design, lies save and non slip in your hand**
- **with graduation on front- and backside, backside with crosswise graduation for comfortable vertical reading**
- **autom. blade-stop**
- **in a practical sales box, including hanging cards**

- rugged and rubber covered housing, with stainless metal clip and lanyard
- yellow coated blade, high rubb-off resistant and kink resistant
- self adjusting end-hook, with magnetic dots
- long-life spring made of special steel, automatic blade return and blade stop
- black/red figures, black scale
- with two-point magnetic fixing



Package as sales display usable



with hanging cards



backside: vertical reading

ART NO	Package quantity Piece		max. ± mm	mm	mm	mm
141403-12	12	3	0.90	19	80 x 75 x 35	1750
141405-12	12	5	1.30	25	80 x 75 x 42	2100
141408-12	12	8	1.80	25	80 x 75 x 42	2100

Electr. Digital Measuring Tape

- **exceptional tape stability**
- **LCD display with clear digits**
- **weatherproof housing**
- **lies save and non slip in your hand**

- rugged and rubber covered housing with stainless metal clip and lanyard
- yellow coated blade, high rubb-off resistant
- self adjusting end-hook, automatic blade return and blade stop
- adjustable readout in display from either side of the housing, mm/inch switchable
- black/red figures, black graduation, no holes punched in the blade
- zero setting at any position, with data hold function, On/Off button
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), and operation manual



ART NO	mm / inch	cm	± mm	mm	mm	mm	
140105	5 m / 16 ft	0.1	1.5	19	75 x 70 x 32	1700	on request

Pocket Measuring Tape with Laser Distance Meter

tolerance class II acc. to MID

- **exceptional tape stability**
- **only suitable for indoor use**

- nylon-wrapped, black tape, extremely scratch resistant and kink resistant
- sliding hook, for internal and external measurement
- long-life spring made of special steel
- automatic blade return and blade stop
- white/red figures, white scale
- scaling on both sides in mm/cm



Laser Distance Meter

- the instrument measures distance, area and volume
- indirect measuring for height measuring
- calculation of angles and triangular areas, trapezoidal faces and much more

- measuring range 0 – 30 m, reading 0,001 m
- max. total accuracy ± 1,5 mm, laser wavelength 19 nm
- „low-battery display“
- measuring in meter, inch or engl. feet, measurement speed 0.5 sec.
- autom. power off: after ~20 sec.
- operation temperature -10 °C ~ +40 °C, storage temperature -20 °C ~ +60 °C
- user-friendly rubber buttons, sound signal by pressing the buttons
- laser class II, FCC test part 15, EN 60825-1:2007 and others
- laser parameter 620 – 660 nm, output max.1 mW
- with 3.7 V Li-Ion rechargeable battery, incl. charger 5 V AC and operation manual



display on the backside



laser output



with point laser

ART NO		m	mm	mm		mm	
140108	5 m / 16ft	0.001	1.5	19	65 x 4.30 x 65	1700	on request

Steel Measuring Tapes and Wood Folding Rules

Steel Measuring Tapes

- **e.g. for machine industry, workbenches, etc.**
- **polyamid coated**
- **adhesive**

- wear off resistant and non corrosive graduation

Other length and graduations are available on request!



ART NO	mm	
graduation from left to right		
1211310100	1000	13 x 0.5
1211310200	2000	13 x 0.5
1211310300	3000	13 x 0.5
1211310400	4000	13 x 0.5
1211310500	5000	13 x 0.5
1211310600	6000	13 x 0.5
graduation from right to left		
1211410100	1000	13 x 0.5
1211410200	2000	13 x 0.5
1211410300	3000	13 x 0.5
1211410400	4000	13 x 0.5
1211410500	5000	13 x 0.5
1211410600	6000	13 x 0.5

Wood Folding Rule

acc. to tolerance class III, CE

- **surface coated with a water repellant, environmentally friendly UV-finish**
- **absolutely professional top tool, extremly sturdy and durable**

- with double mm graduation on front and back
- with 10 links, closely spaced fins, fitting springs back
- with standard angle imprint at the 2nd link
- assembled with special 3 mm rivets
- precise 90° angle locking and ruler function
- optimal leverage and handy to use







Other colours or advertising print are available on request!



Example illustration: Wood Folding Rule in different colours



Example illustration: Wood Folding Rule with advertising print

III CE

ART NO	mm / inch	colour	each link	L x W in total	number of links
1312010200	2000 / 78.74	white	3.20 x 16	235 x 35	10

Measuring tapes in a light metal diagonal frame

acc. to tolerance class II

ART NO 143201



- **product for highest demands**

- in a robust and rigid light metal frame
- ergonomic handle
- crank core with metal shaft, ensures fatigue-free measurement work
- lasting ease of the tape when rolling in and out
- with different beginnings for the tabs
- measuring tape made of steel, painted white, with black figures
- graduation and numbering through transparent lacquer protected against abrasion
- graduation in mm, one side

Beginning of tape

type A



type B



type C



II

ART NO	type	m	mm
143201	type A	10	13
143202		20	13
143203		30	13
143204		50	13
143205	type B	10	13
143206		20	13
143207		30	13
143208		50	13
143209	type C	10	13
143210		20	13
143211		30	13
143212		50	13

Measuring tapes in a light metal triangle frame

acc. to tolerance class II

ART NO 143301



- **product for highest demands**

- in a robust and rigid light metal frame
- ergonomic handle
- crank core with metal shaft, ensures fatigue-free measurement work
- lasting ease of the tape when rolling in and out
- with different beginnings for the tabs
- measuring tape made of steel, painted white, with black figures
- graduation and numbering through transparent lacquer protected against abrasion
- graduation in mm, one side

Beginning of tape

type A



type B



type C



II

ART NO	type	m	mm
143301	type A	10	13
143302		20	13
143303		30	13
143304		50	13
143305	type B	10	13
143306		20	13
143307		30	13
143308		50	13
143309	type C	10	13
143310		20	13
143311		30	13
143312		50	13

Measuring Tapes in a Platal Capsule

Measuring Tapes in a light PVC coated steel case

acc. to tolerance class II

- **product for highest demands**

- in a robust and PVC coated steel case
- crank core with metal shaft, ensures fatigue-free measurement work
- Lasting ease of the tape when rolling in and out
- with different beginnings for the tabs
- Measuring tape made of steel, painted white, with black figures
- graduation and numbering through transparent lacquer protected against abrasion
- graduation in mm, one side

ART NO 143101



Beginning of tape

type A



type B



type C



II

ART NO	type	m	mm
143101	type A	10	13
143102		20	13
143103		30	13
143104		50	13
143105	type B	10	13
143106		20	13
143107		30	13
143108		50	13
143109	type C	10	13
143110		20	13
143111		30	13
143112		50	13

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OXOMI

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Tank Dipping Tapes of stainless steel

acc. to tolerance class II

- **tolerance class II, ± a + bL**
  (a = 0,3mm, b = 0,2 mm, L = length in m)
- **available on request:**
  tolerance class I, ± a + bL
  (a = 0,1mm, b = 0,1 mm, L = length in m)

- strong frame of anodised light metal with oblique handle
- strong foldable winding arm of anodised light metal
- winding drum of durable plastic
- bright graduation and figures, on dark background
- graduation in mm, one side

Tension
- the tension force of the tape is in accordance with the weight of the dip weight (indicate when ordering for which dip weight the tapes should be used)

Options
- type plumb U, art. no.:143601
- type plumb D, art. no.:143602

Dipping Tapes dimensions for other applications on request!

Beginning of tape

type U



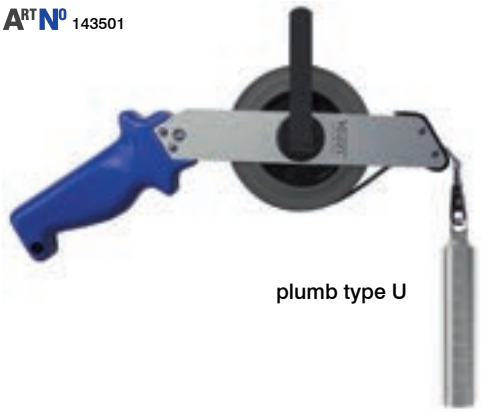
steel, high etched

type D



stainless steel, high etched

ART NO 143501



plumb type U

ART NO 143511



plumb type D

ART NO 143601



plumb type U
- material stainless steel
- weight is attached by a swivel hook
- graduated one side only
- cylindrical with flat bottom
- 121 mm long, ø 25 mm
- graduation: mm
- weight: 400 g

ART NO 143602



plumb type D
- material brass
- weight is attached by a swivel hook
- graduated one side only
- cylindrical with tip
- 171 mm long, ø 22 mm
- graduation: mm
- weight: 400 g

II

ART NO	plumb type	m	mm
143501	U	10	13 x 0.2
143502		20	13 x 0.2
143503		30	13 x 0.2
143504		50	13 x 0.2
143511	D	10	13 x 0.2
143512		20	13 x 0.2
143513		30	13 x 0.2
143514		50	13 x 0.2

Electr. Digital Measuring Wheels

Electr. Digital Measuring Wheel • IP51

- **lightweight construction made of black lacquered steel**

- rugged foldable construction, for outdoor use, with battery
- large LCD display, 12 mm height of digits, with backlight
- dust- and drop-water resistant key panel
- On/Off-button, autom. shut-off after approx. 3 min.
- “Smart Wheel”-function (autom. includes wheel-diameter for accurate wall-to-wall measuremments)
- Start/Stop Mode, prevents accidental measurements
- HOLD function, memory function, reset button
- reading in Meter / Feet / Yard / m² / feet² / yard² / m³ / feet³ / yard³
- plastic made measuring wheel with rubber cover and stand for parking
- area of application from up -10 °C ~ +60 °C, handle made of ABS plastic
- incl. 4x 1.5 V battery (type AAA, art. no.: 90002), with operation manual

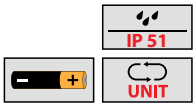




measuring wheel folded



operation panel



ART NO	m / ft	m	max. ± %	measuring wheel ø mm	mm
140210	999.999 / 999.999.9	0.10	0.5	318	1122 x 318 x 85

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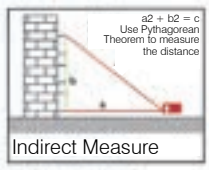
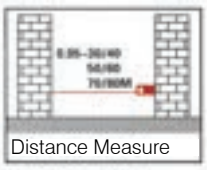
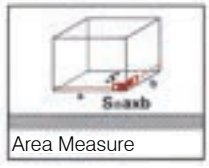
Laser Distance Meter

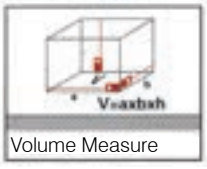
- **the instrument measures distance, area and volume**
- **distances can be added or subtracted**
- **indirect measuring for height measuring**
- **calculation of angles and triangular areas, trapezoidal faces and much more**
- **Pythagoras-Function 1: calculation of distance using two related measurements**
- **Pythagoras-Function 2: calculation of distance using three related measurements**

- „low-battery-display“, with backlight, memory function for 20 measurements
- measuring in meter, inch or engl. feet switchable, measurement speed 0.1 ~ 4 sec.
- autom. power off: laser beam after ~15 sec., device after ~120 sec.
- operation temperature -10 °C ~ +40 °C, storage temperature -20 °C ~ +65 °C
- user-friendly rubber buttons, sound signal by pressing the buttons
- laser class II, FCC test (part 15), EN 60825-1:2007
- laser parameter 620 – 670 nm, output max.1 mW
- incl. 2x 1.5 V battery (type AAA, art. no.: 90002) and operation manual





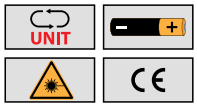










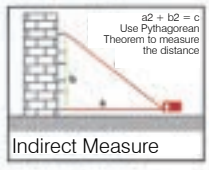


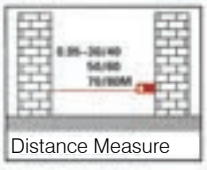
ART NO	m	m	mm	nm	mW	mm	CC
140134	0.5 – 100	0.001	3	620 ~ 670	max. 1	120 x 56 x 27	on request

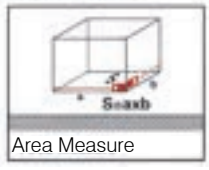
Laser Distance Meter

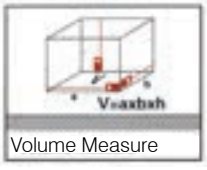
- **the instrument measures distance, area and volume**
- **distances can be added or subtracted**
- **indirect measuring for height measuring**
- **calculation of angles and triangular areas, trapezoidal faces and much more**
- **Pythagoras-Function 1: calculation of distance using two related measurements**
- **Pythagoras-Function 2: calculation of distance using tree related measurements**
- **angle sensor 0° – 150°**

- „low-battery-display“, with backlight, memory function for 50 measurements
- measuring in meter, inch or engl. feet switchable, measurement speed 0,5 sec.
- autom. power off: laser beam after ~ 30 sec., device after ~ 180 sec.
- operation temperature -10 °C ~ +40 °C, storage temperature -20 °C ~ +65 °C
- user-friendly rubber buttons, sound signal by pressing the buttons
- laser class II, FCC test (part 15), EN 60825-1:2007
- laser parameter 620 – 690 nm, output max. 1 mW
- incl. 2x 1.5 V battery (type AAA, art. no.: 90002) and operation manual





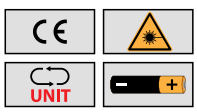




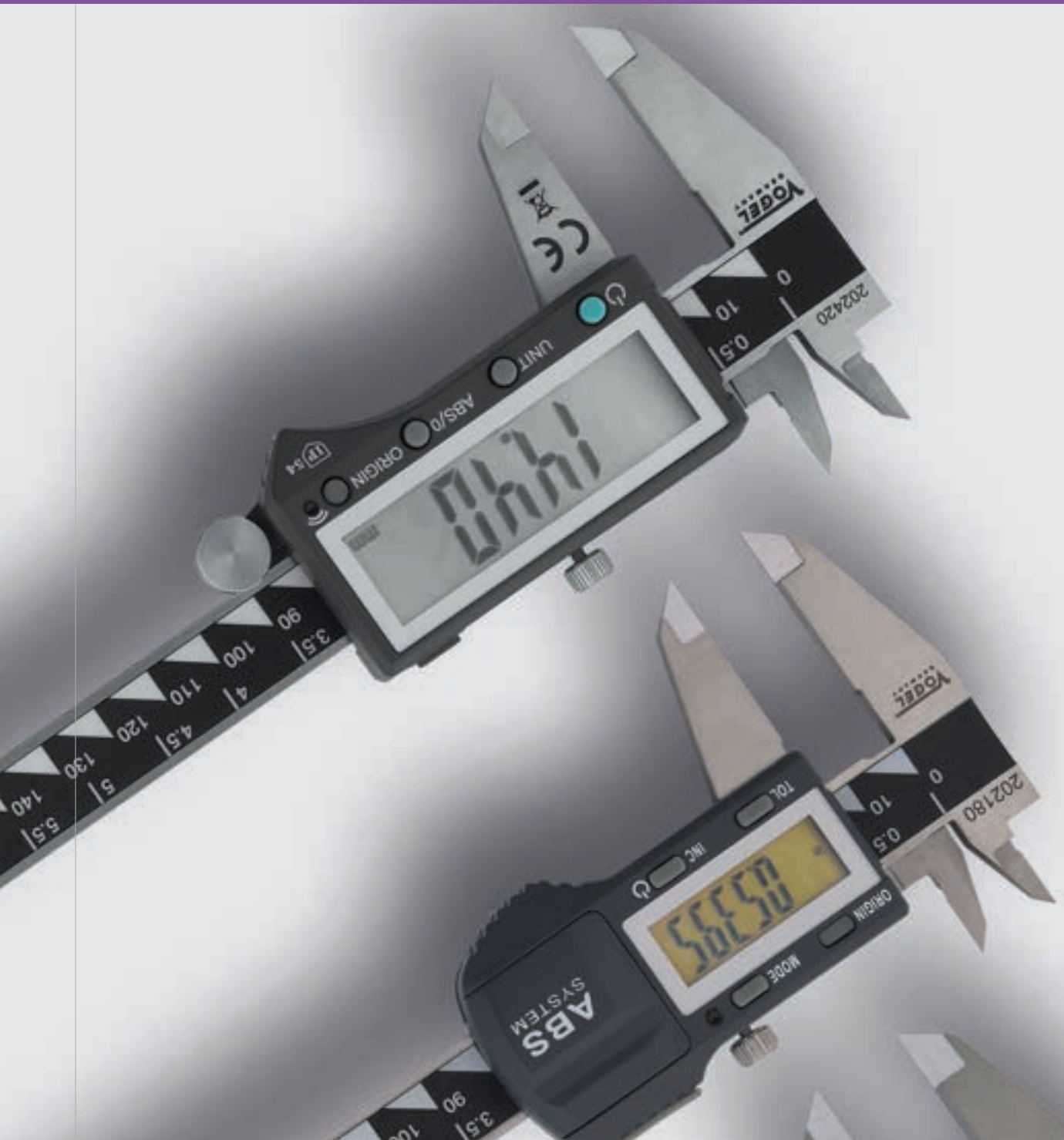








ART NO	m	m	mm	nm	mW	mm	CC
140132	0.5 – 100	0.001	2	620 ~ 690	max. 1	117 x 52 x 27	on request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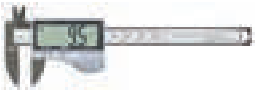
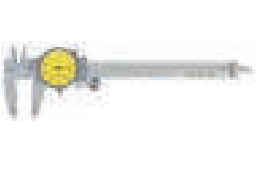
				
Page 57	Page 57	Page 57	Page 57	Page 58
				
Page 58	Page 58	Page 59	Page 59	Page 60
				
Page 60	Page 60	Page 60	Page 61	Page 61
				
Page 61	Page 62	Page 62	Page 62	Page 62
				
Page 62	Page 63	Page 63	Page 63	Page 63

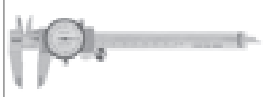

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Image Directory • Calipers


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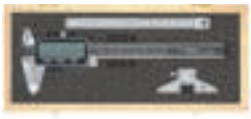
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Sylvac • Ultra-light Caliper UL4 • IP67

DIN 862

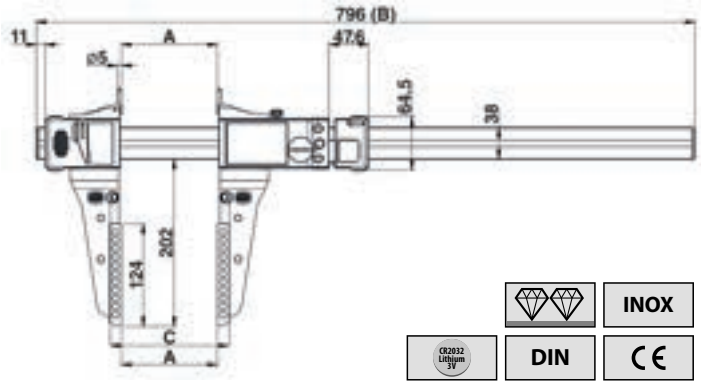
- **with integraded Bluetooth® technology**

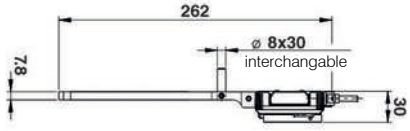
- ultra light caliper for external and internal measurements
- new series with extra large display, digit height 20 mm
- aluminium beam reinforced by four stainless steel rods
- long jaws 200 mm coated with titanium
- new carbide upper internal tips
- measuring force applied control
- mm/inch switchable
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

Options

- data transfer via cable, Proximity – USB, art. no.: 2023101
- data transfer via cable, Proximity – RS 232, art. no.: 2023100
- data transfer via Bluetooth®, art. no.: 2023106S







INOX · UNIT · Bluetooth · DIN · CE · CC · IP 67

ART NO	mm / inch	mm / inch	mm	max. mm	mm	A mm	B mm
200950	400 / 16	0.01 / 0.0005	0.02	0.03	202	0 – 478	796
200951	600 / 24	0.01 / 0.0005	0.02	0.04	202	0 – 683	1001
200952	1000 / 40	0.01 / 0.0005	0.02	0.05	202	0 – 1093	1411
200953	1500 / 60	0.01 / 0.0005	0.02	0.09	202	0 – 1608	1926
200954	2000 / 80	0.01 / 0.0005	0.03	0.12	202	0 – 2123	2441
200955	2500 / 100	0.01 / 0.0005	0.03	0.15	202	0 – 2638	2956
200956	3000 / 120	0.01 / 0.0005	0.03	0.20	202	0 – 3153	3471

Sylvac • Caliper S_Cal EVO STANDARD • IP67

DIN 862

- **professional standard caliper**

- new extra-large display
- without data output
- water and coolant resistant, protection class IP67
- automatic switch-on by moving the slide (absolute system S.I.S)
- switching to economy mode after 20 minutes of inactivity
- storage of the position in economy mode
- mechanics made of stainless steel, hardened and lapped
- mm/inch switchable
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



ABS/INC · INOX · UNIT · CE · DIN · IP 67

ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm		CC
202195	150 / 6	0.01 / 0.0005	0.01	0.02	40	16	flat	on request
202196	200 / 8	0.01 / 0.0005	0.01	0.03	50	19	flat	on request
202197	300 / 12	0.01 / 0.0005	0.01	0.03	64	19	—	on request

Standard Digital Calipers

“Absolute“ Electr. Digital Caliper • IP67

DIN 876



- **professional standard caliper**
- **with metal housing and metal function buttons**
- **water- a. coolant proof acc. to DIN 40050 / IEC 60529**

- without data output
- sturdy quality, stainless steel, hardened
- large LCD display with clear reading, 9 mm digit height
- jaws finely ground and lapped
- On/Off button, autom. shutdown, with ABS/INC measuring system
- With locking screw, with screwed battery compartment cover
- mm/inch switchable, zero setting at any position
- incl. 1x 3 V battery (type CR1632, art.-no.: 90101), with operation manual

UNIT | INOX | ABS/INC | IP 67 | DIN | CE | CR1632 Lithium 3V

ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm		CC
202130-2	150 / 6	0.01 / 0.0005	0.01	0.03	40	16	flat	on request
202131-2	200 / 8	0.01 / 0.0005	0.01	0.03	50	19.5	flat	on request
202132-2	300 / 12	0.01 / 0.0005	0.01	0.03	60	20.5	flat	on request

“Absolute“ Electr. Digital Caliper • IP54

DIN 862



- **professional standard caliper**
- **with optical tolerance alarm by LED signal**
- **with glass rail for more accuracy**
- **with data output (micro USB)**
- **spray water proof acc. to DIN 40050 / IEC 60529**

- sturdy quality, stainless steel, hardened
- large LCD display with clear reading, 9 mm digit height
- jaws finely ground and lapped, with fixing screw
- with PRESET/ORIGIN/ABS/INC-system
- On/Off button, autom. power off
- mm/inch switchable, zero setting at any position
- incl. 2x 3 V battery (type CR2032, art.-no.: 90112), with operation manual

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

CR2032 Lithium 3V | UNIT | INOX | | | ABSOLUTE | IP 54 | | DIN | CE | ORIGIN

ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm		CC
202180	150 / 6	0.01 / 0.0005	0.01	0.02	40	16	flat	on request
202181	200 / 8	0.01 / 0.0005	0.01	0.03	50	19.5	flat	on request
202182	300 / 12	0.01 / 0.0005	0.01	0.03	60	20.5	flat	on request

Explore our
Website.

www.vogel-germany.de



VOGEL GERMANY

Any questions?
We are pleased to advise.

Electr. Digital Caliper • IP67

DIN 862



- **professional standard caliper**
- **water and coolant proof acc. to DIN 40050 / IEC 60529**
- **with integraded Bluetooth® technology (max. 5m distance)**

- mechanic parts stainless, hardened steel
- large LCD display with clear reading, digit height 13 mm
- measuring jaws finely ground and lapped
- On/Off-button, with fixing screw, with thumbroll
- mm/inch switchable, zero-setting at any position
- incl. 2x 3 V battery (type CR2032, art. no. 90112), with operation manual

Option
- data transfer via Bluetooth®, art. no.: 2023106, see page 272



ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm		CC
202420-2	150 / 6	0.01 / 0.0005	0.01	0.02	40	16.5	flat	on request
202421-2	200 / 8	0.01 / 0.0005	0.01	0.02	50	19.5	flat	on request
202422-2	300 / 12	0.01 / 0.0005	0.01	0.03	60	20.5	flat	on request

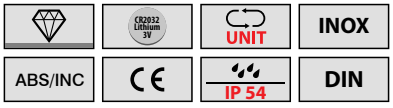
Electr. Digital Caliper • IP54

DIN 862



- **standard caliper**
- **with glass rail for more accuracy**
- **spray water proof acc. to DIN 40050 / IEC 60529**

- sturdy quality, stainless steel, hardened
- large LCD display with clear reading, 9 mm digit height
- jaws finely ground and lapped, with fixing screw
- On/Off button, with ABS/INC measuring system
- graduation in mm or inch, zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no. 90112), with operation manual



ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm		CC
202160-2	150 / 6	0.01 / 0.0005	0.01	0.02	40	16	flat	on request
202161-2	200 / 8	0.01 / 0.0005	0.01	0.03	50	19.5	flat	on request
202162-2	300 / 12	0.01 / 0.0005	0.01	0.03	60	20.5	flat	on request

Electr. Digital Caliper

DIN 862

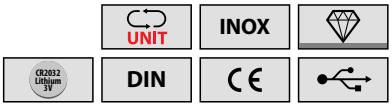


with removeable thumbroll

- **standard caliper**
- **with glass rail for more accuracy**
- **housing with metal cover and metal buttons**
- **with data output (mini USB)**

- sturdy quality, stainless steel, hardened
- with or without thumbroll (included, for self installation)
- large LCD display with clear reading, 9 mm digit height
- jaws finely ground and lapped
- On/Off-button, with flat or round depth gauge
- mm/inch switchable, zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

Option
- data transfer via cable, art. no.: 209001, see page 272



ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm		CC
202040-3	150 / 6	0.01 / 0.0005	0.01	0.02	40	16.5	flat	on request
202041-3	200 / 8	0.01 / 0.0005	0.01	0.03	50	19.5	flat	on request
202042-3	300 / 12	0.01 / 0.0005	0.01	0.03	60	20.5	flat	on request
202043-3	150 / 6	0.01 / 0.0005	0.01	0.02	40	16.5	round	on request

Standard Digital Calipers

Electr. Digital Caliper

DIN 862

- **standard caliper**
- **with extrem large LCD display**

- mechanic parts stainless steel, hardened
- large LCD display with clear reading, digit height 15 mm
- measuring jaws finely ground and lapped
- On/Off-button, with fixing screw
- mm/inch/frac in inch switchable, Zero-setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



with removeable thumbroll



display with fraction number in inch

UNIT | INOX | DIN | CE | CR2032 Lithium 3V

ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm		CC
202011-3	150 / 6	0.01 / 0.0005	0.01	0.03	40	16.5	flat	on request
202012-3	200 / 8	0.01 / 0.0005	0.01	0.03	50	19.5	flat	on request
202013-3	300 / 12	0.01 / 0.0005	0.01	0.04	60	20.5	flat	on request

Electr. Digital Caliper

DIN 862

- **with metal housing and metal buttons**

- sturdy quality, stainless steel, hardened
- large LCD display with clear reading, 8 mm digit height
- jaws finely ground and lapped, with fixing screw
- On/Off button
- mm/inch switchable, zero setting at any position
- incl. 2x 1.5 V battery (type LR44, art. no.: 90213), with operation manual



UNIT | INOX | DIN | CE | LR44 1,5V

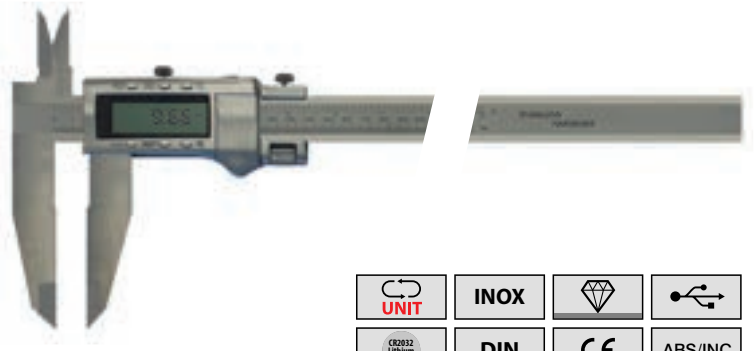
ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm		CC
202140	100 / 4	0.01 / 0.0005	0.01	0.02	30.5	12.5	flat	on request

Electr. Digital Caliper

DIN 862

- **with metal housing and metal buttons**
- **standard model for larger measuring range**
- **with data output (mini USB)**

- sturdy quality, stainless steel, hardened
- large LCD display with clear reading, 9 mm digit height
- jaws finely ground and lapped, with fixing screw and fine adjustment
- On/Off button, with ABS/INC measuring system
- mm/inch switchable, zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



Option

- data transfer via cable, art. no. 209001, see page 272

UNIT | INOX | CR2032 Lithium 3V | DIN | CE | ABS/INC

ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm	CC
202065	400 / 16	0.01 / 0.0005	0.01	0.05	100	38	on request
202066	500 / 20	0.01 / 0.0005	0.01	0.05	100	38	on request
202067	600 / 24	0.01 / 0.0005	0.01	0.05	100	38	on request
202068	800 / 32	0.01 / 0.0005	0.01	0.06	125	51.5	on request
202069	1000 / 40	0.01 / 0.0005	0.01	0.07	125	51.5	on request

Electr. Digital Caliper

DIN 862

- **for left hand use**

- stainless, hardened
- large LCD display with clear reading, 10 mm digit height
- jaws finely ground and lapped
- On/Off button, with flat depth gauge
- mm/inch switchable, zero setting at any position
- incl. 1x 1.5 V battery (type LR 44, art. no.: 90213), with operating manual

Option
- data transfer via cable, art. no.: 209001 see page 272



UNIT | INOX | DIN | CE | LR44 Silveroxide 1,5V

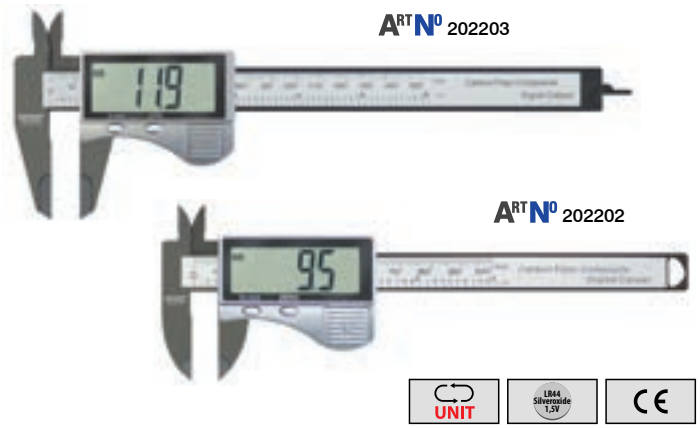
ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm	
202037	150 / 6	0.01 / 0.0005	0.01	0.03	40	16.5	flat
202038	200 / 8	0.01 / 0.0005	0.01	0.03	50	19.5	flat

Electr. Digital Caliper

DIN 862

- **made of carbon fiberglass, non-conductive and especially made for electronic and sensitive purposes, like food sector and automotive parts**

- large LCD display with clear reading, 13 mm digit height
- autom. On/Off
- mm/inch switchable, zero setting at any position
- art. no. 202202 without depth gauge, made of carbon fibreglass
- art. no. 202203 with flat depth gauge, made of carbon fibreglass
- incl. 1x 1,5 V battery (type LR44, art. no.: 90213), with operation manual



UNIT | LR44 Silveroxide 1,5V | CE

ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm	
202202	100 / 4	0.1 / 0.01	0.1	0.2	30	12	—
202203	150 / 6	0.1 / 0.01	0.1	0.2	40	16	flat

Electr. Digital Caliper

- **for standard requirements**
- **mechanic in stainless steel, hardened**
- **with thumbroll**

- large LCD display with clear reading, 13 mm hight
- jaws finely ground and lapped, flat depth gauge
- On/Off button, mm/inch, zero setting at any position
- incl. 1x 1.5 V battery (type LR44, art. no.: 90213)



LR44 1,5V | INOX | mm/inch

ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm	
202002	150 / 6	0.01 / 0.0005	0.01	0.05	40	16	flat

You can't find the right caliper?
We are happy to help you to find a solution.

Special Digital Calipers

Electr. Digital Special Caliper

- **to measure especially deep grooves**
- **with metal cover and metal button**
- **with data output (mini USB)**

- sturdy quality, stainless steel, hardened
- with or without thumbroll (included, for self installation)
- large LCD display with clear reading, 9 mm digit height
- jaws finely ground and lapped
- On/Off button, with flat depth gauge
- mm/inch switchable, zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

Option
- data transfer via cable, art. no.: 209001, see page 272



with removeable thumbroll



UNIT · INOX · DIN · CE

ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm		CC
202027	150 / 6	0.01 / 0.0005	0.01	0.04	40	45	flat	on request

Accessories for Digital Calipers

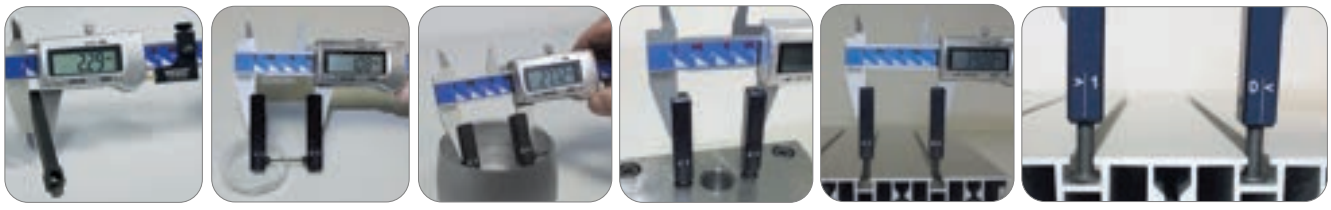
- **for many purposes**

- 6 pairs of different probes
- 2 adapter pairs, different sizes
- with measuring force system (for permanent uniform pressure)
- for calipers up to 300 mm





measuring force testing system

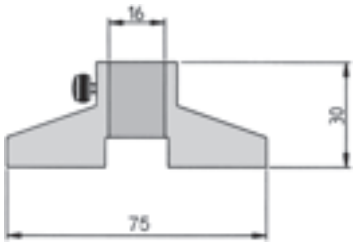


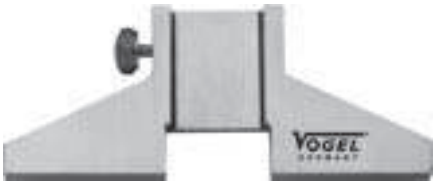
ART NO	description
209333	Accessories for Digital Calipers

Measuring Bridge

- **for depth measuring**
- **for all pocket vernier calipers up to 200 mm**

- stainless steel, hardened
- with fixing screw





INOX

ART NO	mm
2002092	75

Electr. Digital Workshop Caliper

acc. to workshop grade

- **modern design, lightweight model**

- solid shape, made of anodized hard aluminium
- stainless, hardened jaws and Inside measuring approaches
- with two adjustable, exchangeable measuring jaws
- LCD display with clear reading, digit height 10 mm
- On/Off button, mm/inch switchable, „0" setting at any position, ABS system
- for inside and outside measurements (PRESET)
- slides perfectly because of double-prismatic-lead
- slide rail made of oxide coated aluminium
- with measuring force limitation for permanent uniform pressure
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

Options

- art. no. 207154-01: pair of measuring jaws, jaw length 90mm changeable, contact points at the lower ends, thread M2.5
- art. no. 207154-02: setting gauge
- art. no. 207154-03: holder for probes





setting gauge
art. no.: 207154-02

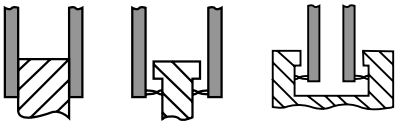


holder for probes
art. no.: 207154-03



interchangeable measuring jaws
art. no.: 207154-01





ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm	mm	CC
207150	300 / 12	0.01 / 0.0005	0.01	0.04	90	35	10	on request
207151	500 / 20	0.01 / 0.0005	0.01	0.05	90	35	10	on request
207152	800 / 32	0.01 / 0.0005	0.01	0.06	90	35	10	on request
207153	1000 / 40	0.01 / 0.0005	0.01	0.06	90	35	10	on request

Electr. Digital Workshop Caliper

acc. to Workshop grade

- **for simple workshope use**
- **modern design, lightweight model**

- solid shape, made of anodized hard aluminium
- stainless, hardened jaws and Inside measuring approaches
- with two adjustable, exchangeable measuring jaws
- LCD display with clear reading, digit height 10 mm
- On/Off push button, mm/inch switchable, „0" setting on each position, ABS system
- for inside and outside measurements (PRESET)
- perfectly sliding sliding parts thanks to plastic bearings double prism guide
- slide rail made of aluminium oxide coated
- with measuring force limitation for permanent uniform pressure
- incl. 1x 3 V battery (type CR2032, art. no.: 90112) with operation manual

Options

- art. no. 207159-0: pair of measuring jaws, jaw length 150 mm interchangeable, contact points at the lower ends, thread M2.5
- art. no. 207154-02: setting gauge
- art. no. 207154-03: holder for probes





setting gauge
(art. no.: 207154-02)

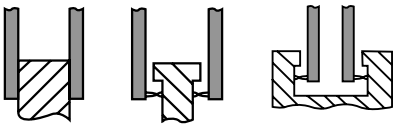


holder for probes
(art. no.: 207154-03)



Interchangeable measuring jaws
(art. no.: 207159-01)





ART NO	mm / inch	mm / inch	mm	max. mm	mm	mm	CC
207155	1500 / 60	0.01 / 0.0005	0.01	0.1	150	20	on request
207156	2000 / 80	0.01 / 0.0005	0.01	0.13	150	20	on request
207157	2500 / 100	0.01 / 0.0005	0.01	0.2	150	20	on request
207158	3000 / 120	0.01 / 0.0005	0.01	0.25	150	20	on request

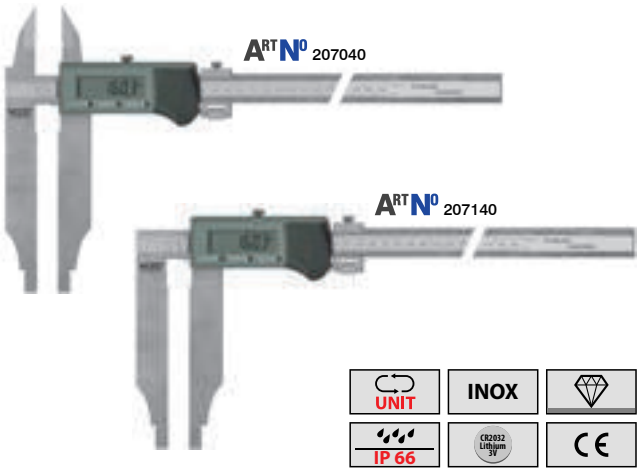
Digital Workshop Calipers

Electr. Digital Workshop Caliper • IP66

acc. to workshop grade

- **water and coolant proof acc. to DIN 40050 / IEC 60529**

- stainless steel, hardened
- large LCD display with clear reading, digit height 11 mm
- jaws finely ground and lapped
- offset jaws for inside measurements
- On/Off button, automatic shutdown, mm/inch switchable
- zero setting at any position, with REL-, ABS- and PRESET-mode
- function buttons made of metal
- with fine adjustment, with or without knife points
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



ART Nº	mm / inch	mm / inch	mm	max. mm	mm	mm	ø mm	CC
207040	500 / 20	0.01 / 0.0005	0.01	0.06	100	56	20	on request
207041	500 / 20	0.01 / 0.0005	0.01	0.06	150	56	20	on request
207140	500 / 20	0.01 / 0.0005	0.01	0.06	100	—	20	on request
207141	500 / 20	0.01 / 0.0005	0.01	0.06	150	—	20	on request
207144	800 / 32	0.01 / 0.0005	0.01	0.07	150	—	20	on request
207145	800 / 32	0.01 / 0.0005	0.01	0.07	200	—	20	on request
207146	1000 / 40	0.01 / 0.0005	0.01	0.07	150	—	20	on request
207147	1000 / 40	0.01 / 0.0005	0.01	0.08	200	—	20	on request
207048	1000 / 40	0.01 / 0.0005	0.01	0.07	150	67	20	on request
207049	1000 / 40	0.01 / 0.0005	0.01	0.08	200	67	20	on request

„Absolute“ Electr. Digital Workshop Caliper • IP54

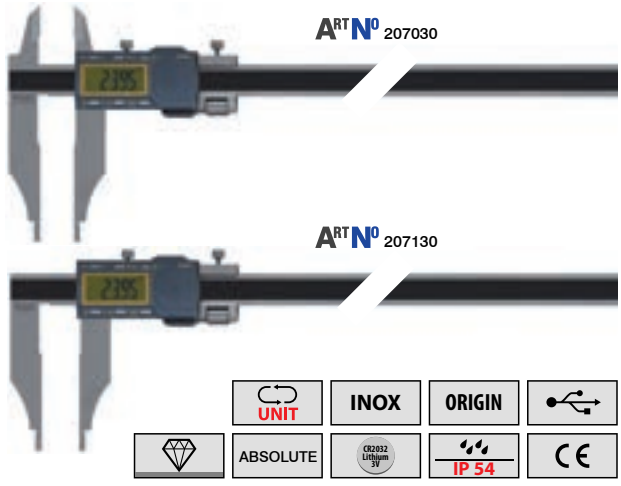
acc. to workshop grade

- **water- and coolant proof acc. 40050 / IEC 60529**

- large LCD display with clear reading, 11 mm digit height
- mechanic parts, stainless steel, hardened
- measuring jaws finely ground and lapped
- offset jaws for inside measurements
- with PRESET/ORIGIN/ABS/INC-system
- On/Off button, mm/inch switchable
- zero-setting at any position, DATA HOLD function
- with fine adjustment, with or without knife points
- incl. 2x 3 V batteries (type 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.: 2023106 + 209000, see page 272



ART Nº	mm / inch	mm / inch	mm	max. mm	mm	mm	ø mm	CC
207030	300 / 12	0.01 / 0.0005	0.01	0.03	90	38	10	on request
207031	500 / 20	0.01 / 0.0005	0.01	0.05	150	60	20	on request
207032	1000 / 40	0.01 / 0.0005	0.01	0.06	150	63	20	on request
207130	300 / 12	0.01 / 0.0005	0.01	0.03	90	—	10	on request
207131	500 / 20	0.01 / 0.0005	0.01	0.05	150	—	20	on request
207132	1000 / 40	0.01 / 0.0005	0.01	0.06	150	—	20	on request

Electr. Digital Workshop Caliper

acc. to workshop grade

- **with two moveable, exchangeable jaws**
- **modern design, lightweight model, made of anodized hard aluminium**

- stainless, hardened measuring jaws and tips
- jaws finely ground
- with two adjustable, exchangeable measuring jaws
- LCD display with clear reading, digit height 10 mm
- On/Off button, mm/inch switchable, zero setting at any position
- slides perfectly because of double-prismatic-lead
- rail and electronic housing made of anodized aluminium
- incl. 1x 1.5 V battery (type LR44, art.-no. 90213), with operation manual

Options

- art.-no. 200891: measuring jaw-pair, jaw lenght 125 mm, exchangeable
- art.-no. 200892: measuring jaw-pair, jaw lenght 150 mm, exchangeable



two moveable jaws for measurements in inaccessible places



measuring jaw-pair

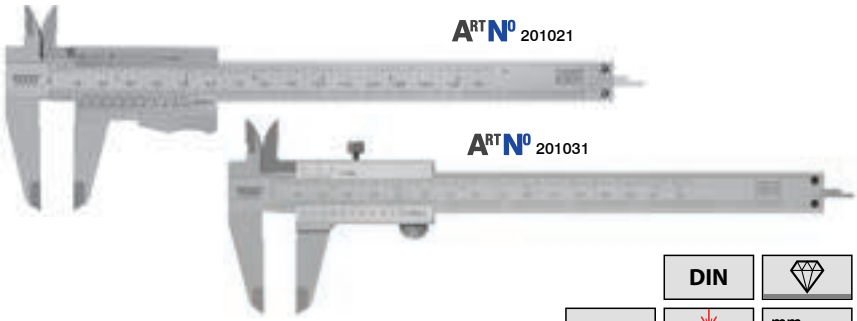
ART N°	mm / inch	mm / inch	mm	max. mm	mm	mm	ø mm	CC
200880	300 / 12	0.01 / 0.0005	0.01	0.04	90	40	10	on request
200881	500 / 20	0.01 / 0.0005	0.01	0.05	90	40	10	on request
200882	800 / 32	0.01 / 0.0005	0.01	0.06	90	40	10	on request

Pocket Vernier Caliper

DIN 862

- **standard caliper**

- stainless steel, hardened
- reading in mm/inch, scale laser engraved
- reading satin chrome finish
- jaws fine ground and lapped
- mono-block vernier
- flat or round depth gauge



DIN · INOX · mm/inch

ART N° thumb locking	ART N° fixing screw	mm / inch	mm bottom	inch top	mm	mm		CC
201021	**201031**	150 / 6	0.05	1/128	40	16	flat	on request
201022	**201032**	150 / 6	0.05	1/128	40	16	round	on request
201024	**201034**	200 / 8	0.05	1/128	50	19	flat	on request
201025	**201035**	150 / 6	0.02	1/1000	40	16	flat	on request
201026	**201036**	200 / 8	0.02	1/1000	40/50	16/19	flat	on request
—	**201038**	200 / 8	0.05	1/128	40/50	16	round	on request
—	**201013**	300 / 12	0.05	1/128	55/60	20	flat	on request
—	**201015**	300 / 12	0.02	1/1000	64	20	flat	on request

Vernier Calipers

Pocket Vernier Caliper

DIN 862

- **professional standard caliper**

- inox, hardened
- graduation in mm/inch, scale etched
- reading satin chrome finish, flat depth gauge
- jaws finely ground and lapped



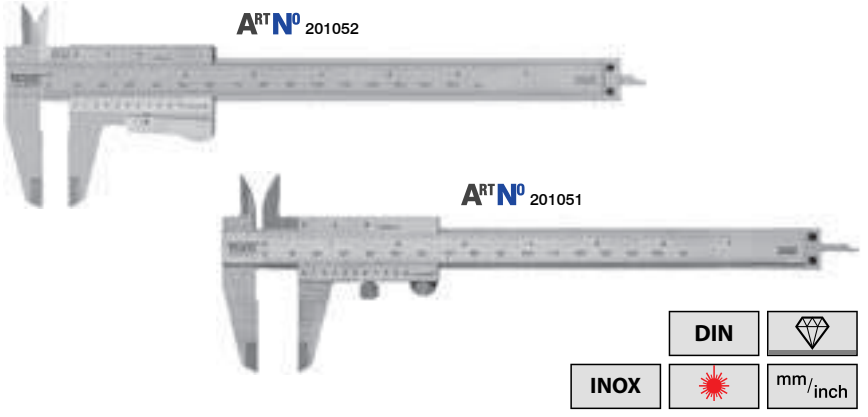
ART NO thumb locking	ART NO fixing screw	mm / inch	mm bottom	inch top	mm	mm	
201020-2	**201030-2**	150 / 6	0.05	1/128	40	16	flat

Pocket Vernier Caliper

DIN 862

- **with parallaxfree reading**

- stainless steel, hardened
- graduation in mm/inch, laser engraved scale
- reading satin chrome finish
- jaws finely ground and lapped, flat depth gauge
- mono-block vernier



ART NO thumb locking	ART NO fixing screw	mm / inch	mm bottom	inch top	mm	mm		CC
201052	**201051**	150 / 6	0.05	1/128	40	16	flat	on request

Pocket Vernier Caliper

- **for DIY requirements**

- reading in mm/cm
- reading satin chrome finish
- hardened
- jaws fine ground
- with fixing screw
- flat depth gauge



ART NO	mm	mm	mm	mm	
201005	150	0.02	40	16	flat

Pocket Vernier Caliper

DIN 862

- **with thump locking**
- **for left-handed use**

- stainless steel, hardened
- graduation in mm/inch, laser engraved scale
- scale and vernier satin chrome finish
- jaws finely ground and lapped
- mono block vernier



mm/inch | INOX | DIN

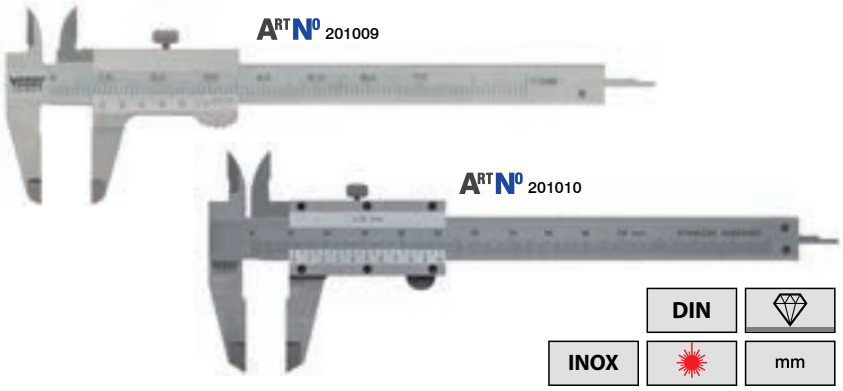
ART NO	mm / inch	mm bottom	inch top	mm	mm		CC
201027	150 / 6	0.05	1/128	40	16	flat	on request

Small Pocket Vernier Caliper

DIN 862

- **for crafts, also very popular promotional item**

- stainless steel, hardened
- scale and vernier satin chrome finish, laser engraved scale
- jaws finely ground and lapped
- with fixing screw



DIN | INOX | mm

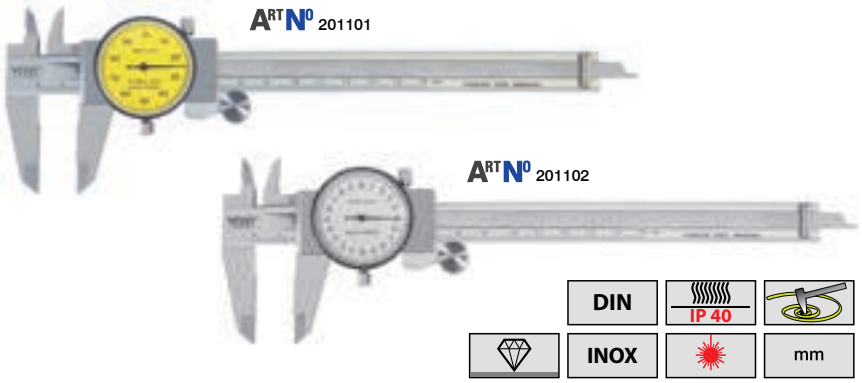
ART NO	mm	mm	mm	mm		CC
201009	70	0.05	20	9	flat	on request
201010	100	0.05	30	13	flat	on request

Dial Caliper • IP40

DIN 862

- **economic model, shock proof mechanics**
- **for fast and accurate reading**

- stainless steel, hardened
- measuring rail matt chrome finish, laser engraved scale
- jaws finely ground and lapped
- dust proof housing, flat depth gauge
- with thumb roll for fine adjustment
- with fixing screw



DIN | IP 40 | INOX | mm

ART NO	mm	mm	mm	mm	mm		CC
201101	150	0.01	1	40	16.5	flat	on request
201108	200	0.01	1	48	19.5	flat	on request
201109	300	0.01	1	62	22	flat	on request
201102	150	0.02	2	40	16.5	flat	on request
201103	200	0.02	2	48	19.5	flat	on request
201104	300	0.02	2	62	22.0	flat	on request

Analog Workshop Calipers

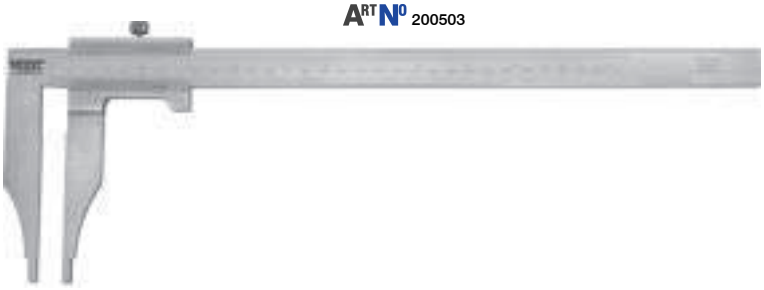
Workshop Caliper

DIN 862 or in special sizes acc. to workshop grade

- **precision class**

- stainless steel, hardened
- scale and vernier satin chrome finish, laser engraved scale
- jaws finely ground
- offset jaws for inside measurements
- with or without fine adjustment, without knife points
- with fixing screw
- mono block vernier
- 0 – 600 mm → mm-pitch
- < 600 mm → cm-pitch

ART NO 200503



ART NO 200533



mm/inch | INOX | DIN

ART NO	ART NO	mm / inch	bottom mm	top inch	mm	ø mm	CC
200501	**200531**	200 / 8	0.05	1/128	65	10	on request
200502	**200532**	250 / 10	0.05	1/128	80	10	on request
200503	**200533**	300 / 12	0.05	1/128	100	10	on request
—	**200533-1**	300 / 12	0.05	1/128	150	20	on request
200504	**200534**	400 / 16	0.05	1/128	100	20	on request
200505	**200535**	500 / 20	0.05	1/128	150	20	on request
—	**200535-1**	500 / 20	0.05	1/128	200	20	on request
200505-2	**200535-2**	500 / 20	0.05	1/128	300	20	on request
200506	**200536**	600 / 24	0.05	1/128	150	20	on request
—	**200536-1**	600 / 24	0.05	1/128	200	20	on request
—	**200536-2**	600 / 24	0.05	1/128	300	20	on request
200508	**200538**	800 / 32	0.05	1/128	150	20	on request
—	**200538-1**	800 / 32	0.05	1/128	200	20	on request
—	**200538-2**	800 / 32	0.05	1/128	300	20	on request
200510	**200540**	1000 / 40	0.05	1/128	150	20	on request
—	**200541**	1000 / 40	0.05	1/128	200	20	on request
—	**200542**	1000 / 40	0.05	1/128	300	20	on request
—	**200543**	1000 / 40	0.05	1/128	500	20	on request
—	**200551**	1250 / 50	0.05	1/128	200	20	on request
200512	**200552**	1500 / 60	0.05	1/128	200	20	on request
—	**200552-1**	1500 / 60	0.05	1/128	300	20	on request
200513	**200553**	2000 / 80	0.05	1/128	200	20	on request
—	**200553-1**	2000 / 80	0.05	1/128	300	20	on request
200514	**200554**	2500 /100	0.05	1/128	200	20	on request
200515	**200555**	3000 /120	0.05	1/128	200	20	on request
—	**200555-1**	3000 /120	0.05	1/128	300	20	on request

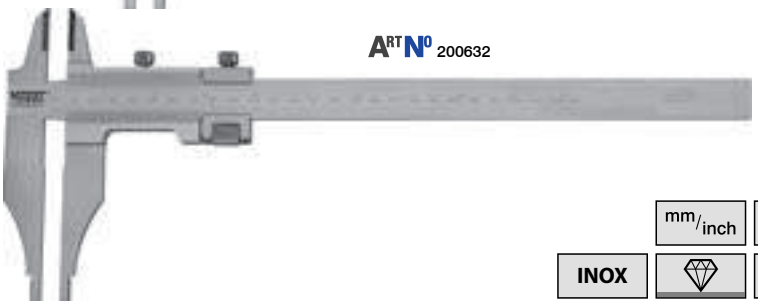
Workshop Caliper

DIN 862 or in special sizes acc. to workshop grade

- **precision class**

- stainless steel, hardened
- scale and vernier satin chrome finish, laser engraved scale
- jaws finely ground
- offset jaws for inside measurements
- with or without fine adjustment, with knife points
- with fixing screw
- mono block vernier



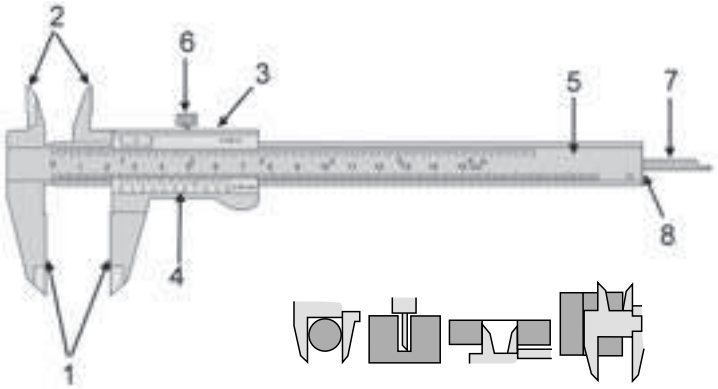


mm/inch | INOX | DIN

ART N°	ART N°	mm / inch	bottom mm	top inch	mm	mm	ø mm	CC
200601	200631	200 / 8	0.05	1/128	65	32	10	on request
200602	200632	250 / 10	0.05	1/128	80	32	10	on request
200603	200633	300 / 12	0.05	1/128	100	32	10	on request
200604	200634	400 / 16	0.05	1/128	125	56	10	on request
200605	200635	500 / 20	0.05	1/128	150	67	20	on request
200606	200636	600 / 24	0.05	1/128	150	67	20	on request
200608	200638	800 / 32	0.05	1/128	150	67	20	on request
200610	200640	1000 / 40	0.05	1/128	150	67	20	on request
200612	200652	1500 / 60	0.05	1/128	200	80	20	on request
200613	200653	2000 / 80	0.05	1/128	200	80	20	on request
200614	200654	2500 / 100	0.05	1/128	200	80	20	on request
200615	200655	3000 / 120	0.05	1/128	200	80	20	on request
200616	200656	3000 / 120	0.05	1/128	300	80	20	on request
200617	200657	3500 / 140	0.05	1/128	200	80	20	on request
200618	200658	3500 / 140	0.05	1/128	300	80	20	on request

Important components of a mechanical caliper

1) measuring jaws for external measurement
2) measuring tips for inside measurement
3) vernier slide
4) vernier
5) measurement rail with scale
6) locking screw
7) depth gauge
8) measuring surface for depth measurement



Groove Calipers

„Absolute“ Digital Caliper for Inside or Outside Grooves • IP54

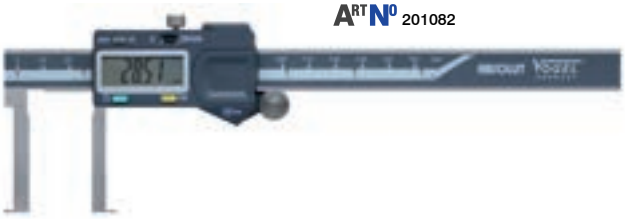
DIN 862

- art. no. 201082 – 201084 for inside groove measurement
- art. no. 201096 – 201098 for outside groove measurement
- top model for industry purposes
- with glass rail for more accuracy
- spray water proof acc. to DIN 40050 / IEC 60529
- with data output, top model (connectivity also for Digimatic measuring devices)

- sturdy quality, stainless steel, hardened
- large LCD display with clear reading, 9 mm digit height
- jaws finely ground and lapped, with fixing screw
- On/Off button, with „ORIGIN“ system, with thumbroll
- mm/inch switchable, zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

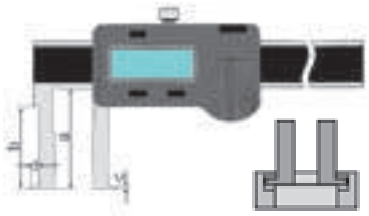
Options
- data transfer via cable, art. no.: 2420194, see page 272
- data transfer via WiFi, art. no.: 2040101, see page 272
- data transfer via Bluetooth®, art. no.: 2023106 + 209000, see page 272

ART NO 201082



ART NO 201097







UNIT | INOX | ABSOLUTE | CR2032 Lithium 3V | IP 54 | DIN | CE

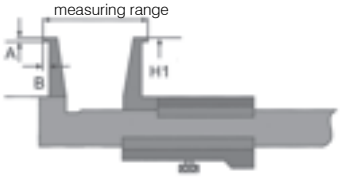
ART NO	type	mm / inch	mm / inch	mm	max. mm / inch	A mm	B mm	C mm	D mm
201082	inside	20 – 150 / 0 – 6	0.01 / 0.0005	0.01	0.03 / 0.0015	36	30	1.00	3.00
201083	inside	25 – 200 / 0 – 8	0.01 / 0.0005	0.01	0.03 / 0.0015	46	39	1.00	7.00
201084	inside	30 – 300 / 0 – 12	0.01 / 0.0005	0.01	0.04 / 0.0020	56	50	1.00	4.50
201096	outside	0 – 150 / 0 – 6	0.01 / 0.0005	0.01	0.03 / 0.0015	40	15	1.00	5.00
201097	outside	0 – 200 / 0 – 8	0.01 / 0.0005	0.01	0.03 / 0.0015	51	19	1.80	7.00
201098	outside	0 – 300 / 0 – 12	0.01 / 0.0005	0.01	0.04 / 0.0020	60	21	1.80	8.00

Groove Caliper

- to measure groove dimensions

- stainless steel, hardened
- scale and vernier satin chrome finish, laser engraved scale
- with fixing screw





mm | INOX

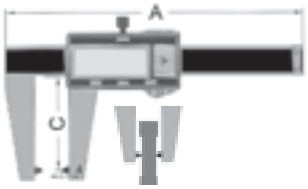
ART NO	mm	mm	A mm	B mm	H1 mm	CC
201075	10 – 160	0.05	0.9	3.5	25	on request
201076	20 – 160	0.05	2	5	40	on request
201077	26 – 200	0.05	3	7	60	on request
201085	30 – 250	0.05	3.5	8.5	78	on request
201086	35 – 300	0.05	5	10	105	on request

Electr. Digital Brake Disc Caliper

acc. to workshop grade

- **fast and easy measurement of the brake disc thickness**

- stainless steel, hardened
- LCD display with clear reading, digit height 9 mm
- conical, hardened knife points
- zero setting at any position, mm/inch switchable
- On/Off button, with HOLD function
- fixing screw
- incl. 2x 1.5 V battery (type LR44, art. no.: 90213), with operation manual





UNIT INOX LR44 1,5V CE

ART NO	mm / inch	mm / inch	mm	max. mm	A mm	C mm	CC
206020	60.00 / 2.40	0.01 / 0.0005	0.01	0.04	150	50	on request

Electr. Digital Brake Disc Caliper • IP54

acc. to workshop grade

- **for quick and easy measurement WITHOUT removing the tires (only aluminium rims)**

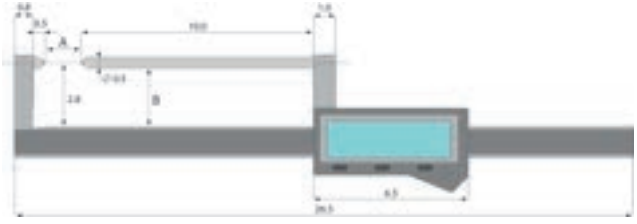
- mechanic in stainless steel, hardened
- LCD display with clear reading, digit height 13 mm
- conical, hardened knife points
- zero setting at any position, mm / inch / fraction switchable
- On/Off button, with HOLD function
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual





fractional display in inches





UNIT INOX CR1632 Lithium 3V IP 54 CE

ART NO	mm / inch	mm / inch	mm	max. mm	A mm	B mm
206022	80.00 / 3.20	0.01 / 0.0005	0.02	0.02	85.10	25.50

Brake Disc Caliper

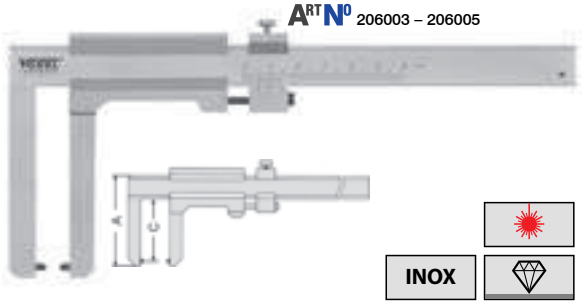
- **with drag pointer**
- **for measuring the thickness of installed brake discs**

- stainless steel, hardened
- scale and vernier satin chrome finish, laser engraved scale
- art. no. 206001 with locking screw

ART NO 206001



ART NO 206003 – 206005



INOX

ART NO	mm	mm	A mm	C mm	mm	CC
206001	0 – 60	0.10	86	74	77	on request
206003	0 – 60	0.10	67	50	55	on request
206004	0 – 60	0.10	102	79	83	on request
206005	0 – 90	0.10	142	119	120	on request

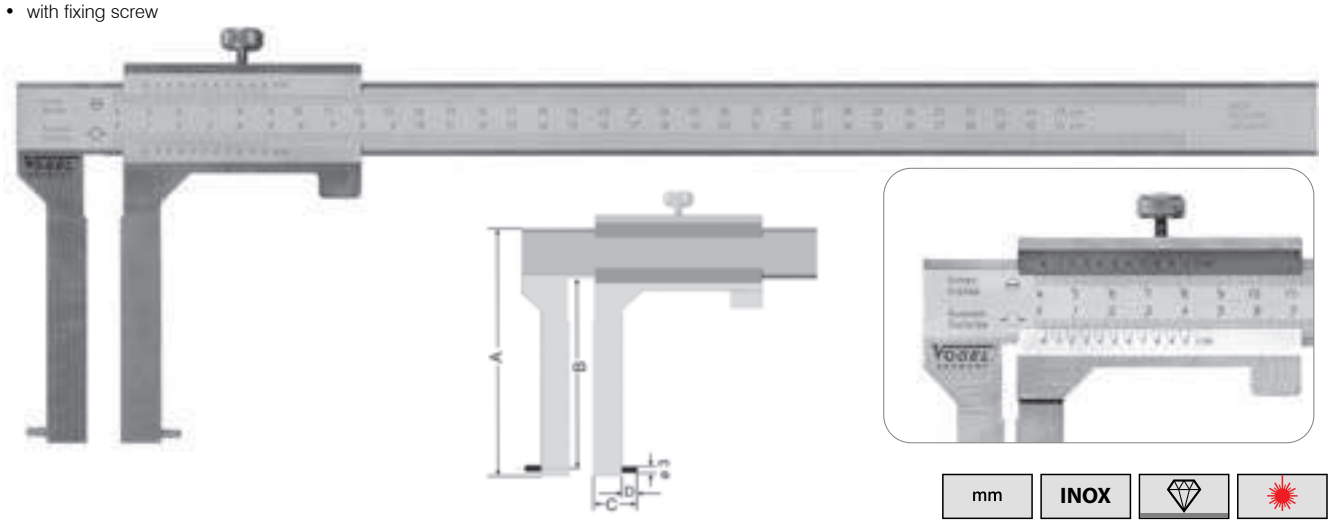
Brake Drum and Depth Calipers

Brake Drum Caliper

acc. to workshop grade

- **for measuring internal and external diameters**

- stainless steel, hardened
- scale and vernier satin chrome finish, laser engraved scale
- with fixing screw



mm | INOX

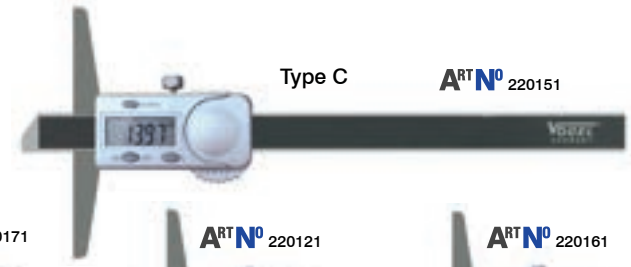
ART NO	inside mm	outside mm	mm	mm	A mm	B mm	C mm	D mm	CC
205203	40 – 300	0 – 300	0.05	93	116	90	20	7	on request
205206	50 – 500	0 – 500	0.05	153	177	150	25	9	on request

Electr. Digital Depth Caliper • IP54

DIN 862

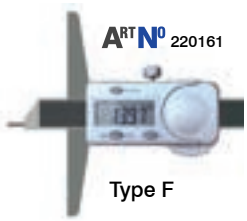
- **standard model for industry and craft**
- **with glass rail for more accuracy**
- **spray water proof acc. to DIN 40050 / IEC 60529**

- sturdy quality, stainless steel, hardened
- large LCD display with clear reading, 9 mm digit height
- stainless, hardened, with fixing screw
- On/Off button
- mm/inch switchable
- zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual









UNIT | INOX | CR2032 Lithium 3V | IP 54 | DIN | CE

ART NO	type	mm / inch	mm / inch	max. mm	mm	type / size of measuring surface mm		CC
220151	C	150 / 6	0.01 / 0.0005	0.02	100		5.5	on request
220152		200 / 8	0.01 / 0.0005	0.03	100		5.5	on request
220153		300 / 12	0.01 / 0.0005	0.03	150		5.5	on request
220171	D	150 / 6	0.01 / 0.0005	0.02	100		6 / 3.50	on request
220172		200 / 8	0.01 / 0.0005	0.03	100		6 / 3.50	on request
220173		300 / 12	0.01 / 0.0005	0.03	150		7 / 3.50	on request
220121	E	150 / 6	0.01 / 0.0005	0.02	100		20.5 x 6 / 3.5	on request
220122		200 / 8	0.01 / 0.0005	0.03	100		20.5 x 6 / 3.5	on request
220123		300 / 12	0.01 / 0.0005	0.03	150		20.5 x 6 / 3.5	on request
220161	F	150 / 6	0.01 / 0.0005	0.02	100		ø 1.5 / 7	on request
220162		200 / 8	0.01 / 0.0005	0.03	100		ø 1.5 / 7	on request
220163		300 / 12	0.01 / 0.0005	0.03	150		ø 1.5 / 7	on request

Electr. Digital Depth Caliper • IP67

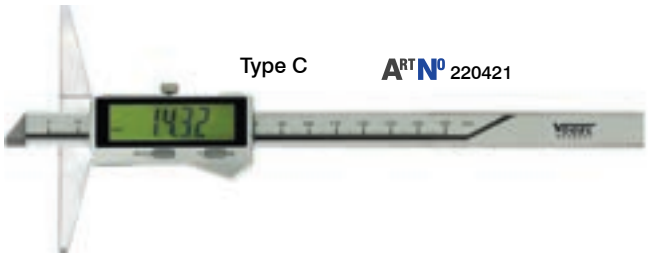
DIN 862

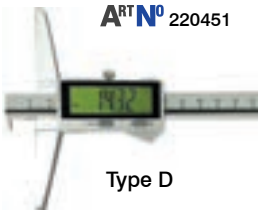
- **with integraded Bluetooth® technology**
- **top model for industry purposes**
- **water- and coolant proof acc. to DIN 40050 / IEC 60529**

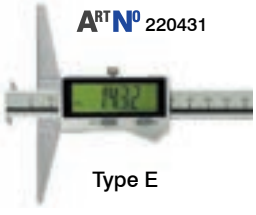
- sturdy quality, stainless steel, hardened
- large LCD display with clear reading, 13 mm digit height
- jaws finely ground and lapped, with fixing screw
- On/Off button, data transfer button
- mm/inch switchable, zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

Option

- data transfer via Bluetooth®
  (art. no.: 2023106, see page 272)









UNIT | INOX | LR44 Silveroxide 1.5V | IP 67 | DIN | CE

ART NO	type	mm / inch	mm	max. mm	mm / inch	type / size of measuring surface mm		CC
220421	C	150 / 6	0.01 / 0.0005	0.03	100		5.5	on request
220422		200 / 8	0.01 / 0.0005	0.03	100		5.5	on request
220423		300 / 12	0.01 / 0.0005	0.04	150		5.5	on request
220451	D	150 / 6	0.01 / 0.0005	0.03	100		5 / 2	on request
220452		200 / 8	0.01 / 0.0005	0.03	100		5 / 2	on request
220453		300 / 12	0.01 / 0.0005	0.04	150		5 / 2	on request
220431	E	150 / 6	0.01 / 0.0005	0.03	100		26.4/ 4	on request
220432		200 / 8	0.01 / 0.0005	0.03	100		26.4 / 4	on request
220433		300 / 12	0.01 / 0.0005	0.04	150		26.4 / 4	on request
220441	F	150 / 6	0.01 / 0.0005	0.03	100		Ø 1.5 / 6	on request
220442		200 / 8	0.01 / 0.0005	0.03	100		Ø 1.5 / 6	on request
220443		300 / 12	0.01 / 0.0005	0.04	150		Ø 1.5 / 6	on request

Electr. Digital Depth Caliper

DIN 862

- **with plastic housing cover**

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



UNIT | INOX | CR2032 Lithium 3V | CE | DIN

ART NO	mm / inch	mm / inch	max. mm	mm	type / size of measuring surface mm		CC
228251	150 / 6	0.01 / 0.0005	0.03	100		6	on request
228252	200 / 8	0.01 / 0.0005	0.03	100		6	on request
228253	300 / 12	0.01 / 0.0005	0.04	100		6	on request

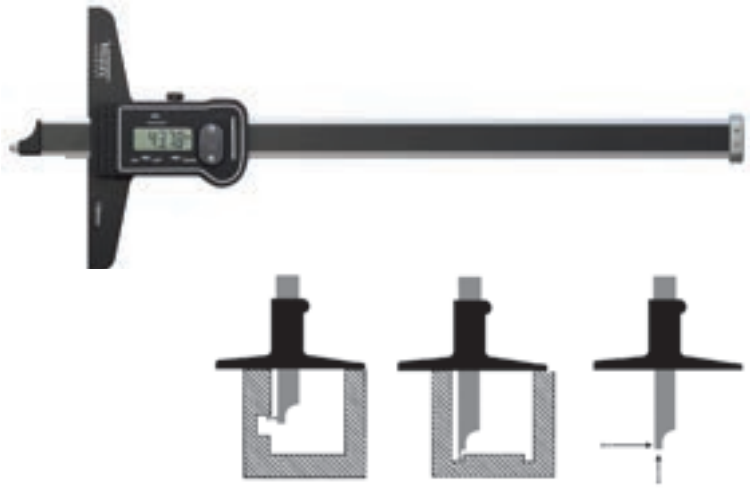
Digital Depth Calipers

Electr. Digital Depth Gauge

acc. to workshop grade

- **modern design, leightweight model**
- **made of anodized hard aluminium**
- **with exchangeable measuring tips (M2.5)**
- **with 3 measuring bridges with different length (150 mm, 300 mm, 450 mm)**

- LCD display with clear reading, digit height 10 mm
- incl. hardened measuring tips with M2.5 thread, exchangeable
- On/Off button, mm/inch switchable, zero setting at any position
- slides perfectly because of double-prismatic-lead
- rail and electronic housing made of anodized aluminium
- incl. 1x 1.5 V battery (type LR44, art.-no.: 90213), with operation manual and hexagon-key



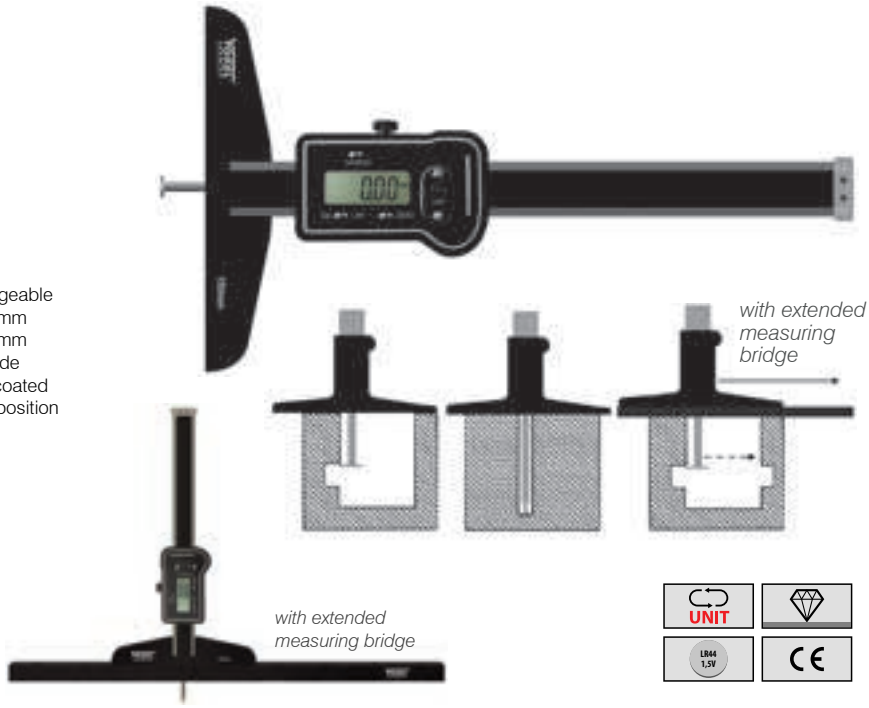
ART NO	mm / inch	mm / inch	mm	max. mm	mm	CC
220880	300 / 12	0.01 / 0.0005	0.01	0.04	150 / 300 / 450	on request
220881	500 / 20	0.01 / 0.0005	0.01	0.05	150 / 300 / 450	on request
220882	800 / 32	0.01 / 0.0005	0.01	0.06	150 / 300 / 450	on request

Electr. Digital Depth Gauge

acc. to workshop grade

- **especially for narrow bore depth**
- **with round depth measuring bar**
- **modern design, leightweight model**
- **made of anodized hard aluminium**
- **with exchangeable measuring tips (M2.5)**
- **with exchangeable disc inserts**
- **incl. 2 measuring bridges**

- LCD display with clear reading, digit height 10 mm
- incl. hardened measuring tips with M2.5 thread, exchangeable
- incl. plate insert with ø 10 mm with measuring rods-ø 4 mm
- incl. plate insert with ø 20 mm with measuring rods-ø 6 mm
- all sliding parts slide in plastic bearing double prism guide
- rail and electronics housing made of aluminium, oxide-coated
- On/Off button, mm/inch switchable, zero setting at any position
- incl. 1x 1.5 V battery (type LR44, art. no.: 90213), with operation manual and hexagon-key
- further probe tips with M2.5 thread see page 136 – 137



ART NO	mm / inch	mm / inch	mm	max. mm	meas.-beam-ø mm	mm	CC
220840	200 / 8	0.01 / 0.0005	0.01	0.03	4	150/350	on request
220841	300 / 12	0.01 / 0.0005	0.01	0.04	4	150/350	on request
220842	500 / 20	0.01 / 0.0005	0.01	0.05	6	150/350	on request
220843	800 / 32	0.01 / 0.0005	0.01	0.06	6	150/350	on request

Depth Caliper

DIN 862

- **suitable for craftsmen and industry**

- stainless steel, hardened, vernier and scale matt chrome finish
- surfaces finely ground, with fixing screw
- mono block vernier, reading 0.05 mm
- straight bar, series 221530, type “C“
- straight and 90°-hook bar, reversible, series 221630, type “A“
- straight and with 2-hook bar, reversible, series 221830, type “B“
- exchangeable tip, reversible, series 221730, type “G“
- fixed tip, (art. no.: 221718), type “F“



ART NO 221718 Type F

ART NO 221532 Type C



ART NO 221632 Type A



ART NO 221732 Type G



ART NO 221832 Type B



INOX DIN

ART NO type C	ART NO type A	ART NO type B	ART NO type G	ART NO type F	mm	mm	mm	CC
—	—	—	—	**221718**	80	0.05	50	on request
221530	**221630**	**221830**	**221730**	—	150	0.05	100	on request
221531	**221631**	**221831**	**221731**	—	200	0.05	100	on request
221535	**221633**	—	**221733**	—	250	0.05	125	on request
221532	**221632**	**221832**	**221732**	—	300	0.05	150	on request
221533	**221634**	—	—	—	400	0.05	150	on request
221534	**221635**	—	**221735**	—	500	0.05	150	on request
221536	**221636**	—	—	—	500	0.05	250	on request
221537	—	—	—	—	800	0.05	250	on request
221538	—	—	—	—	1000	0.05	250	on request

Tread Depth Calipers and Height Calipers

Electr. Digital Tread Depth Gauge

- **suitable for craftsmen and industry**

- large LCD display, digit height 9.5 mm
- On/Off button, zero setting at any position
- mm/inch switchable
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

oval probe tip (4.1 mm x 3.1 mm)

ART NO 214442



ABS plastic version



round probe tip (ø 1.5 mm)

ART NO 214445



mechanical parts and tip in stainless steel

ART NO	mm / inch	mm / inch	mm	mm
214442	0 – 25 / 0 – 1	0.01 / 0.0005	0.03	60
214445	0 – 25 / 0 – 1	0.01 / 0.0005	0.03	45

Electr. Digital Height and Marking Gauge

- **with „ABSOLUT“ system**
- **with data output, top model (connectivity also for Digimatic measuring devices)**

- stainless steel guideway, with fine adjustment
- LCD with clear figures
- On/Off switch, zero-setting at any position
- reading switchable mm / inch
- data-hold, Preset function ±
- max. slidingspeed 1.5 m/sec.
- carbide tipped drawing point, interchangeable
- at „0“-position the drawing point coincides exactly with the base
- base made of stable cast iron, blue lacquered
- with battery 3 V (type CR 2032, art. no.: 90112), with operation manual

Option
- data transfer via cable, art. no.: 3420195, see page 272





ART NO	mm / inch	mm / inch	mm	max. mm	guide bar	size of base	CC
340403	300 / 12	0.01 / 0.0005“	0.02	0.03	20 x 6	140 x 90 x 45	on request

„Absolute“ Electr. Digital Height and Marking Gauge

- **for standard workshop purposes**
- **with integraded Bluetooth® technology**

- guide bar made of stainless steel
- with handwheel for quick adjustment and fine adjustment
- LCD display with clear reading, digit height 14 mm
- reading mm/inch, switchable, zero-setting at any position
- On/Off switch, hold function, with „ORIGIN“ system
- carbide tipped steel scriber, exchangeable, with racks feed
- at zero-position the drawing point coincides exactly with the base
- with built-in connector for external power supply
- with holder for clamping a dial gauge, massive Special cast iron base, lacquered
- with external digital input function for example digital gauges art. series 240250 – 240257
- incl. 1 x 3 V battery (type CR2032, art. no. 90112), with operation manual

Connections: Mini-USB Power Supply





application example

Option
- data transfer via Bluetooth®, art. no.: 2023106 see page 272

UNIT | INOX | ABSOLUTE | Bluetooth | CR2022 Lithium 3V | CE

ART NO	mm / inch	mm / inch	max. mm	mm	guide bar	size of base	CC
341215	300 / 12	0.01 / 0.0005	0.03	0.02	35 x 15	150 x 100 x 50	on request
341216	600 / 24	0.01 / 0.0005	0.05	0.02	35 x 15	150 x 100 x 50	on request

Electr. Digital Height and Marking Gauge

- **with „ABSOLUTE“ system**
- **with data output, top-model**

- stainless steel guideway, with fine adjustment
- LCD display with clear reading
- On/Off switch, zero-setting at any position
- reading switchable mm/inch
- tolerance setting, hold function
- presenting of measured values (± pre-set), measuring direction switchable
- carbide tipped drawing point, interchangeable
- base made of stable cast iron, grey lacquered
- incl. 1x 3 V battery (type CR 2032, art. no.: 90112), with operating manual
- (other sizes available on request, 500, 800, 1500 and 2000 mm)



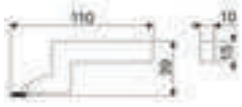
HM-scriber (art. no. 341301-1)



holder for dial indicator



HM-scriber (art. no. 341302-1)



HM-scriber (art. no. 341304-1)

Options
- data transfer via cable, art. no. 209001, see page 272
- HM-scriber
  0 – 300 mm (art. no.:341301-1)
  0 – 500, 0 – 600 mm (art. no.: 341302-1)
  0 – 800, 0 – 1000, 0 – 1500, 0 – 2000 mm (art. no.: 341304-1)
- holder for dial indicator
  0 – 300 mm (art. no.: 341301-3)
  0 – 500, 0 – 600 mm (art. no.: 341302-3)
  0 – 800, 0 – 1000, 0 – 1500, 0 – 2000 mm (art. no.: 341304-3)

CE | UNIT | CR2032 Lithium 3V | ABSOLUTE | USB

ART NO	mm / inch	mm / inch	max. mm	mm	guide bar	size of base	CC
341301	300 / 12	0.02	0.04	0.02	23 x 6	132 x 91 x 44	on request
341303	600 / 24	0.02	0.05	0.02	31 x 10.5	180 x 120 x 54	on request
341305	1000 / 40	0.02	0.07	0.02	50 x 16	250 x 150 x 73	on request

Height Calipers and Gear Teeth Caliper

Universal Height and Marking Gauge

- **for standard workshop purposes**

- guide bar made of special steel
- reading parts matt chrome finish, with fine adjustment
- at zero-position the scriber coincides exactly with the base
- carbide tipped steel scriber, exchangeable
- sturdy base, cast iron made, lacquered
- art. no. 341113 – 341119 with magnifying glass



without magnifying glass



with magnifying glass





ART NO 341110-1


spare part - drawing point

ART NO 341113-1


spare part - drawing point

ART NO 341181


spare part - magnifying glass incl. frame

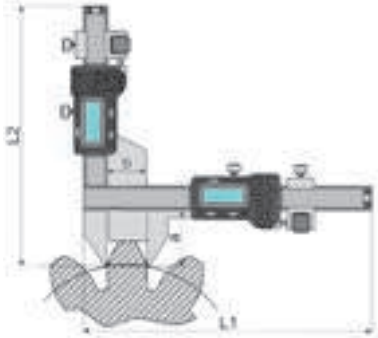
ART NO	mm	mm	max. mm		mm guide bar	mm size of base	CC
341110	300	0.02	0.04	X	20 x 6	110 x 65 x 32	on request
341111	500	0.02	0.05	X	28 x 8	150 x 110 x 50	on request
341113	300	0.02	0.04	✓	20 x 6	110 x 65 x 32	on request
341116	500	0.02	0.05	✓	35 x 12	170 x 110 x 50	on request

Electr. Digital Gear Teeth Caliper

acc. to workshop grade

- **to measure the gear teeth at front-and helical gears, etc.**

- stainless steel, hardened
- LCD display with clear reading
- carbide jaws, finely ground
- with fixing screw and fine adjustment on both sides
- On/Off button, zero setting at any position, mm/inch switchable
- incl. 2x 1.5 V battery (type LR44, art. no.: 90213), with operation manual





UNIT INOX

ART NO	modules mm	mm / inch	mm	max. mm	L1 mm	L2 mm	a mm	b mm	CC
202301	3 – 25	0.01 / 0.0005	0.01	0.03	156	156	30.5	21	on request
202302	5 – 50	0.01 / 0.0005	0.01	0.03	210	185.5	50.5	50.5	on request

Brass Button Gauge

- **also very popular as a promotional gift**

- made of hard brass
- surface finely ground
- with dove-tail guiding, vernier reading
- promotional engraving possible on the front or rear



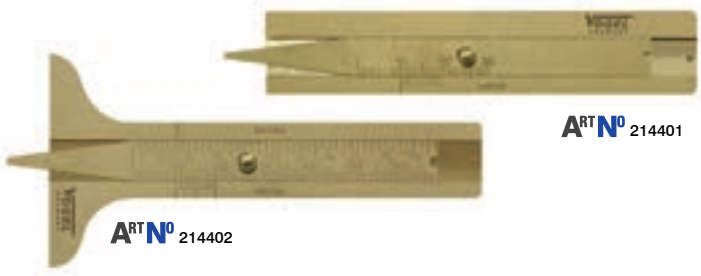
mm/inch

ART NO round jaws	ART NO with inside measurement	mm / inch	mm	mm	
214001	**214301**	80 / 3	0.10	25 *(214001)*	20 *(214301)*
214003	**214303**	100 / 4	0.10	25 *(214003)*	20 *(214303)*

Brass Tread Depth Gauge

- **also very popular as a promotional gift**

- surface finely ground
- with dove-tail guiding, vernier reading
- promotional engraving possible on the front or rear



ART NO	mm / inch	mm	mm
214401	30.00 / 1.20	0.10	20
214402	60.00 / 2.40	0.10	50

Individually laser engraved articles!

We engrave special scales, trademarks, pictures, drawings, etc. according to your specifications.

Laser marking is particularly suitable for permanent, tamperproof engravings..

Thanks to our unique flexibility we can offer to our customers favourable prices for marking single pieces as well as for mass production.



Laser engraving is possible on:

• steel, high-grade steel • cast iron
• non-ferrous metals • plastic • self-adhesive foils

Any questions? We are pleased to advise!

Measuring Tool Sets

Measuring Tool Sets

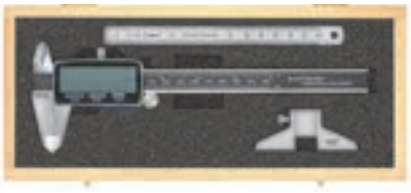
- selection of need-based compilations

Other combinations available on request, please!

ART NO SET	pieces	consisting of	article
330002	10	**Electr. Digital Caliper** • stainless steel,150.00 x 0.01 mm / 6 x 0.0005“	202011-3
		Marking Gauge • stainless steel, 200.0 x 0.1 mm • hardened carbide scriber	335070
		Digital Angle Sensor „Level Box“ • +/- 180 x 0.1°	320010
		Digital Protractor • 0 – 360.00 x 0.05° • 200 x 200 mm	320021
		Workshop Square with back • special steel • 100 x 70 mm	312473
		Carbide Marker • with clip • exchangeable tips • push technic	334615
		Pocket Measuring Tape • 3 meter • self adjusting end-hook • with magnetic dots and lanyard	141003
		Radius Gauge Set • 2 pcs.	472105 472106
		Wood Folding Rule • white • meter • 10 links	1312010200



ART NO SET	pieces	consisting of	article
202091	3	**Digital Caliper** • 150.00 x 0.01 mm • mm / inch • stainless • hardened	202011-3
		Measuring Bridge • 75 mm • stainless • hardened	2002092
		Stainless Steel Rule • 150.00 x 13.00 x 0.50 mm • stainless • mm/mm	1010010015

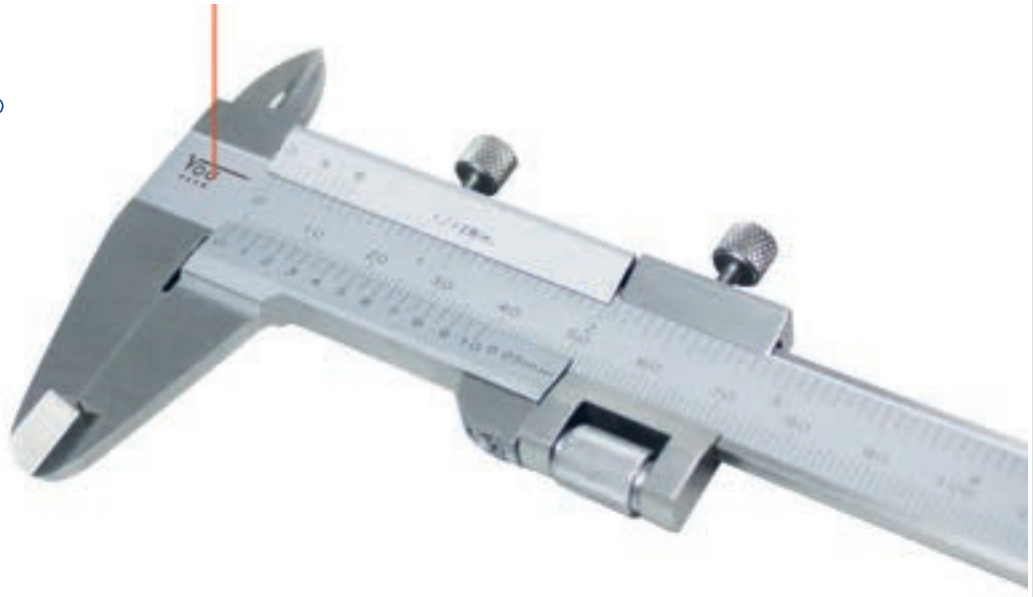


ART NO SET	pieces	consisting of	article
239908	8	**Precision Vernier Caliper** • 150.00 x 0.05 mm • mm / inch • stainless • hardened	201020-2
		Micrometer • 0 – 25.00 mm x 0.01 mm • with carbide surfaces	231351
		Flat Square, DIN 875/2 • 100 x 70 mm	310062
		Knife straight edge, bevelled edge • 100 mm	310323
		Spring Divider • 125 mm	302421
		Carbide Steel Scriber • 150 mm	334608
		Stainless Steel Rule • 200.00 x 13.00 x 0.50 mm • stainless • mm/mm	1010010020
		Center Punch • 120 x ø 10 mm	239999



VOGEL GERMANY

HIGH PRECISION
LASERCENTER



Modern technologies for high precision

Special scales, your logotypes, pictures, drafts etc.
There is nothing impossible.

Laser engraving has a lot of advantages.
One is the top quality, high accuracy and the long-life cycle.

Flexibility is an asset of Vogel Germany for your needs because manufacturing is on a low cost level.



Laser engravings are possible on:

- ✓ steel, high-grade steel, stainless steel
- ✓ cast iron
- ✓ non-ferrous metal
- ✓ special plastic material

0-25 mm 0.001 mm
IP54
25-50mm
0.01mm
IP65
75 - 100 mm 0.001 mm

Micrometers



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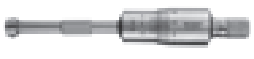
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Sylvac • Professional micrometer S_Mike • IP67

DIN 863

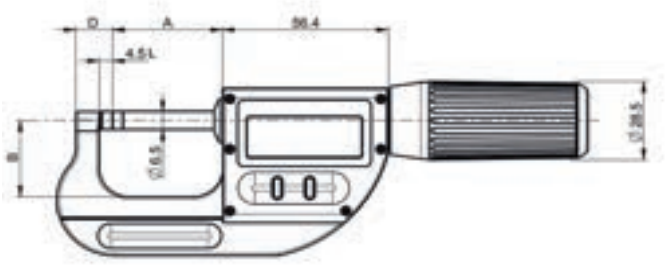
- auto. wake-up by moving the measuring spindle
- large LCD display with clear reading, digit height 8 mm
- sleeping mode after 20 min. of no use
- position memorized in sleeping mode, absolute system S.I.S
- with carbide measuring surfaces, lapped, spindle hardened
- water and coolant resistant, protection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

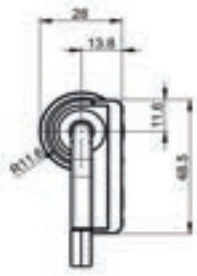
Options

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









ART NO	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. 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 NO	mm / inch	mm / inch	set contents	ø mm	mm	spindle-Ø 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

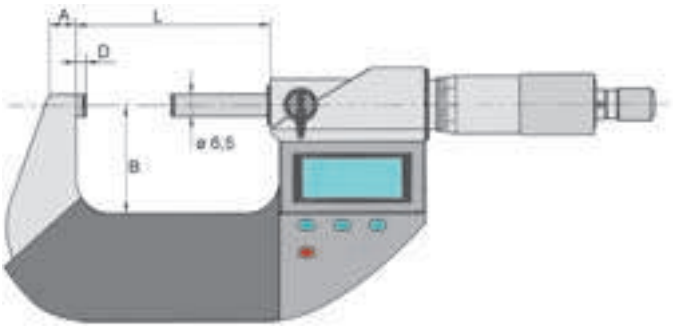
DIN 863

- **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 (typee 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.: 209009





IP 65 | CR2032 Lithium 3V | UNIT | ABS/INC | DIN | CE

ART NO	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. 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

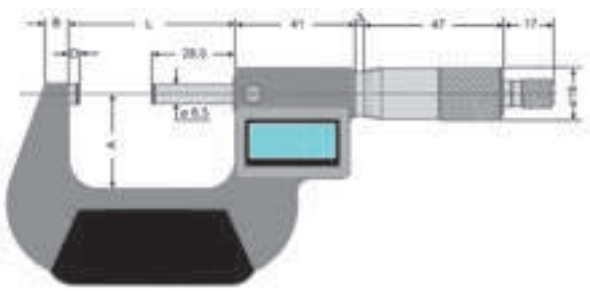
Electr. Digital Micrometer

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





LR44 1,5V | UNIT | CE | DIN

ART NO	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max. 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

Electr. Digital Micrometer • IP40

DIN 863

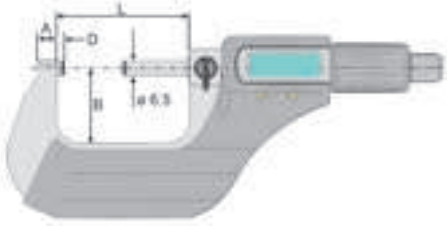
- **dust resistant acc. to DIN 40050 / IEC 60529**
- **Absolute Measurement System (ABS-system)**

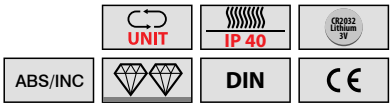
- frame lacquered, with insulation plates, sturdy quality
- large LCD display, clear reading, digit height 8 mm
- with carbide surfaces, lapped, spindle hardened and ground
- On/Off button, zero setting at any position
- mm/inch switchable, ABS/INC measuring system
- locking lever for quick and precise 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	max. 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

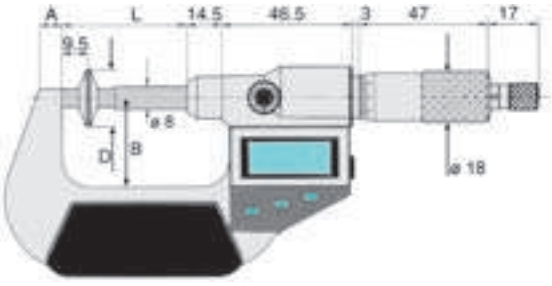
Electr. Digital Micrometer • IP40

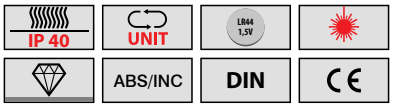
DIN 863

- **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	max. mm	CC
231171	0 – 25 / 0 – 1	0.001 / 0.00005	8.3	32	20	43	0.004	on request
231172	25 – 50 / 1 – 2	0.001 / 0.00005	8.3	44.5	20	68	0.004	on request
231173	50 – 75 / 2 – 3	0.001 / 0.00005	8.3	57	20	93	0.005	on request
231174	75 – 100 / 3 – 4	0.001 / 0.00005	11.5	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

IP 65 | UNIT | CR2032 Lithium 3V | ABS/INC | DIN | CE

ART NO	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

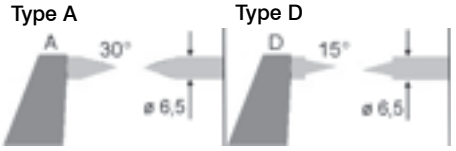
DIN 863

- **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



Type A **Type D**



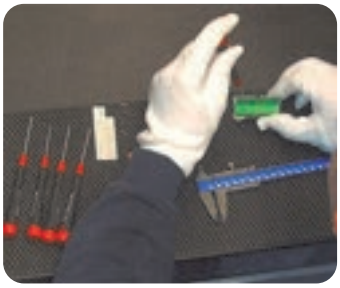
LR44 1,5V | ABS/INC | UNIT | DIN | CE

ART NO Type A	ART NO 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





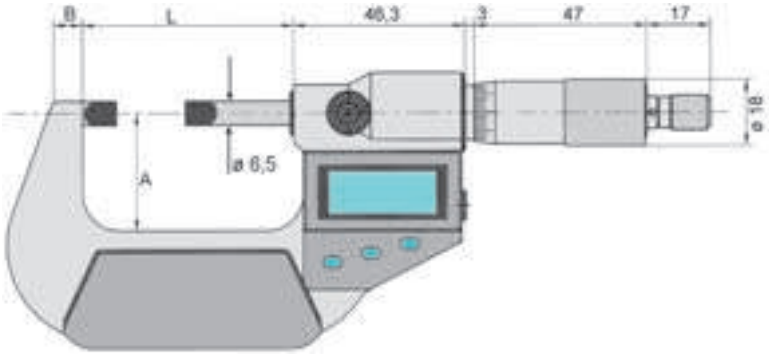
Electr. Digital Micrometer • IP40

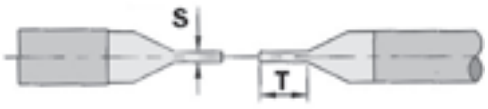
DIN 863

- **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







IP 40 | UNIT | LR44 1,5V | ABS/INC | DIN | CE

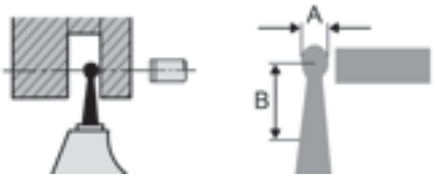
ART NO	mm / inch	mm / inch	A mm	B mm	L mm	S mm	T mm	max. mm	CC
232381	0 – 25 / 0 – 1	0.001 / 0.00005	26.5	6	57	0.75	6.5	0.002	on request
232382	25 – 50 / 1 – 2	0.001 / 0.00005	32	8	82	0.75	6.5	0.002	on request
232383	50 – 75 / 2 – 3	0.001 / 0.00005	44.5	8	107	0.75	6.5	0.003	on request
232384	75 – 100 / 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





LR44 1,5V | ABS/INC | UNIT | CE

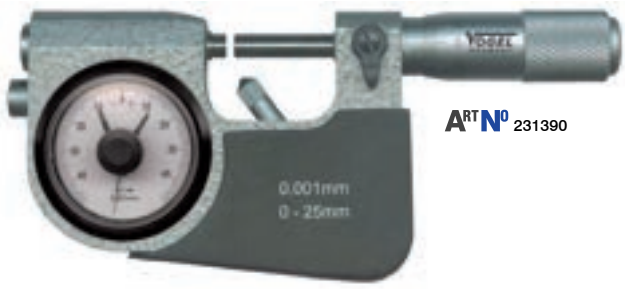
ART NO	mm / inch	mm / inch	ø mm	A ø mm	B mm	max. mm	CC
232813	0 – 25 / 0 – 1	0.001 / 0.00005	18	4.7	25	0.003	on request

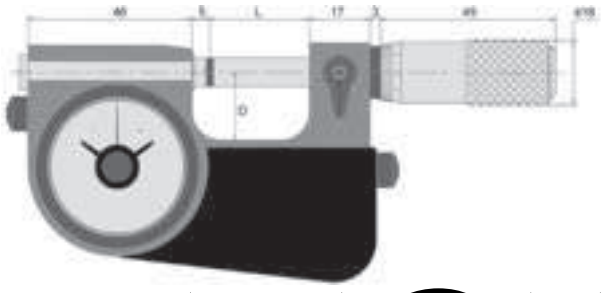
Standard Analog Micrometers

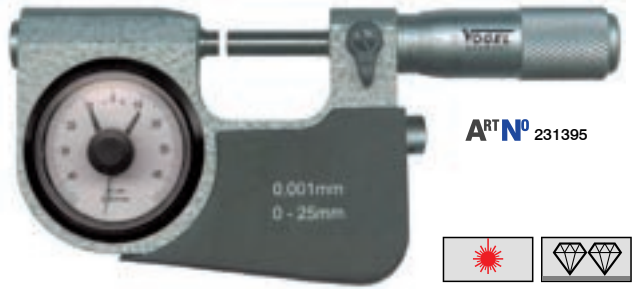
Indicator Snap Micrometers

- **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 ±0.003 mm
- accuracy indicator ±0.001 mm





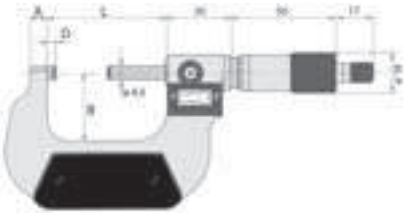


ART N°	mm	drum mm	dial mm	indicator mm	ø mm	L mm	D mm	CC
231390	0 – 25	0.002	0.001	±0.001	18	28.5	19	on request
231395	0 – 25	0.002	0.001	±0.001	18	28.5	19	on request

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 N°	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 N°	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

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



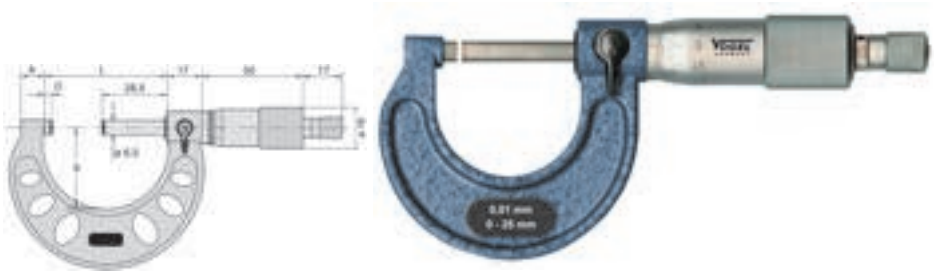
ART NO	mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	CC
231330	0 – 25	0.01	23	0.5	9	32	3	32.5	0.004	on request
231331	25 – 50	0.01	23	0.5	15	33	3	57.5	0.004	on request
231332	50 – 75	0.01	23	0.5	15	40	3	82.5	0.005	on request
231333	75 – 100	0.01	23	0.5	15	55	3	107.5	0.005	on request
231334	100 – 125	0.01	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	ø mm	mm	A mm	B mm	D mm	L mm	max. 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	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	CC
231309	0 – 25	0.01	19.5	0.5	7	24	3	31	0.004	on request

Standard Analog Micrometers

External Micrometers

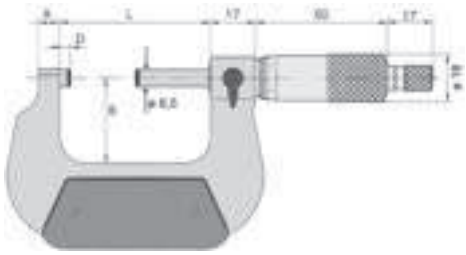
DIN 863

- **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 NO 231351 – 231354





ART NO 231355 – 231358

DIN

ART NO	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 NO 232006





ART NO 232003 – 232004

DIN

ART NO	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

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
- with hand warmth protection handle
- without setting gauges, for setting gauges see page 92





DIN

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
- with hand warmth protection handle
- without setting gauges, for setting gauges see on page 92



DIN

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 NO	mm	mm	ø mm	mm	spindle-ø mm	max. 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!



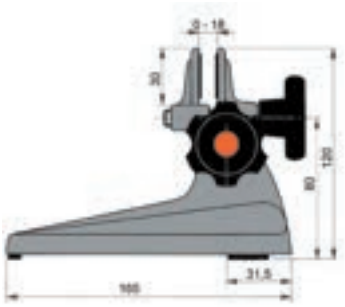
DIN

ART NO	mm	max. mm	CC
2309302	25	0.00125	on request
2309303	50	0.00125	on request
2309304	75	0.0015	on request
2309305	100	0.002	on request
2309306	125	0.0025	on request
2309307	150	0.0025	on request
2309308	175	0.0025	on request
2309309	200	0.003	on request
2309310	225	0.003	on request
2309311	250	0.003	on request
2309312	275	0.003	on request
2309313	300	0.003	on request
2309314	325	0.0035	on request
2309315	350	0.0035	on request
2309316	375	0.0035	on request
2309317	400	0.0035	on request
2309318	425	0.0035	on request
2309319	450	0.0035	on request
2309320	475	0.0035	on request
2309321	500	0.0035	on request
2309322	525	0.0035	on request
2309323	550	0.0035	on request
2309324	575	0.0035	on request
2309325	600	0.0035	on request
2309326	625	0.004	on request

ART NO	mm	max. mm	CC
2309327	650	0.004	on request
2309328	675	0.004	on request
2309329	700	0.004	on request
2309330	725	0.004	on request
2309331	750	0.004	on request
2309332	775	0.004	on request
2309333	800	0.004	on request
2309334	825	0.004	on request
2309335	850	0.004	on request
2309336	875	0.004	on request
2309337	900	0.005	on request
2309338	925	0.005	on request
2309339	950	0.005	on request
2309340	975	0.005	on request
2309341	1000	0.005	on request
2309342	1050	0.005	on request
2309343	1150	0.006	on request
2309344	1250	0.007	on request
2309345	1350	0.007	on request
2309346	1450	0.007	on request
2309347	1550	0.009	on request
2309348	1650	0.01	on request
2309349	1750	0.01	on request
2309350	1850	0.011	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 NO	for micrometer measuring range mm	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





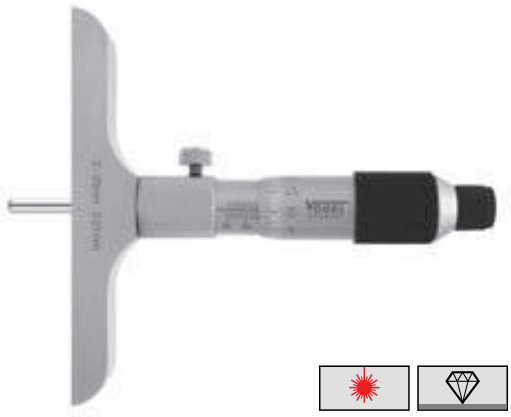
ART NO	for micrometer measuring range mm	mm
239005	0 – 100	117 x 70 x 40

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 NO	mm	mm	ø mm	mm	mm	measuring pin-ø mm	quantity of pins	max. mm	CC
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

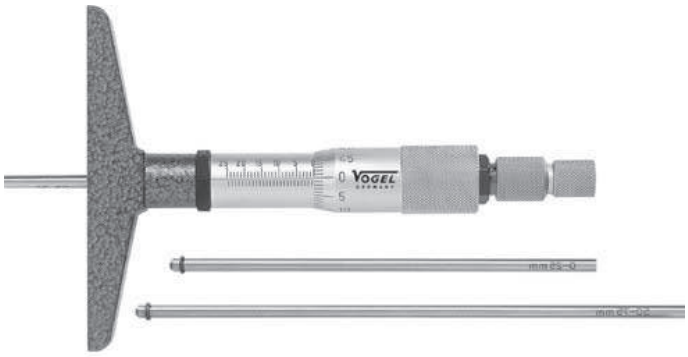
Depth Gauge Micrometers

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

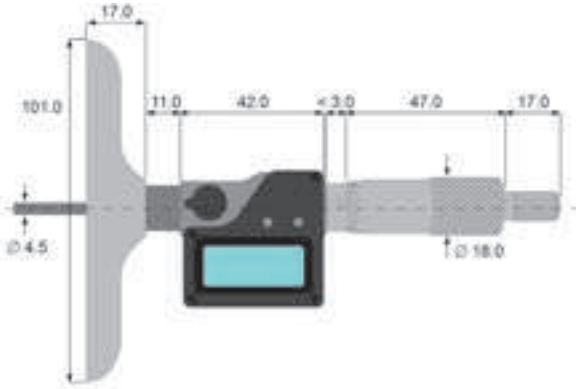


ART NO	mm	mm	ø mm	mm	mm	measuring pin-ø mm	quantity of pins	max. mm	CC
230812	0 – 75	0.01	20	0.5	50 x 17	4.0	3	0.005	on request
230814	0 – 100	0.01	20	0.5	100 x 17	4.0	4	0.005	on request
230815	0 – 150	0.01	20	0.5	100 x 17	4.0	6	0.006	on request
230816	0 – 200	0.01	20	0.5	100 x 17	4.0	8	0.007	on request
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 (typee LR44, art. no.: 90213), with operation manual





ART NO	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

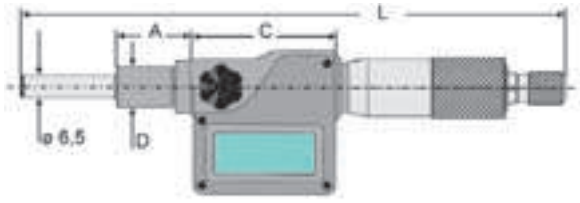
Electr. Digital Micrometer Heads • IP65

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 (typee LR44, art. no.: 90213), with operation manual



UNIT | IP 65 | ABS/INC | DIN | CE

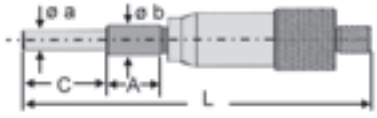
ART NO	mm / inch	mm / inch	ø mm	mm	A mm	C mm	D mm	L mm	max. mm	CC
231287	0 – 25 / 0 – 1	0.001 / 0.00005	18	0.5	17.5	47.6	12	165.5	0.003	on request

Micrometer Head

DIN 863



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



DIN

ART NO	mm	mm	ø mm	mm	A mm	C mm	L mm	ø a mm	ø b mm	max. 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 (typee LR44, art. no.: 90213), with operation manual
- art. no. 231620 with setting ring

Option

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



ART NO 231620

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

UNIT | ABS/INC | CE

ART NO	mm / inch	mm / inch	ø mm	mm	max. 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

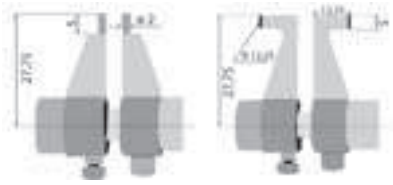
Analog Internal Micrometers

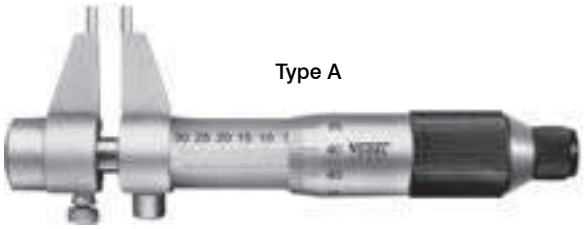
Internal Micrometers

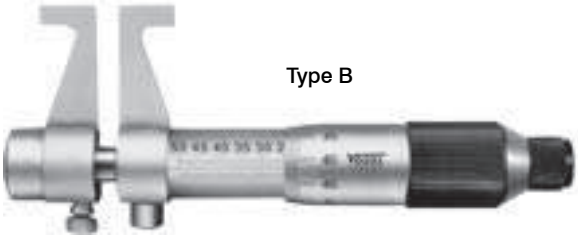
DIN 863

- **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







DIN

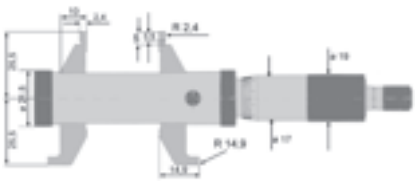
ART NO	mm	Type	mm	ø mm	mm	mm	max. mm	CC
231611	5 – 30	A	0.01	18	0.5	5	0.005	on request
231612	25 – 50	B	0.01	18	0.5	25	0.006	on request
231613	50 – 75	B	0.01	18	0.5	—	0.007	on request
231614	75 – 100	B	0.01	18	0.5	—	0.008	on request
231615	5 – 100 (Set)	A + B	0.01	18	0.5	5 + 25	0.005 / 0.006 / 0.007 / 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	CC
230610	5 – 55	0.01	0.5	30	0.006	on request

Internal Micrometers

DIN 863

- drum and sleeve matt chrome finish
- carbide equipped measuring heads, spherically lapped, ø 6 mm
- from up 100 mm with clamping ring and with insulation handle







Other sizes available on request!

DIN

ART NO	mm	mm	mm	ø D mm	L mm	max. mm	CC
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, ø 7 x 6 mm
- high accuracy because of spring loaded measuring end
- with insulation handle
- individual packed extensions are available on request





DIN

ART NO	mm	mm	mm	quantity of anvils with ...		max. mm	CC
				... tube-ø 17 mm	... tube-ø 32 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

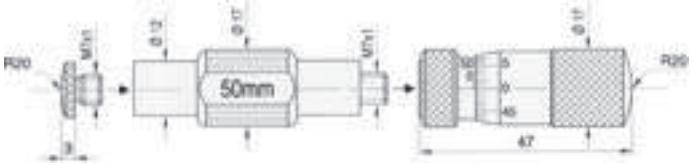
Internal Micrometer Sets

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 NO	mm	mm	mm	quantity of anvils with tube-ø 17 mm	max. mm	CC
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 integraded 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



UNIT | IP 67 | Bluetooth | CE | CC

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 integraded 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 see above



UNIT | IP 67 | Bluetooth | CE | CC

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 integraded 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	max. mm	meas. depth mm	ø mm	CC
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 integraded 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	max. mm	meas.depth mm	meas. heads amount	quantity	CC
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 integraded 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

UNIT | CR2032 Lithium 3V | IP 67 | Bluetooth | PROXIMITY | CE | CC

ART NO	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

UNIT | LR44 1,5V | IP 65 | PROXIMITY | CE | CC

ART NO	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 NO	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 NO	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 NO	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 NO
	**230658**

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

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

ART NO	ø mm	CC
230770-3000	300	inclusive



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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, ± 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

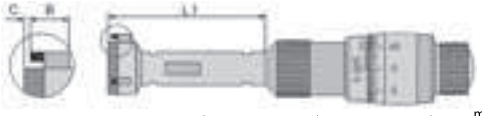
3-Point Bore Micrometers

- **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	max. mm	meas.-depth mm	meas.-heads amount	quantity	CC
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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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 NO 472030







ART NO 472031

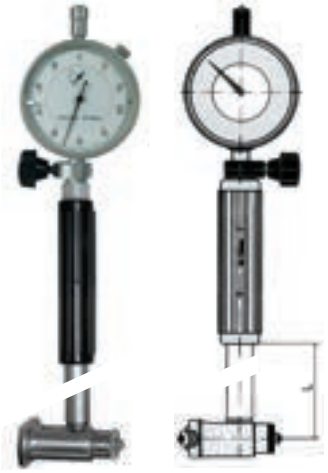


ART NO	Set / mm	mm	measuring depth (L) mm	A mm	B mm
472030	8 – 150	8 – 12.7 12.7 – 19 19 – 32 32 – 54 54 – 90 90 – 150	102 102 102 127 127 127	4 5 5 7.5 7.5 7.5	3 4 4 6 6 6
472031	8 – 150	8 – 12.7 12.7 – 19 19 – 32 32 – 54 54 – 90 90 – 150	300 300 300 300 300 300	4 5 5 7.5 7.5 7.5	3 4 4 6 6 6

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 ponits
- with operation manual



ART NO 237011 – 237012



ART NO 237013



ART NO 237014 – 237017



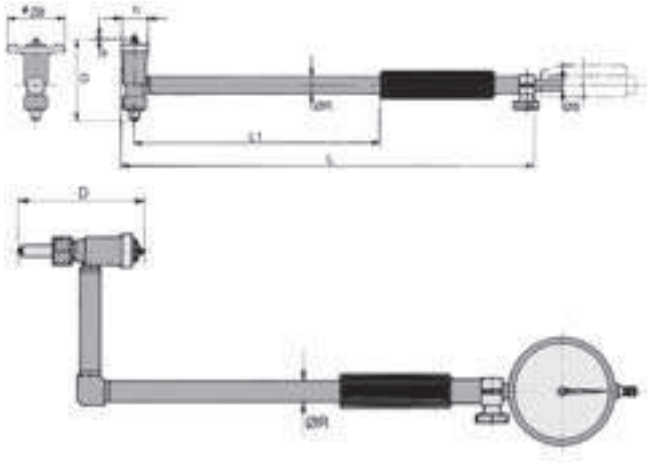
ART NO	mm	mm	quantity of contact points	quantity of distance plates	L mm	CC
237011	10 – 18	0.01	9	1	50	on request
237012	18 – 35	0.01	7	2	142	on request
237013	35 – 50	0.01	5	2	155	on request
237014	50 – 100	0.01	7	2	200	on request
237015	50 – 160	0.01	8	2	200	on request
237016	100 – 160	0.01	8	2	205	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 NO steel contact points	ART NO 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 NO	mm	pipe-ø mm	ART NO	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**

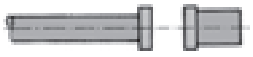
- measuring surfaces hardend, ground and lapped
- spindle and probe made of stainless steel, measuring pressure approx. 1 N
- zero setting of the display by rotating the knurled outer ring
- different but **not** exchangeable probes are available

The probe typee "F" is delivered as standard!



ART NO	mm	mm	throad 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 (typee CR2032, art. no.: 90112), with operation manual



example of application



UNIT | CR2032 Lithium 3V | CE

ART NO	mm / inch	mm / inch	mm	max. mm	throad 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



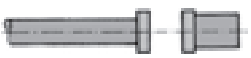
ART NO 240403



DIN

ART NO	mm	mm	throad depth mm	available probes	mm	CC
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

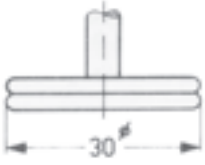


type M



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 NO	mm	mm	type	throat depth mm	available probes	mm	CC
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

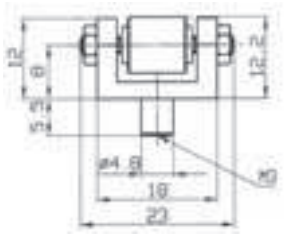
Thickness Gauges

Käfer • Thickness Gauges with Wheels

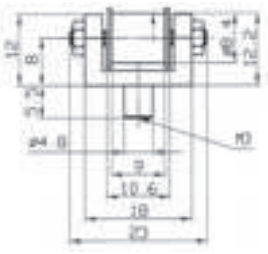
- **designed for the measuring of threads, wires, strings, foils, etc.**
- **as special version with side discs on the lower wheel available**

- 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 NO	mm	mm	size of wheels length x ø mm	throat depth mm	side discs yes	side discs no	mm	CC
240425	0 – 5	0.01	8.7 x 8.4	50	—	X	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 NO	mm	mm	graduation mm	throat depth mm	mm	CC
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-ø 10 mm



example of application



ART NO	mm	mm	graduation mm	mm	outer ring-ø mm	CC
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





DIN

ART NO	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
- sratch-resistant, black anodized surface
- laser engraved, clear reading scale

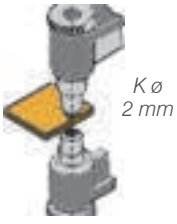


ART NO	mm	mm	total length mm
303306	120	0.1	190
303307	160	0.1	250
303308	200	0.1	310
303309	250	0.1	380
303310	300	0.1	460

Quicktest “Pocotest“

- **universal and handy pocket measuring instrument**

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



K ø 2 mm



ART NO	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

Kroeplin • Quicktest Gauge “Oditest“ • IP65

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

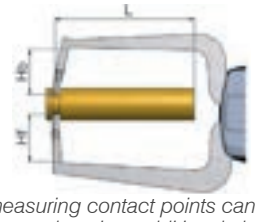
- water proof
- tungsten carbide measuring contact points
- with moveable arm, with tolerance fingers
- zero setting by rotating the knurled outer ring

ART NO 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
				



measuring contact points can be changed against additional charge

IP 65 CC

ART NO	mm	mm	form D	L mm	Hb mm	Hf mm	F min. N	F max. N	max. mm	CC
240435	0 – 10	0.005	6 / ø 6	35	19.1	18.6	1.2	1.6	0.02	inclusive
240435-1	0 – 20	0.01	6 / ø 10	85	24.7	24.6	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	167	30	30	0.8	1.7	0.05	inclusive
240439	0 – 50	0.05	18	169	30	4.3	0.8	1.7	0.05	inclusive
240440	50 – 100	0.05	14 / ø 5	169	30	30	0.8	1.7	0.075	inclusive
240441	100 – 150	0.05	14 / ø 5	169	30	30	0.8	1.7	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.

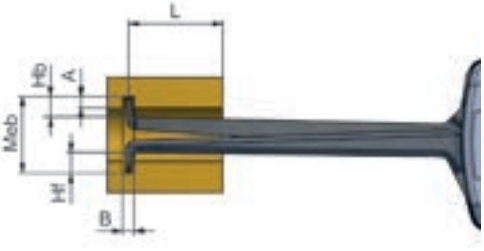
- water and colant proof acc. to DIN 40050 / IEC 60529
- tungsten carbide measuring contact points
- with steel thread drive
- with moveable contact arm
- with tolerance fingers
- incl. operation manual



IP 65 | CC

D = form of measuring contact points

form 1 S R 0.10 mm	**form 2** carbide ball ø 1.00 mm	**form 3** carbide ball ø 1.00 mm	**form 4** carbide ball ø 0.60 mm	**form 5** carbide ball ø 1.00 mm
				



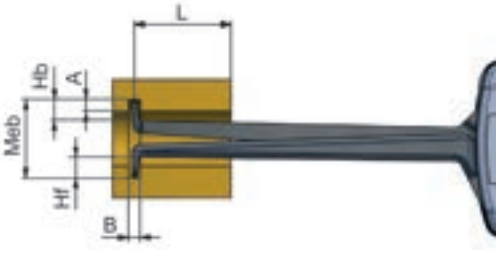
ART NO	mm	mm	form	L mm	A mm	B mm	Hb mm	Hf mm	F min. N	F max. N	max. mm	CC
240530	2.5 – 12.5	0.005	1	12	0.7	0.4	0.9	0.9	0.8	1.2	0.015	inclusive
240532	5 – 15	0.005	4	35	2.3	0.8	2.5	2.5	0.8	1.2	0.015	inclusive

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





IP 65 | CC

ART NO	mm	mm	form	L mm	A mm	B mm	Hb mm	Hf mm	F min. N	F max. N	max. mm	CC
240539	10 – 30	0.01	2	85	5.2	1.2	5.3	5.3	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	8.5	8.5	1.1	1.6	0.03	inclusive
240543	50 – 70	0.01	5	85	8.3	1.2	8.5	8.5	1.1	1.6	0.03	inclusive
240544	60 – 80	0.01	5	85	8.3	1.2	8.5	8.5	1.1	1.6	0.03	inclusive
240545	70 – 90	0.01	5	85	8.3	1.2	8.5	8.5	1.1	1.6	0.03	inclusive
240546	80 – 100	0.01	5	85	8.3	1.2	8.5	8.5	1.1	1.6	0.03	inclusive

Quick Test Gauges

Kroeplin • Electr. Digital Quicktest Gauge • IP67

- **with analogous and digital display**
- **with USB interface, with Mitutoyo interface and Bluetooth (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 (0.001 / 0.002 / 0.005 / 0.01 / 0.02 / 0.05 mm)
- incl. 2x battery (type AAA, art. no.: 90002), and operation manual

ART NO 240300

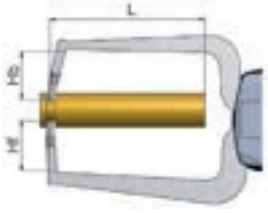


ART NO 240310



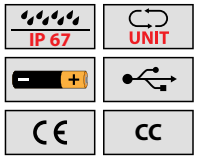
D = form of measuring contact points **external**

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
				



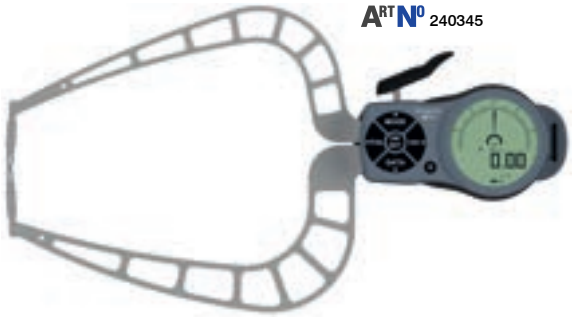
ART NO	mm	mm	form D	L mm	Hb mm	Hf mm	F min. N	F max. N	max. mm	CC
external quicktest gauge										
240300	0 – 10	0.005	E / ø 1.5	35	19.1	18.6	1.2	1.6	0.005	inclusive
240301	0 – 10	0.005	C / ø 6	35	21.7	14.8	0.8	1.2	0.005	inclusive
240302	0 – 20	0.01	E / ø 1.5	85	24.6	24.6	1.1	1.6	0.01	inclusive
240303	0 – 20	0.01	F	85	24.6	2.5	1.1	1.6	0.01	inclusive
240307	0 – 20	0.01	C / ø 10	85	28.2	20.7	1.1	1.6	0.01	inclusive
240304	0 – 30	0.02	E / ø 3	116	30	30	0.9	1.6	0.02	inclusive
240305	0 – 30	0.02	A / ø 3	116	30	4	0.9	1.6	0.02	inclusive
240306	0 – 30	0.02	D	116	30	24	0.9	1.6	0.02	inclusive
internal quicktest gauge										
240310	2,5 – 12,5	0,005	G	12	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	5,3	5,3	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	8,5	8,5	1,1	1,6	0,01	inclusive
240316	50 – 70	0,01	L	85	8,5	8,5	1,1	1,6	0,01	inclusive
240317	60 – 80	0,01	L	85	8,5	8,5	1,1	1,6	0,01	inclusive
240318	70 – 90	0,01	L	85	8,5	8,5	1,1	1,6	0,01	inclusive
240324	80 – 100	0,01	L	85	8,5	8,5	1,1	1,6	0,01	inclusive
240319	13 – 43	0,02	H / ø 1,3	127	5,5	5,5	1,2	1,7	0,02	inclusive
240320	30 – 60	0,02	L / ø 1,5	132	6,5	6,5	1,2	1,7	0,02	inclusive
240321	50 – 80	0,02	L / ø 2	132	8,5	8,5	1,2	1,7	0,02	inclusive
240322	70 – 100	0,02	L / ø 2	132	8,5	8,5	1,2	1,7	0,02	inclusive
240323	90 – 120	0,02	L / ø 2	132	8,5	8,5	1,2	1,7	0,02	inclusive

Kroeplin • Electr. Digital Quicktest Gauge • IP67

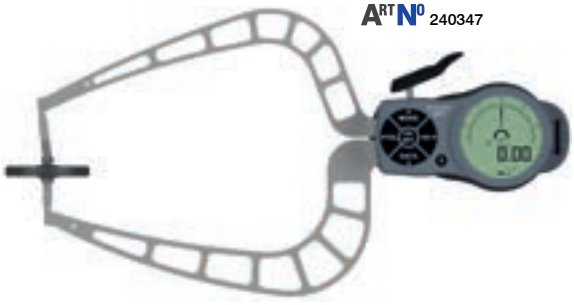
- **with extra long contact arms**
- **with analogous and digital display**
- **with USB interface, with Mitutoyo interface and Bluetooth (as accessories available)**

- 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 (0.001 / 0.002 / 0.005 / 0.01 / 0.02 / 0.05 mm)
- numeric interval switch, repatability ±0.04 mm
- incl. 1x 1.5 V Battery (typee AA, art. no.: 90003), with operation manual

ART NO 240345



ART NO 240347

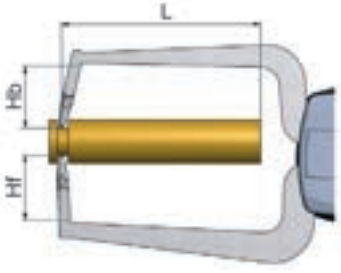


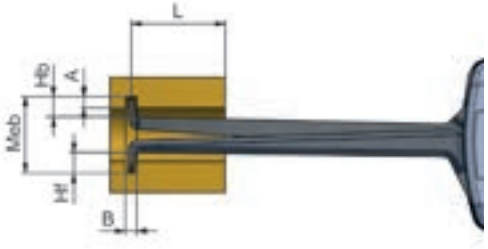
ART NO 240337



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 D** disc ø 50.00 mm
			





UNIT · IP 67 · CE · CC

ART NO	mm	mm	form	L mm	Hb mm	Hf mm	F min. N	F max. N	max. mm	CC
external quicktest gauge										
240345	0 – 50	0.02	E	167	30	30	0.8	1.7	0.06	inclusive
240347	0 – 50	0.02	D	167	36	24	0.8	1.7	0.08	inclusive
internal quicktest gauge										
240336	15 – 65	0.02	K	188	6.0	6.0	1	1.8	0.06	inclusive
240337	40 – 90	0.02	L	192	8.5	8.5	1	1.8	0.06	inclusive


0.01mm 0-3mm
0-1mm
8 JEWELS
0.001mm
Vmade

Dial Indicators and Stands



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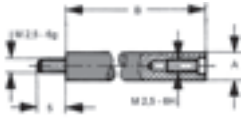
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Digital Dial Indicators

Electr. Digital Dial Indicator

- **standard model for industry and craft**
- **with data output**

- aluminium housing with sturdy plastic cover
- large LCD display with clear reading, digit height 10 mm
- stem and spindle stainless, hardened and lapped
- exchangeable probe tips, M2.5
- On/Off button, ABS and Preset function
- zero setting at any position, mm/inch switchable
- with bar display (art. no.: 242055, 242056 and 242057)
- min./max., tol. and set function (selection and indication of tolerance limits)
- with flat backcover and backcover with lug
- incl. 1x 3 V battery (Type CR2032, art. no.: 90112), with operation manual

Option
- data transfer via cable, art. no.: 2420192, see page 272


ART NO 242060

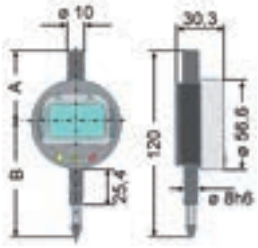

ART NO 242055

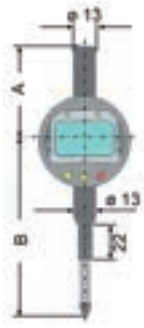

ART NO 242160

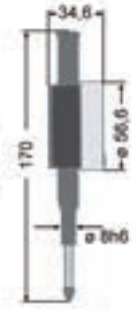

ART NO 242056

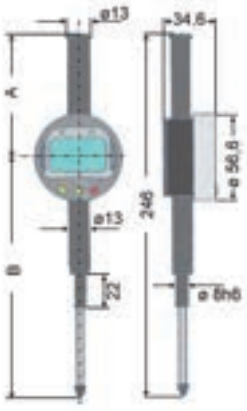

ART NO 242161

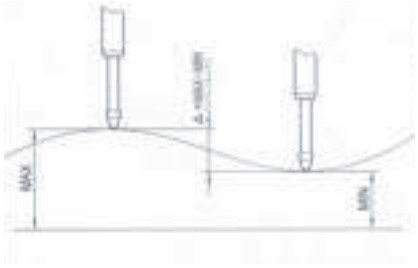

ART NO 242057











CR2032 Lithium 3V · UNIT · CE

ART NO	mm / inch	mm / inch	mm	max. mm	measuring force N	min/max tol/set	A mm	B mm	CC
242060	0 – 12.70 / 0 – 0.50	0.010 / 0.00050	0.01	0.01	< 1.50	✓	50	75	on request
242055	0 – 12.70 / 0 – 0.50	0.001 / 0.00005	0.003	0.05	< 1.50	✓	50	75	on request
242160	0 – 12.70 / 0 – 0.50	0.001 / 0.00005	0.003	0.05	< 1.50	✓	50	75	on request
242163	0 – 25.40 / 0 – 1.00	0.010 / 0.00050	0.01	0.015	< 1.50	✓	60	120	on request
242056	0 – 25.40 / 0 – 1.00	0.001 / 0.00005	0.003	0.05	< 1.50	✓	60	110	on request
242161	0 – 25.40 / 0 – 1.00	0.001 / 0.00005	0.003	0.06	< 1.50	✓	60	110	on request
242164	0 – 50.80 / 0 – 2.00	0.010 / 0.00050	0.01	0.03	< 1.50	✓	85	155	on request
242057	0 – 50.80 / 0 – 2.00	0.001 / 0.00005	0.003	0.05	< 1.50	✓	90	160	on request
242162	0 – 50.80 / 0 – 2.00	0.001 / 0.00005	0.03	0.08	< 1.50	✓	85	155	on request

„Absolute“ Electr. Digital Dial Indicator

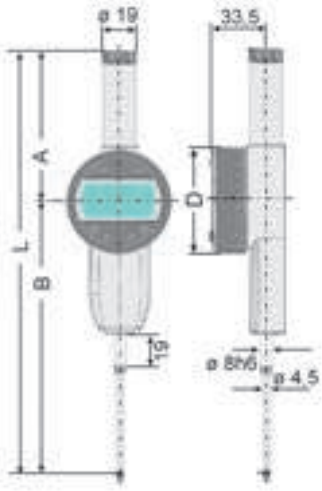
- **top model for industry purposes**
- **with optical tolerance alarm by LED signal**
- **with Bluetooth® data output**
- **spray water proof, acc. to 40050 / IEC 60529**

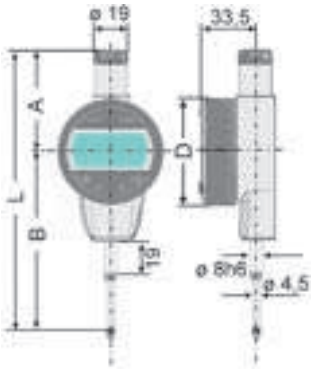
- mechanical parts in stainless steel, hardened, IP51 protected
- housing IP54 protected, front plate made of plastic
- large LCD display with clear reading, 10 mm digit height
- On/Off button, LED signal for data transmitting and tolerance range
- with PRESET/ORIGIN/ABS/INC-system
- mm/inch switchable, from up 25 mm with lifting device
- incl. 3 V battery (type CR2032, art. no.: 90112), with operation manual

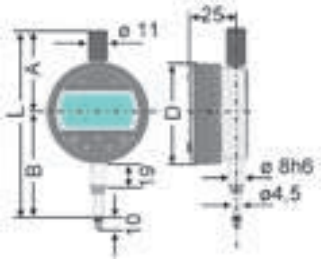
Options
- data transfer via cable, art. no.: 3420195, see page 272
- data transfer via WiFi, art. no.: 2040102, see page 272
- data transfer via Bluetooth®, art. no.: 2023106, see page 272











UNIT | INOX | Bluetooth | ABSOLUTE | ORIGIN | CR2032 Lithium 3V | CE

ART NO	mm / inch	mm / inch	mm	max. mm	L mm	A mm	B mm	D mm	CC
240280	12.5 / 0.5	0.01 / 0.0005	0.002	0.01	129.2	60.2	69.0	60.1	on request
240285	12.5 / 0.5	0.001 / 0.00005	0.002	0.004	129.2	60.2	69.0	60.1	on request
240281	25.0 / 1.0	0.01 / 0.0005	0.002	0.01	159.2	57.7	101.5	60.1	on request
240286	25.0 / 1.0	0.001 / 0.00005	0.002	0.004	159.2	57.7	101.5	60.1	on request
240282	50.0 / 2.0	0.01 / 0.0005	0.002	0.015	236.2	83.7	152.5	60.1	on request
240287	50.0 / 2.0	0.001 / 0.00005	0.002	0.005	236.2	83.7	152.5	60.1	on request

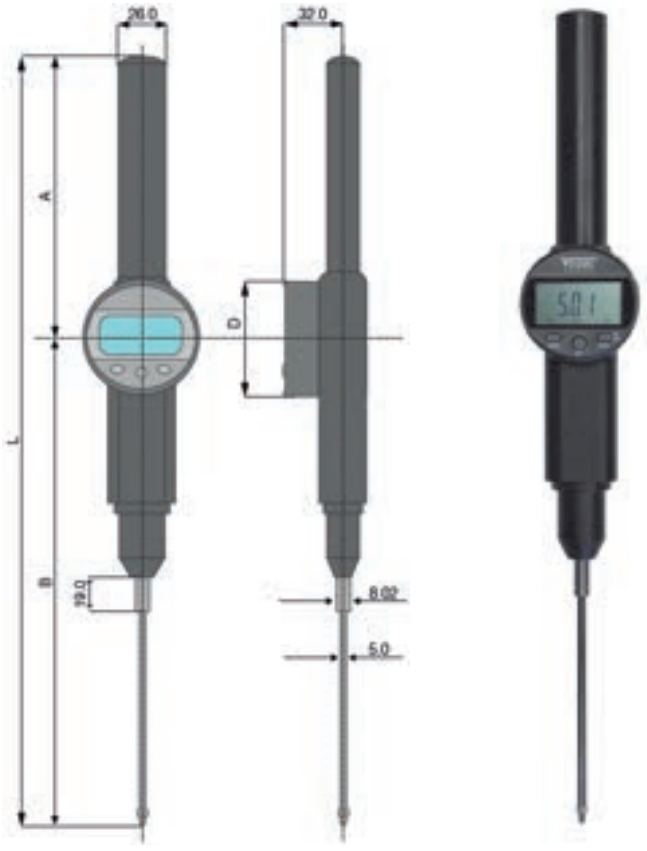
Digital Dial Indicators

„Absolute“ Electr. Digital Dial Indicator • IP54

- **top model for industry purposes**
- **with data output**
- **spray water proof, acc. to 40050 / IEC 60529**

- mechanical parts in stainless steel, hardened, IP51 protected
- housing IP54 protected, front plate made of plastic
- large LCD display with clear reading, 10 mm digit height
- On/Off button, with tolerance presetting and display for tolerance range
- ORIGIN/ABS/INC-system
- mm/inch switchable
- incl. 1x 3 V battery (Type CR2032, art. no.: 90112), with operation manual

Option
- data transfer via cable, art. no.: 2420192, see page 272



UNIT · ORIGIN · ABSOLUTE · IP 54 · DIN · CE · CR2032 Lithium 3V

ART NO	mm / inch	mm / inch	mm	max. mm	L mm	A mm	B mm	D mm	CC
240270	100 / 4	0.01 / 0.0005	0.002	0.01	405	150	265	57	on request

Electr. Digital Small Dial Indicator • IP40

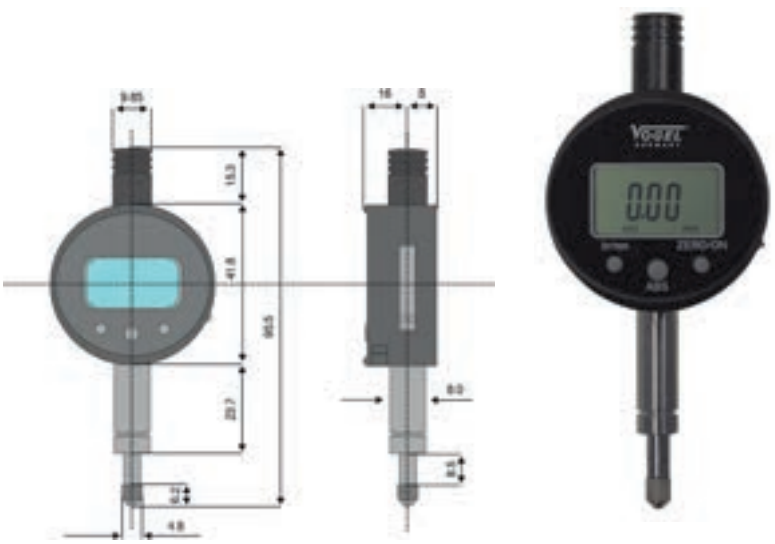
- **with data output**

- mechanical parts in stainless steel, hardened
- housing made of aluminium, front plate made of plastic
- LCD display with clear reading, digit height 8 mm
- On/Off button, ABS/INC measurement system
- mm/inch switchable, +/- pre-select value, PRESET
- switchable measuring direction
- incl. 1x 3 V battery (Type CR1632, art. no.: 90101), incl. operation manual

Option
- data transfer via cable, art. no.: 2420192, see page 272



Display



UNIT · IP 40 · CR2032 Lithium 3V · CE

ART NO	mm / inch	mm / inch	mm	max. mm	CC
240235	5 / 0.2	0.01 / 0.0005	0.02	0.01	on request

Sylvac • Electr. Digital Indicators S_Dial Work, Advanced • IP54

ART Nº 240266

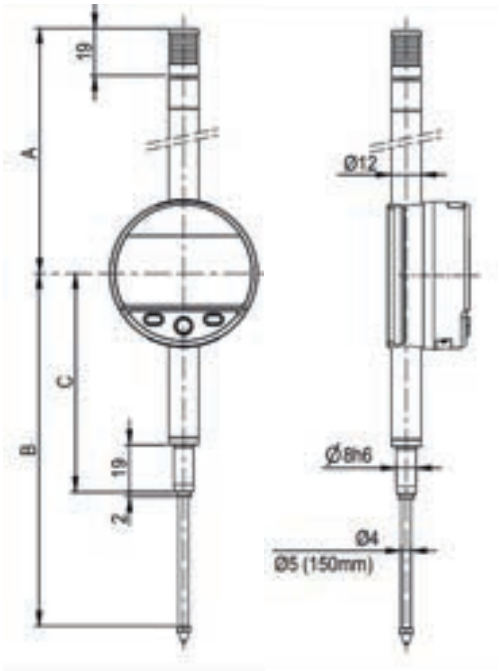
ART Nº 240242

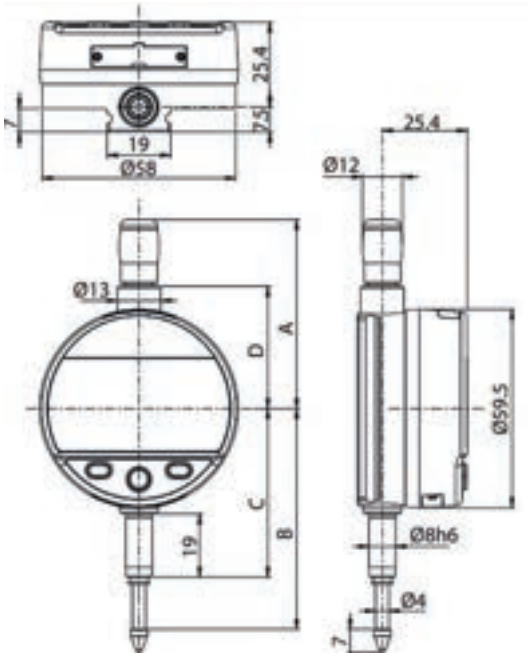
- with proximity data output

- robust structure
- water and coolant resistant
- aluminium case, rotating display over 270°
- LCD display with clear reading, with integrated LEDs tolerances, 10 mm digit height
- automatic wake-up and sleeping mode, (absolute system S.I.S)
- broad choice (MIN / MAX / DELTA, TOL, facror, PRESET, AUTO, OFF etc.)
- data output via cable Proximity to USB oder RS232
- mm/inch switchable, measuring direction reversible
- incl. 1x 3 V battery (Type CR2032, art. no.: 90112), with operation manual

Options

- data output via cable, Proximity – USB, art. no.: 2023101
- data output via cable, Power- USB, external power, art. no.: 2424101, see page 272





UNIT | PROXIMITY | CR2032 Lithium 3V | IP 54 | ABSOLUTE | CE

ART Nº	mm / inch	mm / inch	mm	max. mm	A mm	B mm	C mm	D mm	CC
240242	12.5 / 0.5	0.01 / 0.0005	0.002	0.010	56.7	66.1	50.5	36.6	on request
240262	12.5 / 0.5	0.001 / 0.00005	0.002	0.003	56.7	66.1	50.5	36.6	on request
240243	25.0 / 1.0	0.01 / 0.0005	0.002	0.010	69.4	78.5	50.5	49.4	on request
240263	25.0 / 1.0	0.001 / 0.00005	0.002	0.004	69.4	78.5	50.5	49.4	on request
240244	50.0 / 2.0	0.01 / 0.0005	0.002	0.020	121.0	142.0	88.0	—	on request
240264	50.0 / 2.0	0.001 / 0.00005	0.002	0.005	121.0	142.0	88.0	—	on request
240245	100.0 / 4.0	0.01 / 0.0005	0.002	0.020	172.0	244.0	139.0	—	on request
240265	100.0 / 4.0	0.001 / 0.00005	0.002	0.006	172.0	244.0	139.0	—	on request
240246	150.0 / 6.0	0.01 / 0.0005	0.002	0.020	224.0	349.0	193.0	—	on request
240266	150.0 / 6.0	0.001 / 0.00005	0.002	0.010	224.0	349.0	193.0	—	on request

Digital Dial Indicators

Sylvac • Electr. Digital Indicators S_Dial Work, Advanced • IP67

ART NO 240292

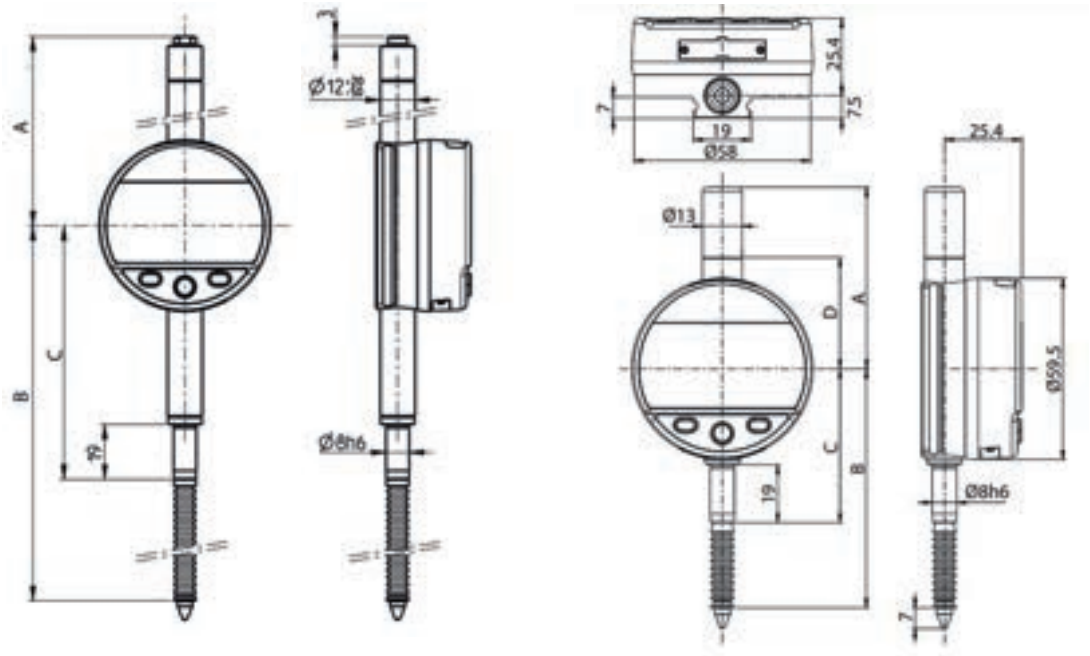
ART NO 240290

- with proximity data output

- robust structure
- water and coolant resistent, protection class IP67 acc. to IEC 60529
- aluminium case, rotating display over 270°
- LCD display with clear reading, with integrated LEDs tolerances, 10 mm digit height
- automatic wake-up and sleeping mode (Absolute System S.I.S)
- broad choice of functions (MIN / MAX / DELTA, TOL, factor, PRESET, AUTO, OFF etc.)
- data output via cable Proximity to USB or RS232
- mm/inch switchable, measuring direction reversible
- 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, Power – USB, external power, art. no.: 2424101, see page 272

Data cables for digital measuring instruments you will find on page 272



UNIT | PROXIMITY | CR2032 Lithium 3V | IP 67 | ABSOLUTE | CE

ART NO	mm / inch	mm / inch	mm	max. mm	A mm	B mm	C mm	D mm	CC
240290	12.5 / 0.5	0.001 / 0.00005	0.002	0.003	59.6	78.4	50.5	36.3	on request
240291	25.0 / 1.0	0.001 / 0.00005	0.002	0.004	85.4	99.7	50.5	49.4	on request
240292	50.0 / 2.0	0.001 / 0.00005	0.002	0.005	104.4	175.3	88.0	—	on request

Sylvac • Electr. Digital Indicators S_Dial Work, Advanced • IP54

ART N° 240297

ART N° 240295

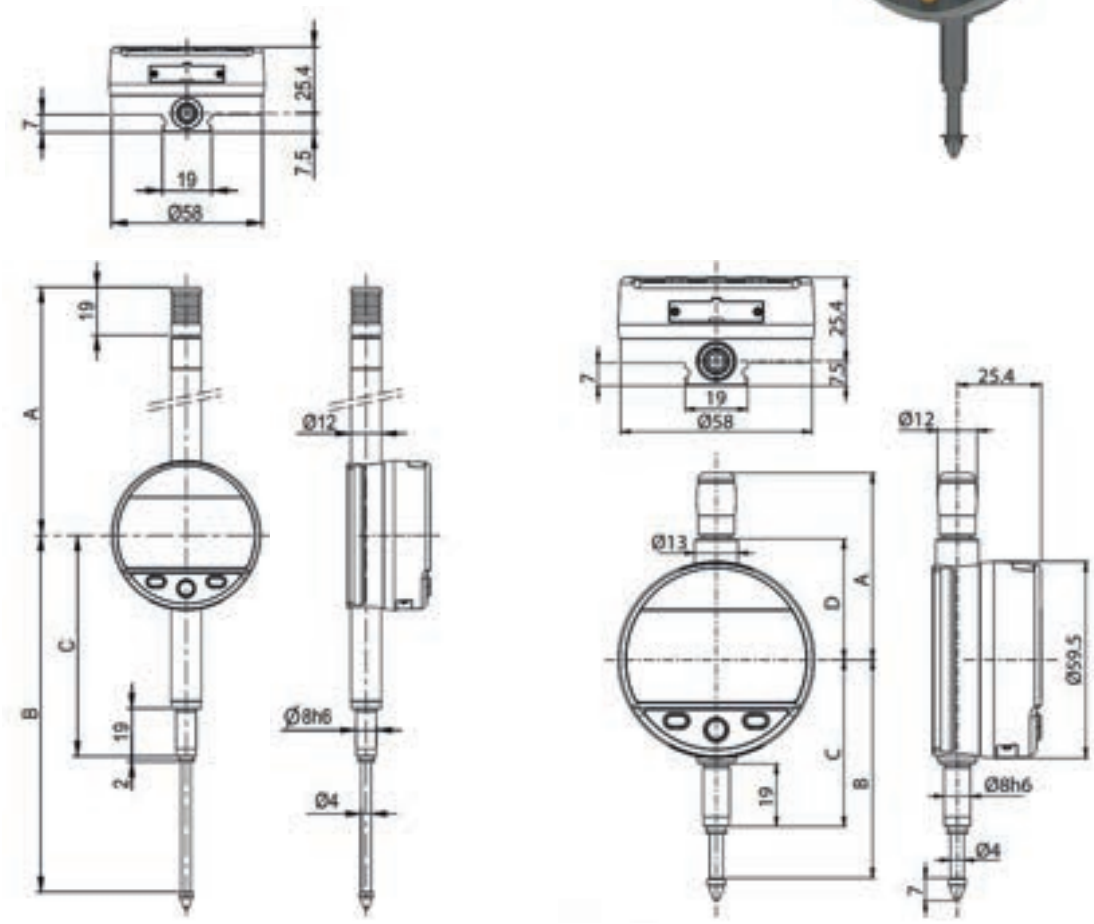
• with integraded Bluetooth® technology

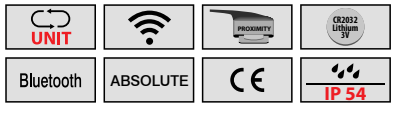
- robust structure
- aluminium case, rotating display over 270°
- LCD display with clear reading, with integrated LEDs tolerance LEDs, 10 mm digit height
- automatic wake-up and sleeping mode (Absolute System S.I.S)
- broad choice of functions (MIN / MAX / DELTA, TOL, factor, PRESET, AUTO, OFF etc.)
- data output via Bluetooth® or cable Proximity to USB or RS232
- mm/inch switchable, measuring direction reversible
- incl. 1x 3 V battery (Type CR2032, art. no.: 90112), with operation manual

Options

- data output via cable, Proximity – USB, art. no. 2023101, see page 272
- data output via cable, Power – USB, external power, art. no.: 2424101, see page 272
- data output via Bluetooth®, art. no.: 2023106S, see page 272







ART N°	mm / inch	mm / inch	mm	max. mm 1 Digit	A mm	B mm	C mm	D mm	CC
240295	12.50 / 0.50	0.001 / 0.00005	0.002	0.003	56.70	66.10	50.50	36.30	on request
240296	25.00 / 1.00	0.001 / 0.00005	0.002	0.004	69.40	78.50	50.50	49.40	on request
240297	50.00 / 2.00	0.001 / 0.00005	0.002	0.005	121.00	142.00	88.00	—	on request
240298	100.00 / 4.00	0.001 / 0.00005	0.002	0.006	172.00	244.00	139.00	—	on request

Digital Dial Indicators

Sylvac • Electr. Digital Small Dial Indicators

- **dial indicators „Type P“ water and coolant proof acc. to DIN 40050 / IEC 60529 (IP67)**
- **with Sylvac electronic**
- **with data output RS232 „Power“**
- **with integraded Bluetooth® technology**

- mechanical parts in stainless steel, hardened
- housing and front plate made of polyamide
- LCD display with clear reading, digit height 6 mm
- autom. On/Off switching, zero setting at any position
- hold function, absolute and relative mode, pre-select value
- mm/inch switchable, reversal of the measuring device
- with dovetail guide at the back
- incl. 1x 3 V battery (Type CR2032, art.-no.: 90112), with operation manual

Options
- data output via cable, Proximity – USB, art.-no. 2023101, see page 272
- data output via cable, Power – USB, external power, art.-no.: 2424101, see page 272
- data output via Bluetooth®, art.-no.: 2023106S, see page 272

ART N° 240231



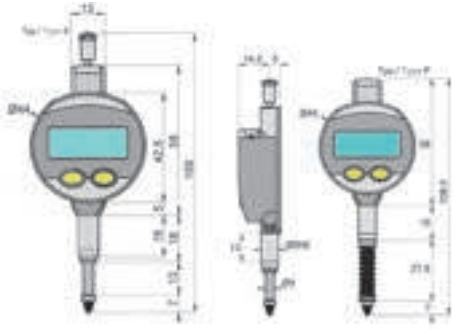
Type S

ART N° 240230



Type P
(IP67)





UNIT | RS232 C | Bluetooth | CR2032 Lithium 3V | CE

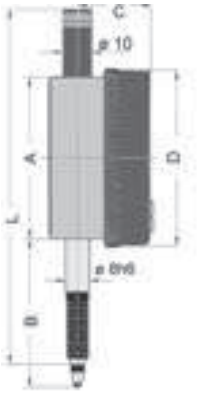
ART N°	mm / inch	mm / inch	mm	max. mm [1] 1 Digit	Type **P** protected	Type **S** standard	measuring force N	CC
240230	0 – 12.7 / 0 – 0.5	0.01 / 0.0005	0.002	[1] 0.010	✓	—	0.60 – 1.30	on request
240231	0 – 12.7 / 0 – 0.5	0.01 / 0.0005	0.002	[1] 0.010	—	✓	0.50 – 0.90	on request
240232	0 –12.7 / 0 – 0.5	0.001 / 0.00005	0.002	0.004	✓	—	0.60 – 1.30	on request
240233	0 – 12.7 / 0 – 0.5	0.001 / 0.00005	0.002	0.004	—	✓	0.50 – 0.90	on request

Electr. Digital Dial Indicators • IP65

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

- mechanical parts in stainless steel, hardened
- housing made of aluminium, front plate made of plastic
- LCD display with clear reading, digit height 11mm
- On/Off button, ABS/INC measurement system
- zero setting at any position, ± pre-select value, PRESET
- mm/inch switchable
- incl. 1x 3 V battery (Type CR2032, art.-no.: 90112), with operation manual

Options
- spare rubber sleeve (art.-no.: 249915)
- data transfer via cable, art.-no.: 2420192, see page 272



ART N° 242140



ART N° 242150



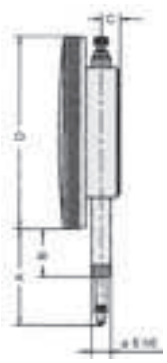
UNIT | USB | IP 65 | CE | CR2032 Lithium 3V

ART N°	mm / inch	mm / inch	mm	max. mm [1] 1 Digit	A mm	B mm	C mm	D mm	L mm	CC
242140	12.5 / 0.5	0.01 / 0.0005	0.02	[1] 0.01	59	65	30	59.5	145	on request
242150	12.5 / 0.5	0.001 / 0.00005	0.004	0.003	59	65	30	59.5	145	on request

Small Dial Indicators
workshop grade

- **standard quality**
- **e.g. for workshop use**

- metal housing, matt chrome finish
- spindle and stem stainless and hardened
- with turnable scale by outer ring, for easy zero setting



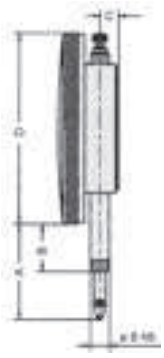


ART NO	mm	mm	mm	A mm	B mm	C mm	D-ø mm	CC
241001	0 – 3	0.01	0.5	28	14	8.2	45	on request
241002	0 – 5	0.01	0.5	28	14	8.2	45	on request

Käfer • Small Dial Indicators
DIN 878 / workshop grade

- **sturdy design, for workshop use and calibration purposes**

- solid brass housing, matt chrome finish
- spindle and stem stainless, hardened and lapped
- adjustable tolerance fingers
- from up 0.001 mm reading in workshop grade
- with turnable scale by outer ring, for easy zero setting





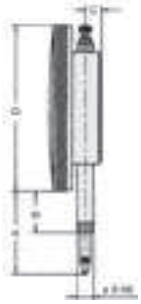
DIN

ART NO	mm	mm	yes	no	mm	A mm	B mm	C mm	D-ø mm	CC
240001	0 – 3	0.01	—	X	0.5	28.5	14	7.3	40	on request
240002	0 – 5	0.01	—	X	0.5	28.5	14	7.3	40	on request
240003	0 – 1	0.001	—	X	0.2	28.5	14	7.3	40	on request
240121	0 – 3	0.01	✓	—	0.5	28.5	14	7.3	40	on request
240122	0 – 5	0.01	✓	—	0.5	28.5	14	7.3	40	on request
240123	0 – 1	0.001	✓	—	0.2	28.5	14	7.3	40	on request

Dial Indicators
workshop grade

- **standard quality**
- **e.g. for workshop use**

- solid brass housing, matt chrome finish, adjustable tolerance fingers
- spindle and stem stainless steel and hardened
- with turnable scale by outer ring, for easy zero setting



ART NO 241131



ART NO 241101



ART NO	mm	mm	yes	no	mm	A mm	B mm	C mm	D-ø mm	CC
241101	0 – 10	0.01	—	X	1	43	22	8.2	57	on request
241103	0 – 1	0.001	—	X	0.2	33.5	22.0	8.0	57	on request
241131	0 – 10	0.01	✓	—	1	43	22	8.2	57	on request

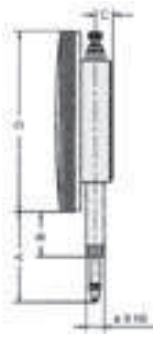
Analog Dial Indicators

Käfer • Dial Indicators

DIN 878

- **sturdy design, for workshop use and calibration purposes**

- solid brass housing, matt chrome finish
- stem and spindle stainless steel, hardened and lapped
- adjustable tolerance fingers, from 0.001 mm with factory accuracy
- with turnable scale by outer ring, for easy zero setting





DIN

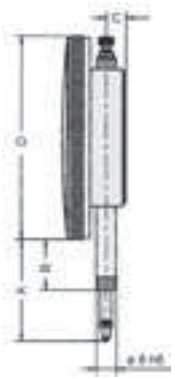
ART NO	mm	mm	yes	no	mm	A mm	B mm	C mm	D-ø mm	CC
240101	0 – 10	0.01	—	X	1.0	40	18.5	7.5	58	on request
240103	0 – 1	0.001	—	X	0.2	40	18.5	7.5	58	on request
240106	0 – 5	0.001	—	X	0.2	40	18.5	7.5	58	on request
240131	0 – 10	0.01	✓	—	1.0	40	18.5	7.5	58	on request
240133	0 – 1	0.001	✓	—	0.2	40	18.5	7.5	58	on request

Dial Indicator

high workshop grade

- **for large measuring ranges**
- **concentric millimeter scale**

- metal housing, matt chrome finish, adjustable tolerance fingers
- stem and spindle stainless and hardened
- with turnable scale by outer ring, for easy zero setting
- with flat backcover and backcover with lug
- incl. calibration certificate





ART NO	mm	mm	mm	A mm	B mm	C mm	D-ø mm	CC
241121	0 – 30	0.01	1	60	22.5	8	60	inclusive

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Website.

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VOGEL GERMANY

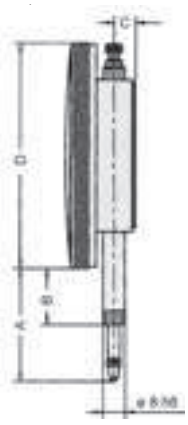
Any questions?

We are pleased to advise.

Käfer • Dial Indicators

- **with concentric millimeter scale**

- solid brass housing, matt chrome finish
- stem and spindle stainless, hardened and lapped
- adjustable tolerance fingers
- with turnable scale by outer ring, for easy zero



ART NO 240102



ART NO 240134



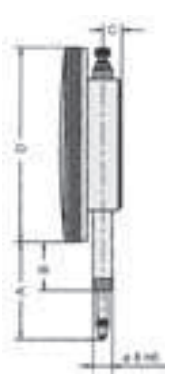
ART NO	mm	mm	yes	no	mm	A mm	B mm	C mm	D-ø mm	CC
240102	0 – 30	0.01	—	X	1	60.0	18.5	7.5	58	on request
240104	0 – 50	0.01	—	X	1	97.5	36.5	7.5	58	on request
240105	0 – 100	0.01	—	X	1	178.0	65.5	8.5	80	on request
240110	0 – 100	0.01	—	X	1	147.5	56.5	7.5	58	on request
240111	0 – 10	0.01	—	X	1	40.0	18.5	7.5	58	on request
240132	0 – 30	0.01	✓	—	1	60.0	18.5	7.5	58	on request
240134	0 – 50	0.01	✓	—	1	97.5	36.5	7.5	58	on request
240135	0 – 80	0.01	✓	—	1	147.5	56.5	7.5	58	on request

Käfer • Dial Indicators • IP67

DIN 878

- **water-, coolant and oil tight acc. to DIN 40050 / IEC 60529**

- solid brass housing, matt chrome finish, stem with rubber sleeve
- stem and spindle stainless, hardened and lapped
- adjustable tolerance fingers, shadowfree flat glass, perfect sealed by O-rings
- with turnable scale by outer ring, for easy zero setting
- version with 0.001 mm and 0.002 mm reading are acc. to workshop grade





IP 67 DIN

ART NO	mm	mm	yes	no	mm	A mm	B mm	C mm	D-ø mm	CC
240151	0 – 10	0.01	✓	—	1.0	45.5	16.7	9.3	61.5	on request
240152	0 – 3	0.01	✓	—	0.5	33.0	11.6	9.3	44.5	on request
240153	0 – 1	0.001	✓	—	0.2	45.5	16.7	9.3	61.5	on request
240154	0 – 1	0.002	✓	—	0.2	33.0	11.6	9.3	44.5	on request

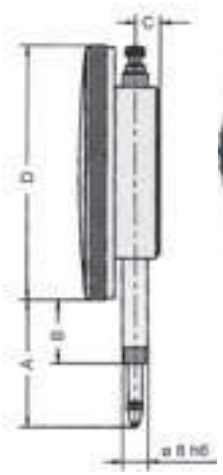
Analog Dial Indicators

Käfer • Dial Indicators

DIN 878

- **with magnetic backside**

- solid brass housing, matt chrome finish
- stem and spindle stainless, hardened and lapped
- adjustable tolerance fingers
- with turnable scale by outer ring, for easy zero setting







DIN

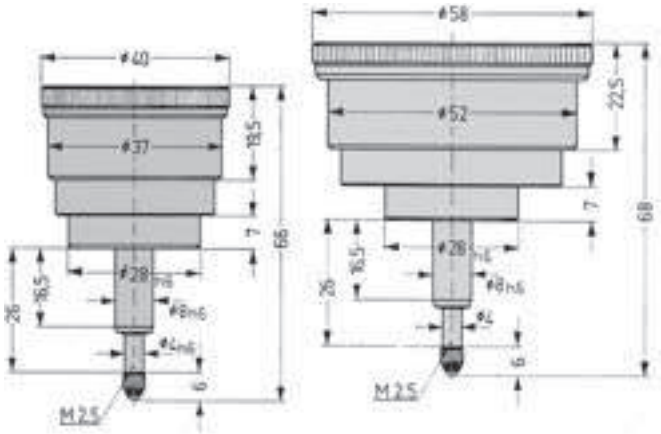
ART NO	mm	mm	yes	no	A mm	B mm	C mm	D-ø mm	CC
240001-1	0 – 3	0.01	—	X	28	14	25	40	on request
240101-1	0 – 10	0.01	—	X	40	18.5	25	58	on request
240121-1	0 – 3	0.01	✓	—	28	14	25	40	on request
240131-1	0 – 10	0.01	✓	—	40	18.5	25	58	on request

Käfer • Dial Indicators

- **with probe in the center of the back plate**
- **especially for measuring in appliances and tool engineering**

- solid brass housing, matt chrome finish
- stem and spindle stainless, hardened and lapped
- adjustable tolerance fingers
- with turnable scale by outer ring, for easy zero setting





ART NO	mm	mm	mm	number of pointers	housing-ø mm	CC
240020	0 – 3	0.01	1	2	58	on request
240021	0 – 5	0.01	1	2	58	on request
240023	0 – 3	0.01	0.5	2	40	on request
240024	0 – 5	0.01	0.5	2	40	on request

Why actually Vogel Germany?

Besides a wide range of products which offer the right solution for every application, Vogel Germany is a service oriented company that is also powerful in consulting, training and logistics.

For further information on Vogel Germany please visit:

www.vogel-germany.de



Vogel Germany

- ✓ offers best customer service
- ✓ belongs to the strong Fervi Group
- ✓ offers quality Made in Germany

VOGEL GERMANY®

Accessories for Dial Indicators

Spindle Lifting Lever

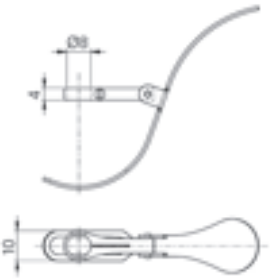
- for our analogous and digital dial indicator
- please choose the suitable lever control according to the art. no. of our dial indicators





ART NO 249997	ART NO 249997	ART NO 249998	ART NO 240998
Dial Indicator	Dial Indicator	Dial Indicator	Dial Indicator
240280 – 240287	240250 + 240255	241001 + 241002	240001 – 240003
—	—	241114 – 241116	240121 – 240123
—	—	—	240001-1 + 240121-1

ART NO 249992	ART NO 2409208	ART NO 2409209	ART NO 240992
Dial Indicator	Dial Indicator	Dial Indicator	Dial Indicator
241101 – 241103	240230 + 240232	240231 + 240233	240101 – 240103
241118 + 241119	—	—	240106 – 240108
241121 + 241131	—	—	240111 + 240131-1
241136 + 241137	—	—	—

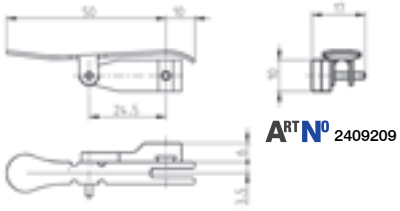


Lifting Device

- for our analogous and digital dial indicators
- choose according to our dial indicator art. no. the right lifting device

ART NO 249996





ART NO 2409209

ART NO 249994



ART NO 2409210



ART NO 2409210	ART NO 249994	ART NO 249996	ART NO 2409209
Dial Indicator	Dial Indicator	Dial Indicator	Dial Indicator
240230 + 240232	240251 + 240252	240800 + 240803	240231
—	240256 + 240257	241804	240233

Backside Cover

- flat or with lug
- for our analogous and digital dial indicator
- please choose the suitable backside cover according to the art. no. of our dial indicator

ART NO 249900



ART NO 249901

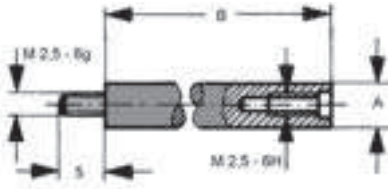


ART NO with lug	ART NO flat	suitable for dial indicator
249900	**249901**	241101 241102 241103 241131
249902	**249903**	241001 241002
249908	**249909**	241143
249990	**249991**	241114 • 241115 • 241116
249910	**249911**	242055 • 242056 • 242057 242060 • 242061 • 242062 242063 • 242160 • 242162 242163 • 242164 • 242140 242150 • 240250 • 240255

ART NO with lug	ART NO flat	suitable for dial indicator
240980	**240981**	240005 • 240007 • 240009 • 240030 • 240031 240101 • 240102 • 240103 • 240104 • 240106 240111 • 240131 • 240132 • 240133 240134 • 240135 • 240141 • 240143 • 240151 240153 • 240800 • 240803 • 240810 • 240813
240982	**240983**	240001 • 240002 • 240003 • 240004 • 240006 240008 • 240121 • 240122 • 240123 • 240142 240144 • 240152 • 240154
240984	**240989**	241118 • 241119 • 241121 • 241134 241136 • 241137 • 241142
240987	**240988**	240230 • 240231 • 240232 • 240233

Extensions

- for analogous and electr. digital dial indicators



ART NO	length B mm	ø A mm
24095010	10	4
24095020	20	4
24095030	30	4
24095040	40	4
24095050	50	4
24095060	60	4
24095070	70	4
24095080	80	4
24095090	90	4
240950100	100	4

ART NO	length B mm	ø A mm
24095110	10	5
24095120	20	5
24095130	30	5
24095140	40	5
24095150	50	5
24095160	60	5
24095170	70	5
24095180	80	5
24095190	90	5
240951100	100	5

Measuring Bridge for Depth Measurements

- with extensions rods, as set
- suitable for all analogous or digital dial indicators

- measuring bridge made of steel, hardened, chromed
- stainless steel extensions, with M2.5 inside/outside thread

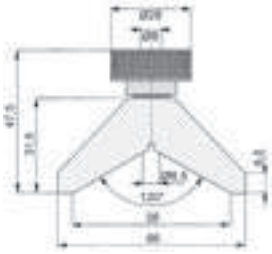


ART NO	size of measuring bridge mm	sizes of extension rods mm
240525	80 (Art. no.: 240511)	10 / 20 / 30 / 40 / 50 / 60 / 70 / 80 / 90

Measuring Bridge for Depth Measurements

- with prismatic base
- suitable for all analogous or digital dial indicators
- for measuring the depth of keyways in cylindrical shafts, etc.

- made of steel, hardened, matt chrome finish
- measuring surface lapped
- bore-ø 8 H7





ART NO	length of bridge mm	for shafts-ø mm	width mm
240520	66 x 16	10 – 100	16

Measuring Bridge for Depth Measurements

- suitable for all analogous or electr. digital dial indicators

- made of steel, hardened, matt chrome finish or black burnished
- measuring surface lapped, bore-ø 8 H7



ART NO 240511



ART NO 240510

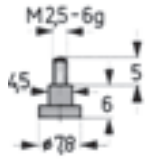
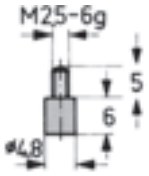
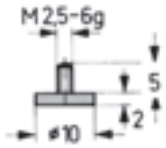
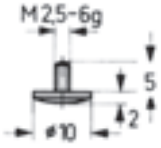


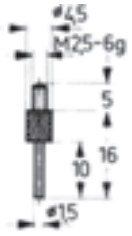
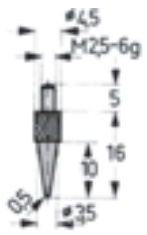
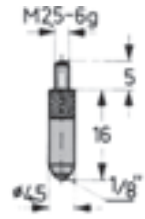
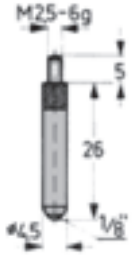
ART NO burnished	ART NO chromed	length of bridge mm	width mm
240500	240510	50	16
240501	240511	80	16
240504	240514	100	16
240502	240512	120	20
240503	240513	150	20

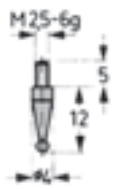
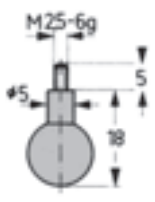
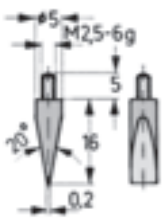
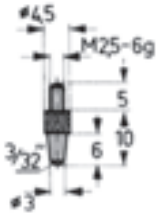
Accessories for Dial Indicators

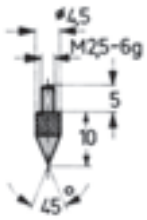
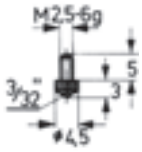
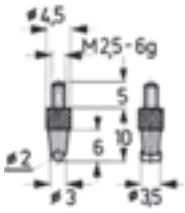
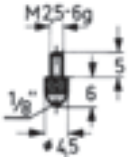
Contact Points

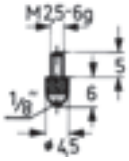
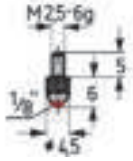
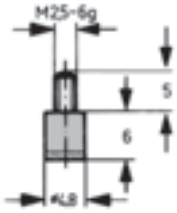
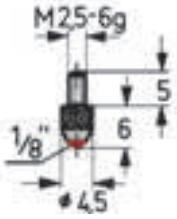
- for analogue and electr. digital dial indicators

ART NO Steel	ART NO Steel	ART NO Steel	ART NO Steel
240952	240953	240954	240955
	ART NO Carbide	ART NO Carbide	ART NO Carbide
	2409531	2409541	2409551
			

ART NO Steel	ART NO Steel	ART NO Steel	ART NO Steel
240956	240957	240958	240959
ART NO Carbide		ART NO Carbide	ART NO Carbide
2409561		2409581	2409591
		ART NO Ruby	ART NO Ruby
		2409582	2409592
			

ART NO Steel	ART NO Steel	ART NO Steel	ART NO Steel
240960	240961	240962	240963
		ART NO Carbide	ART NO Carbide
		2409621	2409631
			

ART NO Steel	ART NO Steel	ART NO Steel	ART NO Steel
240964	240965	240966	240967
ART NO Carbide			
2409641			
			

ART NO Carbide	ART NO Ruby	Carbide	Ruby
2409671	2409672		
			

Explore our ***Website.***

www.vogel-germany.de



Any questions?

We are pleased to advise.

Accessories for Dial Indicators

Inside Test Indicators

- **without dial indicator**
- **designed to check small bore holes**

- sturdy version, hammer blow lacqered
- suitable for all analogous and digital dial indicators
- bore-ø 8 H7, shaft-ø 8 h6

Angle Test Indicators

- **without dial indicator**
- **to controll small bores on lathes and various tool machines**

- sturdy version, hammer blow laquered
- suitable for all analogous and digital dial indicators
- bore-ø 8 H7, shaft-ø 8 h6



ART NO	measuring depth mm	smallest bore to be measured ø mm
240646	60	6
240647	30	6

Centering Holders

- **allows large cylinder diameters or holes to be centered**
- **suitable for all dial indicators and for dovetail guide**

- made of steel, black burnished

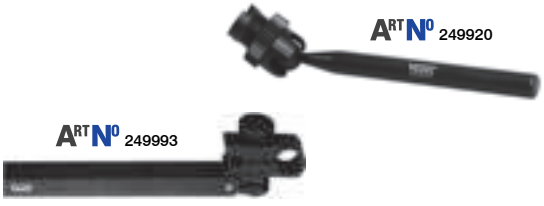


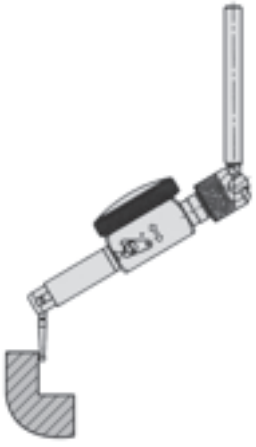
ART NO	for bore-ø mm	shaft-ø mm	for dove tail guide
240997	4 + 8	8	✓

Clamp Holders

- **suitable for all dial indicators and for dovetail guide**

- made of steel, black burnished





ART NO	mm	for bore-ø mm	for dovetail guide
249993	72 x 12 x 6	4 + 8	✓
249924	72 x 12 x 6	6 + 8	✓
249920	ø 6 x 70	—	✓
249921	ø 8 x 70	—	✓
249922	76 x 9 x 9	6 + 8	✓
249923	76 x 9 x 9	4 + 8	✓

Clamping Shaft

- made of steel, black burnished or stainless steel, polished



ART NO	shaft-ø mm
240995	4 h6
240995-1	6 h6
240995-2	4 h6

ART NO	shaft-ø mm
240996	8 h6
240996-1	8 h6
—	—

Electr. Digital Test Indicator • IP54

- **with data transfer via cable**

- mechanical parts in stainless steel, hardened
- aluminium housing, front panel made of polyamide
- LCD display with clear reading, digit height 10 mm, more than 360° moveable
- autom. power off
- mm/inch switchable, selection of measuring direction
- housing with 3 dovetail guides
- incl. 1x 3 V battery (Type CR2032, art. no.: 90112)
- incl. operation manual

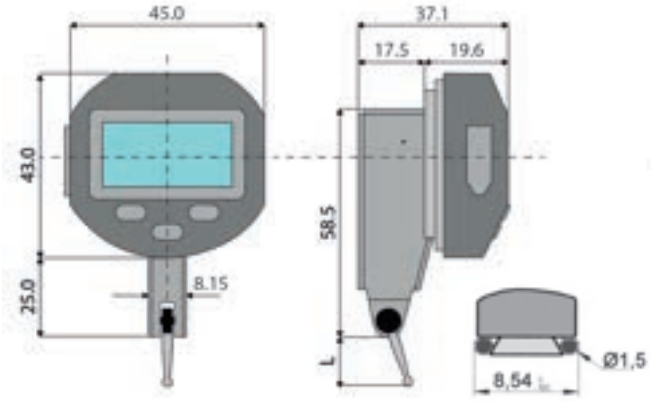
Option
- data transfer via cable, art. no.: 3420195, see page 272

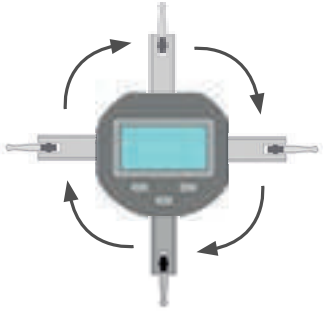
Accessories for our test indicators can be found on page 141



with digital and graph bar





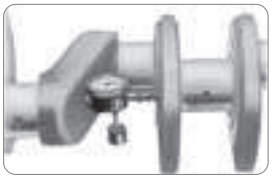


IP 54 | CR2032 Lithium 3V | UNIT | CE

ART NO	mm	mm / inch	Measuring range mm / inch	mm	max. mm	Measuring force N	L mm	CC
240682	0 – 1.6	0.001 / 0.0001	±0.8 / ±0.03	0.001	0.01	0.07 ± 15 %	13	on request

Crankshaft Testing Instruments

- **for testing crankshaft deflections and for the alignment of crankshaft bearings during engine assembly**
- **used in ship engines, car engines, compressors, etc.**



example





ART NO	mm	mm	housing-ø of dial indicator mm	CC
240162-2	60 – 500	0.01	40	on request

Test Dial Indicators

Käfer • Dial Test Indicator

DIN 2270

- **for toolmakers, for checking of difference measurement**
- **to check the parallelism, smoothness and trough running**

- solid brass housing, matt chrome finish
- with friction clutch, means shock proof
- housing with dovetail guide
- important bearings machined in ceramic stones
- carbide measuring ball-ø 2 mm, exchangeable
- contact points reverses, always maintaining clockwise
- scale mounted in turnable knurled grip ring

ART NO 240600



form A

ART NO 240601



form B

ART NO 240602



form C

DIN

ART NO form A	ART NO form B	ART NO form C	mm	measuring range mm	mm	L mm	ø D mm	quantity of dovetail guides form A+B	quantity of dovetail guides form C	CC
240600	**240601**	**240602**	0 – 40 – 0	0.8	0.01	12	32	3	2	on request
240610	**240611**	**240612**	0 – 100 – 0	0.2	0.002	12	32	3	2	on request
240630	**240631**	**240632**	0 – 25 – 0	0.5	0.01	35	32	3	2	on request
240640	**240641**	**240642**	0 – 40 – 0	0.8	0.01	12	40	3	2	on request
240650	**240651**	**240652**	0 – 25 – 0	0.5	0.01	35	40	3	2	on request
240660	**240661**	**240662**	0 – 100 – 0	0.2	0.002	12	40	3	2	on request

Dimensions of Dial Test Indicators

DIN 2270

article-Type	D mm	E mm	G mm	H mm
240600+240610	32	5.6	7.1	69.5
240601+240611	32	5.6	7.7	69.5
240602+240612	32	5.6	7.5	69.5
240630	32	5.6	7.1	69.5
240631	32	5.6	7.7	69.5
240632	32	5.6	7.5	73.5
240640+240660	40	6	7.5	73.5
240641+240661	40	6	8.1	73.5
240642+240662	40	6	7.9	73.5
240650	40	6	7.5	73.5
240651	40	6	8.1	73.5
240652	40	6	7.9	98.4

form A



form B



form C



Dial Test Indicator

- **standard quality**

- solid brass housing, matt chrome finish
- carbide measuring ball ø 2,5 mm, exchangeable
- contact points reverses, always maintaining clockwise
- scale mounted in turnable knurled grip ring
- incl. clamp holder ø 6 mm + ø 8 mm at art. no. 246600 until 246660

Accessories for test indicators can be found on page 141

ART NO 246641



ART NO 246600



ART NO	mm	measuring range mm	mm	L mm	ø D mm	quantity of dovetail guides	CC
246600	0 – 40 – 0	0.8	0.01	13.5	30	3	on request
246610	0 – 100 – 0	0.2	0.002	13.5	30	3	on request
246640	0 – 40 – 0	0.8	0.01	16.5	37.5	3	on request
246641	0 – 40 – 0	0.8	0.01	43.4	30	3	on request
246660	0 – 100 – 0	0.2	0.002	13.5	37.5	3	on request
246661	0 – 40 – 0	0.8	0.01	43.4	37.5	3	on request

Probes for Dial Test Indicators

- **suitable for dial test indicators art. no. 240600 – 240662**
- with carbide or ruby ball, length 12 + 35 mm



2409690
ø 0.4 x 12 mm



2409691
ø 1 x 12 mm



2409692
ø 2 x 12 mm



2409693
ø 3 x 12 mm



2409694 / Rubin
ø 2 x 12 mm



2409695
ø 1 x 35 mm



2409696
ø 2 x 35 mm



2409697
ø 3 x 35 mm



2409698 / Rubin
ø 2 x 35 mm

Probes for Dial Test Indicators

- **suitable for dial test indicators art. no. 246600 – 246690**
- with carbide ball, length 13.5 mm + 16.5 mm



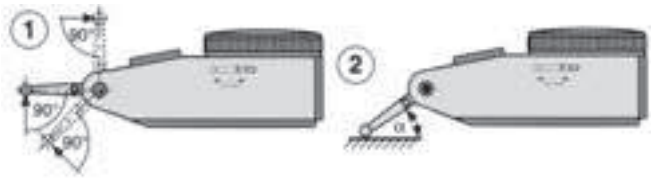
2409699
ø 2 x 13.5 mm

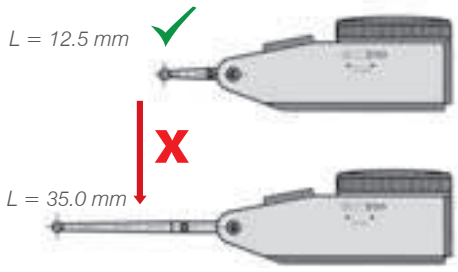


2409687
ø 2.5 x 16.5 mm

Reference to application of Dial Test Indicators

For accurate measurements the axis of the contact point must be perpendicular to the measuring direction (fig.1). If this is not possible, it is necessary to multiply the reading on the dial with a correction factor, which depends on an angle α (fig. 2).
The correction factor is negligible for angles below 15°.





Use only the probe whose length is engraved on the housing, please!

angle α	15°	30°	45°	60°
corr.-faktor	0.96	0.87	0.7	0.5
example:				
angle α:	30° (estimated)			
reading on dial:	0.38 mm			
measuring result:	0.38 x 0.87 = 0.33 mm			

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Zero Setting and Centering Devices

Electr. Digital Zero Setting Device • IP65

- **water- and coolant proof acc. to DIN 40050 / IEC 60529**
- **with magnet inserts in the bottom**
- **for setting tools (e.g. end mills) to zero determining the reference point of the machine spindle**
- **no demage to cutting edge of tool during setting**

- sturdy metal housing, black burnished
- LCD display with clear reading, digit height 8 mm
- incl. 1x 3 V battery (Type CR2032, art. no.: 90112), and operation manual



example



UNIT | IP 65 | CR2032 Lithium 3V | INOX

ART NO	mm / inch	spring range of contact plate mm / inch	contact plate-ø mm	mm
271010	0.002 / 0.00005	0 – 2.4 / 0 – 0.094	24	ø 50 x 51

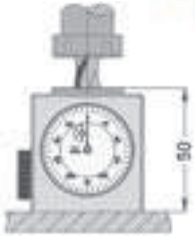
Zero Setter with permanent magnetic base

- **to adjust the tools, for example milling tools, to the „0"-position and for to determine the reference point of the machine spindle**
- **no feeler gauge or starting contact is needed**
- **no damages at the measuring element and at the work piece**

Operational instruction:
- calibrate the zero setter by putting a parallel on the setter and press it against on the spring loaded surface and set the dial gauge at „0"
- put the setter on machine table or workpiece reference surface. Move spindle to bring cutting tool to touch measuring surface and read
- the dial gauge carefully. When the dial points are at „0", the distance between tool end and machine table is 50 mm (±0.01 mm)





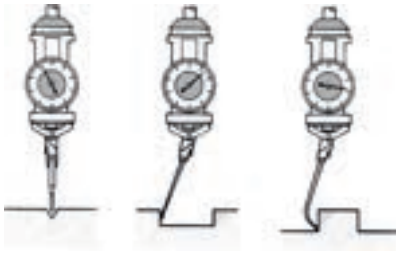


ART NO	mm	spring range of contact plate mm	contact plate-ø mm	total height mm	mm	max. ± mm
271052	0.01	0 – 2	32	50	50 x 50 x 50	0.01

Centering Devices

- **for the centrical alignment of bores and spindles on tool machines**

- with bended and straight probes in different length
- clamping shaft ø 10 mm
- reading 0.01 mm
- accuracy of centering 0.02 mm



ART NO 272011



ART NO 272001

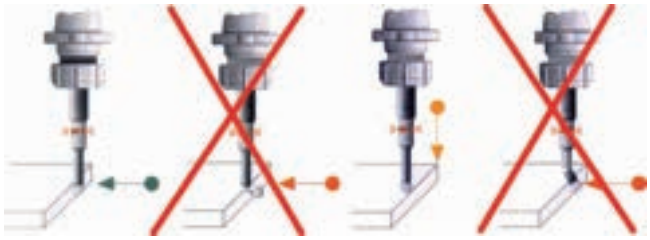


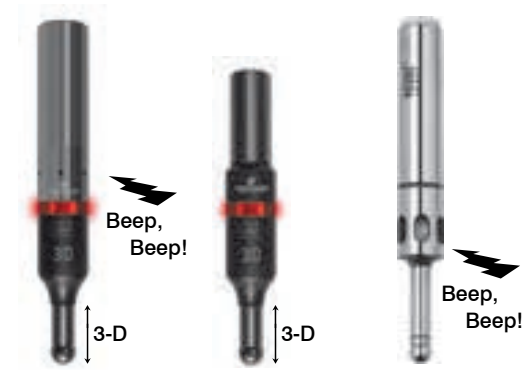
ART NO	mm	mm	Length of straight probes mm	Length of bended probes mm	Length of center probes mm
272001	0.01	0 – 3	45, 100, 154	46, 100, 154	52.5
272011	probes set	—	45, 100, 154	46, 100, 154	52.5

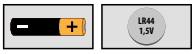
Edge Finders

- with LED signal light
- art. no. 270015 + 270018 with acoustic signal and signal light
- for adjusting basic surfaces or edges

- stainless. hardened, fine ground
- with hardened contact ball







ART N°	Type	acoustic signal	contact ball-ø mm	clamping shaft-ø mm	mm	mm	ART N° battery	battery Type
270015 (Vogel)	2-D	✓	10	20	5	158	**90008**	23 A / 12 V
270017 (Tschorn)	3-D	—	10	16	5	111	**90008**	23 A / 12 V
270018 (Tschorn)	3-D	✓	10	20	5	131	**90008**	23 A / 12 V

3D-Probe, with Dial Indicator

- extremely slim and rugged housing
- allows quick and easy determination of workpiece zero points and length

- contact point with predetermined breaking point
- large travel paths, limited by mechanical stops
- Art. no. 270210: solid carbide ball, with standard probe, size ø 3 x 27 mm (art. no.: 279911)
- Art. no. 270215: solid ceramic ball



probe

270210 (V2)


measurement scale

270215 (Tschorn)


measurement scale

ART N° 270210



ART N° 270215



ART N°	Type	mm	contact ball-ø mm	clamping shaft-ø mm	mm
270210 (V2)	3-D	-1.5 / 0 / 2	3	12	124
270215 (Tschorn)	3-D	-1.5 / 0 / 2	3	12	134

Probes, as Spare Part

- solid ceramic ball



ART N° 279911



ART N° 279912

ART N°	description	ball-ø mm	mm
279911	probe „Standard“	3	27
279912	probe „Extra“	6	62

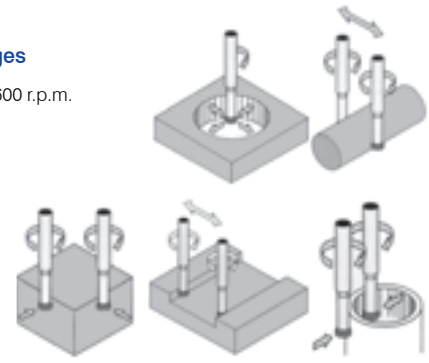
Edge Finders and Measuring Stands

Edge Finders

- **for adjusting basic surfaces or edges**

- rotational speed of spindle approx 400 – 600 r.p.m.
- hardened steel, HRC 58

Options
- Spare Part Spring (art. no.: 270090) for Edge Finder art. no. 270010 / 270011
- Spare Part Spring (art. no.: 270091) for Edge Finder art. no. 270009



ART NO 270011 | ART NO 270010 | ART NO 270009



ART NO steel, hardened	contact tip-ø mm	clamping shaft-ø mm	mm
270009	6 / 10	10	74
270010	10	10	84
270011	4 / 10	10	88

Universal Magnetic Measuring Stands

- **for all kind of measurements in various position**
- **for professional use**

- chromed stem, with fine adjustment
- clamping connection by cross head at art.-no. 250201 + 250203
- with clamping connection by grip clamp at art.-no. 250204
- sturdy magnetic block, On/Off-rotary switch made of aluminium, prismatic base and with a flat ground face backwards
- hammer blow blue lacquered magnetic block
- dial indicator shank ø 8 mm





clamping head at art.-no. 250204

ART NO 250201



ART NO 250204



ART NO	total height mm	column ø x lenght mm	arm length mm	thread mm	magnetic block mm	magnetic power ~ N
250201	295	16 x 230	250	M 10	70 x 45 x 65	650
250203	500	20 x 420	250	M 12	75 x 60 x 80	800
250204	295	16 x 230	250	M 10	70 x 45 x 65	650

Universal Magnetic Measuring Stands

- **for all kind of measurements in various position**
- **economy model, for simple demands**

- chromed stem, with fine adjustment, lacquered magnetic block
- clamping connection by cross head
- sturdy magnetic block, On/Off-switch made of rugged plastic, prismatic base and with a flat ground face backwards
- dial indicator shank ø 4 mm and ø 8 mm

ART NO 252002



ART NO 252001



ART NO	total height mm	column ø x L mm	arm length mm	thread mm	magnetic block mm	magnetic power ~ N
252001	235	12 x 175	140	M8	65 x 50 x 55	600
252002	280	16 x 220	200	M10	65 x 50 x 55	600

Magnetic Measuring Stands

- **triple-jointed arm with central mechanical clamping**
- **particularly for use in hard to reach places**
- **high-end product with unrestricted mobility**

- elocated aluminium column, corrosion-resistant, universal rotating
- with fine adjustment by knurled screw
- sturdy magnetic block
- with On/Off-rotary switch made of aluminium
- hammer blow lacquered magnetic block
- magnetic block with prismatic base and with a flat ground face backwards
- dial indicator shank ø 8 mm and with dovetail for dial test indicators



ART NO	total height mm	column ø x lenght mm	arm length mm	thread mm	magnetic block mm	magnetic power ~ N
250301	430	18 x 370	320	M 10	70 x 45 x 65	650

Magnetic Measuring Stands

- **triple-jointed arm with central mechanical clamping**
- **all joints are clamped with just one twist grip**
- **ball joints allow a fast and safe positioning**

- infinitely adjustable clamping force with high stability
- scratch-resistant, black anodized column
- with fine adjustment by knurled screw
- dial indicator shank ø 6 mm, ø 8 mm and for dove tail clamping
- magnetic base with On/Off-switch
- hammerblow lacquered magnetic base, with prism base

ART NO 250333



ART NO 250331



ART NO	total height ~ mm	total length of column ~ mm	arm length ~ mm	thread mm	magnetic block mm	magnetic power ~ N
250331	350	295	140	M8	65 x 50 x 55	800
250332	440	390	180	M8	74 x 50 x 55	1000
250333	695	640	270	M10	118 x 50 x 55	1300

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Any questions?
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Measuring Stands

Magnetic Measuring Stands

- **with central mechanical clamping**
- **particularly for use in hard to reach places**
- **standard model with unrestricted mobility**

- chromed column, corrosion-resistant, universal turnable
- art.-no. 255001,250319 and 250320: with sturdy magnetic block, On/Off-switch
- with prismatic base and with a flat ground face backwards,
- art.-no. 250300 and 250304 with permanent magnetic base with lacquered magnetic block
- dial indicator shank ø 8 mm and dovetail for dial test indicators, with fine adjustment
- art.-no. 250300 and 250320 with shank ø 6 mm and dovetail











ART NO	total height mm	column ø x length mm	arm length mm	thread mm	magnetic block mm	magnetic power ~ N
255001	400	10/12 x 345	330	M 8	65 x 50 x 55	600
250300	105	10/17 x 65	45	M 5	Ø 28 x 30	120
250304	205	8/20 x 175	100	M 5	Ø 35 x 30	120
250319	210	8/20 x 175	100	M 5	36 x 30 x 35	300
250320	108	10/17 x 65	45	M 5	36 x 30 x 35	300

Universal Measuring Stands

- **with flexible articulated arm**
- **particularly for use in hard to reach places**
- **with unrestricted mobility**

- flexible stem with locking lever, adjustable to any position
- sturdy magnetic block, On/Off-switch
- with prismatic base and with a flat and fine ground face backwards
- with lacquered magnetic block
- dial indicator shank for ø 10 mm and ø 8 mm adjustable

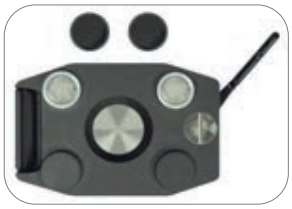


ART NO	total height mm	column ø x length mm	arm length mm	thread mm	magnetic block mm	magnetic power ~ N
251501	395	16 x 340	240	M8	65 x 50 x 55	600

Universal Magnetic Measuring Stand

- **for professional 3-point clamping with just one twist grip**
- **stable clamping with ergonomically shaped handle**
- **ball joint in the food for flexible positioning, with clamping lever**

- stable frame with black anodized surface
- with fine adjustment by knurled screw
- dial indicator holder for clamping shanks ø 6 mm, ø 8mm and dovetail
- tension foot with plastic on / off lever
- tension foot with 4 strong permanent magnetic points, black painted



tension foot with 4 strong permanent magnetic points





tension foot with ball joint



ART NO	total height mm	colum-ø x L mm	cross arm-ø x L mm	thread mm	tension foot mm	magnetic force without a protective cap ~ N
250120	360	13.5/25 x 135	25/10 x 115	M 8	110 x 70 x 42	320

Measuring Stand, with Vacuum-Base

- **triple-jointed arm with central mechanical clamping**
- **particularly for use in hard to reach places**
- **high-end product with unrestricted mobility**

- elocated aluminium column, corrosion-resistant, universal rotating
- with fine adjustment by knurled screw
- vacuum-base with extrem and permanent vacuum force and with locking lever
- dial indicator shank ø 8 mm and with dovetail for dial test indicators



ART NO	total height mm	column ø x lenght mm	arm length mm	thread mm	vacuum-base mm
250305	395	18 x 370	320	M8 + M10	ø 115

Mini-Magnetic Measuring Stands

- **all joints are clamped with just one twist grip**
- **swivel joint allow quick and safe positioning**

- scratch-resistant, black anodized surface
- dial gauge holder for clamping shanks ø 8 mm
- 360° swivelling
- magnet with fine ground prism
  (only at art. no.: 250506)

ART NO 250506



side view



bottom side with magnetic prism

ART NO 250505



bottom side with 2 magnetic points

ART NO	total height ~ mm	arm length mm	thread	magnetic block mm	magnetic power ~ N
250505	46	35	M 8	73 x 37 x 12	180
250506	59	35	M 8	73 x 37 x 26	180

Magnetic and Vacuum Bases

Magnetic Bases

- **the thread is eccentrically placed on the surface, so that the magnetic core is protected from smut**

- sturdy magnetic block, On/Off-rotary switch from aluminium
- hammer blow blue lacquered
- magnetic block with prismatic base and with a flat ground face backwards



ART NO	thread mm	suitable for art.-no.	mm	magnetic power ~ N
250210	M 10	250201 / 250204 / 250301	70 x 45 x 65	650
250212	M 12	250203	75 x 60 x 80	800

Magnetic Bases

- sturdy magnetic block, On/Off-switch
- magnetic block with prismatic base and with a flat ground face backwards
- hammer blow lacquered

ART NO 252014



ART NO 252015



ART NO 250310



ART NO 252010



ART NO	thread mm	suitable for art.-no.	mm	magnetic power ~ N
252010	M 8	252001 / 250401 / 251501 / 255001	58 x 50 x 55	800
252012	M 8	252001 / 250401 / 251501 / 255001 / 250332	74 x 50 x 55	1000
252014	M 5	250319 / 250320	36 x 30 x 35	300
252015	M 8	252001 / 250401 / 251501 / 255001	75 x 46 x 54	600
250310	M 10	250333	118 x 50 x 55	1300

Vacuum Base

- **with powerful suction power**

- with locking lever
- solid aluminium dye-cast housing
- with M10 and M8 threads



ART NO	thread mm	suitable for art. no.	mm
250312	M8 and M10	250305	ø 115 x 25

Measuring Stand Columns

- with mechanical clamping
- with fine adjustment













ART NO	column ø x length mm	thread mm	suitable for art. no.	material	shank-ø mm
250308	370	M 10	250301 + 250305	aluminium	8 + dovetail
250314	175	M 5	250304 + 250319	steel. chromed	8 + dovetail
250316	75	M 5	250300 + 250320	steel. burnished	6 + dovetail
250341	201	M 8	250331	steel. anodized	6 + 8 + dovetail
250342	246	M 8	250332	steel. anodized	6 + 8 + dovetail
250343	568	M 8	250333	steel. anodized	6 + 8 + dovetail
255008	345	M 8	255001	steel. chromed	8 + dovetail
259925	150/190	ø 8 x 40	shaft-ø 8 mm	steel. chromed	8 + dovetail

Measuring Stand Columns

- rigid column
- with fine adjustment







ART NO	column ø x length mm	thread mm	suitable for art. no.	material	shank-ø mm
250205	16 x 230	M 10	250204	steel. chromed	8
250208	20 x 425	M 12	250203	steel. chromed	8
250209	16 x 230	M 10	250201	steel. chromed	8
252008	16 x 220	M 10	252002	steel. chromed	8
252009	12 x 175	M 8	252001	steel. chromed	8

Measuring Stand Columns

- flexible tubular steel sections
- with wire-rope tension



ART NO	column ø x length mm	thread mm	suitable for art. no.	material	shank-ø mm
250508	16 x 340	M 8	251501	steel. burnished	6 + 8

Accessories for Stand Columns and Measuring Tables

Accessories for Measuring Stands

ART NO	article description
259902	cross joint for 250201
259903	cross joint for 250203
259909	cross joint for 252001
259910	cross joint for 252002
259906	grip clamp for 250204 + 251020
259901	dial indicator shank for 250201 / 250203 + 250204
259911	dial indicator shank for 250301 / 250302 + 250305 ø 8+dovetail
259912	dial indicator shank for 250401 + 255001 ø 8+dovetail
259904	spanner M6 for 252001 + 252002
259905	spanner M8 for 250201 / 250203 + 250204
259908	spanner M5 for 250304 + 250319

ART NO 259902



ART NO 259906



ART NO 259901



ART NO 259911



ART NO 259912



ART NO 259905



ART NO 259908



ART NO 259904



Measuring Tables

- **without dial indicator**

- flat measuring table, steel, hardened and ground surface
- chromed column, rigid measuring arm, with fine adjustment
- dial indicator shank ø 8 mm
- Measuring table flat

ART NO 258011



ART NO 258013



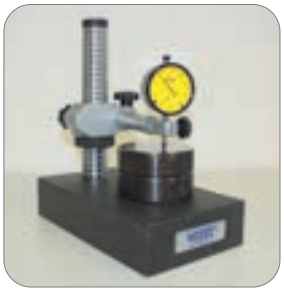
ART NO	mm	measuring height mm	outreach mm	column ø mm	flatness mm
258011	ø 60	125	75	25	0.008
258013	60 x 60	125	75	25	0.008

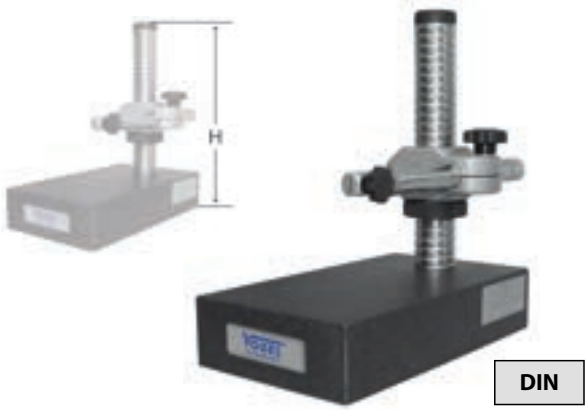
Precision Measuring Tables

DIN 876/00

- **made of black granite**
- **for the measuring room and calibration laboratory**

- measuring surface fine ground and diamond lapped
- hardened column with height adjustment and setting ring
- with adjustable cross arm
- dial indicator shank ø 8 mm





DIN

ART NO	mm table	meas. height mm	arm length mm	total height (H) mm	column ø mm	cross arm ø mm
250815	250 x 150 x 50	165	180	270	35	22
250816	300 x 210 x 60	235	225	360	35	22
250817	400 x 300 x 70	300	270	450	35	22

Precision Measuring Tables

DIN 876/00

- **made of black granite**
- **for the measuring room and calibration laboratory**

- measuring surface fine ground and diamond lapped
- hardened column with height adjustment and setting ring
- with adjustable cross arm
- dial indicator shank ø 8 mm

Option
- cross arm with fine adjustment, art. no.: 258052







DIN

ART NO	mm table	measuring height mm	arm length mm	total height (H) mm	column-ø mm
258051	80 x 80 x 20	120	62	205	25

Universal Comparative Measuring Instrument, without Dial Indicator

- **for measuring inside- and outside diameters of grooves, reverse turns, thread turns etc.**
- **with one fixed and one movable probe**

- rugged construction, measuring table stainless, hardened
- measurement can be done by analogy dial indicator or by digital dial indicator
- different probes are available, interchangeable
- large application range, for comparison measurements
- dial indicator shank ø 8H7
- further accessories, e.g. calibrated gauge blocks or setting rings on request
- with instruction manual

Measuring Probes included
- stainless, hardened
- 1 pair of measuring probes art.-no.: 391010-01, ø 10 x 40 mm, spherical shaft, shaft ø 8 mm
- 1 pair of measuring probes art.-no.: 391010-02, ø 20 x 34 mm, probe reduced,, shaft ø 8 mm





CE

ART NO	mm	table mm	max. mm
391010	100	202 x 167 x 110	2.0


VOGEL
GERMANY
210
200
190
180
170
160
150
140
120
110
100
90
10 9 8 7 6 5 4 3 2 1 0
0.05mm
VOGEL

Marking, Scribing Devices, Protractors



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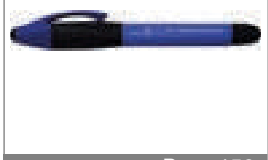
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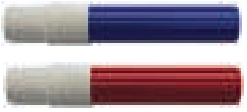
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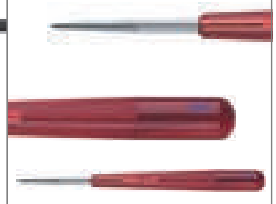
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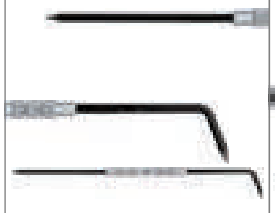
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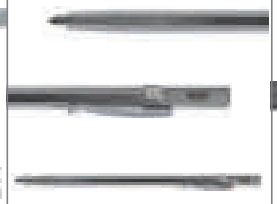
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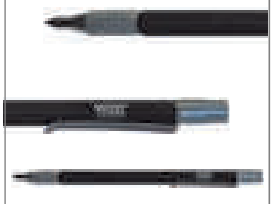
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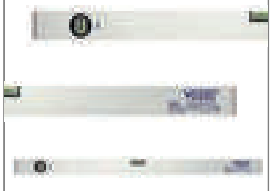
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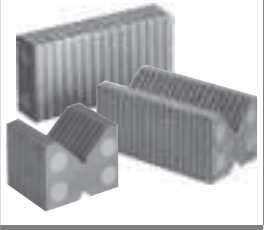
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Ink Markers and Steel Scribers

Emil Otto • Metal Etching Pens

- **for markings on metal and aluminium**
- **with exchangeable ink tank**

- chemical and thermical resistant
- package contents 1 pen holder and 2 cartriges





ink tank (spare part)

ART NO for metal (green liquid)	ART NO for aluminium (light blue liquid)	ART NO for tool steel (blue liquid)	ART NO for titanium and titanium alloys (turquoise dark blue)
334501	**334502**	**334503**	**334504**

ART NO spare part ink tank for metal (green liquid)	ART NO spare part ink tank for aluminium (light blue liquid)	ART NO spare part ink tank for tool steel (blue liquid)	ART NO spare part ink tank for titanium and titanium alloys (turquoise dark blue)
334591	**334592**	**334593**	**334594**

EMIL OTTO • Marking Ink

- **for the marking of machining points on surfaces**
- **as marker, in a spray bottle or in a plastic canister available**

- drys within seconds
- non-reflective fluid
- good adhesions and can be removed easily
- 2 different colours available





ART NO 262601





ART NO 262611



ART NO 262603



ART NO 262605



ART NO 262604

ART NO	colour	contents ml	marker	spray bottle	canister
262601	blue	30	✓	—	—
262603	blue	500	—	—	✓
262604	blue	1000	—	—	✓
262605	blue	500	—	✓	—
262611	red	30	✓	—	—
262613	red	500	—	—	✓
262614	red	1000	—	—	✓
262615	red	500	—	✓	—

Steel Scribers

- **with hardened tips**

- made from special steel

ART NO 334604



ART NO 334602



ART NO 334600



ART NO 334603



ART NO	mm	scriber-ø mm	version
334600	180	5	straight bar, knurled handle
334602	230	4	straight and cranked bar, with plastic handle
334603	175	4	straight bar, exchangable tip, knurled handle
334604	250	4	straight and cranked bar, exchangeable tips, knurled handle
334691	90	4	spare tip, straight (for art.-no.: 334603 – 334604)
334692	100	4	spare tip, cranked (for art.-no.: 334604)

Steel Scribers

- with tungsten carbide tips



ART NO 334606



ART NO 334612

ART NO 334608



ART NO 334610



ART NO 334611



ART NO 334615



ART NO	mm	shaft-ø mm	version
334606	175	14	straight bar, with red plastic handle
334608	150	6	hexagonal bar, galvanized, with clip
334609	180	8	hexagonal bar, galvanized, without clip
334610	150	8	hexagonal, aluminium shaft, lacquered, with drop mechanic
334695	35	—	spare tip, carbide, for 334610
334611	150	10	„RICO"-Marker, aluminium shaft, knurled handle, pen type
334694	70	—	spare tip, carbide, for 334611
334612	230	4	straight and cranked bar, exchangeable tips, knurled handle
334615	150	9	carbide marker, push technic, with clip
334690	30	—	spare tip, carbide, straight version, for 334615
334696	90	—	spare tip, carbide, straight version, for 334612
334697	100	—	spare tip, carbide, cranked version, for 334612

Steel Scribers

- with tungsten carbide needle
- with clip and magnet

- made of steel, black burnished
- with exchangeable needle
- with anti-slip knurled handle



with magnet



ART NO	mm	shaft-ø mm	version
334620	155	3.2	with tungsten carbide tip, anti-slip knurled handle
334629	—	3	spare part, tungsten carbide needle

Parallel Surface Gauge

- for simple workshop purposes

- round, chromed column, without graduation
- hardened steel scriber, straight and cranked bar
- scriber is rotatable and turnable
- round and lacquered iron base



ART NO	mm
342102	300
342104	500

Dividers and Compasses

Spring Divider

DIN 6486

- steel, polished
- square legs, with hardened tips
- with quick nut for quick movement
- with fine adjustment





ART NO 3026899
pair of spare needles



DIN

ART NO Divider	
302420	100
302421	125
302422	150
302423	175
302424	200
302425	250
302426	300
302427	400
302428	500
302429	600

ART NO Divider with exchangeable points	
302680	100
302681	125
302682	150
302683	175
302684	200
302685	250
302686	300
302687	400
302688	500
302689	600

Internal and External Spring Joint Compass

DIN 6482/6484

- steel, polished
- square legs, with hardened tips
- with quick nut for quick movement
- with fine adjustment





DIN

ART NO Spring Inside Compass	
302440	100
302441	125
302442	150
302443	175
302444	200
302445	250
302446	300
302447	400
302448	500
302449	600

ART NO Spring Outside Compass	
302460	100
302461	125
302462	150
302463	175
302464	200
302465	250
302466	300
302467	400
302468	500
302469	600

Divider and Divider with Setting Wing

DIN 6486

- steel, polished
- square legs, with hardened tips
- with rivet

ART NO 302402



ART NO 302412



ART NO 302472



DIN

ART NO Divider		ART NO with setting wing		ART NO with holder	
302402	150	**302412**	150	**302472**	150
302403	175	**302413**	175	**302473**	175
302404	200	**302414**	200	**302474**	200
302405	250	**302415**	250	**302475**	250
302406	300	**302416**	300	**302476**	300
302407	400	**302417**	400	**302477**	400
302408	500	**302418**	500	**302478**	500

Internal and External Joint Compass

DIN 6482 / 6484

- steel, polished
- with flat legs
- with rivet

ART NO 302432



ART NO 302452



DIN

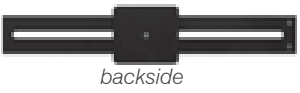
ART NO Inside Compass		ART NO Outside Compass	
302432	150	**302452**	150
302433	175	**302453**	175
302434	200	**302454**	200
302435	250	**302455**	250
302436	300	**302456**	300
302437	400	**302457**	400
302438	500	**302458**	500

Marking Gauges and Marking Vernier Calipers

Marking Gauges

- **with flat sliding ruler and marking block**
- **with fixing screw**

- made of Dur-Aluminium, surface hardened HRC63
- scratch-resistant, black anodized surface
- marking block made of steel
- laser engraved, clear reading scale
- vernier reading 0.05 mm


backside


side



ART NO	mm	mm	mm
336230	200	0.05	298 x 60 x 16
336231	250	0.05	348 x 60 x 16
336233	300	0.05	400 x 60 x 16

Marking Gauges

- **with flat sliding ruler and marking block**

- with fiting screw
- made of Dur-Aluminium, surface hardened HRC63
- scratch-resistant, black anodized surface
- with hardened steel marking block, locking screw
- laser engraved, clear reading scale
- marking block 44 mm high




side

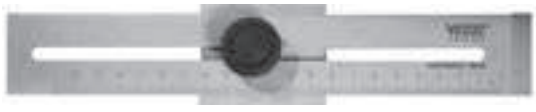

backside

ART NO	mm	mm	mm
336260	200	0.05	300 x 60 x 44
336261	250	0.05	350 x 60 x 44
336262	300	0.05	400 x 60 x 44

Marking Gauges

- **with flat sliding rule**
- **with metal fixing screw**

- stainless steel blade, with hardened marking block
- laser engraved scale, blade surface matt chrome finish
- with vernier reading 0.1 mm



ART NO	mm	mm	mm
336220	200	0.1	260 x 40 / 50 x 25
336221	250	0.1	305 x 40 /50 x 25
336223	300	0.1	360 x 40 / 50 x 25

Universal Marking Gauges

- **with contact-roll**
- **carbide scriber, exchangeable**

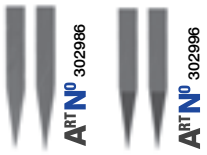
- stainles steel, hardened
- laser engraved scale, reading parts in matt chrome finish
- 2nd scriber as spare part included



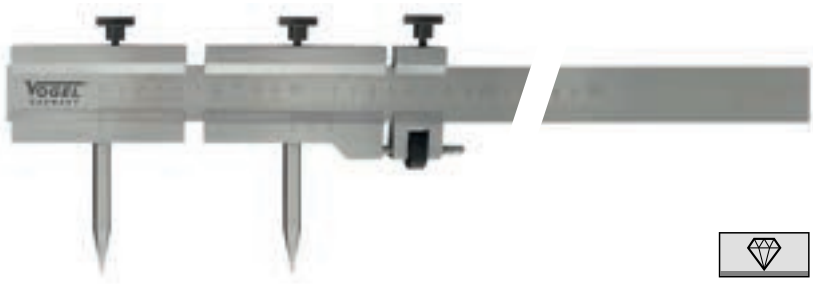
ART NO	mm / inch	mm	ART NO carbide scriber (spare part)
335070	200 / 8	0,1	**335072**
335071	400 / 16	0,1	**335072**

Trammels

- steel, with hardened, exchangeable points
- flat beam, with fine adjustment
- with fixing screws



spare points in pair hardened



ART NO	mm	mm
302911	500	0.1
302912	1000	0.1
302913	1500	0.1
302914	2000	0.1
302915	3000	0.1

Compass Vernier Calipers

- **for accurate marking owing to parallel position of the scriber jaws**

- special steel, reading scale in matt chrome finish
- with fixing screw
- with carbide tips or hardened tips at your choice



ART NO hardened tips	ART NO carbide tips	mm	for ø mm	mm
303002	**303102**	150	300	0.1
303003	**303103**	200	400	0.1
303004	**303104**	250	500	0.1
303005	**303105**	300	600	0.1

Marking Gauges

- **with round bar**

- chromed bar and scale, with 0.1 mm vernier reading
- with round contact plate, with fixing screw
- with or without fine adjustment, at your choice
- with exchangeable, hardened marking needle



ART NO	ART NO	cm		ART NO spare needle
335030	**335031**	30	0.1	**335066**
—	**335051**	50	0.1	**335066**

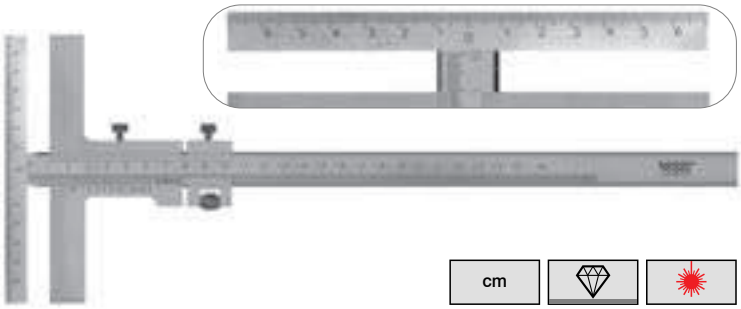
Marking Vernier Calipers and Digital Protractors

T-Marking Vernier Calipers

- **with mm-graduation at the edge of the T-bar**

- special steel, hardened, with fine adjustment
- laser engraved scale, reading parts in matt chrome finish





cm

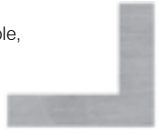
ART NO	cm	mm	length of T-bar mm
337301	16	0.05	100
337302	25	0.05	140
337303	30	0.05	160
337305	50	0.05	160

Electr. Digital Universal Bevel Protractor Set

- **with data output**
- **with 3 blades (150 / 200 / 300 mm), 90° square and angle stop**

- stainless steel, hardened and fine ground
- rugged ABS-plastic housing, multifunctional display
- with fine adjustment for easy adjustment and fixing device for the blade
- large LCD display with clear reading
- two display lines, resolution in 1. line with 0.005° and in 2. line with min. 10“
- preset to 360° / 180° / 90°, two measuring directions selectable
- On/Off button, mode-button, set-button, zero setting at any position
- automatic switch off after approx. 5 min
- operation temperature 0 °C ~ +40 °C, storage temperature -10 °C ~ +60 °C
- incl. 1x 3 V battery (type CR2032, art.-no.: 90112), with operation manual

Option
- data transfer via cable, art.-no. 2420192, see page 272



90° angled adjustment



angle stop



UNIT | INOX | CR2032 Lithium 3V | CE

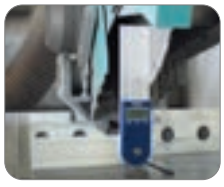
ART NO	length of blade mm			max.	CC
320100	150 / 200 / 300	360° / 2x 180° / 4x 90°	0.005° / 10''	5'	on request

Electr. Digital Protractor

- **for checking and transferring angles**

- large LCD display with clear reading, digit height 10 mm
- blades in anodized aluminium with profile grooves, and embedded magnet strips
- On/Off button and data hold function, with fixing screw
- 180° rotating display, by pressing function button
- zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), operation manual









CR2032 Lithium 3V

ART NO	°	°	max. °	length of blades mm	mm	CC
320021	0 – 360	0.05	0.3	200 x 200	205 x 45 x 30	on request
320022	0 – 360	0.05	0.3	300 x 300	305 x 45 x 30	on request

Electr. Digital Bevel Protractor

- **for high precision accuracy and safety reading**

- LCD display with clear reading, digit height 10 mm
- stainless, hardened and fine ground
- On/Off button, with fixing screw
- zero setting at any position, with data hold function
- reading of values in display by 180° switchable
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

ART NO 320201



ART NO 320202 – 320203







ART NO	length of blade mm	arc-ø mm	°	°	max. °	CC
320201	150	120	0 – 180	0.05	0.3	on request
320202	200	150	0 – 180	0.05	0.3	on request
320203	300	200	0 – 180	0.05	0.3	on request

Protractor (Skew Measure)

- **for high precision accuracy and safety reading**

- LCD display with clear reading, digit height 10 mm
- stainless, hardened and fine ground
- On/Off button, with fixing screw
- zero setting at any position, with data hold function
- reading of the values in the display from 10° – 170°
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



	Actual value °	Lower limit value °	Upper limit value °
X Flatness deviation	0.0057	0.0000	0.0300
Y Parallelism deviation	0.0071	0.0000	0.0450
Z Angular deviation at 90°	0.0000	-1.0000	1.0000

ART NO	length of blade mm	arc-ø mm	angle graduation	CC
320581	150	100	10 – 170	on request
320582	300	150	10 – 170	on request
320583	400	200	10 – 170	on request

Digital Protractors

Electr. Digital Angle-Sensor „Bevel-Box“ and „Level-Box“ • IP54

- **dust- and splash water proof acc. to DIN 40050 / IEC 60529**
- **ideal device for angle adjustment, can be used for many purposes**

- rugged metal housing
- large LCD display with clear reading, digit height 10 mm
- with 3 magnetic discs in the bottom of the housing
- with On/Off-, zero- and ABS button, data hold function
- art.-no. 32 0011 added with a vial on top of the housing
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



ART NO 320010



ART NO 320011



magnetic discs

IP 54 · UNIT · CE · CR2032 Lithium 3V

ART NO	⟷	👁	max. ⟷	mm
320010	±180°	0.1°	±0.1°	50 x 50 x 32
320011	±180°	0.1°	±0.1°	50 x 63 x 32

Electr. Digital Angle-Sensor with 90° swiveling LCD display • IP54

- **dust- and splash water proof acc. to DIN 40050 / IEC 60529**
- **ideal device for angle adjustment, can be used for many purposes**

- large LCD display, with clear reading, digit height 8 mm
- LCD display swivelling up to 90°, with direction indicating vial in the display
- with magnetic V-base
- On/Off button and data hold function
- incl. 2x 1.5 V battery (type AAA, art. no.: 90002), with operation manual





magnetic V-base



swivelling display



IP 54 · UNIT · CE

ART NO	⟷	👁	max. ⟷	mm
320015	±180°	0.1°	±0.1°	55 x 57 x 32

Electr. Digital Protractor • IP65

- **water- and coolant proof acc. to DIN 40050 / IEC 60529**
- **ideal device for precise leveling and measuring of flatness and squareness, can be used for many purposes**

- sturdy housing with aluminium V-prism at top and bottom side
- art.-no. 320016 additionally with magnetic discs in the V-bottom
- large LCD display, with clear reading, digit height 9 mm
- with acoustic signal and backlight
- autom. 180° rotating display, by turning up-side down
- with data hold function, ABS system, with easy to handle self calibration
- On/Off- and zero button, zero setting at any position
- incl. 2x 1.5 V battery (type AAA, art. no.: 90002), with operation manual



ART NO 320016



magnetic base

IP 65 · UNIT · CE

ART NO	⟷	👁	max. ⟷	mm	
320013	4 x 90° (0 – 360°)	0.05°	±0.15°	150 x 33 x 60	X
320016	4 x 90° (0 – 360°)	0.05°	±0.15°	150 x 33 x 60	✓

Universal Bevel Protractor Set

- **set with 3 blades in different length**

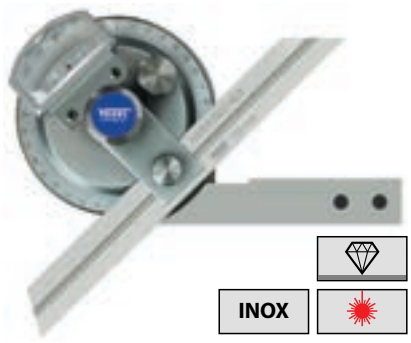
- stainless, hardened and fine ground
- scales matt chrome finish
- parallaxfree reading by vernier, with large magnifying lens
- with fine adjustment
- incl. angle stop (art. no.: 321276)

Option
- Wooden box: art. no.: 3299020





angle stop



ART NO	length of blades mm		angle graduation °	CC
321220	150 / 200 / 300 mm	4 x 90°	1/12° = 5'	on request

Protractors (Skew Measurer)

- **for standard mechanical engineering**

- special steel, in chromed finish
- scale in matt chrome finish
- with adjustable blade, with fixing screw



ART NO	length of blades mm	arc-ø mm	angle graduation °
320571	150	100	10 – 170°
320572	300	150	10 – 170°
320573	400	200	10 – 170°
320574	500	250	10 – 170°

Protractor

- **with fixing screw**
- **with half round plate**

- special steel, chromed
- scale matt chrome finish
- double graduation from 0° – 180° in opposite direction



ART NO	length of blades mm	arc-ø mm	°	CC
322541	150	80	0 – 180	on request

Spare Parts for Electr. Digital Universal Protractors

- **art.-no. 320100**

ART NO	spare blade
320101	150
320102	200
320103	300

ART NO 320101
ART NO 320102
ART NO 320103



ART NO		mm
321275	90° angled adjustment	60 x 50 / 15 x 4

ART NO		mm
321276	angle stop	70 / 40 x 18 x 4

ART NO 321276
ART NO 321275



Analog Protractors

Spare Parts for Universal Protractors

- art.-no. 321220

ART NO	spare blade
321225	150
321226	200
321227	300
321229	500

ART NO	magnifying glass, w/o screws	mm
321228		37 x 22

ART NO	angle stop	mm
321230		68 x 38 / 18 x 4





ART NO 321228



ART NO 321230

Protractor

- with fixing screw
- for standard mechanical engineering

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



ART NO	length of blade mm	arc-ø mm	°	CC
322511-2	120	80	0 – 180	on request
322512-2	150	120	0 – 180	on request
322513-2	200	150	0 – 180	on request
322514-2	300	200	0 – 180	on request
322515-2	500	300	0 – 180	on request

Protractor

- with fixing screw
- for standard mechanical engeneering

- special steel, in chromed finish
- scale in matt chrom finish, laser engraved scale



ART NO	lenght of blade mm	arc-ø mm	°	CC
322511	120	80	0 – 180	on request
322512	150	120	0 – 180	on request
322513	200	150	0 – 180	on request
322514	300	200	0 – 180	on request
322515	500	300	0 – 180	on request
322516	600	300	0 – 180	on request

Electr. Digital Angle Measurer Spirit Level

- **automatic calculation of single and double mitre angles without any other tools**

- sturdy aluminium housing, with adjustable bevel blade
- large LCD display, digit height 12 mm, reading from all directions possible, with shiftable backlight
- rapid calculation and transfer of angles by means of memory function for frequently used angle dimensions
- power On/Off button, data hold function, shock resistant up to 1 m falling down
- precise mitre- and self-calibration function
- with 1x horizontal vial and 1x vertical vial
- with fixing screw for fixing the angle setting
- incl. 2x battery 1.5 V (type AAA, art.-no.: 90002)
- incl. operation manual





ART NO			max. ± °	max. vial	mm
711020	0 – 225°	0.05°	0.1°	1 mm/m = ±0.057°	440 x 60 x 25

Electr. Digital Angle Measurer Spirit Level

- **for quick and accurate measuring of angular degrees, can also be used as a spirit level**
- **with 1x horizontal vial and 1x vertical vial**

- sturdy aluminium housing, with adjustable bevel blade
- large LCD display with clear reading, digit height 12 mm
- On/Off and zero button, zero setting at any position
- incl. 1x 3 V battery (type CR2032, art.-no.: 90112), with operation manual



ART NO			max.	max. vial	mm
711025	0° – 225°	0.1°	0.3°	1 mm/m = ±0.057°	305 x 52 x 23

Electr. Digital Spirit Level

- **for trade and industry**

- rugged, rectangular profile, made of light alloy
- large LCD display with clear reading, digit height 12 mm, with shiftable back light
- display always appears in the reading direction no matter which direction the device is rotated
- conversion between ABS- and INC-measurement
- calculation of ascend/descend, angle and deviation
- with self-calibration function
- power On/Off button, data hold function
- with 1 x horizontal vial and 1 x vertical vial
- incl. 2x 1.5 V battery (type AAA, art.-no.: 90002)
- with operation manual





ART NO			max. ± °	mm
712020	4 x 90°	0.1°	0.2°	416 x 50 x 21

Angle Measure Spirit Levels and Spirit Levels

Electr. Digital Light Alloy Spirit Level

- **with cross laser, angle degree indicator and percent deviation**

- rugged, rectangular profile, made of light alloy, with ribbed surface
- large LCD display, digit height 10 mm, reading from all directions possible
- switchable display in angle-, percentage measuring- and tangent-mode
- On/Off button, data hold function and memory function
- magnetic inserts in the bottom and M6 thread for tripod attachment
- with each 1x horizontal and 1x vertical vial
- with self-calibration and switchable cross laser, range about 7 m (inside)
- incl. 1x 9 V battery (type 6LR61, art.-no.: 90006), with operation manual

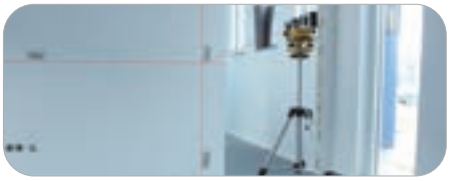


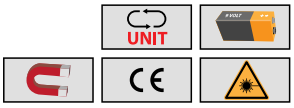
with cross laser





with magnet inserts and M6 thread for tripod attachment





ART NO	mm		max. ± °	mm
712010	4 x 90°	0.05°	0.2	225 x 57 x 25

Spirit Levels „NIVEAU NORM“

- **top quality spirit levels with plane surfaces**

- rugged light alloy rectangular profile, from up 1500 mm length with extrem solid wallthickness
- with 1x horizontal vial and 1x vertical vial
- barrel-shaped vials with patented SOLID built-in system, permanent fixed and constantly aligned with the profile
- surfaces in stratosilver elocated
- measuring accuracy adjusted by electronical adjustment and at final inspection
- measuring accuracy in normal position 0.5 mm/m = 0.029°, with reversal measurement minimum 0.75 mm/m = 0.043°

art.-no.: 714100 – 714110
- with strong adhesive magnet in the measurement base

ART NO 714000 – 714010



without magnets

ART NO 714100 – 714110



with strong adhesive magnet in the measurement base



plane, rectangular aluminium profile, extruded and warm cured

ART NO 714100 – 714110



ART NO	mm			max. vial
714000	200	50 x 20	X	0.5 mm/m = ±0.029°
714001	300	50 x 20	X	0.5 mm/m = ±0.029°
714002	400	50 x 20	X	0.5 mm/m = ±0.029°
714003	500	50 x 20	X	0.5 mm/m = ±0.029°
714004	600	50 x 20	X	0.5 mm/m = ±0.029°
714005	800	50 x 20	X	0.5 mm/m = ±0.029°
714006	1000	50 x 20	X	0.5 mm/m = ±0.029°
714007	1200	50 x 20	X	0.5 mm/m = ±0.029°
714008	1500	50 x 20	X	0.5 mm/m = ±0.029°
714009	1800	50 x 20	X	0.5 mm/m = ±0.029°
714010	2000	50 x 20	X	0.5 mm/m = ±0.029°
714100	250	50 x 20	✓	0.5 mm/m = ±0.029°
714101	300	50 x 20	✓	0.5 mm/m = ±0.029°
714102	400	50 x 20	✓	0.5 mm/m = ±0.029°
714103	500	50 x 20	✓	0.5 mm/m = ±0.029°
714104	600	50 x 20	✓	0.5 mm/m = ±0.029°
714105	800	50 x 20	✓	0.5 mm/m = ±0.029°
714106	1000	50 x 20	✓	0.5 mm/m = ±0.029°
714107	1200	50 x 20	✓	0.5 mm/m = ±0.029°
714108	1500	50 x 20	✓	0.5 mm/m = ±0.029°
714109	1800	50 x 20	✓	0.5 mm/m = ±0.029°
714110	2000	50 x 20	✓	0.5 mm/m = ±0.029°

Parallel V-Block Pairs

- made of dense special cast iron with high resistance to wear
- supplied in matched pair
- 4 different large grooves, 90°
- available in milled or ground version



grade 0 = ground parallelism tolerance = ±0.008 mm
grade 1 = ground parallelism tolerance = ±0.016 mm
grade 3 = milled parallelism tolerance = ±0.064 mm

ART N° grade 0	ART N° grade 1	ART N° grade 3	mm	for shaft-ø mm
333511	**333501**	**333531**	60 x 120 x 100	8 – 90
333512	**333502**	**333532**	75 x 150 x 130	10 – 120
333513	**333503**	**333533**	90 x 200 x 170	12 – 180

Prism Pair

- made of dense special cast iron with high resistance to wear
- supplied in matched pair
- with 1 large cut, 90°
- available in milled or ground version
- from 200 mm length with grooves

ART N° 333101



ART N° 333103



grade 0 = ground parallelism tolerance = ±0.008 mm
grade 1 = ground parallelism tolerance = ±0.016 mm
grade 3 = milled parallelism tolerance = ±0.064 mm

ART N° grade 0	ART N° grade 1	ART N° grade 3	mm	for shaft-ø mm
333101	**333201**	**333301**	100 x 40 x 30	6 – 40
333102	**333202**	**333302**	150 x 50 x 40	8 – 50
333103	**333203**	**333303**	200 x 70 x 50	8 – 70
333104	**333204**	**333304**	250 x 85 x 60	12 – 85
333105	**333205**	**333305**	300 x 100 x 70	12 – 100

Adjustable Angle Prism

- special steel, hardened, fine ground
- prism cut 90°, angle scaling 0° – 60° / 0° – 30°



ART N°	mm	parallelism tolerance ±mm	for shaft-ø mm
334001	75 x 25 x 32 / 23	0.05	28
334002	102 x 30 x 48 / 29	0.05	40
334003	102 x 46 x 48 / 29	0.05	40

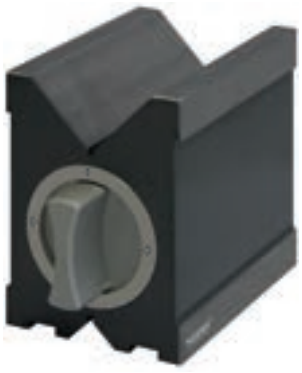
Magnetic Blocks

Magnetic Measuring and Clamping V-Block

- **especially engineered for toolmakers etc.**

- made of special steel
- with V-cut 90°, finely ground
- strong magnetic block
- with On/Off-rotary switch made of aluminium
- magnetic base with finely ground prism
- plane, parallel and squared machined



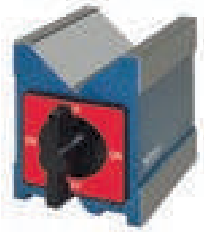


ART NO	mm	for shaft-ø mm	parallelism tolerance ± mm	prism N	surface N
330100	80 x 67 x 96	ø 6 – 66	0,004	400	900
330101	100 x 70 x 96	ø 6 – 72	0,004	650	1800

Magnetic Measuring and Clamping V-Block

- special steel made
- with On/Off switch
- art.-no. 331000 – 331002: with flat magnetic base
- art.-no. 331010 – 331012: with magnetic prism base
- with V-cut 90°, fine ground
- plane, parallel and squared machined

ART NO 331010 + 331011





ART NO 331002



ART NO 331012



ART NO steel	mm	for shaft-ø mm	parallelism tolerance ± mm	N	flat base	prism base
331000	101 x 76 x 78	ø 6 – 40	0.05	700	✓	—
331001	127 x 60 x 73	ø 6 – 35	0.05	600	✓	—
331002	70 x 60 x 73	ø 6 – 30	0.05	700	✓	—
331010	80 x 70 x 95	ø 6 – 30	0.05	800	—	✓
331011	101 x 67 x 95	ø 6 – 70	0.05	1000	—	✓
331012	115 x 75 x 100	ø 6 – 70	0.05	800	—	✓

Lamellar Block / Prism Lamellar Block

- **for setting on magnetic holding plates**

- special steel, fine ground
- with 90° cut or in flat version
- with pole distance 4 mm

ART NO 331040



ART NO 331030



ART NO 331041



ART NO flat	mm	ART NO with V-cut	mm
331030 (pair)	100 x 50 x 25	**331040 (pair)**	50 x 60 x 48
—	—	**331041 (single)**	100 x 60 x 48

V-Block with Clamp

- **for clamping cylindrical pieces**

- special steel, hardened, fine ground
- 2 different deep 90° V-cuts
- 2 suporting surfaces
- single or in pair adjusted available



ART NO single	ART NO pair	mm	clamping range for ø mm	max. ± mm / 100 mm
333001	**333011**	45 x 40 x 35	5 – 20	0.01
333002	**333012**	70 x 45 x 40	5 – 25	0.01

V-Block Pair with Clamps

- **for clamping cylindrical pieces and marking purposes, etc.**

- special steel, hardened or stainless steel hardened
- 2 different deep 90° V-cuts, surfaces finely ground
- front faces angular ground in regard to base area, adjusted in pairs

Option
- wooden boxes available, by extra charge



ART NO carbon steel in pairs	mm	clamping range for ø mm	max. ± mm / 100 mm
333041	50 x 40 x 50	5 – 30	0.01
333042	75 x 55 x 55	5 – 50	0.01
333043	100 x 75 x 75	7 – 70	0.01

Clamps for Prisms and Precision Parallel Support Sets

Replacement Clamp for Prisms

- **single packed**

ART NO	suitable for
3330901	333001+333011
3330902	333002+333012
3330941	333041
3330942	333042
3330943	333043

ART NO 3330901



ART NO 3330941



Precision Parallel Support Sets

- **14 pairs of parallels**

- special steel, carefully hardened and strain-removed, HRC 58 – 60
- longitudinal surfaces are plane parallel machined and extra fine adjusted in pairs



ART NO	sizes mm	mm	accuracy for height ± mm
260600	14 / 16 / 18 / 20 / 22 / 24 / 26 / 28 / 30 / 32 / 35 / 40 / 45 / 50	150 x 10 ± 0.05	0,01

Precision Parallel Support Sets, magnetic

- **hardened (~60 HRC), black anodized**
- **with magnetic inserts, reduce the clamping time by up to ~ 10**

- fine ground in pair, as set of each 5 pairs
- scratch-resistant, black anodized surface







Application example

ART NO	sizes mm	height tolerance ± mm	width tolerance ± mm	mm
260620	15 / 22 / 25 / 30 / 32	0.005	0.01	120 x 2.5
260621	15 / 30 / 35 / 37 / 39	0.005	0.01	125 x 2.5
260622	25 / 35 / 40 / 45 / 47	0.005	0.01	150 x 2.5



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DIN 875/1
VOGEL
GERMANY
Aluminium
Hardened
MADE IN GERMANY
VOGEL
GERMANY
Art.Nr. 504033-2
CE

Squares



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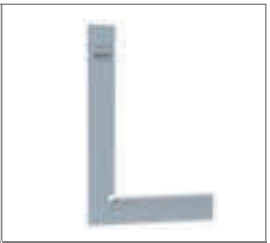
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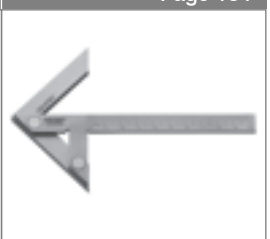
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Precision Inspection Square
DIN 875/0

- **for inspection rooms and test laboratories**

- stainless, hardened steel or made from special hardened steel
- extra fine ground
- flat or with back



Precision Inspection Square
DIN 875/1

- **for precision machinery**

- stainless, steel or made from special steel
- fine ground
- flat or with back



DIN

ART NO flat	mm	ART NO with back	mm	CC	transport box ART NO	transport box ART NO
DIN 875/0 stainless steel					flat	with back
310000	50 x 40	310100	50 x 40	on request	3199050	3199051
310001	75 x 50	310101	75 x 50	on request	3199075	3199076
310002	100 x 70	310102	100 x 70	on request	3199100	3199101
310003	150 x 100	310103	150 x 100	on request	3199150	3199151
310004	200 x 130	310104	200 x 130	on request	3199200	3199201
310005	250 x 165	310105	250 x 165	on request	3199250	3199251
310006	300 x 200	310106	300 x 200	on request	3199300	3199301
DIN 875 GG 0 carbon steel					flat	with back
310011	75 x 50	310111	75 x 50	on request	3199075	3199076
310012	100 x 70	310112	100 x 70	on request	3199100	3199101
310013	150 x 100	310113	150 x 100	on request	3199150	3199151
310014	200 x 130	310114	200 x 130	on request	3199200	3199201
310015	250 x 165	310115	250 x 165	on request	3199250	3199251
310016	300 x 200	310116	300 x 200	on request	3199300	3199301
DIN 875 GG 1 stainless steel					flat	with back
310021	75 x 50	310121	75 x 50	on request	3199075	3199076
310022	100 x 70	310122	100 x 70	on request	3199100	3199101
310023	150 x 100	310123	150 x 100	on request	3199150	3199151
310024	200 x 130	310124	200 x 130	on request	3199200	3199201
310025	250 x 165	310125	250 x 165	on request	3199250	3199251
310026	300 x 200	310126	300 x 200	on request	3199300	3199301
310026-1	400 x 265	310126-1	400 x 265	on request	3199400	3199401
310027	500 x 330	310127	500 x 330	on request	3199500	3199501
310027-1	600 x 400	310127-1	600 x 400	on request	3199600	3199761
310028	750 x 500	310128	750 x 500	on request	3199750	3199751
310029	1000 x 660	310129	1000 x 660	on request	3199990	3199991
DIN 875 GG 1 carbon steel					flat	with back
310041	75 x 50	310141	75 x 50	on request	3199075	3199076
310042	100 x 70	310142	100 x 70	on request	3199100	3199101
310043	150 x 100	310143	150 x 100	on request	3199150	3199151
310044	200 x 130	310144	200 x 130	on request	3199200	3199201
310045	250 x 165	310145	250 x 165	on request	3199250	3199251
310046	300 x 200	310146	300 x 200	on request	3199300	3199301
310046-1	400 x 265	310146-1	400 x 265	on request	3199400	3199401
310047	500 x 330	310147	500 x 330	on request	3199500	3199501
310047-1	600 x 400	310147-1	600 x 400	on request	3199600	3199761
310048	750 x 500	310148	750 x 500	on request	3199750	3199751
310049	1000 x 660	310149	1000 x 660	on request	3199990	3199991
310049-1	1500 x 1000	310149-1	1500 x 1000	on request	—	—

Precision Squares

Precision Workshop Squares

DIN 875/2

- **for standard machinery**

- stainless or carbon steel, at your choice
- fine ground
- flat or with back



ART NO 310071



ART NO 310171

DIN

ART NO flat	mm	ART NO with back	mm	CC
DIN 875 GG II stainless steel				
310071	75 x 50	**310171**	75 x 50	on request
310072	100 x 70	**310172**	100 x 70	on request
310073	150 x 100	**310173**	150 x 100	on request
310074	200 x 130	**310174**	200 x 130	on request
310075	250 x 165	**310175**	250 x 165	on request
310076	300 x 175	**310176**	300 x 175	on request
310076-1	400 x 200	**310176-1**	400 x 200	on request
310077	500 x 250	**310177**	500 x 250	on request
310077-1	600 x 300	**310177-1**	600 x 300	on request
310078	750 x 375	**310178**	750 x 375	on request
310079	1000 x 500	**310179**	1000 x 500	on request
310079-1	1500 x 750	**310179-1**	1500 x 750	on request
310079-2	2000 x 1000	**310179-2**	2000 x1000	on request
DIN 875 GG II carbon steel				
310061	75 x 50	**310161**	75 x 50	on request
310062	100 x 70	**310162**	100 x 70	on request
310063	150 x 100	**310163**	150 x 100	on request
310064	200 x 130	**310164**	200 x 130	on request
310065	250 x 165	**310165**	250 x 165	on request
310066	300 x 175	**310166**	300 x 175	on request
310066-1	400 x 200	**310166-1**	400 x 200	on request
310067	500 x 250	**310167**	500 x 250	on request
310067-1	600 x 300	**310167-1**	600 x 300	on request
310068	750 x 375	**310168**	750 x 375	on request
310069	1000 x 500	**310169**	1000 x 500	on request
310069-1	1500 x 750	**310169-1**	1500 x 750	on request
310069-2	2000 x 1000	**310169-2**	2000 x 1000	on request

Workshop Square

- **for locksmith, workshop use, mechanics, training, etc.**

- special steel, galvanized finish
- flat or with back





ART NO flat	mm	ART NO with back	mm
312453	100 x 70	**312473**	100 x 70
312454	150 x 100	**312474**	150 x 100
312455	200 x 130	**312475**	200 x 130
312456	250 x 160	**312476**	250 x 160
312457	300 x 180	**312477**	300 x 180
312458	400 x 230	**312478**	400 x 230
312459	500 x 280	**312479**	500 x 280
312460	600 x 330	**312480**	600 x 330
312461	750 x 375	**312481**	750 x 375
312462	1000 x 500	**312482**	1000 x 500
312464	1500 x 750	**312484**	1500 x 750
312465	2000 x 1000	**312485**	2000 x 1000

Mechanic Square

- **with heavy base and thin blade**

- special carbon steel, fine ground
- workshop grade with chromed base, fine ground blade
- DIN quality with fine polished surfaces







DIN

ART NO Factory accuracy	mm
312370	67 x 58
312373	118 x 73
312374	170 x 100
312375	220 x 115
312376	270 x 135
312377	320 x 150

ART NO DIN 875 GG I	mm
312310	75 x 50
312313	100 x 70
312314	150 x 100
312315	200 x 130
312316	250 x 160
312317	300 x 175

ART NO DIN 875 GG II	mm
312350	75 x 50
312353	100 x 70
312354	150 x 100
312355	200 x 130
312356	250 x 160
312357	300 x 175
312358	400 x 250
312359	515 x 263

Bevel Edge Squares and Knife Straight Edges

Precision Bevel Edge Squares

DIN 875/00

- **for testing according to the light-gap method**

- stainless steel or carbon steel, at your choice
- hardened and fine ground
- with two bevelled edges, finely ground and lapped
- flat or with back



ART NO 310201



ART NO 310221 – 310225

DIN

ART NO flat	mm	ART NO with back	mm	CC
stainless steel				
310201	50 x 40	**310221**	50 x 40	on request
310202	75 x 50	**310222**	75 x 50	on request
310203	100 x 70	**310223**	100 x 70	on request
310204	150 x 100	**310224**	150 x 100	on request
310205	200 x 130	**310225**	200 x 130	on request
carbon steel				
310211	50 x 40	—	—	on request
310212	75 x 50	—	—	on request
310213	100 x 70	—	—	on request
310214	150 x 100	—	—	on request
310215	200 x 130	—	—	on request

Precision Knife Straight Edges

DIN 874/00

- **for testing according to the light-gap method**

- stainless steel, anti-glare matt chromed, hardened and fine ground
- carbon steel, with burnished edges, hardened and fine ground
- bevelled edges finely ground and lapped
- with insulation handle



ART NO 310323

ART NO 310303

DIN

ART NO stainless	mm	ART NO carbon steel	mm	CC
310302	75	**310322**	75	on request
310303	100	**310323**	100	on request
310304	125	**310324**	125	on request
310305	150	**310325**	150	on request
310306	200	**310326**	200	on request
310307	250	**310327**	250	on request
310308	300	**310328**	300	on request
310310	400	**310329**	400	on request
310311	500	**310330**	500	on request
310312	600	**310331**	600	on request
310313	750	**310332**	750	on request
310314	1000	**310333**	1000	on request
310315	1250	**310334**	1250	on request
310316	1500	**310335**	1500	on request

Toolmaker Square Set

DIN 875/00

contents:

- knife straight edge, stainless steel, hardened, DIN 874/00, length 100 mm
- square with inside bevelled edge, stainless, hardened, DIN 875/00, size 25 x 20 mm
- square with inside bevelled edge, stainless, hardened, DIN 875/00, size 40 x 28 mm
- square with bevelled edges, stainless, hardened, DIN 875/00, size 75 x 50 mm
- steel scriber point, size 60 x 9 x 9 mm

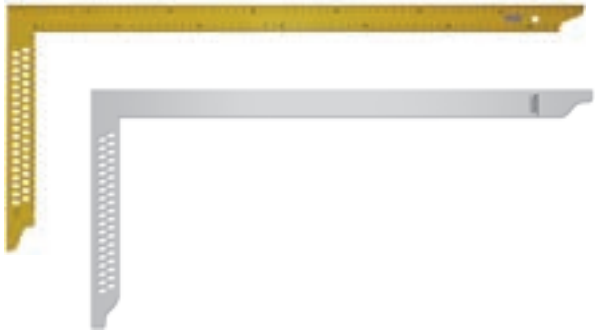


INOX | DIN

ART NO
310229

Carpenter's Squares

- stainless, spring steel
- with marking holes
- art. no. 521123 – 521126 yellow, powder coated surface, with cm-graduation and marking holes



ART NO with marking holes	ART NO yellow, with marking holes	mm	steel blade mm
521111	—	500 x 260	35 x 1.5
521112	—	600 x 280	35 x 1.5
521113	**521123**	700 x 300	35 x 1.5
521114	**521124**	800 x 320	35 x 1.5
521116	**521126**	1000 x 380	35 x 1.5

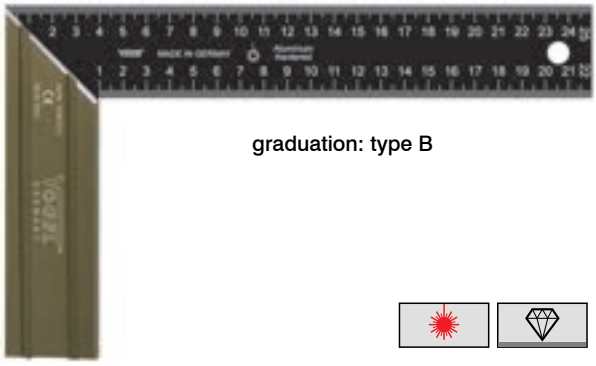
Universal Squares

- **with hardened aluminium blade (HRB 70) and elocated aluminium handle**
- **for general carpentry and metal work, etc.**

- with black anodized aluminium blade, non glare reading
- anodised aluminium handle with profile grooves
- with 45° mitre
- graduation on front- and rear side
- laser engraved scale for clear reading

graduation at type B = mm – mm / mm – mm

graduation at type C = mm – mm / inch – inch



graduation: type B

ART NO Typ B	mm	ART NO type C	mm / inch	length of handle mm	aluminium handle mm	aluminium blade mm
504031-2	150	**504051-2**	150 / 6	130	40 x 12	40 x 2
504032-2	200	**504052-2**	200 / 8	130	40 x 12	40 x 2
504033-2	250	**504053-2**	250 / 10	145	40 x 12	40 x 2
504034-2	300	**504054-2**	300 / 12	145	40 x 12	40 x 2
504036-2	400	**504056-2**	400 / 16	170	40 x 12	40 x 2
504037-2	500	**504057-2**	500 / 20	170	40 x 12	40 x 2

Bevel Squares and Mitre Squares

Bevel Squares

- **for general carpentry and metal work, etc.**

- steel blade and carbon or stainless steel, cross section 29 x 1.6 mm
- anodised aluminium handle with profile grooves, cross section 30 x 11.5 mm
- with or without angle graduation on the handle, at your choice
- with galvanized fixing screw for locking the steel blade



ART NO w/o angle graduation. carbon steel blade	ART NO with angle graduation. carbon steel blade	ART NO w/o angle graduation. stainless steel blade	ART NO with angle graduation. stainless steel blade	mm
504802	**504852**	**504812**	**504862**	200
504803	**504853**	**504813**	**504863**	250
504804	**504854**	**504814**	**504864**	300

Bevel Squares

- **rugged construction**
- **for metalworker, fitters, locksmith, etc.**

- special steel, galvanized finish
- with galvanized fixing screw for locking the steel blade



ART NO	mm	blade mm	handle mm
312571	100	20 x 2.5	20 x 8
312572	150	20 x 2.5	20 x 8
312573	200	20 x 2.5	20 x 8
312574	250	20 x 2	20 x 8
312575	300	20 x 2	20 x 8
312576	400	20 x 2	20 x 8
312577	500	20 x 2	20 x 8

Mitre Squares

- **with hardened aluminium blade (HRB 70) and anodised aluminium handle**
- **for standard joiners' and carpenters' purpose**

- blade made of black anodized aluminium
- anodised aluminium handle with profile grooves
- with 45° and 135° angular



ART NO	mm	aluminium handle mm	aluminium blade mm
504903-2	250	40 x 12	40 x 2
504904-2	300	40 x 12	40 x 2

Acute Angle Squares 35°

DIN 875 GG II

- **stainless steel, with back**
- **for standard machinery purpose**
- edges and sides fine ground



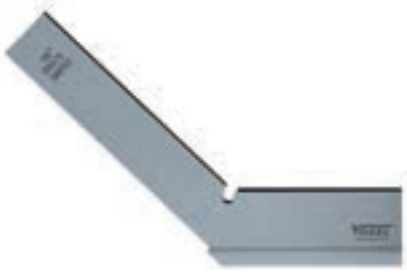
INOX DIN

ART NO	mm	CC
314080	100 x 70	on request
314081	120 x 80	on request
314082	150 x 100	on request
314083	200 x 130	on request

Acute Angle Squares 135°

DIN 875 GG II

- **carbon steel, with back**
- **for standard machinery purpose**
- edges and sides fine ground



DIN

ART NO	mm	CC
313080	100 x 70	on request
313081	120 x 80	on request
313082	150 x 100	on request
313083	200 x 130	on request

Acute Angle Squares 45°

DIN 875 GG II

- **stainless steel, flat or with back**
- **for standard machinery purpose**
- edges and sides fine ground

ART NO 310221 – 310225



ART NO 310201



INOX DIN

ART NO flat 45°	ART NO with back 45°	mm	CC
314001	**314021**	100 x 70	on request
314002	**314022**	120 x 80	on request
314003	**314023**	150 x 100	on request
314004	**314024**	200 x 130	on request

Angle Squares and Flange Squares

Acute Angle Squares 45°

DIN 875/2

- **carbon steel, flat or with back**
- **for standard machinery purpose**
- edges and sides fine ground



ART NO 313001



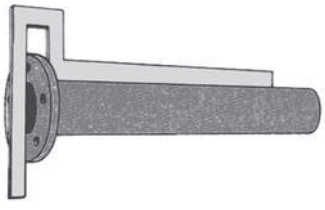
ART NO 313021

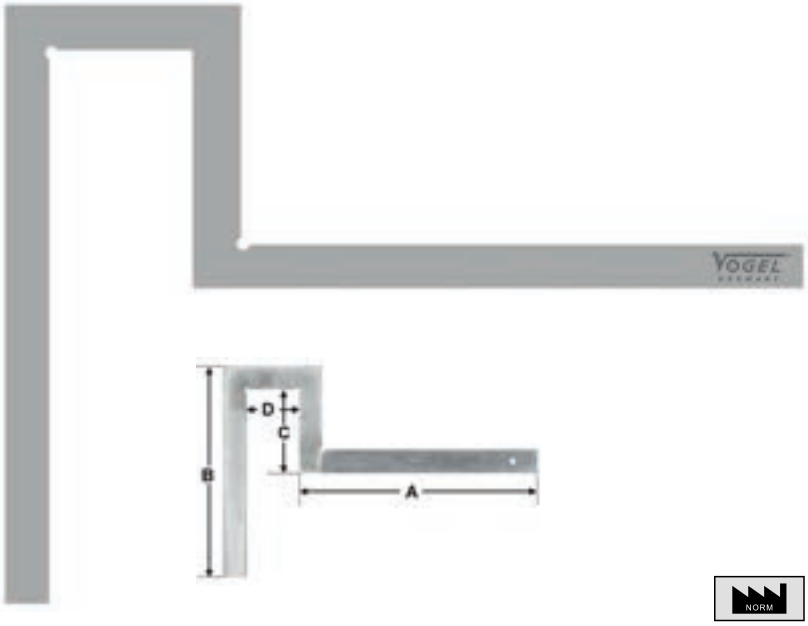
DIN

ART NO flat 45°	ART NO with back 45°	mm	CC
313001	**313021**	100 x 70	on request
313002	**313022**	120 x 80	on request
313003	**313023**	150 x 100	on request
313004	**313024**	200 x 130	on request

Flange Squares

- **for fitters and pipeline constructions**
- **to adjust the flange**
- steel, galvanized finish





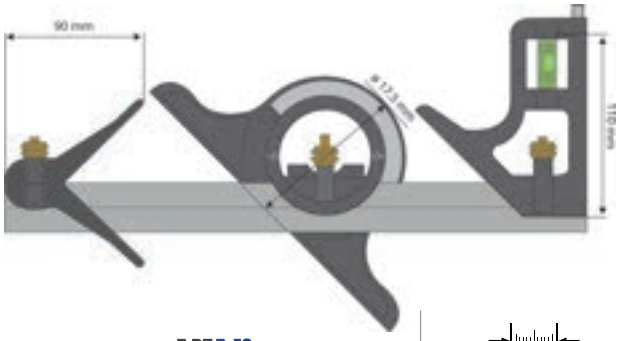
NORM

ART NO	mm A x B x C x D	steel blade mm
312511	300 x 300 x 105 x 65	30 x 5
312512	400 x 400 x 115 x 65	30 x 5
312513	500 x 500 x 125 x 70	30 x 5
312514	600 x 500 x 125 x 70	30 x 5
312515	800 x 500 x 125 x 95	30 x 5
312516	1000 x 500 x 125 x 95	30 x 5

Combination Square Set

- **with protractor and center head**
- **for carpenters, wood workers and mechanics, etc.**

- stainless steel blade, etched graduation in mm/inch, double-sided
- square head, protractor and center head made from alloy casting, powder coated
- smoothly processed surfaces
- with steel scriber and vial





INOX

ART NO	mm / inch	garduation	square	blade
508090	300 / 12	mm - mm / inch - inch	110 x 90 x 17.5	25.4 x 1.8

Center Squares

- **for marking centers on round discs and shafts**

- made of Dur-Aluminium, surface hardened HRC63
- sratch-resistant, black anodized surface
- laser engraved, clear reading scale, with mm graduation



ART NO	mm	for shaft-ø mm
312541	100 x 70	90
312542	150 x 130	190
312543	200 x 150	220
312544	250 x 160	230

ART NO	mm	for shaft-ø mm
312545	300 x 180	280
312546	400 x 250	380
312547	500 x 300	530

Center Squares

DIN 875/1

- **for marking centers on round discs and shafts**

- special steel, chromed finish
- scale in matt chrome finish, with mm graduation



DIN

ART NO	mm	for shaft-ø mm
312531	100 x 70	90
312532	150 x 130	190
312533	200 x 150	220
312534	250 x 160	230

ART NO	mm	for shaft-ø mm
312535	300 x 180	280
312536	400 x 250	380
312537	500 x 330	530


R 1 - 7 mm
VOGEL
VOGEL
.0016"
0.04mm

Test Equipment



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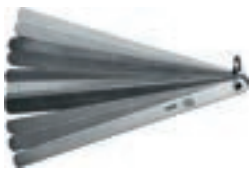
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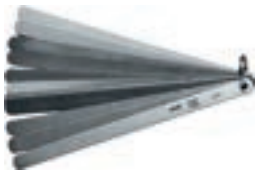
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Precision Feeler Gauge Sets

tolerance acc. to T3 (DIN 2275)

- **high tolerance accuracy for precise measurements**

- hardened spring steel, conical shaped blades, 100 mm length
- nickel plated case, riveted
- sizes in mm on each blade



T3 DIN

ART NO	quantity of blades	mm	compilation	CC
400101-2	8	0.05 – 0.50	0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 / 0.50 mm	on request
400105-2	13	0.05 – 1.00	0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 / 0.50 / 0.60 / 0.70 / 0.80 / 0.90 / 1.00 mm	on request
400107-2	20	0.05 – 1.00	0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.35 / 0.40 / 0.45 / 0.50 / 0.55 / 0.60 / 0.65 / 0.70 0.75 / 0.80 / 0.85 / 0.90 / 0.95 / 1.00 mm	on request

Feeler Gauge Sets

tolerance acc. to T2

- **for standard purposes, like thickness measuring between narrow slots and for automotive- and engine industry**

- hardened spring steel, conical shaped blades, 100 mm length
- nickel plated case with lock nut, sizes in mm and inch on each blade
- thickness tolerance in relation to the metric sizes



Other sets are available on request!



T2

ART NO	quantity of blades	mm / inch	compilation	CC
411000	8	0.03 – 0.10 .0012 – .004	0.03 / 0.04 / 0.05 / 0.06 / 0.07 / 0.08 / 0.09 / 0.10 mm .0012 / .0016 / .002 / .0024 / .0028 / .003 / .0035 / .004 inch	on request
411001	8	0.05 – 0.50 .002 – .02	0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 / 0.50 mm .002 / .004 / .006 / .008 / .010 / .012 / .016 / .020 inch	on request
411003	10	0.05 – 0.80 .002 – .032	0.05 / 0.10 / 0.15 / 0.20 / 0.30 / 0.40 / 0.50 / 0.60 / 0.70 / 0.80 mm .002 / .004 / .006 / .008 / .012 / .016 / .020 / .024 / .028 / .032 inch	on request
411004	10	0.03 – 0.50 .0012 – .02	0.03 / 0.04 / 0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 / 0.50 mm .0012 / .0016 / .002 / .004 / .006 / .008 / .010 / .012 / .016 / .02 inch	on request
412002	10	0.038 – 0.630 .0015 – .025	0.038 / 0.05 / 0.08 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.38 / 0.63 mm .0015 / .002 / .003 / .004 / .006 / .008 / .010 / .012 / .015 / .025 inch	on request
411005	13	0.05 – 1.00 .002 – .04	0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 / 0.50 / 0.60 / 0.70 / 0.80 / 0.90 / 1.00 mm .002 / .004 / .006 / .008 / .010 / .012 / .016 / .020 / .024 / .028 / .032 / .036 / .040 inch	on request
412005	13	0.05 – 0.88 .002 – .035	0.05 / 0.08 / 0.10 / 0.12 / 0.15 / 0.20 / 0.25 / 0.30 / 0.38 / 0.50 / 0.63 / 0.75 / 0.88 mm .002 / .003 / .004 / .005 / .006 / .008 / .010 / .012 / .015 / .020 / .025 / .030 / .035 inch	on request
411007	20	0.05 – 1.00 .002 – .040	0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.35 / 0.40 / 0.45 / 0.50 / 0.55 / 0.60 / 0.65 / 0.70 / 0.75 / 0.80 / 0.85 / 0.90 / 0.95 / 1.00 mm .002 / .004 / .006 / .008 / .010 / .012 / .014 / .016 / .018 / .020 / .022 / .024 / .026 / .028 / .030 / .032 / .034 / .036 / .038 / .040 inch	on request
411008	21	0.10 – 0.50	0.10 / 0.12 / 0.14 / 0.16 / 0.18 / 0.20 / 0.22 / 0.24 / 0.26 / 0.28 / 0.30 / 0.32 / 0.34 / 0.36 / 0.38 / 0.40 / 0.42 / 0.44 / 0.46 / 0.48 / 0.50 mm	on request
411009	21	0.05 – 2.00	0.05 / 0.10 / 0.20 / 0.30 / 0.40 / 0.50 / 0.60 / 0.70 / 0.80 / 0.90 / 1.00 / 1.10 / 1.20 / 1.30 / 1.40/ 1.50 / 1.60 / 1.70 / 1.80 / 1.90 / 2.00 mm	on request
411010	26	0.03 – 1.00	0.03 / 0.04 / 0.05 / 0.06 / 0.07 / 0.08 / 0.09 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.35 / 0.40 / 0.45 / 0.50 / 0.55 / 0.60 / 0.65 / 0.70 / 0.75 / 0.80 / 0.85 / 0.90 / 0.95 / 1.00 mm	on request
411011	32	0.03 – 1.00 .0012 – .040	0.03 / 0.04 / 0.05 / 0.06 / 0.07 / 0.08 / 0.09 / 0.10 / 0.13 / 0.15 / 0.18 / 0.20 / 0.23 / 0.25 / 0.28 / 0.30 / 0.33 / 0.35 / 0.38 / 0.40 / 0.45 / 0.50 / 0.55 / 0.60 / 0.63 / 0.65 / 0.70 / 0.75 / 0.80 / 0.85 / 0.90 / 1.00 mm .001 / .0015 / .002 / .0025 / .0028 / .003 / .0035 / .004 / .005 / .006 / .007 / .008 / .009 / .010 / .011 / .012 / .013 / .014 / .015 / .016 / .018 / .020 / .022 / .024 / .025 / .026 / .028 / .030 / .032 / .034 / .036 / .040 inch	on request
411012	14	0.03 – 1.00	0.03 / 0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 / 0.50 / 0.60 / 0.70 / 0.80 / 0.90 / 1.00 mm	on request

Feeler Gauge Sets

Feeler Gauge Sets, stainless steel

tolerance acc. to T2

- **stainless steel made**

- blades made from stainless steel, hard rolled out
- conical shaped blades, 100 mm length
- nickel plated case with lock nut
- sizes in mm and inch on each blade
- thickness tolerance in relation to the metric sizes



INOX | T2

ART NO	quantity of blades	mm / inch	compilation	CC
413105	13	0.05 – 1 .002 – .04	0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1 mm .002 / .004 / .006 / .008 / .01 / .012 / .016 / .02 / .024 / .028 / .032 / .036 / .04 inch	on request
413107	20	0.05 – 1 .002 – .04	0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.55 / 0.6 / 0.65 / 0.7 0.75 / 0.8 / 0.85 / 0.9 / 0.95 / 1 mm .002 / .004 / .006 / .008 / .01 / .012 / .014 / .016 / .018 / .02 / .022 / .024 / .026 / .028 .03 / .032 / .034 / .036 / .038 / .04 inch	on request

Feeler Gauge Sets, made from brass

- **anti-magnetic gauge, for electronical services**

- blades made from brass
- conical shaped blades, 100 mm length
- brass case with lock nut
- sizes in mm on each blade



ART NO	quantity of blades	cover blade	mm	compilation	CC
414105	13	brass	0.05 – 1	0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.4 / 0.5 / 0.6 / 0.7 / 0.8 / 0.9 / 1 mm	on request
414107	20	brass	0.05 – 1	0.05 / 0.1 / 0.15 / 0.2 / 0.25 / 0.3 / 0.35 / 0.4 / 0.45 / 0.5 / 0.55 / 0.6 / 0.65 / 0.7 0.75 / 0.8 / 0.85 / 0.9 / 0.95 / 1 mm	on request

PERMISSIBLE TOLERANCES FOR SPRING BAND STEEL, HARDENED

nominal thickness mm	T2 (A2) +/- mm	T3 (A3) +/- mm
0.03 / 0.04 / 0.05 / 0.06	0.004	0.003
0.07 / 0.08 / 0.09 / 0.1	0.005	0.004
0.11 / 0.12 / 0.13	0.005	—
0.14 / 0.15	0.006	0.005
0.16 / 0.18	0.007	—
0.2	0.008	0.006
0.22 / 0.24	0.008	—
0.25	0.009	0.006
0.28	0.009	—

nominal thickness mm	T2 (A2) +/- mm	T3 (A3) +/- mm
0.3	0.009	0.007
0.35	0.011	0.007
0.4 / 0.45	0.012	0.008
0.5 / 0.55	0.014	0.009
0.6 / 0.65	0.014	0.009
0.7 / 0.75	0.017	0.012
0.8 / 0.85	0.019	0.013
0.9 / 0.95	0.022	0.014
1	0.024	0.016

nominal thickness mm	T2 (A2) +/- mm	T3 (A3) +/- mm
1.1	0.024	0.017
1.2	0.024	0.018
1.3	0.028	0.019
1.4	0.028	0.021
1.5	0.028	0.022
1.6	0.033	0.023
1.7	0.033	0.024
1.8	0.033	0.026
1.9	0.035	0.027
2	0.035	0.028

Valve Regulation Gauge Sets

tolerance acc.to T2

- **for adjusting of valves**

- blades made from hardened spring steel
- cylindrical shaped blades, 75 mm length, 9 mm width
- fixed by a brass rivet
- sizes in mm and inch on each blade
- delivery bulk packed or in foil
- thickness tolerance in relation to the metric sizes



T2

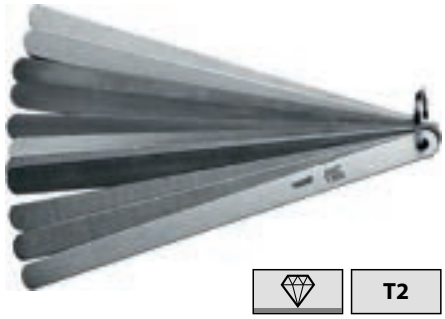
ART NO singly packed	quantity of blades	mm / inch	compilation
415106	6	0.10 – 0.40 .004 – .016	0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 mm .004 / .006 / .008 / .010 / .012 / .016 inch
415107	7	0.10 – 0.50 .004 – .02	0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 / 0.50 mm .004 / .006 / .008 / .010 / .012 / .016 / .020 inch

Piston Feeler Gauge Sets

tolerance acc.to T2

- **on a metal ring**
- **for adjusting of valves at narrow spaces and difficult to reach positions, etc.**

- blades made from hardened spring steel
- cylindrical shaped blades, 13 mm width
- thickness tolerance in relation to the metric sizes



T2

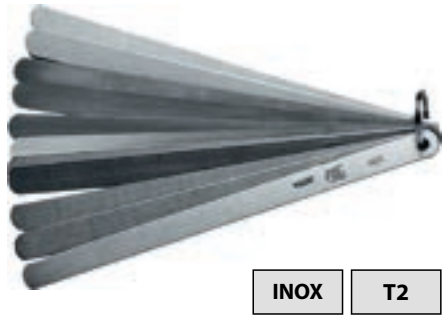
ART NO 8 blades 0.05 – 0.50 mm .002 – .02 inch	ART NO 13 blades 0.05 – 1.00 mm .002 – .04 inch	ART NO 20 blades 0.05 – 1.00 mm .002 – .04 inch	ART NO 20 blades 0.10 – 2.00 mm .004 – .08 inch	length of blades mm
436151	**436155**	**436157**	**436158**	150
436201	**436205**	**436207**	**436208**	200
436301	**436305**	**436307**	**436308**	300
436501	**436505**	**436507**	**436508**	500
436991	**436995**	**436997**	**436998**	1000

Piston Feeler Gauge Sets, stainless steel

tolerance acc.to T2

- **on a metal ring**
- **for adjusting of valves at narrow spaces and to reach difficult positions, etc.**

- blades made from stainless steel, hard rolled out
- cylindrical shaped blades, 13 mm width
- thickness tolerance in relation to the metric sizes



INOX T2

ART NO 8 blades 0.05 – 0.50 mm .002 – .020 inch	ART NO 13 blades 0.05 – 1.00 mm .002 – .040 inch	ART NO 20 blades 0.05 – 1.00 mm .002 – .040 inch	length of blades mm
437151	**437155**	**437157**	150
437201	**437205**	**437207**	200
437301	**437305**	**437307**	300

Feeler Gauge Foils

Feeler Gauge Spare Blades

- **When ordering, please specify blade thickness!**



ART NO spring steel	steel thickness up to max. mm / inch	ART NO brass	brass thickness up to max. mm / inch	conical shape	cylindrical shape	length of blade mm
421110	2 / .08	**424110**	1 / .04	✓	—	100
431150	2 / .08	—	—	—	✓	150
431200	2 / .08	—	—	—	✓	200
431300	2 / .08	—	—	—	✓	300
431500	2 / .08	—	—	—	✓	500

Thickness Gauge Foils

tolerance acc.to T2

Other sizes available on request

- **5 meter, rolled**
- **for automotive and engine industry and as levelling foil**

- hardened spring steel or stainless steel, hard rolled out
- sizes in mm and inch on each blade
- rolled in a rugged plastic box
- From thickness 1.10 mm – 2.00 mm → only available in string of 1 m length
- from 0.65 mm rolled, without box



T2

ART NO spring steel	ART NO stainless steel	mm / inch	length m	ART NO spring steel	ART NO stainless steel	mm / inch	length m
455001	**456001**	0.01 / .0004	5	**455055**	—	0.55 / .022	5
455002	**456002**	0.02 / .0008	5	**455060**	—	0.6 / .024	5
455003	**456003**	0.03 / .0012	5	**455065**	—	0.65 / .026	5
455004	—	0.04 / .0016	5	**455070**	—	0.7 / .028	5
455005	**456005**	0.05 / .002	5	**455075**	—	0.75 / .03	5
455006	—	0.06 / .0024	5	**455080**	—	0.8 / .032	5
455007	—	0.07 / .0028	5	**455085**	—	0.85 / .034	5
455008	—	0.08 / .003	5	**455090**	—	0.9 / .036	5
455009	—	0.09 / .0035	5	**455095**	—	0.95 / .038	5
455010	**456010**	0.1 / .004	5	**455100**	**456100**	1 / .04	5
455012	—	0.12 / .005	5	**457110**	—	1.1	1
455015	**456015**	0.15 / .006	5	**457120**	—	1.2	1
455018	—	0.18 / .007	5	**457130**	—	1.3	1
455020	**456020**	0.2 / .008	5	**457140**	—	1.4	1
455025	**456025**	0.25 / .01	5	**457160**	—	1.6	1
455030	**456030**	0.3 / .012	5	**457170**	—	1.7	1
455035	—	0.35 / .014	5	**457180**	—	1.8	1
455040	**456040**	0.4 / .016	5	**457190**	—	1.9	1
455045	—	0.45 / .018	5	**457200**	—	2	1
455050	**456050**	0.5 / .02	5	—	—	—	—

Holder for Feeler Gauge Blades





ART NO	size
458010	125 x 17 mm

RECORD • Thickness Gauge Foils

DIN EN 10140:2006

- **for adjusting, levelling etc.**

- rolled in a rugged plastic box
- different material in different widths and different lengths available

brass: CuZn37 (MS63)
stainless steel: 1.4301
strength: 1300 – 1500 N/mm²



DIN

ART NO steel length x width 2500 x 150 mm	ART NO brass length x width 2500 x 150 mm	ART NO stainless steel length x width 2500 x 25 mm	ART NO stainless steel length x width 2500 x 50 mm	ART NO stainless steel length x width 2500 x 150 mm	mm
—	462010	463010	464010	465010	0.01
—	462020	463020	464020	465020	0.02
452025	462025	463025	464025	465025	0.025
—	462030	463030	464030	465030	0.03
—	462040	463040	464040	465040	0.04
452050	462050	463050	464050	465050	0.05
—	462060	463060	464060	465060	0.06
—	462070	463070	464070	465070	0.07
452075	462075	463075	464075	465075	0.075
—	462080	463080	464080	465080	0.08
—	462090	463090	464090	465090	0.09
452100	462100	463100	464100	465100	0.1
—	—	463120	464120	465120	0.12
452150	462150	463150	464150	465150	0.15
—	—	463180	464180	465180	0.18
452200	462200	463200	464200	465200	0.2
—	—	463220	464220	465220	0.22
452250	462250	463250	464250	465250	0.25
452300	462300	463300	464300	465300	0.3
—	—	463350	464350	465350	0.35
452400	462400	463400	464400	465400	0.4
—	—	463450	464450	465450	0.45
452500	462500	463500	464500	465500	0.5
—	—	—	—	465600	0.60 (rolled)
—	—	—	—	465700	0.70 (rolled)
—	—	—	—	465800	0.80 (rolled)
—	—	—	—	465999	1.00 (rolled)

RECORD • Thickness Gauge Foils

DIN EN 10140:2006

- **for adjusting, levelling etc.**

- stripes in a case with 10 or 5 blades
- different material in different widths and different lengths available



DIN

ART NO stainless steel length x width 300 x 50 mm / 10 blades	ART NO stainless steel length x width 500 x 150 mm / 5 blades	mm	ART NO stainless steel length x width 300 x 50 mm / 10 blades	ART NO stainless steel length x width 500 x 150 mm / 5 blades	mm
466010	467010	0.01	466100	467100	0.1
466015	—	0.015	466120	467120	0.12
466020	467020	0.02	466150	467150	0.15
466025	467025	0.025	466180	467180	0.18
466030	467030	0.03	466200	467200	0.2
466040	467040	0.04	466220	467220	0.22
466050	467050	0.05	466250	467250	0.25
466060	467060	0.06	466300	467300	0.3
466070	467070	0.07	466350	467350	0.35
466075	467075	0.075	466400	467400	0.4
466080	467080	0.08	466450	467450	0.45
466090	467090	0.09	466500	467500	0.5

Other Measuring Devices

Screw Pitch Gauges

- **for internal and external measurements of threads**
- fine cutted threads



ART NO	quantity of blades	mm / inch	thread type	graduation	
471009	24	0.25 – 6 mm	metr. 60°	6 / 5.5 / 5 / 4.5 / 4 / 3.5 / 3 / 2.5 / 2 / 1.75 / 1.5 / 1.25	1 / 0.9 / 0.8 / 0.75 / 0.7 / 0.6 / 0.5 / 0.45 / 0.4 / 0.35 / 0.3 / 0.25
471010	20	0.4 – 7 mm	metr. 60° SI	7 / 6.5 / 6 / 5.5 / 5 / 4.5 / 4 / 3.5 / 3 / 2.5	2 / 1.75 / 1.5 / 1.25 / 1 / 0.8 / 0.75 / 0.7 / 0.5 / 0.4
471011	20	4 – 30 Gang / t.p.i.	whitw. 55°	4 / 4.5 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12	13 / 14 / 16 / 18 / 19 / 22 / 24 / 26 / 28 / 30
471012	28	4 – 62 Gang / t.p.i.	whitw. 55°	4 / 4.5 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 16 / 18	19 / 20 / 22 / 24 / 25 / 26 / 28 / 30 / 32 / 36 / 40 / 48 / 60 / 62
471013	48	4 – 62 mm / 0.4 – 7	whitw. / metr. SI	combined	Art. no.: 471012 + 471010
471014	52	4 – 62 / 0.25 – 6	whitw. / metr.	combined	Art. no.: 471012 + 471009
471015	6	8 – 28 Gang / t.p.i.	whitw. 55°	Tube	8 / 10 / 11 / 14 / 19 / 28
471016	58	4 – 62 / 0.25 – 6 / 8 – 28	whitw. / metr.	combined	Art. no.: 471014 + 471015
471017	14	10 – 40 Gang / t.p.i.	US 60° SAE	10 / 11 / 12 / 13 / 14 / 16 / 18	20 / 24 / 27 / 28 / 32 / 36 / 40
471018	30	6 – 60 Gang / t.p.i.	US 60° SAE	6 / 7 / 8 / 9 / 10 / 11 / 11.5 / 13 / 14 / 15 / 16 / 18 / 20 / 22 / 24	26 / 28 / 30 / 32 / 34 / 36 / 38 / 40 / 42 / 44 / 46 / 48 / 50 / 56 / 60
471019	30	4 – 42 Gang / t.p.i.	US 60° SAE	4 / 4.5 / 5 / 5.5 / 6 / 7 / 8 / 9 / 10 / 11 / 11.5 / 12 / 13 / 14 / 15	16 / 18 / 20 / 22 / 24 / 26 / 27 / 28 / 30 / 32 / 34 / 36 / 38 / 40 / 42
471020	52	4 – 84 Gang / t.p.i.	US 60° SAE	4 / 4.5 / 5 / 5.5 / 6 / 7 / 8 / 9 / 10 / 11 / 11.5 / 12 / 13 / 14 / 15 / 16 / 18 / 20 / 22 / 24 / 25 / 26 / 27 / 28 / 30 / 32	34 / 36 / 38 / 40 / 42 / 44 / 46 / 48 / 50 / 52 / 54 / 56 / 58 / 60 / 62 / 64 / 66 / 68 / 70 / 72 / 74 / 76 / 78 / 80 / 82 / 84
471021	22	4 – 64 Gang / t.p.i.	US 60° UNC	4 / 4.5 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13	14 / 16 / 18 / 20 / 22 / 24 / 32 / 40 / 48 / 56 / 64
471022	16	12 – 80 Gang / t.p.i.	US 60° UNF	12/ 14 / 16 / 18 / 20 / 24 / 28 / 32	36 / 40 / 44 / 48 / 56 / 64 / 72 / 80

Radius Gauges

- **for testing of raised and recessed curves**
- concave and convex shaped blades
- fine cutted forms

ART NO 472105



ART NO 472106 + 472107



ART NO carbon steel	ART NO stainless steel	quantity of blades	mm	composition mm
472105	**472115**	34	1 – 7	1 / 1.25 / 1.5 / 1.75 / 2 / 2.25 / 2.5 / 2.75 / 3 / 3.5 / 4 / 4.5 / 5 / 5.5 / 6 / 6.5 / 7
472106	**472116**	32	7.5 – 15	7.5 / 8 / 8.5 / 9 / 9.5 / 10 / 10.5 / 11 / 11.5 / 12 / 12.5 / 13 / 13.5 / 14 / 14.5 / 15
472107	**472117**	30	15.5 – 25	15.5 / 16 / 16.5 / 17 / 17.5 / 18 / 18.5 / 19 / 19.5 / 20 / 21 / 22 / 23 / 24/ 25

Radius Gauge Set

- **matt chrome finish**
- **for testing of raised and recessed curves**
- concave and convex shaped blades
- each blade with 5 measuring points



ART NO	quantity of blades	mm	composition mm
472109	26	0.5 – 13	0.5 / 1 / 1.5 / 2 / 2.5 / 3 / 3.5 / 4 / 4.5 / 5 / 5.5 / 6 / 6.5 / 7 / 7.5 / 8 / 8.5 / 9 / 9.5 / 10 / 10.5 / 11 / 11.5 / 12 / 12.5 / 13

Angle Gauge

- angles 1° – 45°
- fine machined edges



ART NO	quantity of blades	°	compilation °
472000	20	1 – 45	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 12 / 14 / 16 / 18 / 20 / 25 / 30 / 35 / 40 / 45

Angle Gauge Set

- **stainless steel**
- angles 5° – 90°
- each blade with several angles



ART NO	quantity of blades	°	compilation °
472020	18	5 – 90	5 / 10 / 15 / 20 / 25 / 30 / 35 / 40 / 45 / 50 / 55 / 60 / 65 / 70 / 75 / 80 / 85 / 90

Angle Thread Cutting Gauge

- **suitable for craftsmen and industry**
- angles 55° whitworth or 60° metric

ART NO 472001



ART NO 472002



ART NO	whitworth	ART NO	mm
472001	55°	472002	60°

Combined Angle Thread Cutting Gauge

- **suitable for craftsmen and industry**
- fine machined edges



ART NO	angles threads °	flat threads threads/inch (t.p.i.)
472003	45 / 53.8 / 55 / 60 / 70	2 / 2.5 / 3 / 3.5 / 4 / 4.50 / 5 / 6 / 7 / 8

Trapez Thread Cutting Gauge

- **suitable for craftsmen and industry**
- fine machined edges



ART NO	trapez thread °	trapez pitch mm
472004	30	2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 12

Other Measuring Devices

Combined Turning and Thread Cutting Gauge

- **suitable for craftsmen and industry**
- with trapez- and flat threads



ART NO	trapez threads mm	flat threads threads/inch (t.p.i.)	angles °
472005	2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 12	2 / 2.5 / 3 / 3.5 / 4 / 4.5 / 5 / 6 / 7 / 8	55 + 60

Combined Turning and Thread Cutting Gauge

- **suitable for craftsmen and industry**
- with trapez- and saw cutting angles



ART NO	trapez threads mm	saw cutting angles °	angles °
472006	2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 12	40 / 45 / 50 / 55 / 60 / 65 / 70 / 75 / 80	55 + 60

Combined Turning and Thread Cutting Gauge

- **suitable for craftsmen and industry**
- with trapez- and saw cutting angles, with adjusting angle pointer



ART NO	trapez threads mm	saw cutting angles °	adjusting angle °	angles °
472007	2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 12	40 / 45 / 50 / 55 / 60 / 65 / 70 / 75 / 80	0 – 30	55 + 60

ACME Thread Cutting Gauge

- **suitable for craftsmen and industry**
- SAE 60° / Ww-BSF 55.0° / 14.5° ACME / 47.5° BA



ART NO	SAE °	whitworth BSF °	ACME °	B.A. °
472008	60	55	14.5	47.5

Twist Drill Grinding Gauges

- **suitable for craftsmen and industry**
- with 118° angle cut (art. no.: 472011)
- with 55° / 60° / 90° / 120° angle cut (art. no.: 472012)



ART NO 472011



ART NO 472012



ART NO	angle cut °	up to drill-ø mm
472011	118°	50
472012	55 / 60 / 90°/ 120	60

Universal Twist Drill Drinding Gauge

- **suitable for craftsmen and industry**
- with adjustable angle pointer

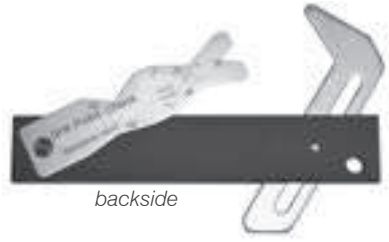


ART NO	angle cut °	up to drill-ø mm
472013	30 – 160	60

Universal Twist Drill Grinding Gauge

- **suitable for craftsmen and industry**
- special steel, hardened, ground and burnished
- with angle finder at the rear side







ART NO	mm	angle settings °	up to drill-ø mm
472018	0 – 70	60° / 118° / 120° / 130° / 140° / 160°	100

Jet Gauges

- **suitable for craftsmen and industry**
- with hardened steel pins, in plastic holders mounted



ART NO	quantity of pins	mm	composition mm
472201	20	0.45 – 1.5	0.45 / 0.5 / 0.55 / 0.6 / 0.65 / 0.7 / 0.75 / 0.8 / 0.85 / 0.9 / 0.95 / 1 1.05 / 1.1 / 1.15 / 1.2 / 1.25 / 1.3 / 1.4 / 1.5
472202	16	1.5 – 3	1.5 / 1.6 / 1.7 / 1.8 / 1.9 / 2 / 2.1 / 2.2 / 2.3 / 2.4 / 2.5 / 2.6 2.7 / 2.8 / 2.9 / 3

Precision Jet Gauges

- **Product for highest demands**
- measuring pin hardened, fine ground
- nickel plated housing



ART NO	mm	mm	taper mm	mm
472219	0 – 3	0.1	1 : 10	Ø 6.5 x 118
472220	0 – 5	0.1	1 : 10	Ø 9 x 176

Other Measuring Devices

Taper Gauges

- **flat version**
- **art.-no. 472370 – 472372: made of special steel, hardened**
- **art.-no. 472373: made of technical ABS plastic**
- **useful gauge, especially for the inspection of gap size, generators, motors, turbines, engines, etc.**

- laser engraved graduation
- with knurled handle





ART NO	cm	mm	mm	version
472370	0 – 7	0.1	124 x 8 x 8	steel
472372	0 – 11	0.1	153 x 8 x 12	steel
472373	0 – 11	0.1	155 x 8 x 12	ABS plastic

Hole Gauge

- **flat version**
- **rear side with rounded edges**

- special steel, hardened and fine ground
- laser engraved graduation



ART NO	cm	mm	mm
472320	1 – 15	0.1	178 x 12 x 2

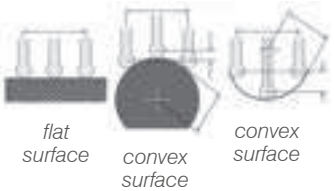
Electr. Digital Arc Test Set

- **ideal device for tooling**

- USB data output
- aluminium housing with sturdy plastic cover
- large LCD display with clear reading, digit height 10 mm
- stem and spindle stainless, hardened and lapped
- exchangeable probe tips, M2.5
- different sized probes for arc measurements
- measured value display in percent and radius display
- autom. power off, zero setting at any position
- Hold function, reading mm/inch, switchable
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual







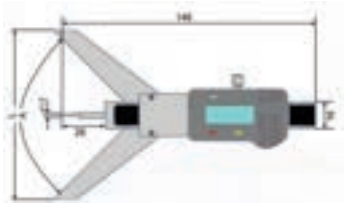
ART NO	linearly mm / inch	radius mm	mm / inch	mm	linearly mm	radius mm
472120	12.7 / 0.5	5 – 700	0.01 / 0.0005	0.01	< 0.02	< 0.02

Electr. Digital Keyway Calipers

- **for measurements of groove depth, etc.**

- mechanical parts in stainless steel, hardened
- LCD display with clear reading, digit height 8 mm
- zero setting at any position
- reading switchable in mm/inch
- incl. 1x 1.5 V battery (type LR44, art.-no.: 2020192/B),
- with operation manual







UNIT | INOX | LR44 1,5V | CE

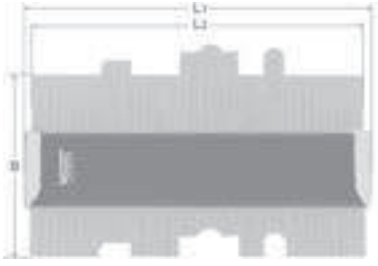
ART NO	mm / inch	mm / inch	mm	A °	L mm	for shaft-ø mm
473315	50 / 2	0.01 / 0.0005	0.03	90	100	5 – 140
473316	50 / 2	0.01 / 0.0005	0.03	120	100	5 – 200

Profile Gauges

- **especially use for taking-off and transferring all existing shapes**

- with pins made of carbon steel







ART NO	mm	B mm	L2 mm	L1 mm	thickness mm
474501	150 x 40	80	148	154	20
474502	300 x 75	150	293	305	33

Welding Gauge

- **fan shape**
- **for measuring right angled welds**

- stainless steel





INOX

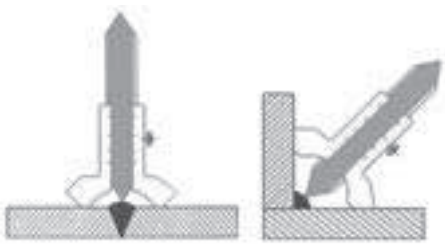
ART NO	quantity of blades	mm	compilation mm
474401	12	3 – 12	3 / 3.5 / 4 / 4.5 / 5 / 5.5 / 6 / 6.5 / 7 / 8 / 10 / 12

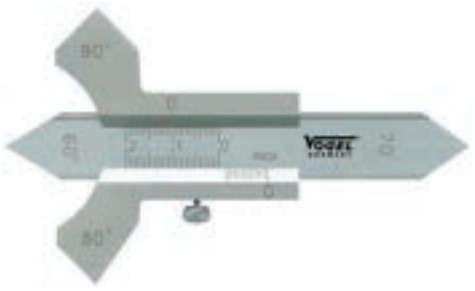
Welding Gauges

Precision Welding Gauge

- **with vernier reading**
- **for measurements of flat welding seams and in corners etc.**

- stainless steel hardened and fine ground
- scale matt chromed
- with fixing screw





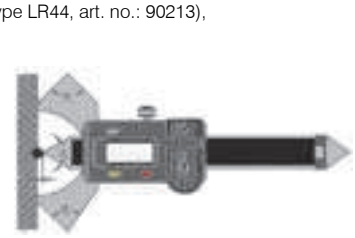
INOX

ART NO	mm	mm	angle °	mm	CC
474403	0 – 20	0.1	60 / 70 / 80 / 90	98 x 59 x 5.2	on request

Electr. Digital Welding Gauge

- **with data output RS 232 C**

- stainless steel, hardened and ground
- LCD display with clear reading, zero-setting at any position
- On/Off button, reading switchable mm/inch
- incl. 1x 1.5 V battery (type LR44, art. no.: 90213), with operation manual





INOX

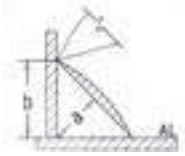
ART NO	mm / inch	mm / inch	max.	angle °	mm	CC
474410	0 – 20 / 0 – 0.8	0.01 / 0.0005	0.03	60 / 70 / 80 / 90	100 x 62 x 14	on request

Precision Welding Gauge

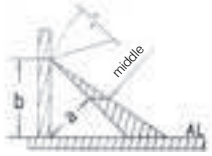
- **with reading window**

- stainless steel, hardened and fine ground
- reading through a window by a reference line

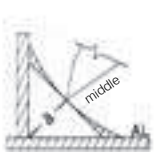




Read b from scale B. When measuring b, read a from scale C.



Permissible „a“ with unequal legs. Rest on the long arm (AL)



Read a from scale A.



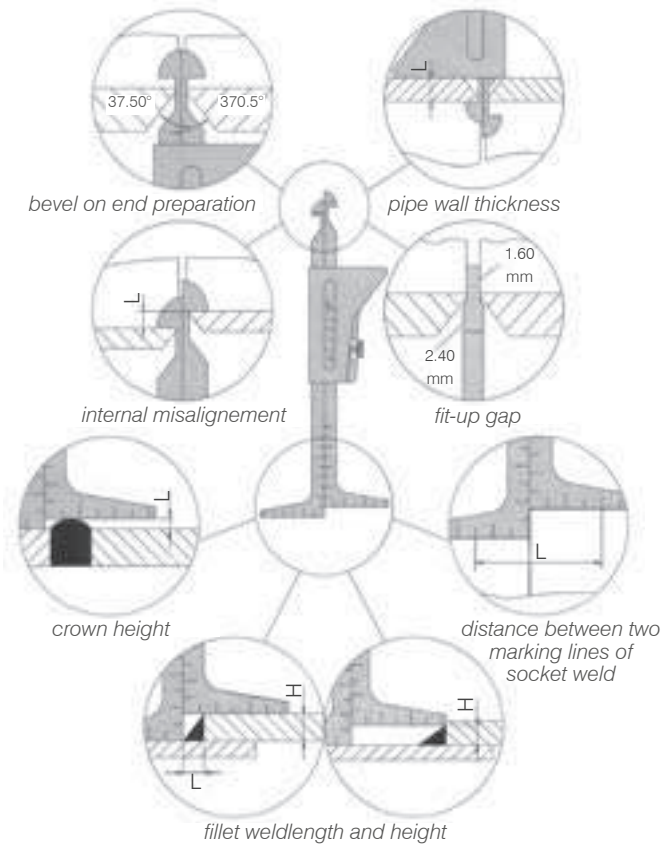
INOX

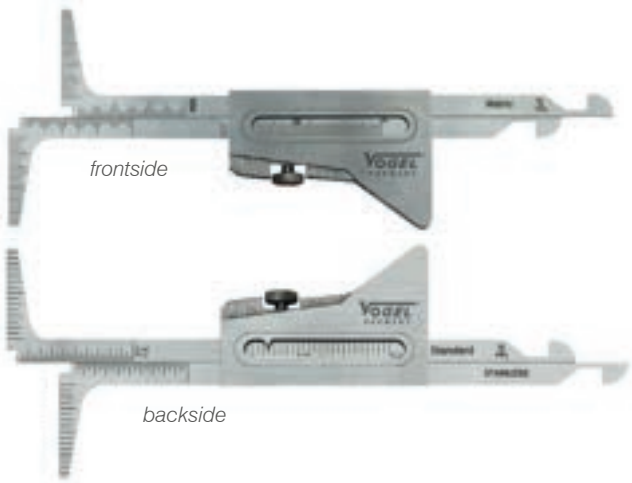
ART NO	mm	mm	CC
474404	0,1	108 x 81.5 x 3.2	on request

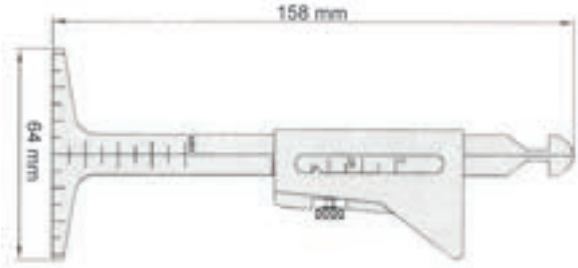
Pipe Welding Gauge / Edge Offset Gauge

- **with opposite movable measuring jaws**
- **for pipe welds up to 35.0 mm wall thickness**

- stainless steel, hardened, polished surfaces
- reading scale in mm and inch, laser engraved graduation
- with reading window, with fixing screw









INOX

ART NO	mm	mm	mm
474409	35	1	158 x 64 x 7

Measuring Tool Set

- **selection of need-based compilations**

ART NO SET	pieces	consisting of	article
479901	**4**	**Welding Gauge** stainless steel, fan shape, quantity of blades 12, 3 – 12 mm	**474401**
		Precision Welding Gauge stainless steel, hardened and fine ground, with vernier reading, scale matt chromed, with fixing screw	**474403**
		Precision Welding Gauge stainless steel, hardened and fine ground, reading through a indow by a reference line	**474404**
		Pipe Welding Gauge / Edge Offset Gauge with opposite movable measuring jaws, for pipe welds up to 35.0 mm wall thickness, stainless, hardened, reading 1.0 mm	**474409**

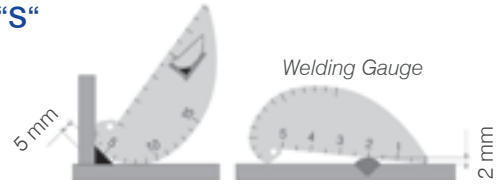
ART NO 479901



Welding Gauges

Welding Gauge “S“

- for craft
- made from aluminium





ART NO	mm
474405	62.7 x 29.8 x 1

Limit Plug Gauges

DIN EN ISO 1938-1

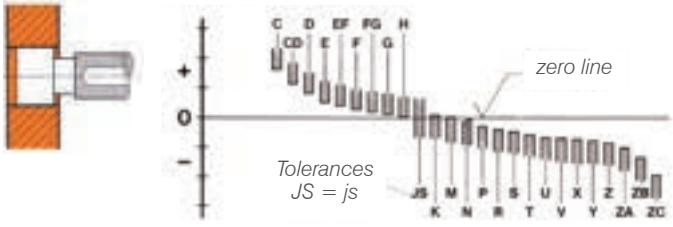
Other tolerances on request available: 37090-xxx

- designed acc. to DIN 2245 / 2246 / 2247

- special steel, finely ground and lapped
- with „Go“ and „No-Go“ side



Dimensions for bores and shafts



Dimensions for bores and shafts



DIN

ART NO tolerance H7	size-ø mm	CC
37080-0010	1	on request
37080-0012	1.2	on request
37080-0015	1.5	on request
37080-0018	1.8	on request
37080-0020	2	on request
37080-0022	2.2	on request
37080-0025	2.5	on request
37080-0028	2.8	on request
37080-0030	3	on request
37080-0035	3.5	on request
37080-0040	4	on request
37080-0045	4.5	on request
37080-0050	5	on request
37080-0060	6	on request
37080-0070	7	on request
37080-0080	8	on request
37080-0090	9	on request
37080-0100	10	on request
37080-0110	11	on request
37080-0120	12	on request
37080-0130	13	on request
37080-0140	14	on request
37080-0150	15	on request
37080-0160	16	on request
37080-0170	17	on request
37080-0180	18	on request
37080-0190	19	on request
37080-0200	20	on request
37080-0210	21	on request
37080-0220	22	on request
37080-0230	23	on request
37080-0240	24	on request
37080-0250	25	on request
37080-0260	26	on request
37080-0270	27	on request
37080-0280	28	on request

ART NO tolerance H7	size-ø mm	CC
37080-0300	30	on request
37080-0320	32	on request
37080-0330	33	on request
37080-0340	34	on request
37080-0350	35	on request
37080-0360	36	on request
37080-0370	37	on request
37080-0380	38	on request
37080-0400	40	on request
37080-0420	42	on request
37080-0440	44	on request
37080-0450	45	on request
37080-0460	46	on request
37080-0470	47	on request
37080-0480	48	on request
37080-0500	50	on request
37080-0520	52	on request
37080-0550	55	on request
37080-0580	58	on request
37080-0600	60	on request
37080-0620	62	on request
37080-0650	65	on request
37080-0680	68	on request
37080-0700	70	on request
37080-0720	72	on request
37080-0750	75	on request
37080-0780	78	on request
37080-0800	80	on request
37080-0820	82	on request
37080-0850	85	on request
37080-0880	88	on request
37080-0900	90	on request
37080-0920	92	on request
37080-0950	95	on request
37080-0980	98	on request
37080-1000	100	on request

Limit Thread Plug Gauge Set
Limit Thread Ring Gauge Set
Limit Plug Gauge Set

- **acc. to DIN tolerances**
- special steel, hardened, fine ground





DIN

ART NO	plug gauge set	ring gauge set	„Go“	„No-Go“	contents mm	CC
390801	✓	—	✓	✓	M 3 / M 4 / M 5 / M 6 / M 8 / M 10 / M 12	on request
390805	—	✓	✓	—	M 3 / M 4 / M 5 / M 6 / M 8 / M 10 / M 12	on request
390806	—	✓	—	✓	M 3 / M 4 / M 5 / M 6 / M 8 / M 10 / M 12	on request
370801	✓	—	✓	✓	3H7 / 4H7 / 5H7 / 6H7 / 8H7 / 10H7 / 12H7	on request

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Any questions?
We are pleased to advise.

facebook.com/VogelGermany

Setting Ring Gauges

Setting Ring Gauges, acc. to DIN 2250 C, DIN ISO 286/1

- **special steel, hardened, finely ground and lapped**

Other tolerances available on request!



DIN | DIN ISO

ART NO setting ring	ø mm	CC
370770-0010	1.00	on request
370770-0012	1.20	on request
370770-0015	1.50	on request
370770-0018	1.80	on request
370770-0020	2.00	on request
370770-0022	2.20	on request
370770-0025	2.50	on request
370770-0028	2.80	on request
370770-0030	3.00	on request
370770-0035	3.50	on request
370770-0040	4.00	on request
370770-0045	4.50	on request
370770-0050	5.00	on request
370770-0060	6.00	on request
370770-0070	7.00	on request
370770-0080	8.00	on request
370770-0090	9.00	on request
370770-0100	10.00	on request
370770-0110	11.00	on request
370770-0120	12.00	on request
370770-0130	13.00	on request
370770-0140	14.00	on request
370770-0150	15.00	on request
370770-0160	16.00	on request
370770-0170	17.00	on request
370770-0180	18.00	on request
370770-0190	19.00	on request
370770-0200	20.00	on request
370770-0210	21.00	on request
370770-0220	22.00	on request
370770-0230	23.00	on request
370770-0240	24.00	on request
370770-0250	25.00	on request
370770-0260	26.00	on request
370770-0270	27.00	on request
370770-0280	28.00	on request
370770-0300	30.00	on request
370770-0320	32.00	on request
370770-0330	33.00	on request
370770-0340	34.00	on request
370770-0350	35.00	on request
370770-0360	36.00	on request
370770-0370	37.00	on request
370770-0380	38.00	on request
370770-0400	40.00	on request
370770-0420	42.00	on request
370770-0440	44.00	on request
370770-0450	45.00	on request
370770-0460	46.00	on request
370770-0470	47.00	on request
370770-0480	48.00	on request
370770-0500	50.00	on request

ART NO setting ring	ø mm	CC
370770-0520	52.00	on request
370770-0550	55.00	on request
370770-0580	58.00	on request
370770-0600	60.00	on request
370770-0620	62.00	on request
370770-0650	65.00	on request
370770-0680	68.00	on request
370770-0700	70.00	on request
370770-0720	72.00	on request
370770-0750	75.00	on request
370770-0780	78.00	on request
370770-0800	80.00	on request
370770-0820	82.00	on request
370770-0850	85.00	on request
370770-0880	88.00	on request
370770-0900	90.00	on request
370770-0920	92.00	on request
370770-0950	95.00	on request
370770-0980	98.00	on request
370770-1000	100.00	on request
370770-1050	105.00	on request
370770-1100	110.00	on request
370770-1150	115.00	on request
370770-1200	120.00	on request
370770-1250	125.00	on request
370770-1300	130.00	on request
370770-1350	135.00	on request
370770-1400	140.00	on request
370770-1450	145.00	on request
370770-1500	150.00	on request
370770-1550	155.00	on request
370770-1600	160.00	on request
370770-1650	165.00	on request
370770-1700	170.00	on request
370770-1750	175.00	on request
370770-1800	180.00	on request
370770-1850	185.00	on request
370770-1900	190.00	on request
370770-1950	195.00	on request
370770-2000	200.00	on request
370770-2100	210.00	on request
370770-2200	220.00	on request
370770-2400	240.00	on request
370770-2500	250.00	on request
370770-2600	260.00	on request
370770-2800	280.00	on request
370770-3000	300.00	on request
370770-3200	320.00	on request
370770-3400	340.00	on request
370770-3600	360.00	on request
370770-3800	380.00	on request
370770-4000	400.00	on request

Limit Thread Plug Gauges

DIN 13

Other sizes or types are available on request!



- metric ISO-threads

- special steel, hardened and finely ground
- „Go“ and „No-Go“ thread plug gauge

DIN ISO DIN

ART NO	tolerance class	thread-ø mm	CC
390101	5H	1 x 0.25	on request
390102	5H	1.1 x 0.25	on request
390103	5H	1.2 x 0.25	on request
390104	5H	1.4 x 0.3	on request
390105	6H	1.6 x 0.35	on request
390106	6H	1.8 x 0.35	on request
390107	6H	2 x 0.4	on request
390108	6H	2.2 x 0.45	on request
390109	6H	2.5 x 0.45	on request
390110	6H	3 x 0.5	on request
390111	6H	3.5 x 0.6	on request
390112	6H	4 x 0.7	on request
390113	6H	4.5 x 0.75	on request
390114	6H	5 x 0.8	on request
390115	6H	6 x 1	on request
—	—	—	—

ART NO	tolerance class	thread-ø mm	CC
390116	6H	7 x 1	on request
390117	6H	8 x 1.25	on request
390118	6H	9 x 1.25	on request
390119	6H	10 x 1.5	on request
390120	6H	12 x 1.75	on request
390121	6H	14 x 2	on request
390122	6H	16 x 2	on request
390123	6H	18 x 2.5	on request
390124	6H	20 x 2.5	on request
390125	6H	22 x 2.5	on request
390126	6H	24 x 3	on request
390127	6H	27 x 3	on request
390128	6H	30 x 3.5	on request
390129	6H	33 x 3.5	on request
390130	6H	36 x 4	on request
390131	6H	39 x 4	on request

„Go“ or „No-Go“ Thread Ring Gauges

DIN 13

- metric ISO-threads

- special steel, hardened and finely ground



type B



type C

type B „Go“ thread ring gauge

type C „No-Go“ thread ring gauge

DIN

ART NO type B	ART NO type C	tolerance class	thread-ø mm	CC
390201	390301	6h	1 x 0.25	on request
390202	390302	6h	1.1 x 0.25	on request
390203	390303	6h	1.2 x 0.25	on request
390204	390304	6h	1.4 x 0.3	on request
390205	390305	6g	1.6 x 0.35	on request
390206	390306	6g	1.8 x 0.35	on request
390207	390307	6g	2 x 0.4	on request
390208	390308	6g	2.2 x 0.45	on request
390209	390309	6g	2.5 x 0.45	on request
390210	390310	6g	3 x 0.5	on request
390211	390311	6g	3.5 x 0.6	on request
390212	390312	6g	4 x 0.7	on request
390213	390313	6g	4.5 x 0.75	on request
390214	390314	6g	5 x 0.8	on request
390215	390315	6g	6 x 1	on request
390216	390316	6g	7 x 1	on request
390217	390317	6g	8 x 1.25	on request
390218	390318	6g	9 x 1.25	on request
390219	390319	6g	10 x 1.5	on request
—	—	—	—	—

ART NO type B	ART NO type C	tolerance class	thread-ø mm	CC
390220	390320	6g	12 x 1.75	on request
390221	390321	6g	14 x 2	on request
390222	390322	6g	16 x 2	on request
390223	390323	6g	18 x 2.5	on request
390224	390324	6g	20 x 2.5	on request
390225	390325	6g	22 x 2.5	on request
390226	390326	6g	24 x 3	on request
390227	390327	6g	27 x 3	on request
390228	390328	6g	30 x 3.5	on request
390229	390329	6g	33 x 3.5	on request
390230	390330	6g	36 x 4	on request
390231	390331	6g	39 x 4	on request
390232	390332	6g	42 x 4.5	on request
390233	390333	6g	45 x 4.5	on request
390234	390334	6g	48 x 5	on request
390235	390335	6g	52 x 5	on request
390236	390336	6g	56 x 5.5	on request
390237	390337	6g	60 x 5.5	on request
390238	390338	6g	64 x 6	on request
390239	390339	6g	68 x 6	on request

Precision Measuring Steel Pins and Holder

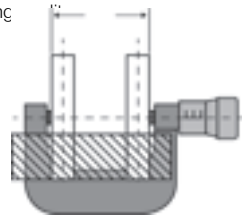
Cylindrical Measuring Pins in a Set

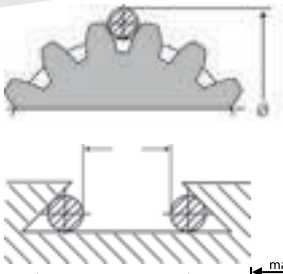
DIN 2269

Other sizes available on request!

- **Product for highest demands**

- special chrome-steel with high wearing and enough resistance to corrosion
- hardened, finely ground and **lapped**
- from up 3.0 mm marked with the size on the top surface







DIN

ART NO	contents pcs.	size-ø mm	steps mm	max. ± mm	length mm	CC
380210	21	0.1 – 0.3	0.01	0.0005	30	on request
380211	21	0.3 – 0.5	0.01	0.0005	30	on request
380212	51	0.5 – 1	0.01	0.0005	30	on request
380213	19	0.1 – 1	0.05	0.0005	30	on request
380301	21	0.1 – 0.3	0.01	0.001	40	on request
380302	21	0.3 – 0.5	0.01	0.001	40	on request
380303	51	0.5 – 1	0.01	0.001	40	on request
380304	19	0.1 – 1	0.05	0.001	40	on request
380307	21	1 – 2	0.05	0.001	70	on request
380308	21	2 – 3	0.05	0.001	70	on request
380309	21	3 – 4	0.05	0.001	70	on request
380310	21	4 – 5	0.05	0.001	70	on request
380311	21	5 – 6	0.05	0.001	70	on request
380312	21	6 – 7	0.05	0.001	70	on request
380313	21	7 – 8	0.05	0.001	70	on request
380314	21	8 – 9	0.05	0.001	70	on request
380315	21	9 – 1	0.05	0.001	70	on request
380316	100	10.01 – 11	0.01	0.002	50	on request
380317	100	11.01 – 12	0.01	0.002	50	on request
380318	100	12.01 – 13	0.01	0.002	50	on request
380319	100	13.01 – 14	0.01	0.002	50	on request
380320	100	14.01 – 15	0.01	0.002	50	on request
380321	100	15.01 – 16	0.01	0.002	50	on request
380323	100	16.01 – 17	0.01	0.002	50	on request
380324	100	17.01 – 18	0.01	0.002	50	on request
380325	100	18.01 – 19	0.01	0.002	50	on request
380326	100	19.01 – 2	0.01	0.002	50	on request
380350	101	1 – 2	0.01	0.001	70	on request
380351	101	2 – 3	0.01	0.001	70	on request
380352	101	3 – 4	0.01	0.001	70	on request
380353	101	4 – 5	0.01	0.001	70	on request
380354	101	5 – 6	0.01	0.001	70	on request
380355	101	6 – 7	0.01	0.001	70	on request
380356	101	7 – 8	0.01	0.001	70	on request
380357	101	8 – 9	0.01	0.001	70	on request
380358	101	9 – 10	0.01	0.001	70	on request
380341	41	1 – 5	0.10	0.001	70	on request
380342	91	1 – 10	0.10	0.001	70	on request
380343	91	0.5 – 5	0.05	0.001	40 / 70	on request
380344	100	5.05 – 10	0.05	0.001	70	on request
380345	100	10.05 – 15	0.05	0.002	50	on request
380346	100	15.05 – 20	0.05	0.002	50	on request

Pin Holder

- **with marking “G” (Go) + “A” (No-Go)**



ART NO	for pin-ø mm	ART NO	for pin-ø mm	ART NO	for pin-ø mm
381001	1 – 2	**381003**	4 – 6	**381005**	8 – 10
381002	2 – 4	**381004**	6 – 8	—	—

Singly Cylindrical Measuring Pins

DIN 2269

- **for inspection and measuring of bores, bore distances, or as setting-gauge for measuring instruments**
- **for inspection of internal- and external-tooth system and many other application**

- special chrome steel with high wearing quality and enough resistance to corrosion, hardened, finely ground and lapped

Option

- alloy steel handle, available at extra charge (when order the handle, specify the diameter also, please!)





Other sizes available on request!
Price depending on size value.

DIN

ART NO	size-ø mm	max. ± mm	length mm	CC
3805010...	0.10 – 1.00	0.0005	30	on request
3805011...	0.10 – 0.99	0.0010	40	on request
3805012...	1.00 – 3.00	0.0010	40	on request
3805013...	1.00 – 3.00	0.0010	70	on request
3805014...	3.01 – 6.00	0.0010	70	on request
3805015...	6.01 – 10.20	0.0010	70	on request

ART NO	size-ø mm	max. ± mm	length mm	CC
3805030...	10.00 – 12.00	0.0020	50	on request
3805031...	12.01 – 14.00	0.0020	50	on request
3805032...	14.01 – 16.00	0.0020	50	on request
3805033...	16.01 – 18.00	0.0020	50	on request
3805034...	18.01 – 20.05	0.0020	50	on request
—	—	—	—	—

Repair Service

Benefit from our many years of experience in the repair of measuring tools and the procurement of spare parts and accessories. By having the measuring tools checked by us or our calibration laboratory, you save time, money and unnecessary transport when troubleshooting errors.

Repair, adjustment and testing / calibration from a single source ensure that your measuring tools are in perfect condition.

Overview of services:

- ✓ Visual and functional test
- ✓ Dismantling and cleaning
- ✓ Replacement of the defect parts
- ✓ Assembly with function test
- ✓ Calibration if desired

Any questions?

We are happy to help.



Parallel Gauge Blocks

Parallel Gauge Blocks, individual

DIN EN ISO 3650

- **product for highest demands**

- from specially alloyed, particularly cured and relaxed special steel or of zirconia ceramic (best ceramic grade)
- ceramic gauge blocks are particularly suitable for the measurement chamber and test room
- each gauge block is marked with an identification number



Option

- gauge blocks made of tungsten carbide available on request

DIN EN ISO

size = nominal size mm	ART NO steel tolerance class 0	ART NO ceramic tolerance class 0	ART NO steel tolerance class 1	ART NO ceramic tolerance class 1
0.5	350200-00050	350201-00050	350210-00050	350211-00050
1	350200-001000	350201-001000	350210-001000	350211-001000
1.0005	350200-0010005	350201-0010005	350210-0010005	350211-0010005
1.001	350200-001001	350201-001001	350210-001001	350211-001001
1.002	350200-001002	350201-001002	350210-001002	350211-001002
1.003	350200-001003	350201-001003	350210-001003	350211-001003
1.004	350200-001004	350201-001004	350210-001004	350211-001004
1.005	350200-001005	350201-001005	350210-001005	350211-001005
1.006	350200-001006	350201-001006	350210-001006	350211-001006
1.007	350200-001007	350201-001007	350210-001007	350211-001007
1.008	350200-001008	350201-001008	350210-001008	350211-001008
1.009	350200-001009	350201-001009	350210-001009	350211-001009
1.01	350200-00101	350201-00101	350210-00101	350211-00101
1.02	350200-00102	350201-00102	350210-00102	350211-00102
1.03	350200-00103	350201-00103	350210-00103	350211-00103
1.04	350200-00104	350201-00104	350210-00104	350211-00104
1.05	350200-00105	350201-00105	350210-00105	350211-00105
1.06	350200-00106	350201-00106	350210-00106	350211-00106
1.07	350200-00107	350201-00107	350210-00107	350211-00107
1.08	350200-00108	350201-00108	350210-00108	350211-00108
1.09	350200-00109	350201-00109	350210-00109	350211-00109
1.1	350200-00110	350201-00110	350210-00110	350211-00110
1.11	350200-00111	350201-00111	350210-00111	350211-00111
1.12	350200-00112	350201-00112	350210-00112	350211-00112
1.13	350200-00113	350201-00113	350210-00113	350211-00113
1.14	350200-00114	350201-00114	350210-00114	350211-00114
1.15	350200-00115	350201-00115	350210-00115	350211-00115
1.16	350200-00116	350201-00116	350210-00116	350211-00116
1.17	350200-00117	350201-00117	350210-00117	350211-00117
1.18	350200-00118	350201-00118	350210-00118	350211-00118
1.19	350200-00119	350201-00119	350210-00119	350211-00119
1.2	350200-00120	350201-00120	350210-00120	350211-00120
1.21	350200-00121	350201-00121	350210-00121	350211-00121
1.22	350200-00122	350201-00122	350210-00122	350211-00122
1.23	350200-00123	350201-00123	350210-00123	350211-00123
1.24	350200-00124	350201-00124	350210-00124	350211-00124
1.25	350200-00125	350201-00125	350210-00125	350211-00125
1.26	350200-00126	350201-00126	350210-00126	350211-00126
1.27	350200-00127	350201-00127	350210-00127	350211-00127
1.28	350200-00128	350201-00128	350210-00128	350211-00128
1.29	350200-00129	350201-00129	350210-00129	350211-00129
1.3	350200-00130	350201-00130	350210-00130	350211-00130
1.31	350200-00131	350201-00131	350210-00131	350211-00131
1.32	350200-00132	350201-00132	350210-00132	350211-00132
1.33	350200-00133	350201-00133	350210-00133	350211-00133
1.34	350200-00134	350201-00134	350210-00134	350211-00134
1.35	350200-00135	350201-00135	350210-00135	350211-00135
1.36	350200-00136	350201-00136	350210-00136	350211-00136
1.37	350200-00137	350201-00137	350210-00137	350211-00137
1.38	350200-00138	350201-00138	350210-00138	350211-00138
1.39	350200-00139	350201-00139	350210-00139	350211-00139
1.4	350200-00140	350201-00140	350210-00140	350211-00140
1.41	350200-00141	350201-00141	350210-00141	350211-00141
1.42	350200-00142	350201-00142	350210-00142	350211-00142
1.43	350200-00143	350201-00143	350210-00143	350211-00143
1.44	350200-00144	350201-00144	350210-00144	350211-00144
1.45	350200-00145	350201-00145	350210-00145	350211-00145
1.46	350200-00146	350201-00146	350210-00146	350211-00146
1.47	350200-00147	350201-00147	350210-00147	350211-00147

size = nominal size mm	ART NO steel tolerance class 0	ART NO ceramic tolerance class 0	ART NO steel tolerance class 1	ART NO ceramic tolerance class 1
1.48	350200-00148	350201-00148	350210-00148	350211-00148
1.49	350200-00149	350201-00149	350210-00149	350211-00149
1.5	350200-00150	350201-00150	350210-00150	350211-00150
1.6	350200-00160	350201-00160	350210-00160	350211-00160
1.7	350200-00170	350201-00170	350210-00170	350211-00170
1.8	350200-00180	350201-00180	350210-00180	350211-00180
1.9	350200-00190	350201-00190	350210-00190	350211-00190
2	350200-00200	350201-00200	350210-00200	350211-00200
2.5	350200-00250	350201-00250	350210-00250	350211-00250
3	350200-00300	350201-00300	350210-00300	350211-00300
3.5	350200-00350	350201-00350	350210-00350	350211-00350
4	350200-00400	350201-00400	350210-00400	350211-00400
4.5	350200-00450	350201-00450	350210-00450	350211-00450
5	350200-00500	350201-00500	350210-00500	350211-00500
5.5	350200-00550	350201-00550	350210-00550	350211-00550
6	350200-00600	350201-00600	350210-00600	350211-00600
6.5	350200-00650	350201-00650	350210-00650	350211-00650
7	350200-00700	350201-00700	350210-00700	350211-00700
7.5	350200-00750	350201-00750	350210-00750	350211-00750
8	350200-00800	350201-00800	350210-00800	350211-00800
8.5	350200-00850	350201-00850	350210-00850	350211-00850
9	350200-00900	350201-00900	350210-00900	350211-00900
9.5	350200-00950	350201-00950	350210-00950	350211-00950
10	350200-01000	350201-01000	350210-01000	350211-01000
10.5	350200-01050	350201-01050	350210-01050	350211-01050
11	350200-01100	350201-01100	350210-01100	350211-01100
11.5	350200-01150	350201-01150	350210-01150	350211-01150
12	350200-01200	350201-01200	350210-01200	350211-01200
12.5	350200-01250	350201-01250	350210-01250	350211-01250
13	350200-01300	350201-01300	350210-01300	350211-01300
13.5	350200-01350	350201-01350	350210-01350	350211-01350
14	350200-01400	350201-01400	350210-01400	350211-01400
14.5	350200-01450	350201-01450	350210-01450	350211-01450
15	350200-01500	350201-01500	350210-01500	350211-01500
15.5	350200-01550	350201-01550	350210-01550	350211-01550
16	350200-01600	350201-01600	350210-01600	350211-01600
16.5	350200-01650	350201-01650	350210-01650	350211-01650
17	350200-01700	350201-01700	350210-01700	350211-01700
17.5	350200-01750	350201-01750	350210-01750	350211-01750
18	350200-01800	350201-01800	350210-01800	350211-01800
18.5	350200-01850	350201-01850	350210-01850	350211-01850
19	350200-01900	350201-01900	350210-01900	350211-01900
19.5	350200-01950	350201-01950	350210-01950	350211-01950
20	350200-02000	350201-02000	350210-02000	350211-02000
21	350200-02100	350201-02100	350210-02100	350211-02100
22	350200-02200	350201-02200	350210-02200	350211-02200
23	350200-02300	350201-02300	350210-02300	350211-02300
24	350200-02400	350201-02400	350210-02400	350211-02400
25	350200-02500	350201-02500	350210-02500	350211-02500
30	350200-03000	350201-03000	350210-03000	350211-03000
40	350200-04000	350201-04000	350210-04000	350211-04000
41.3	350200-04130	350201-04130	350210-04130	350211-04130
50	350200-05000	350201-05000	350210-05000	350211-05000
60	350200-06000	350201-06000	350210-06000	350211-06000
70	350200-07000	350201-07000	350210-07000	350211-07000
80	350200-08000	350201-08000	350210-08000	350211-08000
90	350200-09000	350201-09000	350210-09000	350211-09000
100	350200-10000	350201-10000	350210-10000	350211-10000

Parallel Gauge Block Sets

Parallel Gauge Block Set

DIN EN ISO 3650

- **for standard use in workshop area and at the machine**

- made of specially alloyed, particularly cured and relaxed special steel
- each gauge block is marked with an identification number
- calibration certificate available by extra charge



DIN EN ISO

ART NO	tolerance class	quantity per set	pcs.	nominal size mm	steps mm	CC
351001	0	32	1 9 9 9 4	1.005 1.01 – 1.09 1.1 – 1.9 1 – 9 10 / 20 / 30 / 50	— 0.01 0.1 1 —	on request
351011	1					on request
351021	2					on request
351002	0	47	1 19 8 9 10	1.005 1.01 – 1.19 1.2 – 1.9 1 – 9 10 – 100	— 0.01 0.1 1 10	on request
351012	1					on request
351022	2					on request
351003	0	87	9 49 19 10	1.001 – 1.009 1.01 – 1.49 0.5 – 9.5 10 – 100	0.001 0.01 0.5 10	on request
351013	1					on request
351023	2					on request
351004	0	103	1 49 49 4	1.005 1.01 – 1.49 0.5 – 24.5 25 – 100	— 0.01 0.5 25	on request
351014	1					on request
351024	2					on request

Rectangular Gauge Block Set

DIN EN ISO 3650

- **suitable for use in measurement and test room**

- made of specially alloyed, particularly cured and relaxed special steel
- each gauge block is marked with an identification number
- calibration certificate available by extra charge



DIN EN ISO

ART NO	tolerance class	quantity per set	nominal size mm	CC
350181	1	8	125 / 150 / 175 / 200 / 250 / 300 / 400 / 500	on request
350183	0	5	600 / 700 / 800 / 900 / 1000	on request
350184	1	5	600 / 700 / 800 / 900 / 1000	on request

Ceramic Parallel Gauge Block Set

DIN EN ISO 3650

- **suitable for use in measurement and test room**

- made of zirconia ceramic, best ceramic quality
- up to 50-fold higher wear resistance than steel
- high thermal stability
- high resistance to knocks and drops
- does not burr easily and high corrosion resistant
- each gauge block is marked with an identification number
- calibration certificate available by extra charge

Other set combinations available on request!



DIN EN ISO

ART NO	tolerance class	quantity per set	pcs.	nominal size mm	steps mm	CC
350031	0	32	1 9 9 9 4	1.005 1.01 – 1.09 1.1 – 1.9 1 – 9 10 / 20 / 30 / 50	— 0.01 0.1 1 —	on request
350041	1					on request
350032	0	47	1 19 8 9 10	1.005 1.01 – 1.19 1.2 – 1.9 1 – 9 10 – 100	— 0.01 0.1 1 10	on request
350042	1					on request

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Parallel Gauge Block Sets

Inspection Gauge Block Set, for Micrometers

DIN EN ISO 3650

- **for review and adjustment of micrometer acc. to VDI/VDE/DGQ 2618, page 5**

- with optical plane face glass and gloves
- each gauge block is marked with an identification number
- calibration certificate **without** optical plane glass calibration by extra charge



ART NO steel	tolerance class	quantity per set	nominal size mm	CC
350130	1	10	2.5 / 5.1 / 7.7 / 10.3 / 12.9 / 15 / 17.6 / 20.2 / 22.8 / 25	on request

Inspection Gauge Block Set, for Micrometers

DIN EN ISO 3650

- **for review and adjustment of micrometer acc. to VDI/VDE/DGQ 2618, page 5 / 10.1**

- each gauge block is marked with an identification number
- calibration certificate by extra charge



ART NO steel	for micrometer sizes	tolerance class	quantity per set	nominal size mm	CC
350176	0 – 25	1	5	5.1 / 10.3 / 15 / 20.2 / 25	on request
350177	0 – 100	1	8	5.1 / 10.3 / 15 / 20.2 / 25 / 50 / 75 / 100	on request

Inspection Gauge Block Set, for Calipers

DIN EN ISO 3650

- **for review and adjustment of pocket calipers acc. to VDI/VDE/DGQ 2618, page 5**

- with hardened steel setting ring and protective gloves
- each gauge block is marked with an identification number
- calibration certificate without setting ring certificate by extra charge



ART NO steel	tolerance class	ø mm	nominal size mm	CC
350139	1	20	30 / 41.3 / 131.4	on request
350148	1	4 and 25	30 / 41.3 / 131.4	on request
350149	1	4 and 25	30 / 41.3 / 131.4 / 243.5	on request

Angle Gauge Block Set

- **workshop quality, for standard purposes**
- **for fast, easy and accurate determination of angular dimensions**

- hardened and relieved special steel, high grade of abrasion resistance
- measuring faces fine ground
- angle accuracy of measuring faces +/- 60°





ART NO	tolerance class	quantity per set	angle sizes in °	L x H	CC
352012	1	12	0,25 / 0,5 / 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30°	75 x 6.5	on request

Maintenance Spray

- **cleans, maintains and lubricates measuring tools, loosens caked-on section and conserves degreased mechanical connections**

- acid and resin-free, compatible to environment, FCKW-free
- displaces humidity in electrical and electronical areas





ART NO	contents ml	mm
350320	500	260 x ø 64

Granite Measuring and Control Plate

DIN 876

- **particularly well selected material of highest quality, entirely faultless**
- **diamond lapped measuring surfaces, acc. to DIN 876**

- extreme hard and wear resistant and acid resistant
- T-Slots acc. to DIN 650, made of steel, **on request**
- calibration certirficate available on request





Option: *T-slot, with extra charge*

Other sizes or special designed plates are available on request!

DIN

grade of accuracy:
should be selected according to the intended purpose

grade 00	extra fine diamond lapped for the inspection room
grade 0	fine diamond lapped for control purposes
grade I	diamond lapped for workshop use

ART NO grade 00	accuracy ± µm	ART NO grade 0	accuracy ± µm	ART NO grade 1	accuracy ± µm	mm
260199	2	**260229**	4	**260259**	12	250 x 250 x 50
260200	3	**260230**	6	**260260**	13	300 x 300 x 50
260201	3	**260231**	6	**260261**	14	400 x 250 x 60
260202	3	**260232**	6	**260262**	14	400 x 400 x 60
260203	3	**260233**	6	**260263**	15	500 x 500 x 80
260204	3	**260234**	7	**260264**	16	630 x 400 x 80
260205	3	**260235**	7	**260265**	16	630 x 630 x 80
260206	4	**260236**	7	**260266**	18	800 x 500 x 100
260207	4	**260237**	8	**260267**	20	1000 x 630 x 100
260208	4	**260238**	8	**260268**	20	1000 x 630 x 150
260209	4	**260239**	8	**260269**	20	1000 x 1000 x 100
260210	4	**260240**	8	**260270**	20	1000 x 1000 x 150
260211	4.4	**260241**	8.8	**260271**	22	1200 x 800 x 150
260212	4.4	**260242**	8.8	**260272**	22	1200 x 800 x 200
260213	5	**260243**	10	**260273**	25	1500 x 1000 x 150
260214	5	**260244**	10	**260274**	25	1500 x 1000 x 200
260215	6	**260245**	12	**260275**	30	2000 x 1000 x 200
260216	6	**260246**	12	**260276**	30	2000 x 1000 x 250

Safety Stands

SUVA-design

- solid angular steel construction, powder coated, grey (RAL 7001)
- for a working height of approx. 900 – 1000 mm adjustable
- with protective device against misalign
- 3-point support M24 x 80 mm
- 4 foot-mounted M16 pins with ø 80 mm diameter plate, stainless steel
- single packed on an Euro-pallet

Cabinets etc. on request!



ART NO	suitable for plate size mm	stand mm
260901	630 x 400	—
260902	630 x 630	—
260903	800 x 500	800 x 500
260904	1000 x 630	1000 x 630
260905	1000 x 1000	1000 x 1000
260906	1200 x 800	1200 x 800
260907	1500 x 1000	1500 x 1000
260908	2000 x 1000	2000 x 1000

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VOGEL GERMANY

Any questions?

We are pleased to advise.

Levelling Jack

- **for granite plates up to 1000 x 630 mm**

- large adjusting range
- support in the ball joint



ART NO	quantity / singly	description	mm
269074	1	table adjustment	60 – 130 mm

Tailstock Pairs

Garde/0

- **made of dense, aged and stress relieved special cast iron with high wear resistance**
- **one tailstock with stationary and one with axially adjustable tail spindle**
- **spindles and dead centres are hardened and precision ground**
- **sliding blocks with a nominal size of 14 mm**
- **tailstocks can be fixed to the T-slot with the help of an excentric adjusting device**

Notes

- hand wheel, adjustable by means of an adjustable tail pressure
- tail stocks can be delivered with or without hardened and precision ground 90° prisms (as option, with extra charge!)
- the prisms are needed for excentrically shanks or for measuring of extra large shanks, which exceed over the length of the tail stock pair



Option (special construction)

tailstocks with hand wheel, adjustment suitable for heavy work pieces. Height adjustment possible through ground screw-thread with hand wheel (fine adjustment).

Grade/00 and Grade/I available on request!

ART NO	center height mm	inside tape MT	total length mm	grade/0
269060-0	100	2	290	±0,008 mm
269061-0	150	2	360	±0,008 mm
269062-0	200	2	390	±0,008 mm
269063-0	250	3	490	±0,008 mm
269064-0	300	3	570	±0,008 mm

Granite Master Squares 90°, triangular

DIN 876/00 with regard to the flatness of the measuring surface
DIN 875-2/00 with regard to angularity

- **particularly well selected material of highest quality, entirely faultless**
- **2 diamond lapped measuring surfaces acc. to grade 00**

- 90° angle machined
- extreme hard and wear-resistant, acid-resistant
- calibration certificate available on request
- incl. test certificate



DIN

ART NO	max. ± µm		angle length mm	width mm
grade 00	flatness	angularity		
260500	2.4 / 2.3	2	200 x 150	50
260501	2.6 / 2.4	2.5	300 x 200	50
260502	2.8 / 2.5	3	400 x 250	60
260503	3 / 2.6	3.5	500 x 300	80
260504	3.3 / 2.8	4	630 x 400	80
260505	3.6 / 3	5	800 x 500	100
260506	4 / 3.2	6	1000 x 600	100

Control Plates, Granite Plates and Accessories

Precision Gauge Blocks

DIN 876/00

- **particularly well selected material of highest quality**
- **2 diamond lapped measuring surfaces acc. to grade 00**

- entirely faultless, from up 800 mm length with transport lugs
- calibration certificate available on request
- from 800 mm length with threaded core, without eyelet hook
- incl. test certificate



example



DIN

ART NO grade 00	parallelism ± µm	mm
260530	3	630 x 50 x 100
260531	4	800 x 50 x 120
260532	4	1000 x 60 x 150
260533	5	1200 x 60 x 180
260534	6	1500 x 70 x 200
260535	6	2000 x 80 x 250

Precision Pair of Parallels

DIN 876/00

- **particularly well selected material of highest quality**
- **2 measuring surfaces parallel machined as a pair acc. to grade 00**

- entirely faultless
- calibration certificate available on request
- incl. test certificate



DIN

ART NO grade 00	parallelism ± µm	mm
260550	2	100 x 15 x 25
260551	2	150 x 20 x 30
260552	2	200 x 25 x 40
260553	2	250 x 30 x 50
260554	3	300 x 40 x 70
260555	3	400 x 50 x 100

Maintenance Set for Granite Plates

- **consisting of cleaner and care oil**

- environmentally friendly
- cleaner protects, maintains and extends the life of granite surfaces
- care oil ensures easy sliding of workpieces and works for wear reducing

Other volumes are available, on request!



ART NO	cleaner content ltr.	care oil content ltr.
260299	0.5	0.5

Granite Master Squares 90°, chimney shape

DIN 876/00 with regard to the flatness of the measuring surface
DIN 875-2/00 with regard to angularity

- **particularly well selected material of highest quality acc. to grade 00**

- entirely faultless, extreme hard and wear-resistant, acid-resistant
- base and 2 small measuring surfaces
- calibration certificate available on request
- incl. test certificate



DIN

ART NO	max. ± µm		mm
grade 00	parallelism	angularity	
260520	2.6	2.5	300 x 100 x 80
260521	3	3.5	500 x 150 x 120
260522	3.6	5	800 x 220 x 150
260523	4	6	1000 x 250 x 200

Granite Master Squares 90°, square shape

DIN 876/00 with regard to the flatness of the measuring surface
DIN 875-2/00 with regard to angularity

- **particularly well selected material of highest quality**
- **measuring surfaces acc. to grade 00**

- entirely faultless, extreme hard and wear-resistant, acid-resistant
- measuring surfaces absolut plane and rectangular finely ground quality
- calibration certificate available on request
- incl. test certificate

Other sizes are available on request!



DIN

ART NO	max. ± µm		mm
grade 00	squareness	straightness	
260580	2.4	2	200 x 200 x 25
260582	2.6	2.5	300 x 300 x 30
260584	3.5	3.5	500 x 500 x 50

Control Plates, Steel Plates and Accessories

Straightening Plates

- **solid or ribbed construction**
- **special wear resistant steel casting**

- surfaces and four sides fine planed
- against extra charge the plates can be also supplied with bores, holes or T-slots



ART NO solid	mm	ART NO ribbed	mm	rib height mm
261400	200 x 200 x 40	**261500**	200 x 200 x 20	40
261401	300 x 300 x 50	**261501**	300 x 300 x 20	40
261402	400 x 400 x 50	**261502**	400 x 400 x 20	40
261403	500 x 500 x 60	**261503**	500 x 500 x 40	40
261404	600 x 600 x 70	**261504**	600 x 600 x 40	40
261405	700 x 700 x 80	**261505**	700 x 700 x 40	40
261406	800 x 800 x 100	**261506**	800 x 800 x 40	40
261407	1000 x 800 x 100	**261507**	1000 x 800 x 40	60
261408	1000 x 1000 x 110	**261508**	1000 x 1000 x 40	60
261409	1200 x 800 x 80	**261509**	1200 x 800 x 60	60
261410	1200 x 1000 x 110	**261510**	1200 x 1000 x 60	60
261411	1500 x 1000 x 120	**261511**	1500 x 1000 x 60	60
261412	2000 x 1000 x 120	**261512**	2000 x 1000 x 60	60

Stands

- **suitable for straightening plates**

- solid steel construction
- for a working height of approx 800 mm
- quantity of legs 4 pcs.



DIN

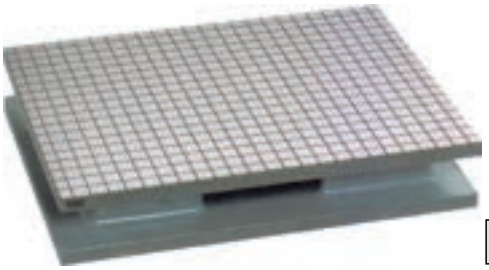
ART NO	for straightening plate size mm
269102	400 x 400
269103	500 x 500
269104	600 x 600
269105	700 x 700
269106	800 x 800
269107	1000 x 800
269108	1000 x 1000
269109	1200 x 800
269110	1200 x 1000
269111	1500 x 1000
269112	2000 x 1000

Lapping and Control Plate

DIN 876/1

- **for lapping, flatness measuring and as base line**

- special high-density cast iron
- top and bottom surfaces finest ground
- upper surface is additionally squared, with dust grooves



DIN

ART NO	mm	eveness mm	ART NO transport box
262101	360 x 260 x 65	0.014	**2699036**

Control-, Surface- and Testing Plates

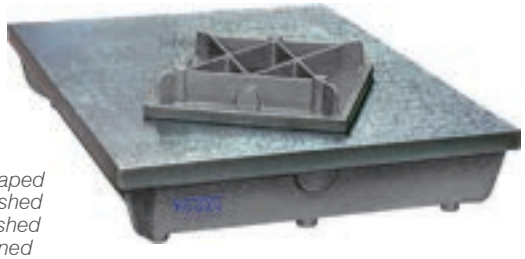
DIN 876

- **special wear-resistant casting with additionally steel**

- strong ribbed construction, side surfaces reinforced
- measuring surface according to DIN 876
- side surfaces carefully planed or milled
- with supporting points, corresponding to the size of plate
- against extra charge we supply the plates with handle and with protective wooden cover

Other sizes and stands are available on request!

grade 0 = fine scraped and finished
grade 1 = fine finished
grade 3 = fine planed



DIN

ART NO grade 0	ART NO grade 1	ART NO grade 3	ART NO wooden cover	mm
261002	261102	261302	2699020	200 x 200
261005	261105	261305	2699030	300 x 300
261007	261107	261307	2699040	400 x 400
261008	261108	261308	2699054	500 x 400
261009	261109	261309	2699050	500 x 500
261011	261111	261311	2699065	600 x 500
261014	261114	261314	2699085	800 x 500
261018	261118	261318	2699160	1000 x 600
261020	261120	261320	2699180	1000 x 800
261021	261121	261321	2699100	1000 x 1000
261022	261122	261322	2699128	1200 x 800
261024	261124	261324	2699157	1500 x 1000
261026	261126	261326	2699210	2000 x 1000

Supporting Feets

- **especially for straightening plates**

- made of special casting
- with adjusting screw



ART NO	stand height mm	adjusting height mm
269076	250 – 300	50
269077	350 – 400	50
269078	450 – 500	50
269079	550 – 600	50
269081	650 – 700	50

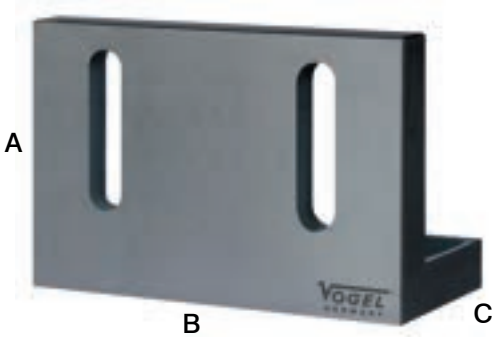
Angle Plates

DIN 875 and DIN 876

- **construction with clamping slots or with clamping T-slots**

- made of special cast iron with high resistance to wear
- accuracy of measuring surfaces according to DIN 876
- accuracy of angle according to DIN 875
- side areas carefully milled

Other sizes are available on request!



DIN

ART NO Con feritoie Grado 1	ART NO slots grade 3	mm B x A x C	slot width mm
261600	261640	150 x 100 x 75	14
261601	261641	200 x 150 x 100	15
261602	261642	275 x 200 x 150	17
261603	261643	300 x 250 x 150	17

Precision Spirit Levels

Precision Inspection Spirit Levels

DIN 877

- **for accurate levelling and adjusting of surfaces and cylinders**

- housing made of special cast iron
- with prism and flat surface, finely ground
- adjustable main vial and one cross vial
- with insulation handles

ART NO 360202



ART NO 360281



DIN

ART NO sensitivity 0.01 mm/m	ART NO sensitivity 0.02 mm/m	ART NO sensitivity 0.05 mm/m	length mm	CC
—	**360281**	**360282**	150	on request
360202	**360283**	**360284**	200	on request
360203	**360285**	—	250	on request
360204	**360287**	**360288**	300	on request

ART NO sensitivity 0.1 mm/m	ART NO sensitivity 0.3 mm/m	ART NO sensitivity 0.5 mm/m	length mm	CC
—	—	**360261**	150	on request
360251	**360231**	—	160	on request
360252	**360232**	**360262**	200	on request
360253	**360233**	—	250	on request
360254	**360234**	**360264**	300	on request

Precision Inspection Frame Spirit Levels

DIN 877

- **for levelling and adjusting of horizontal and vertical surfaces and cylinders**

- housing made of special cast iron
- with prism and flat surface, fine ground
- adjustable main vial and one cross vial
- with insulation handles



DIN

ART NO sensitivity 0.02 mm/m	ART NO sensitivity 0.05 mm/m	ART NO sensitivity 0.1 mm/m	→ mm ←	CC
360311	**360312**	**360351**	150 x 150 x 40	on request
360313	**360314**	**360352**	200 x 200 x 40	on request
360315	**360316**	—	250 x 250 x 40	on request
360317	—	**360353**	300 x 300 x 40	on request

Precision Crank Pin Levels

DIN 877

- **to adjust crankshafts and crank pins of motors and machines**

- with vertical and horizontal prism, fine ground
- with main vial and cross vial
- width 40 mm

Option
- with magnets in the prism bottom on request, please



DIN

ART NO sensitivity 0.04 mm/m	ART NO sensitivity 0.1 mm/m	ART NO sensitivity 0.2 mm/m	length mm	CC
—	—	**360295**	60	on request
360296	—	—	90	on request
360297	—	—	120	on request
—	**360293**	—	90	on request
—	**360294**	—	120	on request

Precision Alloy Spirit Level

- **for simple levelling and adjusting of surfaces and cylinders**

- housing made of alloy cast
- with ground prism base
- with ground and graduated main vial



ART NO sensitivity 0.6 mm/m	length mm	width mm
360410	100	22
360415	150	22

ART NO sensitivity 0.6 mm/m	length mm	width mm	CC
360420	200	22	on request
360430	300	22	on request

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Digital Measuring Instruments



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BARCOL Impressor, Hardness Tester

- **portable device, one hand use, for fast and location independent hardness testing**
- **with Bluetooth® data output and with software**
- **Applications:**
  It is mainly used in aluminium processing industry, testing pure aluminium, soft aluminium, thick aluminium alloy, aluminium strip, aluminium rod, aluminium castings, aluminium forgings and aluminium alloy products. Also, it can be used for glass steel industry.
  The device is suitable for testing large and extra thick workpieces.

- rugged ABS plastic housing, with key pad, with backlight
- LCD display with clear reading, digit height 9 mm
- LED signals for the hardness scales HW, HB HV, HRB, HRE, HRF, HRH
- with function of calculation the average value, can calculate the average value of 29 sets of data at most
- with the max. hold function, recording the max. hardness value during measurements
- with good, convenient calibration and high accuracy detection
- wide test range, can test from very soft pure aluminium to a particularly hard aluminium alloy,effective test range equivalent to the Brinell Hardness 25 ~ 150 HB
- ON/OFF-button, autom. power off, average, max value, menu function
- operation temperature -0 °C ~ +50 °C, rel. humidity 20 – 80 %RH
- incl. 2x 1.5 V battery (type AAA, art.-no.: 90002)
- incl. 2 test blocks, 2 pins, pin length calibration block, screw driver, spanner, installation software for data transmitting and operation manual



UNIT | Bluetooth | CE

ART NO	HBa	HBa	Hba (max.)	Hba (max.)	Hba	Hba	mm
650270	0 – 100	0.1	81 – 88 ± 1	42 – 48 ± 2	81 – 88 ± 1.5	42 – 48 ± 2.5	170 x 60 x 70

Universal Digital Rebound Hardness Tester

- **with integrated impact device type „D“, portable device without cable connection**
- **measurement is based on the principle of Leeb**

- hand-held device, rugged, polyamide housing material, with self-calibration function
- LCD display with clear reading and backlight, digit height 9 mm
- autom. power off, memory with 99 data
- suitable for testing hardness of almost all Ferrous (Fe) and Non-Ferrous (NFe) materials
- direct display of hardness scales: HL, HRC, HRB, HB, HV and HS
- statistics function: average / min. / max. / value
- provides testing at any angle, even upside down
- min. workpiece weight 2 ~ 5 kg on a solid ground, at 0.05 ~ 2 kg with couplant paste
- for indentation depth see techn. data of the impact devices on page 309
- min. radius workpiece (concave/convex) Rmin. = 50 mm, with support ring Rmin. = 10 mm
- min. surface roughness of workpiece 1.6 µm (Ra)
- storage temperature -20 °C ~ 70 °C, operation temperature -10 °C ~ 45 °C
- incl. cleaning brush, test block with HLD value and with calibration certificate
- incl. 1x 9 V battery (type 6LR61, art.-no.: 90006) and operation manual





DIN EN | UNIT | ASTM | CE | CC

ART NO		(HL=800 / ±0.2 HRC)	mm	CC
651609	200 – 960 HL / 19 – 68 HRC 13 – 101.7 HRB / 20 – 655 HB 80 – 940 HV / 32 – 99.5 HS	±0.6 %	100 x 60 x 33	inkcusive

Hardness Testers

Universal Digital Rebound Hardness Tester

- **portable device for quick and location-independent hardness tests, based on the Leeb principle**
- **with external impact device type „D“ (standard)**
- **with USB data output and Dataview software**



ART NO 651617

- rugged, anodized aluminium housing, with key pad
- multifunction display with clear reading, with switchable backlight
- display functions: hardness scales, hardness value, date, testing time, battery indicator, impact direction, average value, recognition of impact device, memory capacity for 600 groups
- suitable for most metallic materials, measuring in any position, vertical, horizontal and upside down
- ON/OFF switch or autom. power off
- incl. Adjusting limit function, autom. alarm function when exceeding the limit value
- min. workpiece weight 2 kg on solid support
- direct display of hardness scale in HL, with autom. conversion in HRB, HRC, HV, HB, HS
- and tensile strength (U.T.S.)
- min. workpiece radius (concave/convex) Rmin = 30 mm (< 30 mm with support ring, incl. in the set)
- operation temperature -20 °C ~ +60 °C, rel. humidity 20 – 90 % RH
- incl. 2x 1.5 V Battery (type AA, art. no.: 90003)
- incl. test block type „D“ (2 parts) and impact device type „D“, more impact devices are available as accessories
- with brush, USB data cable, screw driver, data view software, workshop calibration certificate and operation manual

art. no. 651608 with additional functions:
- anti-slip soft shell housing
- integrated thermal printer for direct printing of all values and histogram
- with rechargeable Li-ion battery and charger 100 – 240 V/AC



ART NO 651608



ART NO 651617 — UNIT | DIN ISO | ASTM | BS | CE | CC

ART NO 651608 — UNIT | ~ 230V | DIN ISO | ASTM | BS | CE | CC

ART NO	at least workpiece thickness mm	max. hardness of workpiece HLD	max. HLD	mm	CC
651617	impact device type D/DC/DLD/D+15 = 5 mm impact device type C = 1 mm impact device type G = 10 mm	960	±6	130 x 70 x 30	inclusive
651608	impact device type D/DC/DLD/D+15 = 5 mm impact device type C = 1 mm impact device type G = 10 mm	960	±6	230 x 86 x 46	inclusive

Shore Hardness Tester „Durometer“ • analog model

- **portable device for measuring the hardness for elastomers and plastics**
- **Shore „A“: rubber, elastomers, neoprene rubber, silicon, vinyl, soft plastics, leather, felt and similar materials**
- **Shore „D“: plastic, formica, plexiglass, epoxies and similar materials**



- rugged metal housing, compact design
- with drag pointer, with needle protection
- 2 different models, for Shore „A“ and Shore „D“ measurements
- measuring needle made of special steel, needle guidance is linear mounted
- incl. test block, with operation manual



Shore A *Shore D*



with needle protection

DIN | ASTM

ART NO	shore type	max. spring load N	mm		needle ° / mm	meas.-face mm	indentor type	mm
650720	A	8.064	0 – 100 HA	1	35.00 / ø 0.90	ø 18	blunt taper	100 x 64 x 35
650721	D	44.54	0 – 100 HD	1	30.00 / R 0.10	ø 18	sharp point	100 x 64 x 35

Impact Devices for Special Applications

- suitable for our hardness testers



reference
impact body „G“ suitable for impact device „G“
impact body „D“ for all other impact devices

ART NO	suitable for version	article description	application
659892	type “D”	impact device “D”	standard impact device. for the majority of hardness testing assignments
659893	type “C”	impact device “C”	device with reduced energy (~¼ of that for type D), thin walled or impact sensitive components
659894	type “DC”	impact device “DC”	extremly short impact device
659895	type “D+15”	impact device “D+15”	impact device with particularly slim front section and with measu-ring coil moved back
659896	type “DL”	impact device “DL”	tube front section diameter ø 4.20 mm, length 50.00 mm
659897	type “G”	impact device “G”	enlarged test tip, increased impact energy (~9 x that of type D), with only minor damage to the surface
659890	type “D”	impact body “D”	for measurements in the extremly high hardness range up to 500 HRC/650 HV. Tool steel with high carbide content inclusions for measurements up to 1200 HV
659891	type “G”	impact body “G”	for measurements in the extremly high hardness range up to 500 HRC/650 HV. Tool steel with high carbide content inclusions for measurements up to 1200 HV
659893-2	type “C”	impact body “D”	for surface hardened elements, coatings, thinly coated or impact sensitive parts
659894-2	type “DC”	impact body “D”	for standard measurements in holes, cylinders, inside measure-ments, etc.
659895-2	type “D+15”	impact body “D”	for general measurements in narrow grooves and on narrow surfaces (e.g. gears)
659896-2	type “DL”	impact body “D”	for measurements in inaccessible places and recesses
651690	all models	support rings with holder, set of 11-pcs.	on curved surfaces with a radius under 30 mm, effective positioning, rings can be screwed on front of the impact device
651698-2	651698-1	printer cable	—
651698-3	651606	data cable USB to PC and RS232C	—
651692-1	all models with data output	software for data process	data view/statistics
651699	all models	cable with Lemo connetctor	replacement cable for impact device
659899	all “D” versions	test block “D”, with application of HLD value	for perfomance tests of hardness testers
659899-2	all “D” versions	test block “D”, with application of HRC value	for perfomance tests of hardness testers
659913	651607 + 651608	paper roll	—

Thickness Gauges

Accessories
on page 236

Universal Coating Thickness Gauge

- professional, handheld measuring device for quick and flexible coating thickness measurements
- combined system with 2 probes, for iron/steel (Fe) and non-ferrous metal (Ne)
- large display, with backlight (switchable), with memory function
- rugged extruded aluminium case, USB data output and with dataview software
- operates in any position (horizontal, vertical and upside down)
- for measurements of non-magnetic layers on metal surfaces (Fe) and measurements of insulating layers on non-ferrous metals (NFe)
- application fields include surface engineering, automotive industry, electroplating, pipeline construction, aluminium industry, spray coating, plastic coating, mechanical engineering, bridge construction, etc.



- rugged extruded aluminium body frame, with soft key pad
- multi-function display with clear reading, with backlight switchable
- with „low-battery“ indicator, autom. recognition of probe type, alarm function switchable
- magnetic induction measuring principle (Fe) and eddy current measuring principle (NFe)
- units in µm or mils, autom. substrate recognition, manual or autom. shut down function
- two measuring methods: continuous measurement and a single measurement
- 3 calibration methods: one point calibration, two point calibration and calibration with a roughened surface
- 5 calibration foil-set,1 x aluminium substrate block and 1 x iron substrate block
- 5 statistical values: mean value, max. value, min. value, standard deviation and numbers of measurements, storage of 500 measuring data in total
- min. radius of workpiece: convex 5 mm, concave 50 mm
- min. substrate thickness Fe (F1)-probe 0.75 mm, for NFE (N1)-probe 50 µm
- direct printing of the measured values by USB cable to PC or printer
- operating temperature -0 °C ~ 40 °C, rel. humidity 20 – 90 %RH
- inclusive 2x 1.5 V battery (type AA, art.-no.: 90003), with screw driver, data cable, dataview software, operation manual

UNIT · ASTM · BS · CE · DIN ISO

ART NO	µm	µm F1 + N1	µm probe F1	µm probe N1	mm
480227	0.10 / 0.10	0 - 1250	1 + 3 %	1.50 + 3.00 %	115 x 70 x 30

Universal Paint Thickness Gauge • IP52

- professional, handheld device for quick and accurate paint thickness measurements
- device with built-in probe for quick, non-destructive and accurate measurements
- integrated probe for measurements on smooth, painted areas
- combined system for measurements on iron/steel (Fe) and non-ferrous metal (NFe) both of these offer the highest degree of precision even with thinnest paint coatings
- large display, 4 digits, alphanumeric, height 8 mm
- in a rugged ABS plastic housing, with rubber protective cover
- easy single key operation, just switch on and measure, autom. base material recognition
- for measurements on level or slightly curved surfaces
- no calibration necessary, calibrated before delivery
- area of application: painting companies, spray- and powder coating, automotive companies, experts and automotive garages, oldtimer scene, machinery, aluminium industry, etc.





Anwendungsbeispiel

- rugged ABS plastic housing, with rubber protective cover, with key pad
- innovative and user friendly handling: switch on and measure
- multi-function LCD display with clear reading, autom. recognition of base material
- large contact area for reliable positioning
- magnetic induction measuring principle (Fe) and eddy current measuring principle (NFe) reading in µm and mil
- calibration-free measuring, acoustic signal when recording measured values
- control foil and zero-standards (1 x aluminium- and 1 x steel plate)
- min. radius workpiece for convex surfaces 25 mm, for concave surfaces 50 mm
- min. thickness of workpiece — F 0.75 mm, min. thickness of workpiece — N 0.25 mm, min. measuring surface 40 x 40 mm
- operating temperature 0 °C ~ 60 °C, rel. humidity 20 – 90%RH, surface temperature -15 °C ~ 60 °C
- incl. 2x 1.5 V battery (type AAA, art.-no.: 90002)
- with operation manual

UNIT · IP 52 · ASTM · BS · CE · DIN ISO

ART NO	µm	µm Fe	µm NFe	± µm	probe	mm
480238	1.0 / 2.0 / 5.0	0 – 3000	0 – 3000	3 + 5 %	integrated	110 x 50 x 25

Universal Coating Thickness Gauge • IP52

- professional, handheld device for quick and flexible coating thickness measurements
- device available with built-in probe or with external probe for flexible measurements
- combined system for measurements of non-magnetic layers on metal surfaces (Fe) and for measurements of insulating layers on non-ferrous metals (NFe)
- large display, 4 digits, alphanumeric, height 10 mm
- no calibration necessary, calibrated before delivery
- highly wear-resistant measuring pole made of tungsten carbide
- in a rugged ABS plastic housing, with rubber protective cover
- operates in any position (horizontal, vertical and upside down)
- application fields: painting companies, spray- and powder coating, automotive experts and automotive garages, steel- and automotive companies and shipbuilding, machinery, electro plating, aluminium industry, in laboratories, quality control, etc.

ART NO 480237



ART NO 480236





application example



application example

- rugged ABS plastic housing, with rubber protective cover, with key pad
- innovative and user friendly handling: switch on and measure
- multi-function LCD display with clear reading, autom. recognition of base material
- plastic base of the probes are shaped with a V-groove, thus ensuring vertical positioning on flat, cylindrical or curved surfaces
- magnetic induction measuring principle (Fe) and eddy current measuring principle (NFe) reading in µm and mils
- calibration-free measurements, online statistics (mean values, standard deviations, min, max)
- acoustic signal when recording measured values
- control foil and zero-standards (1x aluminium- and 1x steel plate)
- min. radius workpiece for convex surfaces 5 mm, for concave surfaces 50 mm
- min. thickness of workpiece for Fe probe 0.5 mm, for NFe probe 50 µm, min. measuring surface 10 x 10 mm
- operating temperature 0 °C ~ 60 °C, rel. humidity 20 – 90 %RH, surface temperature -15 °C ~ 60 °C
- incl. 2x 1.5 V battery (type AAA, art.-no.: 90002)
- with operation manual and wrist strap

UNIT | IP 52 | ASTM | BS | CE | DIN ISO

ART NO	µm	µm Fe	µm NFe	max. ± µm	mm probe	mm
480236	1.0 / 2.0 / 5.0	0 – 3500	0 – 3000	2 or 2 %	built-in	110 x 50 x 25
480237	1.0 / 2.0 / 5.0	0 – 3500	0 – 3000	2 or 2 %	ø 24 x 45	110 x 50 x 25

Ultrasonic Thickness Gauge

- Top-model, for various materials, such as steel, stainless steel, glass, gold, silver, non-ferrous metals, nylon, polyethylene, polystyrene, teflon, rubber, plexiglass, titanium, platinum, neoprene, a.m.o.
- pocket size instrument, for quick and flexible wall thickness measurements
- operates in any position (horizontal, vertical and upside down)
- easy to operate device, with automatic probe zero calibration



- rugged polyamid plastic housing, automatic probe identify system
- with touchscreen soft key pad, with low-high limit setting and alarm signal
- resolution in 0,01 mm/0.001“ or 0,1 mm/0.01“, measurements 4/s and 10/s in „fast mode“
- fast calibration on integrated 4 mm test plate (ø 15 mm)
- 4-digit LCD-display with clear reading and backlight display for dark environment
- incl. interchangeable 5 MHz standard transducer (< 60 °C) with ø 10 mm, for general purpose
- operating temperature -20 °C ~ +50 °C, measuring temperatur -20 °C ~ 350 °C (acc. to the probes)
- with average calculation of max. 9 readings, memory of 5.000 reading with location number
- with „low battery“ indicator, autom. power off selectable, measuring unit in mm/inch swichtable
- with selectable sound velocity range from up 1.000 m/s ~ 9.999 m/s
- with installation software on CD-Rom
- with USB data output to PC
- with 2x 1.5 V battery (type AAA, art.-no.: 609283), couplant, hand strap, operation manual
- incl. workshop calibration certificate, in sturdy plastic case

Accessories on page 236







CC | CE | UNIT

ART NO	mm / inch		max.	mm	CC
480101	0.65 – 400 mm / 0.026 – 15.7“	0.1/0.01 mm / 0.01/0.001“	0.5 % +0.1	116 x 64 x 24	inclusive

Ultrasonic Thickness Gauge

- **compact handheld measuring device for quick and location independent measuring**
- **with 2 external probes**
- **dedicated for many materials, such as steel, cast iron, nodular cast iron, aluminium, bronze, copper, zinc, etc., ceramic, glass, composites, epoxies, homogenously plastics, other ultrasonic wave well conductive materials**
- **large LCD display, 4-digit, in a rugged ABS plastic housing**
- **operates in any position (horizontal, vertical and upside down)**
- **with integrated steel test plate for fast calibration**
- **areas of application e. g.: surface technology, automotive-, metal-, machinery- and aluminium-industry, storage tanks, pressure boiler, shipbuilding, bridge construction corrosion tests, etc.**



- rugged ABS plastic housing, with soft keypad
- multi-function display with clear reading, mm/inch switchable
- ON/OFF button, coupling state indication, memory function for 2000 groups
- Pre-Set function for upper and lower limit setting
- incl. software for data transmission
- with 2 external probes:
  1x N05/90° angle probe (ø 10 mm/5 MHz), for steel 1 – 250 mm
  1x N05 straight probe (ø 10 mm/5 MHz), for steel 1 – 250 mm
- operating temperature -10 °C ~ 60 °C, rel. humidity 20 % ~ 90 % RH
- incl. 2x 1.5 V battery (type AA, art. no.: 90003), couplant, operation manual

Accessories on page 236







UNIT | DIN ISO | CE

ART NO	mm	mm N05/90°	mm N05 straight	sound velocity m/s	max.	mm
480261	0.01	1 – 250	1 – 250	1000 – 9999	± 0.50 % + 0.01 mm	163 x 78 x 33

Ultrasonic Thickness Gauge

- **designed to measure the thickness of ferrous (Fe) or non-ferrous materials (NFe)**
- **dedicated for many materials, such as steel, cast iron, grey cast iron, nodular cast iron, aluminium, copper, bronze, zinc, glass (quarz), ceramics, composites, epoxies, homogenously plastics and other ultrasonic wave well conductive materials**
- **rugged handheld measurement device, for quick and flexible wall thickness measurements**
- **suitable for most metallic and non-metallic ultrasonic wave can go through, application areas are e.g. surface technology, automotive industry, storage tank, pressure boiler, shipbuilding, chemical- and petrol plants, power stations, aluminium industry, machine engineering, bridge construction, etc.**
- **for wall thickness checking of pressure tanks, vessels, oil tanks, chemical instruments and many others**
- **operates in any position: horizontal, vertical or upside down**



- robust housing made of polyamide, with soft keypad
- 4-digit LCD display, with backlight, digit height 9 mm
- with integrated test block for fast calibration
- autom. calibration function, reading in mm/inch
- On/Off key and autom. power off function, with „low-battery“ indicator
- selectable sound velocity 1000 – 9999 m/s
- internal data memory for 40 measurements
- incl. exchangeable 5 MHz transducer, ø 10 mm, for standard purposes
- operation temperature 0 °C ~ +40 °C, humidity 20 % – 90 % RH
- incl. 2x battery 1.5 V (type AA, art. no.: 90003), with operation manual, wrist strap and couplant

Accessories on page 236

UNIT | CE

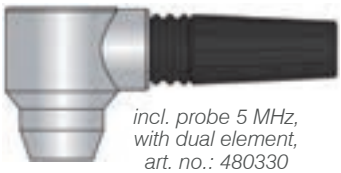
ART NO	mm	mm / inch	max.	mm
480120	0.01	0.70 – 300.00 / 0.36 – 11.80	0.50 % + 0.10	124 x 67 x 30

Ultrasonic Thickness Gauge with Echo-Echo System (A+B-Scan)

- top class device, with USB data output, with A- + B-Scan-Mode
- suitable for measuring material thickness, also through coated surfaces
- location-independent material measurement with simple operation
- dedicated for ferrous (Fe) and non-ferrous materials (NFe)
- large TFT color display (320 x 240 mm), with clear reading
- multilingual menu navigation, data transfer by USB output to PC in any windows system
- 2 – 9 average measurements, operates in any position: horizontal, vertical or upside down
- Min/Max limit setting, with alarm function, low battery indicator
- automatic probe recognition and automatic zero calibration
- integrated test plate for fast calibration
- automatic measurement and manual-measurement selectable
- automatically locates the detection point
- measurement screen is automatic frozen, which makes it easy to analyze the data for the user
- with our optional available probes our device is dedicated for materials e.g. such as: steel, cast iron, grey cast iron, nodular cast iron, aluminium, copper, brass, zinc, glass (quartz), composites, ceramic, epoxies, PVC, homogenously plastics and other ultrasonic wave well conductive materials

- rugged housing, with soft key pad
- TFT color display, with multi-function indicator, clear reading
- integrated steel test plate for fast calibration
- autom. calibration function, values in mm/inch
- On/Off key, autom. power off, with „low-battery“ indicator
- selectable sound velocity range 1.000 m/s – 9.999 m/s
- with data memory 100 measurement in 100 different files
- incl. exchangeable 5 MHz probe, ø 13,20 mm, < 60 °C, for standard purpose
- operation temperature -20 °C ~ +50 °C, rel. humidity 20 – 90 % RH
- incl. 2x 1,5 V battery (type AA, art. no.: 90003),
- with couplant, workshop calibration certificate and operation manual





incl. probe 5 MHz, with dual element, art. no.: 480330

Accessories on page 236

ART NO	mm	mm / inch	sound velocity m/s	max.	mm	CC
480130	T-E 0.65 ~ 400.00 E-E: 3 ~ 25	0.01 / 0.001	1000 ~ 9999	±0.40 mm up to < 9.99 mm ±0.10 % + 0.04 mm up to 10.00 – 99.90 mm ±0.30 % up to > 100.00 mm	133 x 75 x 29	inclusive

Explore our ***Website.***

www.vogel-germany.de



Any questions?

We are pleased to advise.

Accessories for Thickness Gauges

Accessories for Universal Coating Thickness Gauges

ART NO	suitable for model	application	article description	µm
480310	all models	for calibration purpose	calibration foil set Fe + Ne	—
480315	480227	magnetic induction	probe F1 (Fe)	0 – 1250
480316		eddy current method	probe N1 (Ne)	0 – 1250
480322	480237	combined Fe + FNe	combined probe F (Fe) + N (NFe)	0 – 3500 0 – 3000
480323		magnetic induction	probe F10 (Fe)	0 – 10000


ART NO 480315


ART NO 480323


ART NO 480316


ART NO 480322

Accessories for Ultrasonic Thickness Gauges

ART NO	suitable for model	application	article description	mm
480280	all models	for coupling	couplant, 60 ml	—
480288			couplant, 100 ml	
480275	480120	for standard purposes	probe, ø 10 mm 5 MHz	1,00 – 250,00
480274		for thin pipes	probe, ø 7 mm 5 MHz	0,80 – 30,00
480277		for extrem high temperatures	probe, ø 12 mm 5 MHz	3,00 – 100,00
480278		for cast iron	probe, ø 12 mm 2.50 MHz	3,00 – 250,00
480330	480130	for standard purposes and for Echo-Echo up to ø 25.0 x 3.0 mm	probe ø 13.20 mm 5 MHz (< 60 °C)	T-E: 1,44-200 E-E: 3-25
480331	480101 and 480130	for thin pipes up to ø 25.0 x 1.2 mm	probe ø 11 mm 5 MHz (60 °C)	0,80 – 300,00
480332		for extrem high temperatures up to ø 25 x 2 mm	probe ø 15 mm 5 MHz, up to 350°C	2,00 – 200,00
480333		for thin pipes up to ø 15 x 1.2 mm	probe ø 9 mm 7.50 MHz (60 °C)	0,65 – 50,00
480334		for extrem thin pipes up to ø 15.0 x 1.0 mm	probe ø 6.0 mm 10 MHz (60 °C)	0,65 – 20,00
480335		for pipes up to ø 40.0 x 3.0 mm	probe ø 17 mm 2 MHz (60 °C)	2,00 – 400,00
480336	480130	for fiberglass and composites	probe ø 26 mm 1 MHz (60 °C)	3,00 – 200,00
480337	480131	for fiberglass and composites	probe ø 28 mm 1 MHz (60 °C)	20,00 – 590,00
480338	480132	for thin, curved surfaces	probe ø 7.50 mm 5 MHz (60 °C)	E-E: 0,200-10 T-E: 1,500-20
480341	480261	for standard purpose	probe ø 10 mm 5 MHz (60 °C)	1,00 – 250,00
480342		for thin, curved surfaces	probe ø 6 mm 7 MHz (60 °C)	0,75 – 50,00
480343		for cast iron and rough surfaces	probe ø 22 mm 2 MHz (60 °C)	2,50 – 350,00
480344		for extrem high temperatures	probe ø 14 mm 5 MHz, until 500 °C	2,00 – 100,00
489871	all models	6-step test block 1 / 3 / 5 / 10 / 15 / 20 mm		1,00 – 20,00
489872		4-step test block 1.50 / 4.00 / 10.00 / 18.00 mm		1,00 – 10,00


ART NO 480280


ART NO 480288


ART NO 480330


ART NO 480331


ART NO 480332


ART NO 480333


ART NO 480334


ART NO 480335


ART NO 480336


ART NO 480337


ART NO 480338


ART NO 489871

Electr. Digital Vibration Meter

- **with integrated or with external probe, incl. workshop test certificate**
- **compact analyser for predective maintenance of production machinery and for a quick checking of unbalance, misalignment, bearings and gears etc.**

- two-row LCD display, for velocity and temperature, digit height 15 mm/10 mm
- accuracy ±5 % of display value (±2 digits)
- with external accelerometer and adapter cable
- HOLD function for holding the determined measured value
- with magnet
- with temperature measurement (C°/F°) within range -10 °C ~ +80 °C, accuracy ±2 °C
- rugged, polyamid plastic housing, with keypad
- large LCD display with clear reading, with backlight
- On-switch, automatic power-Off after approx. 1 min., with battery indicator
- low frequency mode “Lo-RMS” to test low vibrations
- high frequency mode “Hi-AVE” to test avarage acceleration
- displacement peak to peak mode “Hi-Peak”
- large frequency range: 10 Hz up to 1 kHz (Lo), 1 kHz up to 15 kHz (Hi)
- incl. 2 exchangeable probe tips, for different measuring functions:
  — short probe tip for standard vibration measurements
  — long, small probe tip for vibration measurements on small or narrow objects, etc.
  — without probe tip for vibration measurements on smooth object surfaces, etc.
- operation temperature 0 °C ~ +40 °C, humidity 30 – 90 %RH
  incl. 1x 9 V battery (type 6LR61, art.-no.: 90006), with operation manual



ART NO	velocity Lo-RMS	velocity Hi-AVE	displacement, peak to peak Hi-PEAK	mm
480605	0.1 – 199.9 mm/s	0.1 – 199.9 m/s²	0.001 – 1.999 mm	135 x 75 x 38

Electr. Digital Hand Tachometer

- **with LCD display for optical or mechanical speed detection**

- measurement accuracy is ±0.02 % from the end value ±1 digit
- 5 digit LCD display, sturdy ABS plastic housing
- direct and non-contact recording of rotation
- automatic Off-function, after 30 sec.
- automatic Min/Max/Average memory-function, recall by memory button
- mode function for different measurement units
- power supply via 2x 1.5 V battery (type AA, art. no.: 90003), or rechargeable batteries (optional)
- extensive accessories is included: Hand Tachometer, 10 reflective tags, adaptor for direct measuring 1:1, rubber tip, track wheel 0.1 m and 6 ”
- incl. 2x 1.5 V battery (type AA, art. no.: 90003)
- with operation manual

Option
- art. no. 270160-8 set of reflective tags (10 pcs.)







ART NO	1 / min.	measuring distance max. mm	storage temperature °C	operation temperature °C	CC
270160	1 – 99999	600 (optically)	-20 to +70	0 to +50	on request

Accessories for Hand Tachometers and Stroboscope

Accessories for Electr. Digital Hand Tachometers



ART NO 270160-1



ART NO 270160-2



ART NO 270160-3



ART NO 270160-4



ART NO 270160-5



ART NO 270160-6



ART NO 270160-7



ART NO 270160-8



ART NO 90003

In each set contain:

set content	 270160-1	 270160-2	 270160-3	 270160-5 270160-4	 *0,10 m* 270160-6	 *6“* 270160-7	 270160-8	 90003	
270160	—	✓	✓	✓	✓	✓	✓	✓	✓
270161	✓	✓	✓	✓	✓	✓	✓	✓	✓

ART NO	product description
270160-1	adapter
270160-2	extension shaft
270160-3	change attachment
270160-4	drive cone

ART NO	product description
270160-5	drive tip
270160-6	measuring wheel 0.1 m
270160-7	measuring wheel 6“
270160-8	set of reflective tags, 10 pcs.

Electr. Digital-Stroboscope • IP65

- **water-, coolant proof and shock resistant hand-held device**
- **e.g. for use in the automotive industry and mechanical engineering**
- **for error analysis of high-speed industrial plants**
- **for optical representation of the revolutions**
- **in a rugged aluminium-/ABS-plastic-housing**
- **with modern LED technology, precise working electronic**
- **with auto-synchronization frequency laser function**
- **for non-contact measurement**

- large LCD display, multiple lines, coloured lighting
- light intensity 6.500 Lux @ 300 mm, light colour approx. 6.500 K
- no wear of the high-power LEDs
- Accuracy: flash frequency (internal) and frequency measurement (external)
- resolution ±0.1 (30 … 999.9 FPM) ±1 (1.000 … 999.999 FPM)
- operation temperature 0 °C ~ 45 °C
- incl. 3x 1.5 V battery (type AA, art.-no.: 90003)
- in sturdy carrying case, with operation manual







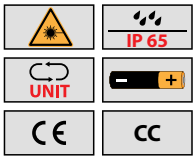
Stroboscope on: rotations visible



Stroboscope off: rotations not visible



LED front



ART NO	FPM	max.	flash colour		mm	CC
610102	30 ~ 999.999	0.02 % (±1 Digit)	white 6500 K	1 mW	191 x 82 x 60	inclusive

Electr. Digital Thermometer

- **for quick and exact measurement of temperatures**
- **with external temperature probe, type K**

- rugged, ABS-plastic housing, with insulating peel
- large LCD display, 3 ½ -digit, with clear reading, with battery indicator
- On/Off button, data hold button, measuring in °C and °F, max. display 1999
- 1 input for temperature probes type K, for temperature and relative measurements
- response time approx. 2.5 sec
- storage temperature 0 °C ~ +50 °C, rel. humidity < 80 % RH
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual

Option
- spare part temperature probe art. no. 649303



with stand



probe



bumper case



ART Nº	capacity of device °C	°C a -50 °C ~ 200 °C	-50 °C ~ 200 °C / 200 °C ~ 1000 °C / 1000 °C ~ 1300 °C	mm
640303	-50 ~ +1300	1	±0.10 % +1.00 °C / ±0.30 % +2.00 °C / ±0.50 % +2.00 °C	147 x 71 x 34

Temperature Probe, Type K



ART Nº 649300



ART Nº 649302

surface probe



ART Nº 649301

immersion probe



ART Nº 649303



ART Nº 649304



ART Nº 649305



ART Nº 649306

ART Nº		L mm	ø mm
649300	~ +700 °C	~ 84	3
649302	~ +400 °C	~ 150	15

ART Nº		L mm	ø mm
649301	~ +700 °C	~ 150	4.00
649303	~ +400 °C	~ 950	2.00
649304	~ +400 °C	~ 15	14.92
649305	~ +600 °C	~ 150	3.50
649306	~ +800 °C	~ 170	5.00

Thermometers and Surface Roughness Tester

Infrared Laser Thermometer

ART NO 640314

ART NO 640317-2



- **pistol-sized, with K-type temperature probe and shiftable laser pointer**
- **for quick measuring of temperatures, by temperature probe or contactless**
- **the devices fulfill the strict requirements of the european national guidelines**

- rugged ABS plastic housing
- large LCD display with clear reading, with backlight
- temperature reading in °C / °F, with shiftable laser pointer
- autom. power off after ~ 20 sec., response time < 0.5 sec., laser protection class II
- data hold function for short memory time of the measuring value, Min/Max-function
- average value selectable, with battery indicator
- storage temperature -10 °C ~ +60 °C, operation temperature 0 °C ~ +50 °C
- relative humidity 10 – 90 % RH, emissivity adjustable
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual



ART NO 649303



UNIT | IEC / EN

ART NO	°C	°C	max. °C	°C	measuring optics	mm	ART NO spare probe
640314	-30 ~ +550	0.1	±4 / ±4 %	±1	12:1	170 x 135 x 50	649303
640317-2	-50 ~ +1300	0.1	±2 / ±2 %	±1	16:1	170 x 135 x 50	—

Electr. Digital Surface Roughness Tester



- **portable roughness measuring device for the measurement of Rz, Ra, Rq, Rt**

- robust aluminium housing, Ra, Rz, Rq, Rt roughness parameters in one gauge
- large OLED display, with switchable backlight, „low-battery“ indicator
- On/Off push button, autom. shutdown after 3 min., with beep (start-test-ready)
- measuring range selectable in µm / µinch, parameter Ra (ISO and Rz DIN)
- min. probe tips curvature radius 10 microns ±1 microns, angle 90° +5° / -10°
- different display values < 12 %, error indication ±15 %
- force measurement: 0.016 N, force measurement share: 800 N/m
- working temperature -20 °C ~ +40 °C, rel. humidity < 90 %
- tracing length 6 mm, tracing speed 1.0 mm / sec., sensor pressure 0.5 N
- integrated sensor protection, with simple calibration function
- incl. roughness standard plate Ra, accuracy acc. ISO class 3
- with 3.7 V Li-Ion rechargeable battery, incl. charger 9 V AC
- incl. operation manual







UNIT | ISO | ~ 230V

ART NO	µm / inch	Ra µm	Rz µm	Rq µm	Rt µm	tracing length mm	mm
657120	0.01 / 1.00	0.05 – 10.00	0.10 – 50.00	0.05 – 10.00	0.10 – 50.00	6	70 x 105 x 25

Surface Finish Specimen „RUGOTEST“

- acc. to the norms NF E 05-501, ISO/R 468 and ISO 2632
- for testing surface roughness by sight and touch method (with finger-tip)
- available for all standard machining methods

- wear-resistant and made of stainless steel
- delivery with description



ART N° 651101 - 651107



ART N° 651001



ISO

ART N°	machining method	quantity of plates	comparaison range Ra µm	ISO class	mm
651001	general (standard)	27	0.05 – 12.5	N2 – N10	120 x 90
651002	sand	6	0.8 – 25.0	N6 – N11	120 x 90
651003	shot / grit (coarse + fine)	18	0.0125 – 25.0	N0 – N11	120 x 90
651101	planing	6	0.8 – 25.0	N6 – N11	110 x 50
651102	turning	6	0.4 – 12.5	N5 – N10	110 x 50
651103	face milling	6	0.4 – 12.5	N5 – N10	110 x 50
651104	suface grinding	8	0.025 – 3.2	N1 – N8	130 x 50
651105	cylindrical grinding	8	0.025 – 3.2	N1 – N8	130 x 50
651107	spark erosion	6	0.4 – 12.5	N5 – N10	110 x 50

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Surface Roughness Measuring Devices

Electr. Digital Surface Roughness Tester

- **high performance device, for professional demand**
- **for measurement of roughness parameters**
- **Rz, Ra, Rq, Ry, Rt, Rv, R3z, R3y, RzJIS, Rsk, Rku, Rsm, Rmr with USB 2.0 data output**

- rugged ABS plastic housing, in ergonomic design
- large OLED display with clear reading and with backlight
- comprehensive information and graphic representations
- diamond tracer tip, 90°, radius 5 µm, contact power 4 mN (0.4 gf)
- standard acc. to ISO, DIN, ANSI, JIS
- digital filter RC, PCRC, Gauss, D-T13565, data memory 2 MB + 2 GB
- with built-in and rechargeable Li-Ion battery, charger 100 – 240 V / 50/60 Hz
- up to 10 hrs. permanent use, with calendar and RTC
- On/Off button, autom. power off, battery indicator
- selectable languages: english, german, chinese
- reliable software for the electrical motor drive
- connection to PC or printer, incl. interface cable
- incl. software, ground plate, calibration test block, standard tracer (art. no.: 657210), with operation manual

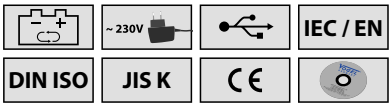








extensive information and graphic representations



ART NO	Ra / Rq µm	Rq/Rt/Rp/Rv/R3z/R3y/ RzJIS/Rsk/Rku/Rsm/Rmr µm	max. %	%	cut-off length mm	mm
657113	Ra 0.005 – 16.00 / 0.02 – 160.00	±0.60 %	< ±10	< 6	0.25 / 0.80 / 2.50	140 x 55 x 47

Accessories for art. no. 657113

- **art. no. 657210** tracer, straight (standard)
- **art. no. 657211** tracer, angled
- **art. no. 657212** tracer, for ø 3 mm bore depth
- **art. no. 657213** tracer, for ø 10 mm bore depth
- **art. no. 657214** Ra test block
- **art. no. 657218** stand
- **art. no. 657219** PC software for wireless data transfer



ART NO 657210



ART NO 657211



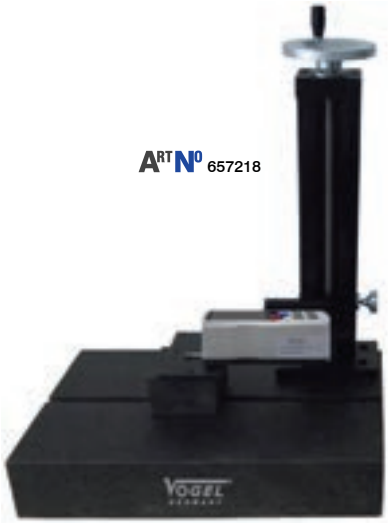
ART NO 657212



ART NO 657213



Example for a wireless transmission



ART NO 657218

Image/Video Borescope Console • IP54 with 3.5“ TFT colour monitor, with connection for all our hoses

- **top model for varied industry purposes, e.g. automotive-, machinery-, pipeline-, shipbuilding-, aircraft-, turbine-, wind power industry, and many more**
- **for quick, visual inspection and documentation, useful in hard to reach places**
- **with 3 adjustable LED‘s at the hose-end**
- **with USB 2.0, TV output (PAL), reset, mini-USB and micro SD slot**
- **spray water proof console, acc. to DIN 40050 / IEC 60529**

- sturdy industry quality, housing with rubber cover, M6 thread insert
- 3.5 inch TFT colour monitor, monitor resolution 640 x 480 pixel
- photo taking (JPEG 1600 x 1200) and video recording (AVI)
- with zoom button (x2/x3/x4) and image freeze
- 180° frame rotation and mirror image
- 7 selectable languages, DE/EN/FR/ES/RU/JP/CN
- ON/OFF button, date/time function, power saving mode, battery status
- build-in flashlight (level-1/-2/-3)
- build-in rechargeable Li-ion battery
- incl. 4 GB memory SD card, USB power cable (USB/mini-USB), 240 V USB charger, AV cable, bracket with M6 thread, with operation manual





table stand with M6 thread



LED light (3 levels)



LED light

tube threaded connection



SD card slot

TV connection

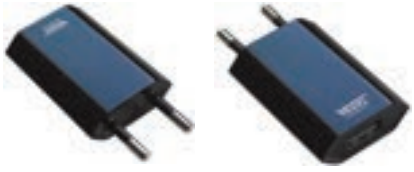
mini USB connection



memory card (4 GB)



extendable table stand



USB charger



Backside
rear with rubberized housing protection



Backside
rear without rubberized housing protection



USB charger cable



AV cable



Example: brake discs control

IP 54

ART NO	Photo (JPG)	Video (AVI)	mm
620003	1600 x 1200	640 x 480	145 x 95 x 37

Photo/Video Endoscopes

Image/Video Borescope Hoses • IP67
endoscope hoses with matching threaded connection suitable for our model console (art. no.: 620003)

- **different hoses available**
- **oil-, water- and coolant proof, acc. to DIN 40050 / IEC 60529**

- sturdy industry quality, flexible and semi-ridgid design
- camera resolution 300.000 pixel
- perfect image recognition in the depth of field
- lenses with bright, white LED's
- 3 times adjustable LED light, console setting
- with operation manual

More hose types available on request



hose ø 3.70 mm or ø 4.50 mm, with 0° lens

above: hose ø 9.00 mm, with 0° and 90° lens



below: hose ø 3.70 mm, with 0° lens



rubberized grip for secure grip, only at viewing direction 0° and 90°



hose ø 9.00 mm, with 0° and 90° lens

ART NO	hose mm	field of view °	hose-Ø mm	quantity LED	hose type	
					flexible	semi rigid
620050	1000	0	3.70	6	✓	X
620051	3000	0	3.70	6	✓	X
620052	5000	0	3.70	6	✓	X
620055	1000	0	4.50	6	X	✓
620056	3000	0	4.50	6	X	✓
620057	5000	0	4.50	6	X	✓
620060	1000	0 / 90	9.00	4 / 2	X	✓
620061	3000	0 / 90	9.00	4 / 2	X	✓
620062	5000	0 / 90	9.00	4 / 2	X	✓

Electr. Digital Moisture Meter

- **for measurements of wood moisture, paper, building materials, etc.**
- **with 4 contact pins**

- rugged, polyamide housing material
- large LCD display with clear reading
- On/Off button, data hold button
- autom. power off, battery indicator
- setting the upper limit of the moisture ratio
- storage temperature -10 °C ~ +60 °C, operation temperature 0 °C ~ +40 °C, rel. humidity < 70 % RH
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual





ART NO	wood		max.	mm
				mm
641006	5 % – 40 %	1.0 %	±1.0 % Rh+0.5	129 x 63 x 32

Electr. Digital Moisture Meter

- **for measurement of building materials, concrete, wood, etc.**

- robust, ABS plastic housing
- large LCD display, 3 digits, with clear reading, digit height 15 mm
- On / Off key, data hold function, min / max key, measurement in digits
- depth of penetration about 20 – 40 mm
- low battery indication, backlight switchable
- storage temperature 0 °C ~ 50 °C, rel. Humidity < 80 % RH
- incl. 1x 9 V battery (type 6LR61, art.-no.: 90006), with operation manual





ART NO	capacity device digits		digit	max.	mm
				digit	mm
641009	0 – 100	1	±1	180 x 45 x 35	

Electr. Digital Moisture Meter

- **for measurements of wood moisture, paper, carton, building material, grain, etc.**
- **with insulating peel**
- **measurement via 2 external contact pins**

- rugged, polyamide housing material
- large LCD display with clear reading
- On/Off button, data hold button, button for wood density selection
- button for selection of moisture measurement / temperature measurement (in °C or °F)
- battery indicator, with backlight
- setting the upper limit of moisture ratio, rel. humidity < 70 % RH
- storage temperature -10 °C ~ +60 °C, operation temperature -10 °C ~ +40 °C
- incl. 4x 1.5 V battery (type AA, art. no.: 90003), with operation manual





ART NO	wood		max.	temperature	temperature	max.	mm
							housing
641008	2 % – 70 %	0.5 %	±1.0 % Rh+0.5	-10 °C – 60 °C	1 °C / 2 °F	±2 °C / ±4 °F	174 x 38 x 73

Other Digital Measuring Instruments

Electr. Digital Sound Level Meter

- **for sound and noise measurements acc. to the international directives whether in industry, craft, or housekeeping**
- **useful device for air-conditioning, aviation industry, environmental technology**
- **with self-calibration**

- rugged, polyamide housing material
- On/Off button, data memory for 4700 measurements, slow-/fast-button, clock- and calendar indicator
- with tripod mounting screw on the rear side, autom. power off
- large LCD display, 4-digit, with clear reading, battery indicator
- frequency range 31.5 Hz ~ 8.5 KHz, A/C frequency weighting select switch, AC/DC out put
- bar graph indicator with 50 dB scale, 1 dB step, with pre-select of min/max.-value
- microphone ½ inch, electret condenser-microphone, with detachable foam ball for outside measuring
- storage temperature -20 °C ~ +70 °C, operation temperature 0 °C ~ +45 °C, DC 6 V input port, AC analog output port
- incl. 4x 1.5 V battery (type AA, art. no.: 90003), USB data cable, software, with operation manual



Option
- charging by power supply possible (only when using rechargeable batteries)

IEC / EN | ANSI | CE

ART NO	level range: dBA / dBC	dB	max. dB	linearity range dB	mm	CC
641106	40 – 80 / 50 – 100 / 60 – 110 / 80 – 130	0.10	±1.50	50	220 x 80 x 35	inclusive
641107	40 – 80 / 50 – 100 / 60 – 110 / 80 – 130	0.10	±1.50	50	220 x 80 x 35	—

Electr. Digital Luxmeter

- **utilising a silicon photo diode with filter behind a large diffusor that is connected to the device by cable ensures that the light intensity can be read in all positions without restriction**

- rugged, polyamide housing material
- large LCD display, 3½ digit, with clear reading
- On/Off switch, data hold switch, 3-step measurement setting function
- max. reading value 1999, test rate 0.5 sec., temperature characteristic ±0.1 % / °C
- storage temperature -20 °C ~ +70 °C, operation temperature 0 °C ~ +45 °C
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual



DIN VDE | CE

ART NO	LUX	LUX	max. < 10.000 LUX	max. > 10.000 LUX		mm	CC
640342	1 – 100.000	1	±4 %	±5 % ±10 Digits	±2 %	130 x 72 x 30	on request

Electr. Digital Anemometer

- **for many outdoor applications and for several industry purposes**
- **for to measure the wind speed in different units**
- **ideal device for heating- and ventilation technician, shipping industry, etc.**
- **with Beaufort scale display**

- rugged, polyamide housing material
- with tripod mounting screw on the rear side
- large LCD display with clear reading and backlight
- wind speed unit selection: m/s; Ft/min; Knots; Km/h; Mph
- with max.-value and data hold button, average and current speed measuring, temperature reading in °C and °F, switchable
- storage temperature -20 °C ~ +70 °C, operation temperature -10 °C ~ +45 °C
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual

- **Art. no. 641205:** without data output
- **Art. no. 641204:** without data output, with external impeller





UNIT | CE

ART NO	wind speed m/s	speed m/s	temperature °C	max. wing speed	max. temperature °C	max. temperature °C	mm
641204	0.3 ~ 45	—	0.1	0.2°	±0.1 Digt	±2°	160 x 62 x 35
641205	0.3 ~ 30	—	0.1	0.2°	±0.1 Digt	±2°	165 x 85 x 38

Testboy • Magnet Field Detector, non contact

- **with LED lamp, non contact**
- **easy and quick contact-free detection of magnetic-fields**
- **all permanent and synthetic magnetic fields are indicated by the tip lighting up**
- **the built-in magnet-field sensor allows a reliable check proper function of hydraulic and pneumatic valves, relays and contactors**

- rugged ABS-plastic housing, with clip
- safe and contactless testing, works at a distance of 4 mm
- optical red LED display, with built-in permanent magnet for a quick self test
- incl. 2x 1.5 V battery (type AAA, art.-no.: 90002), with operation manual





IEC / EN CE

ART NO		mm length x ø
640376	all magnetic fields	160 x 25

Testboy • Brake Fluid Tester, DOT 3, DOT 4, DOT 5.1 • IP44

- **fast and accurate check on the water content in the brake fluid**
- **thanks to various measuring ranges, user-friendly operation and compact design, the device is ideal for use in garages and motorcycle workshops**

- check brake fluids DOT 3, DOT 4, DOT 5.1
- acid- and alcaline housing, with clip
- visual indicating via 3 LED's
- measuring point illumination
- incl. 2x 1.5 V battery (type AAA, art.-no. 90002), with operation manual







IP 44 IEC / EN CE

ART NO		mm L x ø
640372	DOT 3 / DOT 4 / DOT 5.1	152 x 23.5

Electr. Digital Tire Pressure Gauge

- **for quick and independent measuring of the tire pressure**

- sturdy ABS plastic housing
- large LCD display with clear reading, digit height 9.5 mm
- LCD display with backlight
- lighted valve tip
- On/Off button, autom. shutdown
- units in PSI, Bar, Kgf/cm², Kpa, switchable
- reading 0.1 PSI; 0.01 Bar; 0.01 Kgf/cm²; 1 Kpa
- incl. 1x 3 V battery (type CR2032, art.-no.: 90112), with operation manual







CR2032 Lithium 3V
UNIT CE

ART NO	for cars	PSI	Bar / Kgf/cm²	Kpa	max. %
214460	✓	0 – 100	0 – 7 / 0 – 7	0 – 700	1 %

Voltage Tester

Testboy • Voltage Detector • IP44

- **non-contact type, rapid detection of live conductors to e.g. cable connections, cable reels, sockets, electrical outlets, switches,**
- **particulary well-suited for professional use and as well for hobby**



- sturdy ABS-plastic housing, with clip, dustproof and spray water resistant
- contactless and safe testing, works at a distance of 4 mm
- with acoustical signal and built-in LED lamp on top, measuring range 12 V – 1000 V
- overload category CAT III 1000 V
- capacitive process
- incl. 2x 1.5 V battery (type AAA, art. no.: 90002), with operation manual



IEC / EN | IP 44 | CE | TÜV GS

ART NO	V AC	mm L x ø
640357	12 – 1000	160 x 25

Testboy • Two Pole Voltage Tester • IP65

- **the professional appearance is underlined by the mix of materials used in the plastic housing and the rubber handle**
- **display window made of break proof plastic, scratch resistant**



- sturdy ABS-plastic housing, water- and coolant proof acc. to DIN 40050 / IEC 60529
- single pole phase testing, two pole phase sequence testing, autom. load for FI/RCD test
- autom. measurement range, autom. resistance: Is ~ 30 mA ED(DT) = 30 sec.
- operation panel: finger tip contact, continuity test 0 – 500 kOhm, with acoustical signal
- incl. 2x 1.5 V battery (type AAA, art.-no.: 90002), with operation manual





IP 65 | CE | IEC / EN | TÜV GS

ART NO	V AC / DC	phase indicating	overload category	mm
640332	6 – 1000 AC / DC	> 100 V AC	CAT IV 1000 V	238 x 70 x 30

Testboy • Two Pole Voltage Tester • IP44

- **with 8 LED's, user-friendly design**
- **for measuring AC / DC, two practical functions in a single device**
- **the instrument has met with the approval for many customers working in the electrical- and tools branch**



- sturdy ABS-plastic housing with rubber handle, dustproof and spray water resistar
- protected against voltage loads from 6 up to 400 V AC / DC
- DC and AC voltage tests with polarity indication can be performed safely
- power supply by test object
- overload category CAT III 1000 V
- with operation manual

IEC / EN | IP 44 | CE | TÜV GS

ART NO	V AC / DC	display	mm
640356	6 – 400	8 LED's	120 x 60 x 30

Testboy • Car Tester, Voltage Tester for 3 – 48 V • IP40

- **with integrated piercing probe**
  perfect instrument for fault diagnostics in cars, trucks, etc.

- rugged ABS plastic housing, dust proof
- LED's with indicating 12 V / 24 V / 48 V
- power supply via test object
- protection class III, IEC/EN 61010-1
- with operation manual







IP 40 | IEC / EN | CE | TÜV GS

ART NO	DC	mm
640366	3 – 48 V	145 x 25 x 16

Testboy • Electr. Digital Miniature Current Clamp • IP44

- **the manual/automatic test range selector enables versatile and reliable testing use in the service sector, in industry or in the installation whether you want to measure a direct current as shown in the picture to check that a battery's load current will be sufficient, or the load is pulling too much and causing leakage**
- **the included readiness-bag keeps the device and its attachments safe, even in harsh areas or on the road**

- protected housing made of sturdy ABS-plastic, dustproof and spray water resistant
- LCD display with clear reading
- voltage up to 600 V, current AC/DC up to 600 A
- overload category CAT III, 600 V, conductivity with acoustical signal, resistance 0 – 60 Ω
- with diode test, with testing lead set
- incl. 3x 1.5 V battery (type AAA, art.-no.: 90002)
- incl. operation manual





IP 44 | LR44 1,5V | CE | TÜV GS | IEC / EN

ART NO			mm
640364	- 600 V AC/DC	- 600 A AC/DC	208 x 75 x 35

Multimeter

Testboy • Electr. Digital Multimeter • IP44

- **with LED lamp and with non-contact voltage tester**
  very useful instrument, especially in the field of electrical engineering

- housing is made of tough, demage-resistant ABS-plastic, dustproof and spray water resistant
- large LCD display for clear reading
- current DC and AC up to 4 A
- diode test, transistor test function, conductivity test, with acoustical signal
- incl. 1x measuring lines
- incl. 2x 1.5 V battery (typ AAA, art. no.: 90002), with operation manual







IP 44 | IEC / EN | CE | TÜV GS

ART NO	AC/DC	overload protection	resistance	mm
640382	0 – 400 V	CAT III / 300 V	2 MΩ	140 x 70 x 35

Electr. Digital Multimeter • IP44

- **with solar charger on top of instrument**
  very useful instrument, especially in the field of electrical engineering

- housing is made of tough, demage-resistant ABS-plastic, dustproof and spray water resistant
- large LCD display clear reading, digit height 19 mm
- current DC and AC up to 20 A
- incl. thermo probe for temperature measurements
- diode test, transistor test function, conductivity test, with acoustical signal
- with battery test function
- with frequency function
- with decimal digits change
- incl. 2x measuring lines
- incl. rechargeable accu and charger cable, with operation manual





solar charger



with stand



alligator clips



power plug



USB cable for charging



measurement probes



temperature probe

IP 44 | | IEC / EN | CE

ART NO	AC	DC	overload category	resistance	mm
640384	0 – 750 V	0 – 1000 V	CAT III / 600 V CAT IV / 1000 V	60 MΩ	167 x 90 x 50

IP-Protection types overview acc. to EN 60529 (IP • International Protection)

1. Index

Degree of protection against foreign objects/particles and dust

IP **4..** Protection against penetration of solid foreign objects von ≥ 1 mm.

IP **5..** Protection against harmful dust deposits (dust protected).

IP **6..** Protection against penetration of dust (dust-proof).

2. Index

Degree of protection against water

IP **..0** no protection
IP **..2** Protection against dripping water up to 15° tilt housing.
IP **..4** Protection against water spray from any direction.
IP **..5** Protection against water jets from any direction.
IP **..6** Protection against powerful water jets from any direction.
IP **..7** Protection against temporary immersion in water.
IP **..8** Protected from ingress of water during immersion for indefinite period.

Tolerance limits acc. to EC-Measuring Directive 2004/22

Pocket Tapes / Steel Rules

Length	m	1	2	3	4	5	8	10
Tolerance class I	mm	±0.30	±0.40	±0.50	±0.60	±0.70	±1.00	±1.20
Tolerance class II	mm	±0.70	±0.90	±1.10	±1.30	±1.50	±2.10	±2.50

Folding Rules

Length	m	1	2	3
Tolerance class II	mm	±1.00	±1.20	±1.40
Tolerance class III	mm	±1.80	±2.20	±2.60

Thickness tolerances for feeler gauges and feeler gauge rolls

nominal thickness mm	0.000 – 0.024	0.025 – 0.039	0.040 – 0.062	0.063 – 0.124	0.125 – 0.159	0.160 – 0.199	0.200 – 0.249	0.250 – 0.314	0.315 – 0.389	0.400 – 0.499	0.500 – 0.629	0.630 – 0.799	0.800 – 0.999	1.000 – 1.249
Tolerance T2 µm	±2.00	±3.00	±4.00	±5.00	±6.00	±7.00	±8.00	±9.00	±11.00	±12.00	±14.00	±17.00	±19.00	±24.00
Tolerance T3 µm	±1.50	±2.00	±3.00	±4.00	±5.00	±5.00	±6.00	±7.00	±8.00	±9.00	±10.00	±12.00	±13.00	±17.00

Measuring categories CAT I up to CAT IV

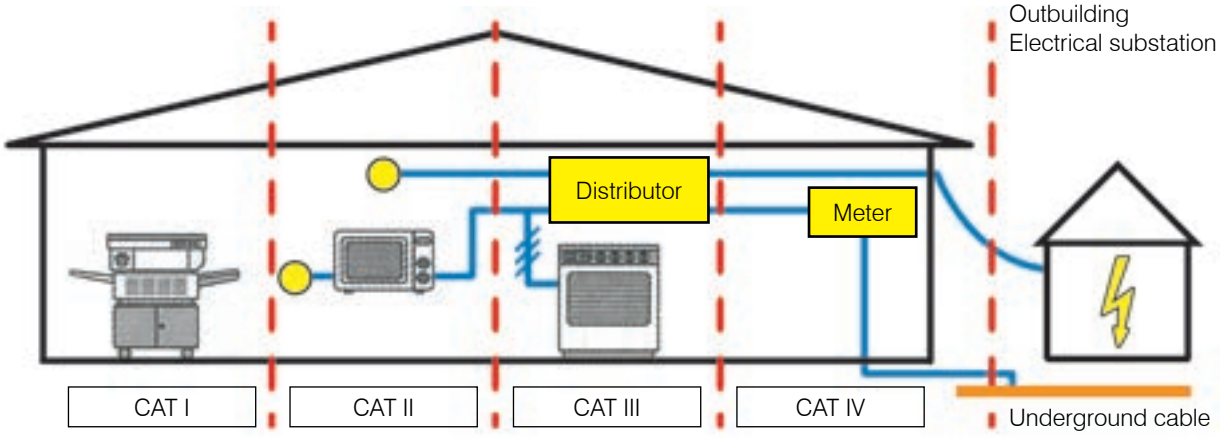
CAT I: approved for measurements on circuits that are not directly connected to the power grid. (e.g. specially protected devices)

CAT II: approved for measurements on circuits which are electrically connected directly to the low voltage grid. (e.g. household appliances)

CAT III: approved for measurements in building installation (e.g. as distribution, wiring, sockets, switches)

CAT IV: approved for measurements at the source of low-voltage installations (e.g. as meters, mains terminals, primary overcurrent protection devices)

Any questions?
We are pleased to advise!



Kern • Electr. Digital Compact Scales

- **entry-level model in the low cost range, with weigh-in function**

- rugged plastic housing, with large LCD unit, digit height 15 mm
- easy operation by two buttons
- connector for charger
- weigh-in function, by pressing the TARE-button switches over to “0”, simplifies mixing
- automatic auto-off after 3 min. without change of load to preserve the battery
- incl. 2x 1.5 V battery (type AA, art. no.: 90003), with operation manual



Option
- charger 230 V/AC (art. no.: 273998)

ART NO	max. kg	g	weighing plate-ø mm	mm
273003	0.50	0.10	150	170 x 240 x 39
273004	0.20	0.01	105	170 x 240 x 39
273006	2.20	1.00	150	170 x 240 x 39
273008	6.00	0.10	150	170 x 240 x 39

Kern • Electr. Digital Precision Scales • IP65 / IP67

ART NO 273322 - 273324

ART NO 273320 + 273321

- **IP65: Dust and jet water proof acc. to DIN 40050 / IEC 60529**
- **IP67: Water and oil tight (at times) acc. to DIN 40050 / IEC 60529**

- rugged metal housing, weighing plate made from stainless steel
- large LCD display, digit height 20 mm
- easy 3-/4-button operation, self-explaining
- operation by battery or main supply, switchable
- automatic power-Off after 3 min. without change of load to preserve the battery
- freely programmable weighing units
- adjusting program (CAL)
- incl. charger 230 V/AC and dust cover
- incl. operation manual



IP67



IP65

ART NO	max. kg	g	reproducibility g	linearity ± g	weighing plate mm	mm	CC
273320	0.5	0.1	0.1	0.2	120 x 150	170 x 150 x 40	on request
273321	5	1	1	2	120 x 150	170 x 150 x 40	on request
273322	5 | 7.5	0.5 | 1	0.5 | 1	1.5 | 3	252 x 200	285 x 255 x 90	on request
273323	8 | 15	1 | 2	1 | 2	3 | 6	252 x 200	285 x 255 x 90	on request
273324	16 | 30	2 | 5	2 | 5	6 | 15	252 x 200	285 x 255 x 90	on request

Kern • Electr. Digital Compact Scales

- **industry quality design, with robust tuning fork weighing system**
- **with data output RS 232**

- rugged metal housing, weighing plate made from stainless steel
- large LCD display, digit height 16,5 mm
- PRE-TARE button for manual subtraction of a known container weight
- with animal weighing program, strong vibrations are filtered out
- incl. dust cover and operation manual
- Internal automatic adjustment, Automatic adjustment CAL for setting the accuracy using a test weight
- Capacity display and autom. refernce optimization



Options
- RS-232 / Bluetooth® adapter for connecting Bluetooth® capable devices, art.-no.: 273063-1
- RS-232 / WLAN adapter for wireless connection to network and WLAN-compatible devices, art.-no.: 273063-2

ART NO	max. kg	g	verification value [e] g	minimum weight [min] g	linearity ± g	weighing plate mm	mm LCD unit	CC
273063	0.62	0.001	—	—	0.004	∅ 140	202 x 293 x 266	on request
273064	3.2	0.01	—	—	0.02	190 x 190	195 x 290 x 90	on request
273065	12	0.1	—	—	0.2	190 x 190	195 x 290 x 90	on request
273067	0.62	0.001	0.01	0.02	0.004	∅ 140	202 x 293 x 266	on request
273068	3.2	0.01	0.1	0.5	0.02	190 x 190	195 x 290 x 90	on request
273069	12	0.1	1	5	0.2	190 x 190	195 x 290 x 90	on request

Kern • Electr. Digital Parcel Platform Scale

- **cheap parcel and allround scales, for despatch weighing**

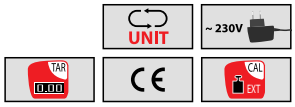
- rugged metal housing, weighing plate made from stainless steel
- with wall mounting for electr. unit
- large LCD display, digit height 25 mm
- weighing units in kg or lb
- display unit placed anywhere by flexible spiral cable (approx. 2 m)
- easy 4-button operation, self-explaining
- automatic power-Off after 3 min., without change of load to preserve the battery, permissible temperature +10 °C ~ +35 °C
- with animal weighing program
- weigh-in function, by pressing TARE-button switches over to "0"
- adjusting programme (CAL) means for adjusting the precision test weights, (not included)
- mains or battery operation possible (6x 1.5 V battery, type AA, art. no.: 90003, batteries are not included)
- incl. charger 230 V/AC, with operation manual



Option
- stand, art. no.: 273558 (stand only)



art. no.: 273558, stand only



ART NO	max. kg	g	readout g	linearity ± g	weighing plate mm	mm LCD	CC
273302	35	10	10	20	310 x 305 x 55	210 x 110 x 45	on request
273303	60	20	20	40	310 x 305 x 55	210 x 110 x 45	on request
273305	150	50	50	100	310 x 305 x 55	210 x 110 x 45	on request
273308	300	100	100	200	310 x 305 x 55	210 x 110 x 45	on request

Kern • Electr. Digital Parcel Platform Scale • IP65

- **multimodel platform scale**
- **for industrial purpose, with piece-counting, reference quantities selectable**
- **dual range scale, automatically switches to the next higher weighing range**
- **dust- and splash water proof acc. to DIN 40050 / IEC 60529**

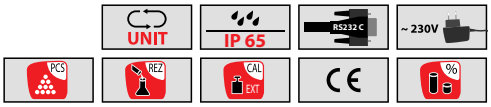
- industry scale with rugged plastic housing, stainless steel weighing plate
- with large LCD display, with backlight, digit height 25 mm
- freely programmable weighing units, e.g. in yarn length g/m, in paper weight g/m², etc.
- display unit (IP 65) placed anywhere by flexible spiral cable (approx. 1.4 m)
- easy 5-button operation, self-explaining, with animal weighing program
- with data output RS 232 C, for data-printer or computer connection
- mains or battery operation possible (1x 9 V battery, type 6LR61, art.-no.: 90006, batteries are not included)
- adjusting program (CAL), piece-counting (PCS), net-total weighing (REZ)
- automatic power-Off after 3 min., permissible temperature +5 °C ~ +35 °C
- incl. charger 230 V/AC, dust cover, with operation manual



Option
- stand, art.-no.: 273550



art.-no.: 273550, stand only



ART NO	max. kg	g	reproducibility g	linearity ± g	weighing plate mm	mm LCD unit	CC
273054	15 / 35	5 / 10	5 / 10	15 / 30	318 x 308 x 75	225 x 110 x 45	on request
273057	30 / 60	10 / 20	10 / 20	30 / 60	318 x 308 x 75	225 x 110 x 45	on request
273059	60 / 150	20 / 50	20 / 50	60 / 150	318 x 308 x 75	225 x 110 x 45	on request
273061	150 / 300	50 / 100	50 / 100	150 / 300	522 x 403 x 90	225 x 110 x 45	on request

Kern • Electr. Digital Industrial Counting Scales

- **verifiable**
- **entry level model into the professional-counting**



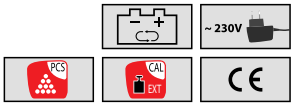
- industry scale with rugged metal housing, stainless steel weighing plate
- with 3 large LCD displays, with backlight, , digit height 18 mm
- verifiable weight display, reference weight, total number of pieces
- programmable via keypad: known reference weight / reference quantity
- accurate counting: the autom. reference optimization gradually improves the average value of the piece weighing
- cumulative counter memory: summing up of the same counting parts and total pieces and total weight, counting resolution: 30000 points
- accoustic beep „Fill-to-target“: target quantity and target weight programmable
- weigh-in function, by pressing the TARE-button switches over to “0”, simplifies mixing
- permissible temperature -10 °C ~ +40 °C
- standard with charger, internal (please mention the country location of use) and operation manual

Option
- **verification** or DAkkS calibration certificate by extra charge (with **verification**: location of use with post code required - subsequently not possible)





- *high mobility, thanks to battery operation*
- *with recessed grips*



ART NO	max. kg	g	verification value [e] g	minimum weight [min] g	minimum weight g/pc.	weighing plate mm	mm	CC
273022	3	1	1	20	0.1	300 x 225	300 x 330 x 110	on request
273024	15	5	5	100	0.5	300 x 225	300 x 330 x 110	on request
273025	30	10	10	200	1	300 x 225	300 x 330 x 110	on request

Electr. Digital Force Gauges

- **robust push/pull force gauge, for simple measurements**



- measurement accuracy is from max. 0.5 % of capacity, data sampling rate 1000 Hz
- large LCD display with backlight
- overload protection 2 % of full scale
- reversible display with automatic direction detection
- with peak hold function, real time or peak hold mode to observe
- automatic power-Off
- incl. standard attachments and extension rod (90 mm long)
- incl. 1x 1.5 V battery (type AAA, art.-no.: 90002), charger and operation manual



standard attachments and extension rod 90 mm

ART NO	N max.	N	measuring units	mm	CC
270353	100	0.05	N / kgf / lbf / oz	195 x 84 x 35	on request
270354	250	0.10	N / kgf / lbf / oz	195 x 84 x 35	on request
270355	500	0.20	N / kgf / lbf / oz	195 x 84 x 35	on request
270356	1000	0.50	N / kgf / lbf / oz	195 x 84 x 35	on request

Electr. Digital Hanging Scale

- **for mobile use**
- **for weighing by hand or for hanging up on an angle bracket**

- sturdy ABS-plastic housing with a stainless steel hook
- large LCD display with digit height:
  art.-no. 273087 about 13 mm / art.-no. 273082 about 11 mm
- with data hold button, display can be "frozen" for approx. 5 sec., makes reading easier
- On/Off-button, TARE-button: attach an empty vessel/container and place the display to zero
- weighing units: kg, lb and N (Newton)
- automatic power-Off
- permissible temperature +5 °C ~ +35 °C
-
- **art.-no. 273087:** - only suitable as luggage scale, not calibratable
  - incl. 2x 1.5 V battery (type AAA, art.-no.: 90002)
  - not calibratable (simple household scale)
- **art.-no. 273082:** - with built-in measuring tape (100 cm)
  - incl. 1x 9 V battery (type 6LR61, art.-no.: 90006), and operation manual

Option
- **art.-no. 273082:** DAkkS calibration certificate by extra charge (afterwards not possible)

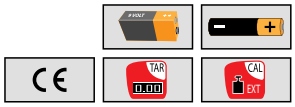
ART NO 273082



ART NO 273087







ART NO	max. kg	g	mm	CC
273082 (Kern)	50	100	90 x 30 x 175	on request
273087 (Vogel Germany)	30	10	95 x 23 x 195	—

Kern • Electr. Digital Crane Scale

- **TÜV approved crane scales acc. to the standards of EN 13155 (loose load receptor) and EN 61010-1 (electr. safety)**

- **art.-no. 273100 – 273103** prof. device for rough application (industry quality)
  art.-no. 273110 – 273111 compact crane scale (for standard purpose)
- **art.-no. 273100 – 273103** self-luminous LED display, digit height 30 mm
  art.-no. 273110 – 273111 LCD display with backlight, digit height 23 mm
- **art.-no. 273100 – 273103** incl. remote control, up to 20 m working range
  art.-no. 273110 – 273111 incl. infrared-remote control, up to 2.5 m working range
- with data-hold button, to hold the display value
- **art.-no. 273100 – 273103** with adaption to unstable conditions
- hook with saftey lock, made from forged steel, chromed, turnable
- standard with internal battery, incl. charge 230 V/AC
- remote control incl. 2x 1.5 V battery (type AAA, art.-no.: 90002)
- adjusting programme (CAL), weigh-in function, by pressing TARE-button switches over to "0"
- accuracy 0.2 % from [max], permissible temperature 0 °C ~ +40 °C
- incl. operation manual

Option
- DAkkS calibration certificate by extra charge (afterwards not possible)

ART NO 273110 - 273111

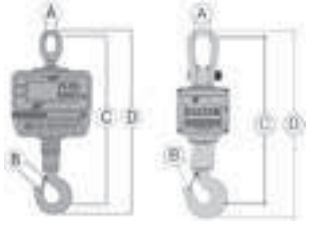


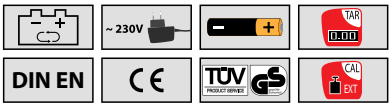
ART NO 273100 - 273103











ART NO	max. kg	g	A	B	C	D	mm	CC
273100	1000	100	80	40	540	610	270 x 175 x 200	on request
273101	3000	500	75	50	540	610	270 x 175 x 200	on request
273102	5000	500	75	50	650	730	300 x 190 x 230	on request
273103	10000	1000	100	60	750	840	300 x 190 x 230	on request
273110	300	100	26	25	358	390	163 x 120 x 159	on request
273111	600	200	26	25	358	390	163 x 120 x 159	on request

Kern • Electr. Digital Hanging Scale • also with IP65

- with stainless steel snap link and S-hook made from stainless steel

- **art.-no. 273083 – 273086** with sturdy ABS plastic housing
  art.-no. 273095 – 273097 with sturdy stainless steel housing, in IP65 design
- **art.-no. 273083 – 273086** large LCD display, digit height 12 mm
  art.-no. 273095 – 273097 large LCD display, at front and rear side, digit height 12 mm
- with data hold button, display can be "frozen" for some seconds, adjusting programme (CAL)
- TARE-button: attach an empty vessel/container and place the display to zero
- automatic power-Off after 3 min., without change of load to preserve the battery
- **art.-no. 273083 – 273086** incl. 3x 1.5 V battery (type AA, art.-no.: 90003)
  art.-no. 273095 – 273097 incl. 2x 1.5 V battery (type AA, art.-no.: 90003),
  incl. operation manual





ART NO 273095 – 273097



ART NO 273083 – 273086

UNIT | IP 65 | CAL EXT | TAR DOT | CE

ART NO	IP65 water- and coolant proof	max. kg	g	mm	total height incl. hooks mm	CC
273083	X	20	10	80 x 45 x 150	290	on request
273084	X	50	100	80 x 45 x 150	290	on request
273085	X	100	200	80 x 45 x 150	290	on request
273086	X	200	500	80 x 45 x 150	290	on request
273095	✓	50	100	95 x 45 x 175	315	on request
273096	✓	100	200	95 x 55 x 175	315	on request
273097	✓	200	500	95 x 55 x 175	315	on request

Test Weights

- for checking of measurements and scales
- available as single weights or in sets

- M1-Quality Class, stainless steel made, finely turned
- DAkkS calibration certificate (with extra charge)
- in a plastic case with soft insert (wooden case on request)

Other weights or set-components are available on request!





ART NO	kg	max. ± mg	CC
Quality Class M1			
273266	0.10	5	on request
273268	0.50	25	on request
273269	1.00	50	on request
273270	2.00	100	on request
273271	5.00	250	on request

ART NO	kg	CC
Set-Components Quality Class M1		
273282	0.001 – 0.50	on request
273283	0.001 – 1.00	on request
273285	0.001 – 5.00	on request
—	—	—
—	—	—

VOGEL GERMANY

Precision measuring tools and test instruments



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10x



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Magnifiers and Lamps

LED Handheld Magnifier

- **with 3 powerful bright LED ligths**

- high tech optic, hardened lens surface
- frame and handle made of rugged ABS plastic
- incl. 3x 1.5 V battery (type AAA, art. no. 90002), with operation manual



ART NO	size of lense ø mm	magnification	quantity LEDs	LED light colour	mm
600145	75	3.00 x	3	white	195 x 85 x 30
600148	90	2.50 x	3	white	210 x 105 x 30

LED Handheld Magnifier

- **very popular model**

- ailicate glass optic, scratch-resistant and solvent-resistant
- with high power LED, rugged ABS-plastic housing
- with aplanatic lens
- incl. 3x battery 1.5 V (type AAA, art.-no.: 90002)



ART NO	size of lense ø mm	magnification	mm
600166	30	10x	38 x 105 x 25
600167	21	15x	38 x 105 x 25

Magnifier with LED Lamp

- **in pocket size**
- **with 3 magnifying lenses**

- 3x, 5x and 7x magnification
- with one extra bright LED lamp
- in a rugged ABS-plastic housing
- incl. 2x 3 V battery (type CR2032, art. no.: 90112)



ART NO	magnification	field of view mm	mm
601230	3x / 5x / 7x	50 x 50 / 25 x 20 / 25 x 20	117 x 61 x 9

Head-Wearing Magnifier

- **with swiveling LED-Lamp, detachable**
- **total new model with 2 powerful LED lights**
- **ideal for technicians, watchmakers, electronics techn. , dentists, etc.**

- frame is made of high-quality plastic
- forehead and headband with adjusting screws for perfect fit
- with 5 different lenses of high-quality, with special surface treatment
- 11 magnification possibilities with 2 attachable lenses, up to 6x magnification
- incl. 3x 1.5 V batteries (type AAA, art. no.: 90002), with operation manual







swiveling lens



5 different lenses



removable LED

ART NO	magnification possibility	quantity lenses	field of view mm	quantity LEDs	LED light colour	working distance mm
600230	1.00 – x / 1.50 – x / 2.00 – x / 2.50 – x / 3.00 – x / 3.50 – x / 4.00 – x / 4.50 – x / 5.00 – x / 5.50 – x / 6.00 – x	5	110 x 40	2	white	60 – 350

Professional LED Illuminated Magnifier

- **with articulated arm**
- **adjustable at any position, with 360° rotation**

- metal body, powder coated, insulation lamp housing made of rugged plastic
- with extra large and precision glass lens, 3 dpt.
- with table clamp, cable inside of the arm, overload category CAT I
- with extra bright LED's, mounted around the lens

ART NO 600350



ART NO 600354



ART NO	voltage	magnification	field of view mm	total throat mm
600350	230	1.75 x	ø 127	900
600354	230	1.75 x	190 x 160	900

LED Work Lamp

- **modern work lamp**
- **designed for universal working places**

- sturdy housing
- with rubber covered handle
- with hand strap, ON/OFF pressure switch
- 52 bright white LED´s at the side and one LED at the top
- incl. 3x 1.5 V battery (type AA, art. no.: 90003)





magnetic bottom



ART NO	quantity of LED's	LED light colour	mm
600025	52 + 1	white	280 x 42 x 42

Magnifiers and Lenses

Precision Technical Magnifier

- **with LED-Light and exchangeable scales**

- tempered glass-lenses, housing made of aluminium / ABS / PE
- delivery with crosshair at:
  art. no. 601126 = 10 – 0 – 10 mm scale, graduation 0.10 mm, scale-ø 26 mm
  art. no. 601135 = 12 – 0 – 12 mm scale, graduation 0.10 mm, scale-ø 35 mm
- adjusting by focus-ring, exchangeable measuring scales
- attachable LED unit, bright, white LED light
- incl. 3x 1.5 V battery (type LR41, art. no.: 90203)

ART NO 601126



ART NO 601135





Exchangeable Scales

- tempered glass lenses, please mention type code and outside diameter!



Type 1 Type 2 Type 3 Type 4



Type 5 Type 6 Type 7 Type 8



Type 9 Type 10 Type 11 Type 12 Type 13



ART NO	size of lens ø mm	magnification	mm
601126	18.50	10 x	95 x 70 x 65
601135	21.00	10 x	95 x 70 x 65

Watchmaker Magnifiers and Stone Magnifiers

- **suitable for craftsmen and industry**

- biconvex silicate lens
- flame resistant plastic housing, with air hole to cope up with steaming



ART NO	size of lense ø mm	magnification
600194	25	7 x
600195	25	10 x

Technical Stand Magnifiers

- **with measuring scale**
- **for precise measurements between scale lines, spaces, etc.**

- adjustable aplanatic lens
- black chromed metal housing
- stainless steel scale, with clear graduation

More scales as spare part are available on request!





ART NO	size of lense ø mm	magnification	length of scale mm	mm	possibility of reading mm	CC
600178	20	10 x	10	0.10	0.025	on request
600180	20	8 x	10	0.10	0.025	on request
600179	20	6 x	20	0.10	0.025	on request

Linen Testers

- **product for highest demands**

- biconvex lens, optically ground silicate glass
- precision brass body, satin chromed



ART NO	size of lense ø mm	magnification	height mm	cut-out mm
600200	12.50	12x	23	10 x 10
600201	14.50	10x	27	15 x 15
600202	17.50	8x	33	20 x 20
600204	31.50	5x	53	30 x 30

Precision Folding Magnifier

- **popular technical folding magnifier**

- compound triple lens, aplanatic lens precision glass optic
- polished chrome plated metal housing, with loop
- metal lens frame, wrapped with black rubber





ART NO	size of lense ø mm	magnification	mm
600150	18	10x	35 x 23 x 18

Precision Folding Magnifier

- **proven technical folding magnifier**

- precision glass optics
- satin chrome plated brass housing, with loop
- black lacquered metal lens frame

ART NO 600159



ART NO 600153



ART NO	size of lense ø mm	magnification	type of lense		mm
			aplanatic	biconvex	
600153	20.30	10x	✓	—	39 x 39 x 34
600159	30.00	4x + 6x = 10x	—	✓	42 x 27 x 56

Inspection Tool Kit

ART NO 474470

- **multipart set, especially for garages, mechanics, plumbers, etc.**
- **well assembled kit for professional users**

5-piece set, contents:
- stainless steel telescope bar with quick release, non-slip grip, 530 mm working length
- socket with ultra bright NICHIA LED-Licht, incl. 3x 1.5 V battery (type LR44, art. no.: 90213)
- socket with powerful magnet, 8lb, for to pick up and hold metal objects in hard to reach places
- inspection mirrors, with perfect reflection, no deterioration in the mirror mounted in a stainless steel frame, 360° rotatable, one mirror in ø 50 mm and one mirror rectangular 60 x 40 mm

7-piece set, contents:
- quality claw pick-up device, semi-rigid hose, 400 mm length
- stainless steel telescope bar with quick release, non-slip grip, 530 mm working length
- socket with ultra bright NICHIA LED light, incl. 3x 1.5 V battery (type LR44, art. no.: 90213)
- socket with powerful magnet, 8lb, for to pick up and hold metal objects in hard to reach places
- inspection mirrors, with perfect reflection, no deterioration in the mirror mounted in a stainless steel frame, 360° rotatable, one mirror in ø 50 mm and one mirror rectangular 60 x 40 mm
- stainless steel tray, ø 110 mm, with powerful permanent magnetic bottom for small parts



ART NO 474471





Price / Performance: good - excellent



INOX | LR44 1,5V | CE

ART NO	set	telescope bar	LED	mirror ø 50 mm	mirror 60 x 40 mm	magnet	claw pick-up	magnetic tray
474470	5-pcs.	✓	✓	✓	✓	✓	X	X
474471	7-pcs.	✓	✓	✓	✓	✓	✓	✓

Magnetic Tray

- **stainless steel, polished**
- with powerful permanent magnet bottom



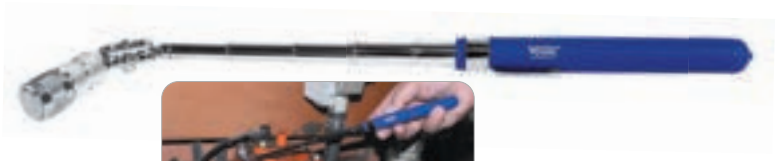
INOX

ART NO	Gauss	mm
474475	1000 – 1200	ø 150

Magnet Lifter

- **professional model for the technician**
- **with quick release and telescope bar**

- socket with magnet
- telescope bar, stainless steel
- 360° rotatatable and swivel joint
- insulated handle, with clip



INOX

ART NO	mm	kg
474441	~650	8

Magnet Lifter

- **with telescope bar**

- telescope bar, stainless steel, with clip
- art.-no. 334614 additionally with scriber



INOX

ART NO	mm	kg
474442	~ 530	3.5
334614	~ 650	1.0

Professional Inspection Mirror

- **with telescope bar**

- stainles steel telescope bar
- 360° rotatatable and swivel joint
- insulated handle



INOX

ART NO	mm	mm
474452	~ 610	ø 40
474453	~ 620	ø 50
474454	~ 620	43 x 65

Professional Inspection Mirror

- **with telescope arm and LED light**

- stainless steel telescope bar
- 360° rotatatable and swivel joint
- detachable LED light (switchable) and with clip
- incl. 3x 1.5 V battery (type LR41, art.-no.: 90203)



bright LED light, detachable

LR41 1,5V

ART NO	mm	mm
474465	~ 610	ø 26

Professional Inspection Mirror

- **with 5x magnification and telescope bar**

- stainless steel telescope bar
- 360° rotatatable and swivel joint
- insulated handle



Mirror image with 5x magnification

INOX

ART NO	mm	mm
474460	~ 610	ø 24
474461	~ 510	ø 55

EMIL OTTO • Dressing Paste

- **the test pieces are covered with the dressing paste, then moved one after the other or on a dressing plate: by this the paste forms a colour coat, showing the eveness**

- easy to remove
- 2 different colours available
- delivery in a tube or in a plastic box



ART NO	colour	contents ml	tube	box
262631	blue	80	✓	—
262632	blue	250	—	✓
262641	red	80	✓	—
262642	red	250	—	✓

EMIL OTTO • Special Cleaner

- **this cleaner dissolves dressing paste, marking ink etc.**

- skin friendly (art. no.: 262645)
- delivery in a spray can or canister

ART NO 262645



ART NO 262644



ART NO	contents ml	spray can	canister
262644	1000	—	✓
262645	500	✓	—

Hand-Held Refractometer

- **refractometers are optical precision instruments for measuring the optimal concentration of liquids**

- rugged stainless stell housing with rubber handle
- with adjusting screw, folding cover, okular with rubber eye cup, quality optic
- incl. operation manual

ART NO 653200



scale reading



ART NO 653200



ART NO 653210



ART NO 653211

Further instruments available on request

ART NO	application range		max.	mm
653200	lubricants, coolant liquids, fruit, juices, wines, etc.	0 – 32 % Brix	±0.20 %	170 x ø-29
653210	automotive industry (standrad)	E: -40 °C – 0 °C P: -50 °C – 0 °C B: 1.10 – 1.40 SG	±5 °C ±5 °C ±0.01 SG	153 x ø-29
653211	automotive industry (universal with Adblue) Adblue concentration, coolant liquids, antifreeze, detergents and battery acidity	Adblue: 30 – 35 % E: -40 °C – 0 °C P: -50 °C – 0 °C B: 1.10 – 1.40 SG	5 °C 5 °C 0.01 SG	170 x ø 29

Electr. Digital Stopwatch

- **for standard requirements**
- **with 2-button-operation**

- sturdy ABS-plastic housing
- LCD display with clear reading
- start / stop / reset-addition / split / dual measuring
- incl. 1x 1.5 V battery (type SR54, art.-no.: 90310), with lanyard and operation manual



ART NO	sec.	indicating range hrs. / min. / sec.	LCD digits	digit height mm	mm
580210	1/100	9 / 59 / 59.99	7	6.5	66 x 70 x 21

Electr. Digital Stopwatch • IP54

- **for standard requirements**
- **with 3-button-operation**

- sturdy ABS-plastic housing
- splash water proof acc. to DIN 40050 / IEC 60529
- LCD display with clear reading
- start / stop / reset-lap / split / daytime / date / alarm with snooze
- art.-no. 580505 with 1.5 V battery (type LR44, art.-no.: 90213), art.-no. 580506 with 3 V battery (type CR2032, art.-no.: 90112)
- with lanyard, protection pouch and operation manual

additional functions for art.-no. 580506
- memory for 10 laps
- recall of lap and split times

ART NO 580505



ART NO 580506



ART NO	sec.	indicating range hrs. / min. / sec.	LCD digits	digit height mm	mm
580505	1/100	9.00 / 59.00 / 59.00	6	11	85.50 x 64.00 x 22.00
580506	1/100	9.00 / 59.00 / 59.99	7	5 / 4	85.50 x 64.00 x 22.00

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OXOMI.com

Stroke Counters

- zero reset by means of turning knob
- adding in one stroke direction
- the lever can be relocated at any position of the driving shaft and returns automatically to the basic position

- movement of stroke min. 38°, max. 60°
- driving shaft righthand side or lefthand side available

ART NO 477001



ART NO 477003



driving shaft at right side





ART NO	ART NO	revolution max. 1/min.	quantity of digits	digit height mm	driving shaft-ø mm	base plate mm	height mm
477001	477002	500	5	4.5	4.0	40 x 46	27.5
477003	477004	500	5	4.5	4.0	60 x 29	27.5

driving shaft at left side





ART NO	ART NO	revolution max. 1/min.	quantity of digits	digit height mm	driving shaft-ø mm	base plate mm	height mm
477005	477006	500	5	4.5	4.0	40 x 46	27.5
477007	477008	500	5	4.5	4.0	60 x 29	27.5

Stroke Counters

- zero reset by means of detachable key
- adding in one stroke direction
- the lever can be relocated at any position of the driving shaft and returns automatically to the basic position

- movement of stroke min. 38°, max. 60°
- driving shaft righthand side and lefthand side

ART NO 477012



ART NO 477010



driving shaft at right and left side





ART NO	ART NO	revolution max. 1/min.	quantity of digits	digit height mm	driving shaft-ø mm	base plate mm	height mm
477010	477011	500	6	4.5	4.0	60 x 70	28.0
477012	477013	500	7	7.0	7.0	120 x 64	45.0

Piece/Length Counters and Measuring Wheels

Mechanical Manual Piece Counters

- for counting the number of people in cinemas, at sporting events, at ski lifts, etc.
- aso for counting piece parts when taking inventory, during production or when counting traffic

- sturdy metal housing
- available with retaining ring, table mounting or wall mounting

ART NO 477103



ART NO 477101



ART NO 477102



ART NO with retaining ring	ART NO with table mounting	ART NO with wall mounting	quantity of digits	digit height mm	housing-ø mm	base plate-ø mm
477101	477102	477103	4	4.50	47	65

Length Counter (Meter Counter)

- zero reset by means of detachable key
- adding in one turning direction and in backwards turning minus
- standard: 5 rev. = 10 figures = 1.0 m by 20 cm measuring wheel circumference
- measuring range: 99.999,9 m (red decimal display)

- revolution max. 100 m/min. with measuring wheel
- revolution max. 300 m/min. without measuring wheel
- driving shaft righthand side and lefthand side





driving shaft at right and left side



ART NO	revolution max. 1/min.	quantity of digits	digit height mm	driving shaft-ø mm	base plate mm	height mm
477130	100 / 300	6	4.50	4	60 x 70	28

Measuring Wheels

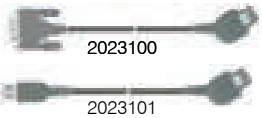
- made from various material and with several surfaces

Other bore hole- and wheel-diameters on request!



ART NO	measuring wheel-circumference cm	bore hole-ø mm	plastic / hytrel ribbed	aluminium / rubber nap version	aluminium / knurled
477140	20	4	✓	—	—
477141	20	4	—	✓	—
477142	20	4	—	—	✓

Data Processing

	ART NO	article description
 compatible with	**2040101**	WiFi
 compatible with	**2040102**	WiFi Mini-USB
 2023100 2023101 Software 	**2023100**	PROXIMITY - RS232 Software
	2023101	PROXIMITY - USB Software
 Software 	**2424101**	POWER - USB, external power Software
	**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 NO	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



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VOGEL GERMANY Measuring Solutions + Saliger-Gruppe GmbH

Strong Partnership

Vogel Germany and the Saliger-Gruppe have agreed on a far-reaching cooperation in the procurement and calibration of measuring equipment. With this cooperation, Vogel Germany is strengthening its offer of having measuring equipment tested in an independent calibration laboratory. The Saliger-Gruppe offers a cross-industry and manufacturer-independent DAkkS-accredited calibration service. In addition to factory calibrations, DAkkS calibrations can be offered for the almost complete range of Vogel Germany.

In order to be able to offer its customers an accelerated and simplified process flow, Vogel Germany has chosen this further route of combining calibration service with the procurement of new measuring equipment. In cooperation with the Saliger-Gruppe, the procurement of measuring equipment for the customers of the Saliger-Gruppe is taken over by Vogel Germany.

Riccardo Pellegrini, Managing Director of Vogel Germany: “We are pleased to have this strong partnership with the Saliger-Gruppe. The focus of the cooperation is an improved service for all aspects of measuring equipment. This will be reflected above all by a strong simplification in the complex procurement of measuring equipment and its calibration for the customer, as this service is available from a single source. The Saliger-Gruppe offers a variety of calibration options that gives our customers real added value.“

Ulrich Saliger, Managing Director of the Saliger-Gruppe: “Looking for a way to redesign our Saliger measuring equipment sales department, we are happy to have entered into close cooperation with Vogel Germany. In times of increased demands on the calibration business, our main concern is to be able to continue to offer our customers a comprehensive range of services. The cooperation with Vogel Germany enables us to concentrate on our core competencies and at the same time to expand the product portfolio for our customers.“

Inquiries can now be submitted to your usual contact person or by email to info@vogel-germany.de or by telephone on +49 2832 9239-0.

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 instrumen/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.

Steel Rules

- Scales above and below



example

max. mm	CC
250	**1094001**
500	**1094005**
1000	**1094010**
2000	**1094020**
4000	**1094040**
6000	**1094060**
8000	**1094080**
12000	**1094120**

Circumference Measuring Tapes



example

max. mm	CC
1000	**1894001**
5000	**1894005**
10000	**1894010**
20000	**1894020**

Graduated Straight Edges



example

max. mm	CC	CC DIN 866	CC Dakks DIN 866
500	**1694005**	**1694005-866**	**1694005-DKD**
1000	**1694010**	**1694010-866**	**1694010-DKD**
1500	**1694015**	**1694015-866**	—
2000	**1694020**	**1694020-866**	—

Electr. Digital Scales



example

max. mm	CC
1000	**1094490**

Calibration

Pocket Measuring Tapes



example

max. mm	CC	CC Dakks
5000	**1494305**	**1494305-DKD**
10000	**1494310**	**1494310-DKD**
20000	**1494320**	**1494320-DKD**
50000	**1494350**	**1494350-DKD**

Calipers



example

max. mm	CC	CC Dakks
200	**2094101**	**2094101-DKD**
300	**2094103**	**2094103-DKD**
500	**2094105**	**2094105-DKD**
1000	**2094110**	**2094110-DKD**
2000	**2094120**	**2094120-DKD**

Height Measuring Devices, Marking Devices and Height Calipers



example

max. mm	CC	CC Dakks
300	**3494110**	**3494110-DKD**
600	**3494111**	**3494111-DKD**
1000	**3494112**	**3494112-DKD**

External Micrometers



example

max. mm	CC	CC Dakks
25	**2394000**	**2394000-DKD**
100	**2394001**	**2394001-DKD**
200	**2394002**	**2394002-DKD**
300	**2394003**	**2394003-DKD**
600 - 1000	**2394004**	—

Indicator Snap Micrometers



example

max. mm	CC	CC Dakks
25	**2394190**	**2394190-DKD**

Gear Tooth Outside Micrometers



example

max. mm	CC
25	**2394420**
100	**2394421**
600	**2394422**
1000	**2394423**

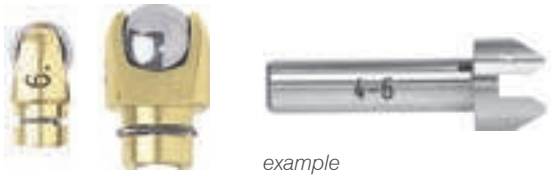
Setting Gauges for Micrometers



example

max. mm	CC	CC Dakks
100	**2394006**	**2394006-DKD**
300	**2394007**	**2394007-DKD**
500	**2394008**	**2394008-DKD**
1000	**2394009**	—

Thread Flanks Measuring Inserts and Measuring Ball Holders



example

CC
2394042

Thread Setting Gauges



example

max. mm	CC
100	**23940421**
200	**23940422**
500	**23940423**
1000	**23940424**
>1000	**23940425**

2-Point Internal Micrometers



example

max. mm	CC	CC Dakks
50	**2394040**	**2394040-DKD**
200	**2394043**	**2394043-DKD**
500	**2394045**	**2394045-DKD**
1000	**2394046**	—
1500	**2394047**	—

2-Point Internal Micrometer Extensions



example

max. mm	CC	CC Dakks
1000	**2394055**	—

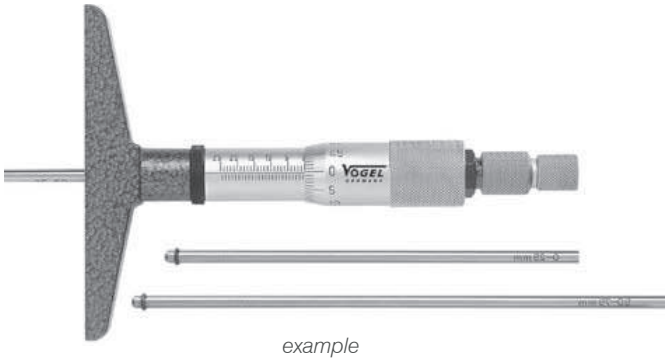
3-Point Bore Micrometers



example

max. mm	CC	CC Dakks
50	**2394020**	**2394020-DKD**
100	**2394021**	**2394021-DKD**
180	**2394023**	**2394023-DKD**
250	**2394024**	—

Depth Micrometers and Extensions



example

max. mm	CC	CC Dakks
Depth Micrometers		
25	**2394500**	**2394500-DKD**
>25	**2394501**	**2394501-DKD**
Extensions		
100	**2394502**	**2394502-DKD**
200	**2394504**	**2394504-DKD**
500	**2394505**	**2394505-DKD**

Calibration

Dial Indicators



example

max. mm	CC	CC Dakks
0 - 30	**2494200**	**2494200-DKD**
30 - 50	**2494201**	**2494201-DKD**
50 - 100	**2494202**	**2494202-DKD**
100 - 150	**2494203**	**2494203-DKD**

Dial Test Indicators



example

CC	CC Dakks
2494600	**2494600-DKD**

Digital Protractors



example

CC	CC Dakks
3294020	3294020-DKD

Protractors



example

CC	CC Dakks
3294025	3294025-DKD

Precision Knife Straight Edge



example

max. mm	CC	CC Dakks
300	**3194302**	**3194302-DKD**
800	**3194303**	**3194303-DKD**

Precision Squares and Bevel Edge Squares



example

max. mm	CC	CC Dakks
100	**3194100**	**3194100-DKD**
300	**3194300**	**3194300-DKD**
600	**3194600**	**3194600-DKD**
800	**3194800**	—

Center Squares, Acute Angle Squares and Mitre Squares



example

CC

3194253

Feeler Gauges

- each blade

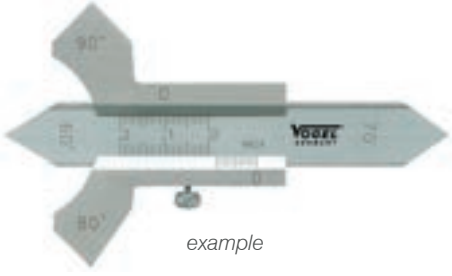


example

CC	CC Dakks
	only tolerance class 3
4194000	**4194000-DKD**

Please specify tolerance class

Welding Gauges



example

CC

4794000

Limit Plug Gauges



example

max. mm	CC	CC Dakks
3	**3994020**	**3994020-DKD**
10	**3994021**	**3994021-DKD**
60	**3994022**	**3994022-DKD**
100	**3994023**	**3994023-DKD**
180	**3994024**	**3994024-DKD**
>180	**3994025**	—

Setting Ring Gauges



example

max. mm	CC	CC Dakks
3	**3994040**	**3994040-DKD**
10	**3994041**	**3994041-DKD**
180	**3994042**	**3994042-DKD**
>180	**3994043**	—

Limit Thread Plug Gauges



example

max. mm	CC	CC Dakks
3	**3994050**	**3994050-DKD**
90	**3994051**	**3994051-DKD**
>90	**3994052**	**3994052-DKD**

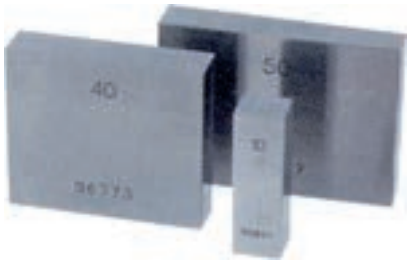
Limit Thread Ring Gauges



example

max. mm	CC	CC Dakks
3	**3994070**	—
100	**3994071**	**3994071-DKD**
>100	**3994072**	—

Parallel Gauge Blocks made of steel and ceramic



example

max. mm	CC	CC Dakks only steel
100	**3594001**	**3594001-DKD**
200	**3594002**	**3594002-DKD**
500	**3594003**	**3594003-DKD**
1000	**3594004**	**3594004-DKD**

Digital Luxmeter



example

CC
6494340

Sound Level Meter



example

CC	CC Dakks
6494101	6494101-DKD

Electr. Digital Protractors



example

CC
3294010

Coating Thickness Gauges



example

CC

4894200

Layer Thickness Calibration Films



example

CC

4894201

Digital Rebound Hardness Tester



example

CC

6594600

Surface Roughness Tester



example

CC	CC
Calibration Test Block	Surface Roughness Tester
6594100	**6594111**

Hand Tachometer



example

CC	CC Dakks
2794110	**2794110-DKD**

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Terms of Sale, Delivery and Payment

1. GENERAL

The type and scope of delivery are determined in the order confirmation. The following terms of sale, delivery and payment are authoritative for each delivery to be made by us. We are not bound by the customer's purchasing conditions, even if we do not expressly contradict them. By placing an order, the buyer accepts our conditions without exception. Oral or telephone agreements require our written confirmation. Obvious errors in offers, order confirmations etc. are expressly reserved and can be taken into account at any time. We are entitled to process the data received about buyers with regard to the business relationship or in connection with this - regardless of whether these come from the buyer himself or from third parties - within the meaning of the Federal Data Protection Act.

2. OFFERS

Our offers are non-binding regard to price, quantity, delivery time and delivery options. An order is deemed to have been placed when we have confirmed it in writing. Changes to the goods in terms of appearance or technology are permitted without special notice, provided that the function of the item is not impaired. Article images used in the catalogue may differ from the original article. No liability is assumed for any printing errors, product changes due to technical developments and/or model changes. For printing reasons, the colours in the catalogue may also differ from the original colour of the products.

3. SPECIAL PRODUCTION

In the case of custom-made products, excess or short deliveries of up to 10% are permitted. This also includes series parts that are to be specially marked at the express request of the customer. The customer cannot withdraw from the order after the order has been confirmed. We do not take back specially manufactured or marked goods.

4. PRICES, DELIVERY BASE AND PACKAGING

All prices mentioned are non-binding and are in EURO per piece or in accordance with the specified quantity units from the price list plus statutory VAT, ex works, excluding packaging. A shipping service of € 9.90 within Germany is charged for each delivery. For freight forwarded goods or deliveries outside of Germany, the shipping service are billed separately. We reserve the right to correct the prices if there are changes in the basic costs, such as raw material, alloy surcharges, energy, wages, etc. by the day of delivery. In the case of special packaging instructions by the customer, the associated additional costs will be charged. Packaging will not be taken back.

5. DELIVERY

Unless otherwise agreed in writing, delivery takes place at the expense and risk of the buyer. The goods are dispatched by a carrier of our choice, unless otherwise agreed. We reserve the right to carry out orders in partial deliveries. In case of goods being taken back as a gesture of goodwill, we are entitled to charge a restocking fee of 15 % of the value of the goods taken back, at least € 15.00 and most € 250.00.

6. DELIVERY TIME, DELIVERY DEADLINES

The delivery time begins after receipt of all information required for the execution of the order. Agreed delivery times are appropriately extended in the event of unforeseen events that are beyond our control, such as strikes, lockouts, operational disruptions, delays in the delivery of primary material, regardless of whether these events occur with us or with our supplier. We are not responsible for such circumstances even if we are already in default. If they occur, both parties are entitled to withdraw from the contract. No claims can be made for late delivery.

7. COMPLAINTS

Obvious defects must be reported in writing and specified within 10 days of receipt of the goods.

8. WARRANTY

For all Vogel Germany measuring tools that are rendered unusable due to proven material or manufacturing defects, we will replace them within one year of delivery. This free replacement service is excluded if the tools have become unusable due to natural wear and tear or improper handling.

9. DISCLAIMER

We do not guarantee the suitability of our products for the purpose intended by the customer. We do not accept any liability for damage caused by unsuitable or improper use, commissioning by the customer or third parties or for natural wear and tear. Any claims for damages, irrespective of the legal reason, and in particular liability through tort (product liability) are excluded - as far as legally permissible.

10. PAYMENT

The payment terms valid on the day of delivery are decisive for the settlement of our invoices. The terms of payment and payment deadlines stated on the invoice apply. We reserve the right to request advance payment. Payments from abroad must be made free of bank charges. Discounts based on specified conditions can only be recognized if no other due invoices are open. The purchaser is in default of payment upon receipt of the first reminder or without a reminder 30 days after the due date and receipt of an invoice in accordance with § 286 Abs.3 German Civil Code (BGB). In the event of default, we are entitled to default interest in accordance with § 286 of the German Civil Code (BGB), subject to proof of further damage caused by default.

11. RETENTION OF TITLE

We reserve title to all goods delivered by us until the buyer has paid all claims arising from the business relationship, including future claims. The buyer is entitled to resell the reserved goods in the ordinary course of business. In the event of a resale, the buyer has to reserve ownership of the sold goods to his customer under the same conditions. The buyer already now assigns to us the purchase price claim to which he is entitled from the resale against the customer.

12. PLACE OF COMPETENCY, JURISDICTION, APPLICABLE LAW

The place of competency is Kevelaer (Germany). The place of jurisdiction for all disputes arising from our legal relationship with the customer is Kevelaer (Germany). However, we are also entitled to take legal action at the customer's headquarters. German law applies and, in exceptional cases, UN sales law.

13. OTHER CLAIMS

Other claims - for whatever reason - remain excluded unless they have been expressly confirmed to the buyer in writing.

14. OTHERS

If individual regulations of these terms of sales, delivery and payment are or become ineffective, this shall not affect the validity of the remaining regulations.

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GERMANY

Measuring Solutions

Our known sales, delivery and payment conditions apply exclusively.

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Vogel Germany GmbH & Co. KG
Ossenpass 4
47623 Kevelaer
Germany

Phone: +49 2832 9239-0
Fax: +49 2832 3621
info@vogel-germany.de
www.vogel-germany.de

4 010873 030499

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