

# PROMOTION 2022

www.vogel-germany.de

# **Explanations**

In our promotion 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.

Prot to D	tection (IP class) acc. IIN 40050 / IEC 60529 etc.	lcor	ns for data process	Sev	eral Icons
IP 40	Protected against solid particles Ø > 1 mm	RS232 C	RS232 data output by data cable	ART NO	Article-Number
IP 44	Splash water resistant	OPTO RS232 C	Opto RS232 data output		Reading / Resolution
IP 51	Drop water resistant	PROXIMITY	Proximity data output, inductive, contactless		Cross section of the article
1,1, IP 52	Drop water resistant	<b>●</b> ✓	Data output by USB and data cable	max.	Max. total accuracy(±)
1,1, IP 53	Dust and spray water resistant	Duo data output	Data output by USB and Mini USB (compatible with Mitutoyo Digimatic)	→ <b> </b> ←	Repeatability (±)
1/4 IP 54	Dust and spray water resistant	िं	wireless communication (WiFi / WLAN) possible	→ tunhun  <b>-</b>	Individual measuring range
1,1, IP 65	Dust and jet water resistant	Bluetooth	wireless communication via Bluetooth® possible	→mm	Article dimension
1,1,1,1,1 IP 67	Water and oil resistant (at times)	O	Software on CD-Rom	UNIT	Measuring- and weighing-unit selectable or swichtable
<b>(</b>	Article is explosion proof	ORIGIN	Setting the absolute zero point	<del>                                      </del>	Optical tolerance signal
(jr)	Article with UL-certificate (american safety norm)			-+	Corresponding battery included
1		Nor	ms, accuracy-classes,	HOLE	Corresponding battery included
.,			ulations	LR41 1,5V	Corresponding cell battery included
Mar	nufacturing process	I	Article fulfils the standard of the tolerance class I	LR44 1,5V	Corresponding cell battery included
**	Article with laser engraved scale / graduation	II	Article fulfils the standard of the tolerance class II	CR1632 Lithlium 3V	Corresponding lithium battery included
<u> </u>	Article with etched scale / graduation	III	Article fulfils the standard of the tolerance class III	CR2032 Lithjum 3V	Corresponding lithium battery included
	Article with printed scale / graduation (Pad print)	E1	Article fulfils the respective verificationstandard		Accu
$\Diamond$	Hardened	СС	Workshop calibration certificate, inclusive	~ 230V	Power supply
	Carbide measuring faces	C€	Article with CE classification		Laser protection class
INOX	Stainless steel	MID	Directive of the European Parliament and of the council on measuring instruments		Magnet power
1		T2	Article with strengths tolerances acc. to DIN 2275	$\mathcal{M}$	Induction
D	d	Т3	Article with strengths tolerances acc. to DIN 2275	***	Laser wavelength
Proc	duct specifications	ASTM	Article fulfils the respective American standard	1	Shock proof
1	Caliper jaw length	ANSI	Article fulfils the respective American standard		Stand out
<b>-</b>	Measuring internal dimension	BS	Article fulfils the respective British standard	mm/inch	Reading in mm and inch
11	Caliper jaws (cross shape)	JIS K	Article fulfils the respective Japanese standard	cm/inch	Reading in cm and inch
1	Caliper jaws (knife shape)	DIN	Article fulfills the respective DIN standard	ABS/INC	Article with ABS/INC measuring system
	Depth Gauge	DIN EN	Article fulfils the respective DIN EN standard	ABSOLUTE	Article with ABSOLUTE measuring function
	Fine adjustment	ISO	Article fulfils the respective ISO standard	WARRANTY	Warranty 1, 2 or 3 years
	Thread pitch	DIN ISO	Article fulfils the respective DIN ISO standard		ı
$\Theta$	Measuring inside	NORM	Article manufactured acc. to tolerances of workshop standard		
• •	Measuring outside	TUV S	Article with seal: "TÜV/Geprüfte Sicherheit (GS)"	Pric	es and delivery
<u> </u>	Pointer rotation	<b>⟨Vd</b> ⟩	Article with seal: "TÜV"		We charge transport and packing costs
<u>(</u> )	Setting gauge	IEC / EN	Article fulfils the respective norm standard	€	Product and Promotion Price

Certificate inclusive (no additional costs)

# **Content Overview**

Length Measurement  Stainless Steel Rules, matt chromed • Straight Edges with bevel • Stainless Steel Rule, matter Aluminium Rules, double-sided • Electr. Digital Scales • Pocket Measuring Tapes Circumference Measuring Tapes	Page 3 – 6 att chromed	Length Measurement	
Calipers  "Absolute" Electr. Digital Calipers • Electr. Digital Calipers • "Absolute" Electr. Digital Caliper Small Pocket Vernier Caliper • Electr. Digital Workshop Calipers • Brake Disc Calipers "Absolute" Digital Caliper for Inside or Outside Grooves • Electr. Digital Tread Depth Gauge Brass Button Gauges • Electr. Digital Depth Calipers • Depth Calipers Electr. Digital Thickness Caliper • Electr. Digital Brake Disc Caliper		Calipers	P
Micrometers  Electr. Digital Micrometers • External Micrometers • Electr. Digital 3-Point Bore Micrometer Bore Gauge Set with Dial Indicator • Internal Micrometer • Internal Micrometer Set	Page 15 – 18	Micrometers	Þ
Dial Gauge and Stand  Electr. Digital Dial Indicators • "Absolute" Electr. Digital Dial Indicator Measuring Bridge for Depth Measurements • Small Dial Indicator • Dial Indicator Electr. Digital Test Indicator • Universal Magnetic Measuring Stand • Magnetic Measuring Stand Measuring Stand Column • Mini-Magnetic Measuring Stands • Precision Measuring Tables	Page 19 – 23	Dial Gauges and Stands	Ø
Scribing Devices  Divider • Spring Circle • Universal Marking Gauge • Steel Scriber • Protractor Protractors (Skew Measurer) • Bevel Squares • Marking Gauges Electr. Digital Marking Gauge and Protractor • Precision Workshop Squares Flange Square • Electr. Digital Height and Marking Gauges Carbide Tipped Steel Scribers • Carpenter's Square "Alpha" Classic Magnetic Measuring and Clamping V-Block • V-Block Pair with Clamps Precision Knife Straight Edges • Wooden box	Page 24 – 30	Scribing Devices	4
Test Equipment  Feeler Gauge Sets • Feeler Gauge Set, made from brass • Valve Regulation Gauge Set Screw Pitch Gauges • Spark Plug Gauge • Hole Gauge • Setting Ring Gauge Limit Thread Plug Gauge Set • Parallel Gauge Block Set • Rectangular Gauge Block Set Precision Parallel Support Sets • Precision Parallel Support Sets, magnetic Precision Inspection Frame Spirit Level	Page 31 – 35	Test Equipment	
Measuring Instruments  BARCOL Impressor, Hardness Tester • Universal Digital Rebound Hardness Tester Shore Hardness Tester "Durometer" • Ultrasonic Thickness Gauge Electr. Digital Moisture Meter • Electr. Digital Multimeter • Infrared Laser Thermometers Electr. Digital Sound Level Meter • Electr. Digital Luxmeter • Electr. Digital Anemometer Surface Finish Specimen "RUGOTEST" • Infrared Thermometer • Hand-Held Refractometer Digital Refractometer	Page 36 – 41	Measuring Instruments	
Miscellaneous  Inspection Tool Kit • Professional Inspection Mirrors • Professional LED Illuminated Magnit Electr. Digital Tire Pressure Gauge • Electr. Digital Stopwatch Electr. Digital Angle Measurer Spirit Level • Data Cable and Accessorie for Electr. Digital De		Miscellaneous	<b>\$</b>

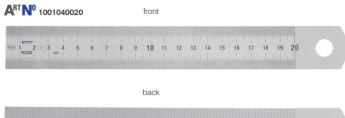


## Stainless Steel Rules, matt chromed

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

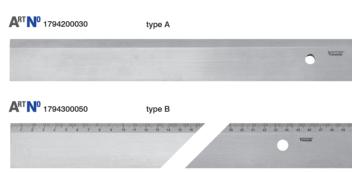
€

ART NO	→luuluul- mm		€	CC
1001040020	200	13 x 0.5	<del>5.09</del> 3.82	on request
1001240050	500	18 x 0.5	<del>18.24</del> 13.68	on request
1001260050	500	30 x 1.0	<del>38.50</del> 28.88	on request



## Straight Edges with bevel

- for simple workshop usemade of steel
- · chromed version
- type A = without graduation, type B = with mm graduation
   graduation black etched, bevel edge matt chrome finish







ART NO type A	€	ART NO type B	€	→luuluul← mm	mm
1794200030	<del>21.76</del> 16.32	_	_	300	40 x 5
1794200040	<del>30.58</del> 22.94	_	_	400	40 x 5
1794200050	<del>37.25</del> 27.94	1794300050	<del>44.35</del> 33.26	500	40 x 5
1794200080	<del>47.80</del> 35.85	_	_	800	40 x 5



## Straight Edges with bevel

- · for technicians
- made of hard aluminium
- · anodised quality
- with black printed mm graduation and cm numbering

















ART NO	→luuluul- mm	mm	€
1795300030	300	50 x 5	<del>7.38</del> 5.54
1795300060	600	50 x 5	<del>10.98</del> 8.24
1795300100	1000	50 x 5	<del>16.29</del> 12.22
1795300180	1800	50 x 5	<del>22.46</del> 16.85

1 42 43 44 45 46 47 48 49 50

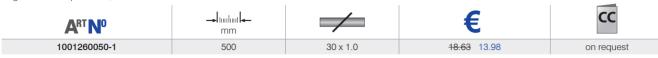
**INOX** 

## Stainless Steel Rule, matt chromed

acc. to tolerance class II

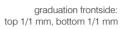
## · graduation on front and back

- · graduation deeply etched
- matt chromed, non glare surface
- · stainless spring steel
- graduation: Top 1/1 mm, Bottom ½ mm



## Aluminium Rules, double-sided acc. to tolerance class II

- · made of hardened aluminium
- · reading from left to right
- · made of black anodized aluminum
- non glare reading, matt surface · lasered graduation with clear reading
- graduation on the front and back
- calibration certificate on request





CE

CE

graduation backside: top ½ mm, bottom ½ mm



INOX

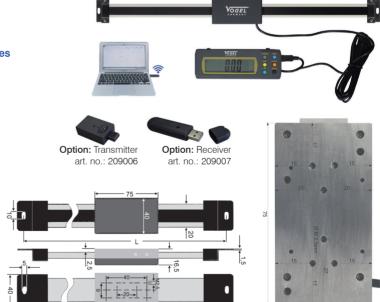
ART NO	→luuluul- mm		€	CC
1070050015	150	40 x 2.0	9 <del>.99</del> 7.49	on request
1070050020	200	40 x 2.0	<del>12.90</del> 9.68	on request
1070050025	250	40 x 2.0	<del>14.95</del> 11.21	on request
1070050030	300	40 x 2.0	<del>16.95</del> 12.71	on request
1070050040	400	40 x 2.0	<del>19.95</del> 14.96	on request
1070050050	500	40 x 2.0	<del>24.95</del> 18.71	on request

## 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 for wireless communication via WiFi,
- art. no.: 209006
- · receiver for wireless communication via WiFi.
- art. no.: 209007
- · transmitter and receiver for wireless communication as set, art. no.: 2040101

























∍linnlantl• mm / inch 300 / 16





















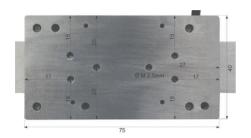


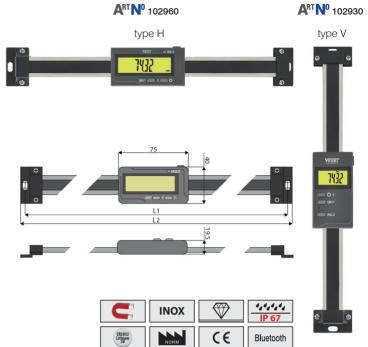
- in horizontal and vertical version stainless steel, hardened rail with LCD display on the rail

- 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, DATA function
- 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





ART NO type H	€	ART NO type V	€	→ luuluul - mm / inch	mm / inch	→↓← Imminut mm	max. mm	L 1 mm	L2 mm	CC
102960	<del>105.76</del> 79.32	102930	<del>105.76</del> 79.32	150 / 6	0.01/ 0.0005	0.01	0.02	277	286	on request
102961	<del>121.34</del> 91.01	102931	<del>121.34</del> 91.01	200 / 8	0.01/ 0.0005	0.01	0.03	317	326	on request
_	_	102932	<del>137.31</del> 102.98	300 / 12	0.01/ 0.0005	0.01	0.03	417	426	on request



## **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
- 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





**A**RT N<sup>0</sup> 141003





with hanging card

ART NO	→lmdad-	± mm	mm	→ <mark>mm</mark> ←	mm	€				
graduation in mm										
141003	3 m	0.9	16	65 x 65 x 35	1400	<del>3,96</del> 2,97				
141005	5 m	1.3	19	65 x 73 x 35	1750	<del>5.45</del> 4.09				
141008	8 m	1.8	25	80 x 85 x 40	2100	<del>8.94</del> 6.71				
141010	10 m	1.8	25	80 x 85 x 40	2100	<del>11.02</del> 8.27				
	graduation in mm/inch									
141103	3 m / 122 inch	0.9	16	65 x 65 x 35	1400	<del>3.96</del> 2.97				
141105	5 m / 197 inch	1.3	19	65 x 73 x 35	1750	<del>5.45</del> 4.09				
141108	8 m / 315 inch	1.8	25	80 x 85 x 40	2100	<del>8.94</del> 6.71				





**ART N**0 141403

## Pocket Measuring Tapes, in stainless steel metal housing

tolerance class II acc. to MID

- · exceptional tape stability
- suitable for craftsmen and industry · with graduation on front- and backside
- · backside with crosswise graduation for comfortable vertical reading
- · autom. blade-stop
- · 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 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





**ART N**<sup>0</sup> 141408

ART NO		± mm	mm	→ <mark>mm</mark> ←	mm	€
141403	3	0.9	19	80 x 75 x 35	1750	<del>7.79</del> 5.84
141408	8	1.8	25	80 x 75 x 42	2100	<del>13.53</del> 10.15

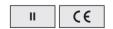
## **Circumference Measuring Tapes** acc. to tolerance class II

**NEW** 



- yellow strap coated with polyamide
   with clear reading
   for measuring diameters and circumferences
- application areas are among others manufacturers of: pipelines, boiler and tank construction, tire industry, forestry, etc.
- · made of stainless steel
- graduation continuous in mm





ART NO	circumference mm	diameter mm	mm		CC	€
183001-G	60 – 950	20 – 300	0.1	13 x 0.20	on request	<del>59,98</del> 44.99
183003-G	60 – 3780	20 – 1200	0.1	13 x 0.20	on request	<del>78,95</del> 59.21
183006-G	60 – 7540	20 – 2400	0.1	13 x 0.20	on request	<del>123,47</del> 92.60
183009-G	60 – 11310	20 – 3600	0.1	13 x 0.20	on request	<del>184,21</del> 138.16















# **Calipers**



































- 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

- data transfer via cable (art. no.: 3420195)
- data transfer via WiFi (art. no.: 2040102) and via Bluetooth<sup>®</sup> (art. no.: 209009)



	UNIT	INOX		•	ABSOLUTE
CR2032 Lithium 3V	1/4 IP 54	$\oplus$	DIN	C€	ORIGIN
	1	ı		1	

ART NO	mm / inch	mm / inch	Innland mm	max.	mm	mm	•	€	CC
202181	200 / 8	0.01 / 0.0005	0.01	0.03	50	19.5	flat	<del>165.80</del> 124.35	on request
202182	300 / 12	0.01 / 0.0005	0.01	0.03	60	20.5	flat	<del>206.05</del> 154.54	on request

## **Electr. Digital Calipers**

- 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







ART NO	→ lunlunl ← mm / inch	mm / inch	→↓← Immimil mm	max.	mm	mm	•	€	CC
202040-3	150 / 6	0.01 / 0.0005	0.01	0.02	40	16.5	flat	<del>56.29</del> 42.22	on request
202042-3	300 / 12	0.01 / 0.0005	0.01	0.03	60	20.5	flat	<del>135.30</del> 101.48	on request
202043-3	150 / 6	0.01 / 0.0005	0.01	0.02	40	16.5	round	63.98 47.99	on request

## Electr. Digital Caliper

## · 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 operation manual

data transfer via cable, art, no.: 209001



ART NO	→lıııılııııl mm / inch	mm / inch	→↓← Inmlant mm	luuluul mm	mm	mm	•	€
202038	200 / 8	0.01 / 0.0005	0.01	0.03	50	19.5	flat	<del>159.87</del> 119.90



Bluetooth

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ORIGIN

DIN

ABSOLUTE

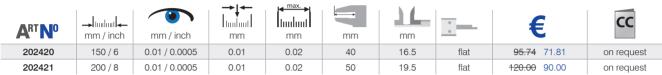
# "Absolute" Electr. Digital Calipers • IP54 • with "ORIGIN" System, with Bluetooth

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
   Absolute-System, with "ORIGIN"-system
- 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

Datenübertragung via Bluetooth<sup>®</sup>, art. no.: 2023106



# Electr. Digital Calipers • IP67 • without "ORIGIN" System, without Bluetooth

- professional standard caliper
- Splashproof acc. to DIN 40050 / IEC 60529
- · 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



INOX



ART NO	mm / inch	mm / inch	liiiiliiiil mm	luuluut mm	mm	mm	•	€	CC
202420-2-OB	150 / 6	0.01 / 0.0005	0.01	0.02	40	16.5	flat	<del>74.38</del> 55.79	on request
202421-2-OB	200 / 8	0.01 / 0.0005	0.01	0.02	50	19.5	flat	<del>85.43</del> 64.07	on request

## Electr. Digital Caliper

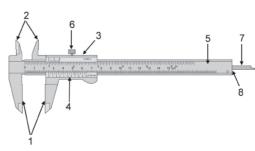
- · made of carbon fiberglass, non-conductive and especially made for electronic and sensitive purposes, like food sector and automotive parts
- · large LCD display with clear reading, 13 mm digit height
- autom. On/Off, mm/inch switchable and zero setting at any position
- without depth gauge, made of carbon fiberglass
- incl. 1x 1,5 V battery (type LR44, art. no.: 90213), with operation manual





# 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



















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# **Calipers**

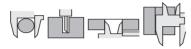


## **Electr. Digital Caliper**

- 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), with operation manual











ART NO	mm / inch	mm / inch	Innlant mm	max.	mm	mm	•	€	CC
202002	150 / 6	0.01 / 0.0005	0.01	0.03	40	16	flat	<del>21.32</del> 15.99	on request



## **Pocket Vernier Calipers**

DIN 862

## · standard caliper

- · with fixing screw
- stainless steel, hardened
- reading in mm/inch, scale laser engraved
- · reading satin chrome finish
- jaws fine ground and lapped mono-block vernier

ART NO

201024

201026

200 / 8

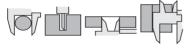
flat or round depth gauge



INOX

40.02 30.02

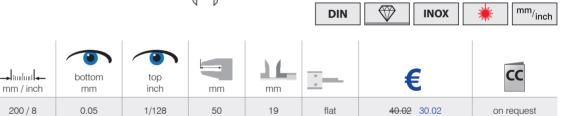




1/1000

50

0.02



19

DIN

flat















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







on request



ART NO	→luuluul- mm	mm	mm	mm	<u>:</u> —	€
201005	150	0.02	40	16	flat	<del>13.50</del> 10.13



## **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





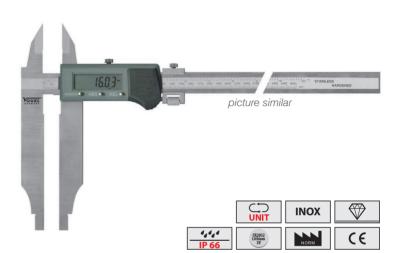
ARTNIO	→luminuil←			1	•	£	CC
An No	mm	mm	mm	mm	•		
201010	100	0.05	30	13	flat	<del>21.36</del> 16.02	on request

## 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 knife points
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



ART NO	mm / inch	mm / inch	→↓← Immimul mm	max.	mm	mm	ø mm	€	CC	
207048	1000 / 40	0.01 / 0.0005	0.01	0.07	150	67	20	<del>932.37</del> 699.28	on request	

## "Absolute" Electr. Digital Workshop Calipers • 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
- data transfer via WiFi, art. no.: 2040101
- data transfer via Bluetooth®, art. no.: 2023106 + 209000



ART NO		mm / inch	Indiani mm	max.	mm	mm	ø mm	€	CC
207030	300 / 12	0.01 / 0.0005	0.01	0.03	90	38	10	<del>162.62</del> 121.97	on request
207130	300 / 12	0.01 / 0.0005	0.01	0.03	90	_	10	<del>143.68</del> 107.76	on request
207131	500 / 20	0.01 / 0.0005	0.01	0.05	150	_	20	<del>242.85</del> 182.14	on request



















# **Calipers**

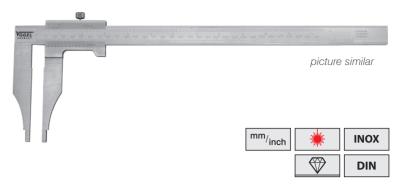


## Workshop Caliper

DIN 862

## · 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
- with identification number
- · with cm/inch reading



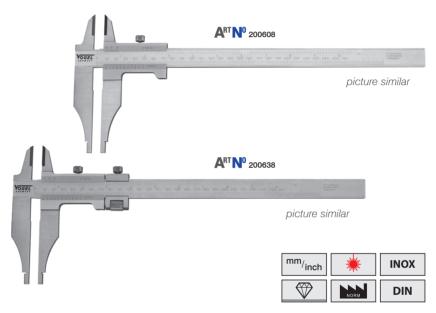
ART NO	mm / inch	bottom	top inch	mm	→ ← ø mm	€	CC
200508	800 / 32	0.05	1/128	150	20	<del>530.25</del> 397.69	on request



## **Workshop Caliper**

## · precision class

- stainless steel, hardenedscale 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



















1/128



150







## **Brake Disc Calipers**

- 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	→luuluul← mm	mm	A mm	C mm	mm	€	CC
206003	0 – 60	0.10	67	50	55	<del>46.8</del> 35.10	on request
206004	0 – 60	0.10	102	79	83	<del>48.45</del> 36.34	on request
206005	0 – 90	0.10	142	119	120	<del>76.95</del> 57.71	on request



11

## Electr. Digital Caliper

**DIN 862** 

- · jaws and measuring tips with carbide
- 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, 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

## Option

• data transfer via cable, art. no.: 209001



ART NO	→ luuluul ← mm / inch	mm / inch	Inmlant mm	max.	mm	mm		•	Ē	CC
202020-3	150 / 6	0.01 / 0.0005	0.01	0.03	40	16.5	flat	144.87	108.65	on request

"Absolute" Digital Caliper for Inside or Outside Grooves • IP54

- · for inside 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

**→**lımlıml**-**-

mm / inch

25 - 200 / 0 - 8

data transfer via cable (art. no.: 2420194), via WiFi (art. no.: 2040101) and via Bluetooth® (art. no.: 2023106 + 209000)

0.01 / 0.0005

0 - 25 / 0 - 1



46

39

## Electr. Digital Tread Depth Gauge

- · suitable for craftsmen and industry
- · large LCD display, digit height 9.5 mm

ART NO

214442

- · On/Off button, zero setting at any position
- mm/inch switchable

ART NO

201083

incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual





0.01 / 0.0005

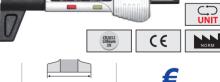
0.01



limini

0.03

0.03 / 0.0015



9.99 7.49

mm/inch

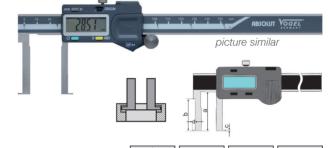
60.0

ABS plastic version

<b>Brass</b>	<b>Button</b>	Gauges

- · 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

APT D TO	<b>→</b>		4	£
A" N°	mm / inch	mm	mm	•
214301	80 / 3	0.10	20	<del>6.27</del> 4.70

















# **Calipers**

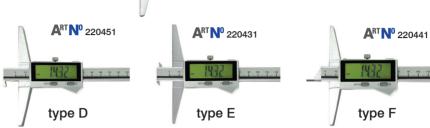






- with integraded Bluetooth® technology top model for industry purposes
- water- and coolant proof acc. to DIN 40050 / IEC 60529
- sturdy quality, stainless steel, hardened
- large LCD display with clear reading, 13 mm digit height
- jaws finely ground and lapped, with fixing screw
- On/Off button, data transfer button
- mm/inch switchable, zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

- data transfer via Bluetooth  $^{\circledR}$  (art. no.: 2023106)



ART Nº 220421

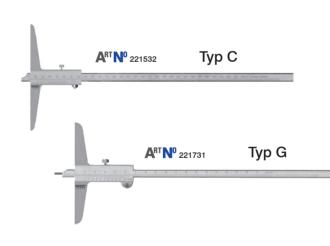
Typ C



ART NO	type	mm / inch	mm	IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	mm / inch	Type / size of measuring surface mm		€	CC
220421		150 / 6	0.01 / 0.0005	0.03	100		5.5	<del>105.09</del> 78.82	on request
220422	С	200 / 8	0.01 / 0.0005	0.03	100		5.5	<del>131.38</del> 98.54	on request
220423		300 / 12	0.01 / 0.0005	0.04	150		5.5	<del>164.21</del> 123.16	on request
220451	D	150 / 6	0.01 / 0.0005	0.03	100		5/2	<del>121.52</del> 91.14	on request
220453		300 / 12	0.01 / 0.0005	0.04	150		5/2	<del>180.64</del> 135.48	on request
220431		150 / 6	0.01 / 0.0005	0.03	100	<b>—</b>	26.4 / 4	<del>131.38</del> 98.54	on request
220432	E	200 / 8	0.01 / 0.0005	0.03	100		26.4 / 4	<del>157.64</del> 118.23	on request
220433		300 / 12	0.01 / 0.0005	0.04	150		26.4 / 4	<del>203.61</del> 152.71	on request
220441		150 / 6	0.01 / 0.0005	0.03	100		ø 1.5 / 6	<del>111.69</del> 83.77	on request
220442	F	200 / 8	0.01 / 0.0005	0.03	100		ø 1.5 / 6	<del>131.38</del> 98.54	on request
220443		300 / 12	0.01 / 0.0005	0.04	150		ø 1.5 / 6	<del>170.78</del> 128.09	on request

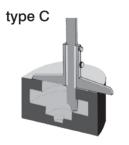
# **Depth Calipers**

- 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 type "C"
- exchangeable tip, reversible, series type "G"



INOX

DIN





	I	I	I	I	I	I	I
ART NO	£	ART NO	£	<b>→</b> Imilimi <b>l</b> —			CC
type C		type G		mm	mm	mm	
_	_	221731	<del>57.30</del> 42.98	200	0.05	100	on request
221535	<del>41.44</del> 31.08	_	_	250	0.05	125	on request
221532	<del>55.23</del> 41.42	_	_	300	0.05	150	on request
221534	<del>114.59</del> 85.94	_	_	500	0.05	150	on request



•

TC

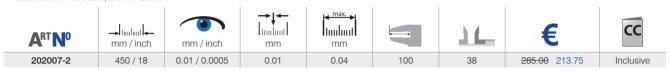
## **Electr. Digital Caliper**

**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
- On/Off button, with battery status display
- 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

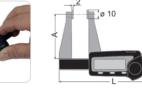


## Electr. Digital Thickness Caliper

acc. to workshop grade

- · with autom. return spring on the right measuring jaw
- · stainless steel, hardened
- LCD display with clear reading, digit height 9 mm
- carbide measuring jaws in disc shape
- zero setting at any position, mm/inch switchable
- On/Off buttton, with HOLD function
- · with fixing screw
- incl. 2x 1.5 V battery (type LR44, art. no.: 90213), with operation manual







ART NO	→ luuluul - mm / inch
206015	50 / 2

mm / inch
0.01 / 0.0005

IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	luuluul mm
0.01	0.04



9.88-





## 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



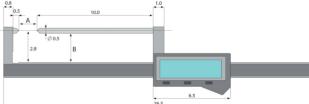
TINU

ABS/INC

INOX

DIN

 $\epsilon$ 





ART NO	→ luuluul - mm / inch	mm / inch	→   ←   liiii   liii     mm	max. IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	A mm	B mm	€
206022	80 / 3.2	0.01 / 0.0005	0.02	0.02	85.1	25.5	<del>74.04</del> 55.53

























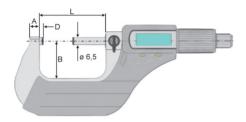






## Electr. Digital Micrometers • IP40

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







UNIT		CR2032 Lithium 3V
ABS/INC	DIN	C€

ART NO	mm / inch	mm / inch	ø mm	mm	A mm	B mm	D mm	L mm	max.	€	CC
231062	25 – 50 / 1 – 2	0.001 / 0.00005	22	0.5	6	32	3.5	57	0.003	<del>94.72</del> 71.04	on request
231063	50 - 75 / 2 - 3	0.001 / 0.00005	22	0.5	7	44	3.5	82	0.004	<del>116.66</del> 87.50	on request
231064	75 – 100 / 3 – 4	0.001 / 0.00005	22	0.5	8	59	3.5	108	0.005	<del>134.09</del> 100.57	on request



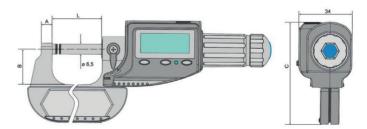
## Electr. Digital Micrometers • IP54 **DIN 863**



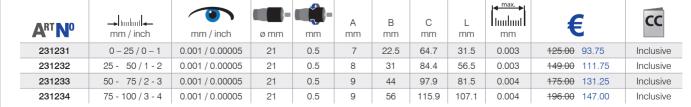
- top model for industry purposes
- with optical tolerance alarm by LED signal with data output (micro USB)
- spray water resistant acc. to DIN 40050 / IEC 60529
- sturdy quality, frame lacquered, with insulation plates
- large LCD display with clear reading, 10 mm digit height
- friction ratchet made from aluminium
- carbide surfaces, lapped, spindle hardened and ground
- with tolerance preset, SET button
- On/Off button, autom. power off
- locking lever for quick precise fixing
- with ratchet for constant measuring pressure
- incl. 1x 3 V battery (type CR2032, art. no. 90112), with operation manual

- data transfer via cable, art. no. 3420195
- data transfer via WiFi, art. no. 2040102
- data transfer via Bluetooth, art. no. 209009















LR44 1,5V

DIN

ABS/INC

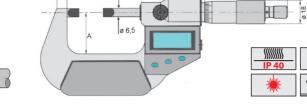
DIN

DIN

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





→ himhmil mm / inch	mm / inch	A mm	B mm	L mm	S mm	T mm	mm max.	€	CC	
0 – 25 / 0 – 1	0.001 / 0.00005	26.5	6	57.0	0.75	6.5	0.002	<del>325.08</del> 243.81	on request	

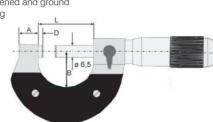
## **External Micrometers**

**DIN 863** 

ART NO

232381

- · sturdy quality, in top precision version
- drum and sleeve matt chromed finish
- · hammer blow grey lacquered frame, 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





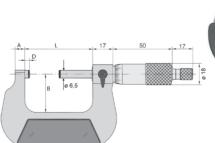
A	RT <b>N</b> O	→ luuluul ← mm	mm	ø mm	mm	A mm	B mm	D mm	L mm	max.	€	CC
23	31322	25 – 50	0.01	20.5	0.5	8	31	3	57	0.004	<del>74.46</del> 55.85	on request
23	31323	50 – 75	0.01	20.5	0.5	9	45.5	3	83	0.005	<del>89.73</del> 67.30	on request
2:	31324	75 – 100	0.01	20.5	0.5	9	56.5	3	109	0.005	<del>97.38</del> 73.04	on request

## **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
- · with setting gauge





ART NO		mm	ø mm	mm	A mm	B mm	D mm	L mm	max. mm	€	CC
231354	75 – 100	0.01	18	0.5	8	57	3.0	107	0.005	<del>48.71</del> 36.53	on request
231355	100 – 125	0.01	18	0.5	8	70	3.0	133	0.006	<del>60.89</del> 45.67	on request
231356	125 – 150	0.01	18	0.5	8	82	3.0	158	0.006	<del>67.91</del> 50.93	on request
231357	150 – 175	0.01	18	0.5	8	95	5.5	183	0.007	<del>76.89</del> 57.67	on request





























## **External Micrometer**

- for measuring plates and panels 100 step graduation
- with deep frame
- drum and sleeve matt chrome finish
- frame hammer blow grey lacquered
- carbide surfaces, lapped, spindle hardened and fine ground
- without insulation plates
- · with ratchet for constant measuring pressure







ART NO	→luuluul- mm	mm	ø mm	mm	spindle-ø mm	max. IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	€	CC
232611	0 – 25 x 50	0.01	24	1.0	6.5	0.002	<del>409.53</del> 307.15	on request



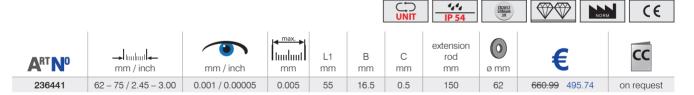
## Electr. Digital 3-Point Bore Micrometer • IP54

- 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
- with tungsten carbide measuring faces
- · zero setting at any position, On-/Off-button
- measuring unit switchable mm/inch, with ABS/INC-system
- data hold function, ± preset function
- incl. setting ring and with extension rod
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual

- data transfer via cable (art. no.: 2420194)
- data transfer via WiFi (art. no.: 2040101) and via Bluetooth® (art. no.: 209000)









## 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







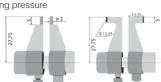
ī			6		ORM	
ART No → Insulant	← mm	quantity of contact points	quantity of distance plates	L mm	€	CC
<b>237012</b> 18 – 35	0.01	7	2	142	<del>82.30</del> 61.73	on request

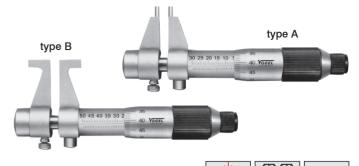
## **Internal Micrometer**

DIN 863

## · for standard requirements in measuring

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





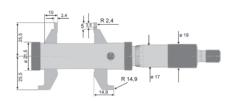


ART NO	→luuluul← mm	type	mm	ø mm	mm	mm	max.	€	CC
231615	5 – 100 (Set)	A + B	0.01	18	0.5	5 + 25	0.005 / 0.006 / 0.007 / 0.008	<del>425.96</del> 319.47	on request

## **Internal Micrometer**

acc. to 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







APT NO	<b>→</b> Imdud <b>-</b>			0	<del>≪ max. →</del>	£	CC
A" Nº	mm	mm	mm	mm	mm	-	
230610	5 – 55	0.01	0.5	30	0.006	<del>208.43</del> 156.32	on request

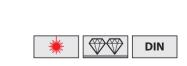
## **Internal Micrometer Set**

DIN 863

- spring loaded end gaugeswith screw-on extensions
- 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







ART NO	→luuluut ← mm	mm	mm	quantity of anvils with Rohr-ø 17 mm	IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	€	CC
230446	100 – 2100	0.01	0.5	50 / 100 / 200 / 400 / 800	0.018	<del>3,129.21</del> 2,346.91	on request



























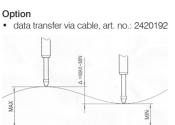


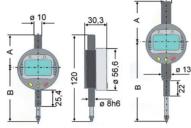




- standard model for industry and craft
- with data output
- aluminium housing with sturdy plastic cover
- large LCD display with clear reading, digit height 10 mm
- stem and spindle stainless, hardened and lapped
- exchangeable probe tips, M2.5
- · On/Off button, ABS and Preset function
- · zero setting 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







**A**RT N<sup>0</sup> 242056

ART NO	→ luuluut - mm / inch	mm / inch	Innimit mm	luuluul mm	measuring force N	min/max tol/set	A mm	B mm	€	CC
242160	0 - 12.7 / 0 - 0.5	0.001 / 0.00005	0.003	0.05	< 1.50	<b>✓</b>	50	75	<del>197.01</del> 147.76	on request
242056	0 - 25.4 / 0 - 1.0	0.001 / 0.00005	0.003	0.05	< 1.50	<b>/</b>	60	110	<del>263.41</del> 197.56	on request

## "Absolute" Electr. Digital Dial Indicator • IP65

- 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
- incl. 3 V battery (type CR2032, art. no.: 90112), with operation manual

# ø 8h6



## Options

data transfer via cable (art. no.: 3420195), via WiFi (art. no.: 2040102) and via Bluetooth® (art. no.: 2023106)



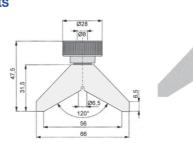
		UNIT	INOX	Bluetooth	ABSOLUTE	ORIGIN	CR203 Lithiu 3V	m (	4,4, 	NORM
ART NO	mm / inch	mm / inch	→↓←                 	max.	L mm	A mm	B mm	D mm	€	CC
240280	12.5 / 0.5	0.01 / 0.0005	0.002	0.01	129.2	60.2	69.0	60.1	<del>199.88</del> 149.91	on request



## Measuring Bridge for Depth Measurements



- 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	<del>130.42</del> 97.82



## **Small Dial Indicator**

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	→limilmil← mm	mm	mm	A mm	B mm	C mm	D-ø mm	€	CC
241002	0 – 5	0.01	0.5	28	14	8.2	45	<del>42.21</del> 31.66	on request

## **Dial Indicator**

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	→luuluutl← mm	mm	mm	A mm	B mm	C mm	D-ø mm	€	CC
241103	0 – 1	0.001	0.2	33.5	22.0	8.0	57	<del>73.11</del> 54.83	on request

## 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

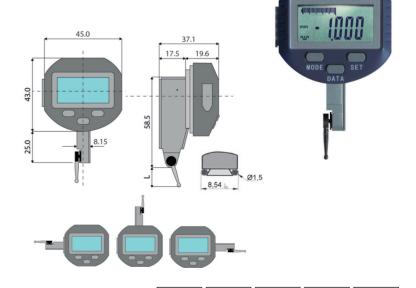
## Option

data transfer via cable, art. no.: 3420195: 3420195





with digital and graph bar



ART NO	→luuluul← mm	mm / inch	Measuring range mm / inch	Innimit mm	max.	Measuring force	L mm	€	CC
240682	0 – 1.6	0.001 / 0.0001	±0.8 / ±0.03	0.001	0.01	0.07 ± 15 %	13.0	<del>165.66</del> 124.25	on request

NORM

 $\epsilon$ 

## **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





NEW

cross arm-ø x L

mm

25/10 x 115

tension foot with 4 strong permanent magnetic points





thread

mm

M8



magnetic force without a protective cap ~ N

320

€	
219.21	164.41



250120 360

ART NO



colum-ø x L

mm

13.5/25 x 135

- **Magnetic Measuring Stand**
- triple-jointed arm with central mechanical clamping ball joints allow a fast and safe positioning

total height

mm

- all joints are clamped with just one twist grip
- with finde adjustment on the magnetic base
- stable frame with black anodized surface
- dial indicator holder for clamping shanks ø 6 mm, ø 8 mm and dovetail
- magnetic base with plastic on / off switch
- hammer blow lacquered magnetic base, with prism base





tension foot

mm

110 x 70 x 42

fine adjustment on the magnetic base







ART NO	total height ~ mm	colum-ø x h mm	cross arm-ø x h mm	thread mm	magnetic block mm	magnetic power ~ N	€
250110	350	27/31.5 x 145	24/33 x 150	M8	65 x 50 x 55	800	<del>135.30</del> 101.48



- 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	M10	250301 + 250305	aluminium	8 + dovetail	<del>107.25</del> 80.44



## **Measuring Stand Column**

- 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	M8	251501	steel. burnished	6 + 8	<del>28.17</del> 21.13		

**NEW** 



## **Universal Magnetic Measuring Stands**

- for professional 3-point clamping with just one twist grip
  stable clamping with ergonomically shaped handle
  with finde adjustment on the magnetic base

- stable frame with black anodized surface
   dial indicator holder for clamping shanks Ø 6 mm, Ø 8mm and dovetail
- Magnetic base with plastic on / off switch
- hammer blow lacquered magnetic base, with prism base









fine adjustment at the magnetic base



ART NO	total height mm	colum-ø x h mm	cross arm-ø x h mm	thread mm	magnetic block mm	magnetic power ~ N	€
250101	280	10 x 120	8 x 110	M5	40 x 30 x 35	400	<del>61.47</del> 46.10
250102	450	12 x 200	10 x 190	M8	65 x 50 x 55	800	<del>67.26</del> 50.45

## Mini-Magnetic Measuring Stands

## NEW

- 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)



side view



magnetic prism



**A**RT **N**<sup>0</sup> 250506

bottom side with



bottom side with 2 magnetic points



ART N<sup>0</sup> 250505

ART NO	total height ~ mm	thread mm	magnetic block mm	magnetic power ~ N	Magnethaftkraft ~ N	€
250505	46	M 8	73 x 37 x 12	180	81,54	<del>28.61</del> 21.46
250506	59	M 8	73 x 37 x 26	180	166,11	<del>45.74</del> 34.31





















## **Precision Measuring Table**

DIN 876

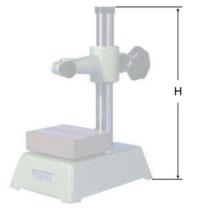
- with ceramic measuring tablefor the measuring room and calibration laboratory
- Measuring surface made of dense ceramic, with dust grooves, finely lapped
   stainless column, finely polished
- with rigid cross arm
- dial indicator shank ø 8 mm













ART NO	<b>→mm</b> table	measuring height mm	arm length mm	total height (H) mm	column-ø mm	€
258050	70 x 60 x 20	100	49	195	22	<del>411.00</del> 308.25



## **Measuring Table**

- · 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











## Divider

DIN 6486

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



ART NO Divider	. []	€
302404	→ΠιιιΙΙΙΙΙΙΙΙ ←	<del>8.51</del> 6.38

# Spring Circle DIN 6486

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



ART NO	→luuluul mm	€
302419	75	<del>4.86</del> 3.65

## **Universal Marking Gauge**

- with contact-roll
- carbide scriber, exchangeable
- stainles steel, hardenedlaser engraved scale, reading parts in matt chrome finish
- 2nd scriber as spare part included

## Option

• carbide scriber (art. no.: 335072)



INOX

<b>A</b> rt <b>N</b> <sup>0</sup>	→limiliml mm / inch	mm	€
335071	400 / 16	0.1	<del>47.08</del> 35.31























NORM

## **Steel Scriber**

• with tungsten carbide tip





ART NO	→lııılıııl mm	shaft-ø mm	version	€
334608	150	6	hexagonal bar. galvanized. with clip	<del>2.01</del> 1.51



## **Protractor**

- with fixing screw
- for standard mechanical engeneering
- special steel, in chromed finish
- · laser engraved scale



ART NO	lenght of blade mm	arc-ø mm	•	€	CC
322511	120	80	0 – 180	<del>16.38</del> 12.29	on request



## **Protractors (Skew Measurer)**

- for standard mechanical engineering
- special steel, in chromed finish
- laser engraved scalewith adjustable blade, with fixing screw



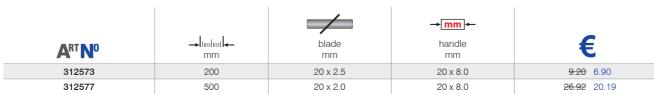
ART NO	length of blades mm	arc-ø mm	angle graduation	€
320571	150	100	10 – 170°	<del>31.22</del> 23.42
320572	300	150	10 – 170°	<del>37.49</del> 28.12



## **Bevel Squares**

- rugged constructionfor metalworker, fitters, locksmith, etc.
- special steel, galvanized finish
- with galvanized fixing screw for locking the steel blade







## **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









ART NO	→ludud mm	mm	→mm	€
336260	200	0.05	300 x 60 x 44	<del>29.82</del> 22.37
336261	250	0.05	350 x 60 x 44	<del>32.40</del> 24.30
336262	300	0.05	400 x 60 x 44	<del>33.21</del> 24.91



## Electr. Digital Marking Gauge and Protractor • IP40

- with flat sliding ruler and hardened marking block
- · digital angle setting and digital length measuring
- · dust proof electronic unit
- made of Dur-Aluminium, hardened with HRC63
- · scratch-resistant, black anodized surface
- laser engraved clear reading scale
- with hardened marking block, with fixing screws
- large LCD display with clear reading, 8 mm digit height
- reading 180° reversible, zero setting at any position
- On/Off button, autom. power off, HOLD function
- · mm/inch, switchable

ART NO

336330

• incl. 3 V battery (type CR2032, art. no.: 90112), with operation manual







Image similar



→ Innihmil ← mm / Inch	length mm / Inch	angle °	→ <mark>mm</mark> ←	€	
300 / 12	0.01 / 0.0005	0 – 360° x 0.05°	400 x 82 x 23	<del>40.00</del> 20.00	





## Our new slogan: **Measuring Solutions**

- ✓ more appropriate
- ✓ more meaningful
- ✓ more contemporary

This stands for the further development of the brand Vogel Germany to even more customer-oriented solutions in the measurement technology, development of the range, consulting, training, etc.





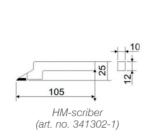


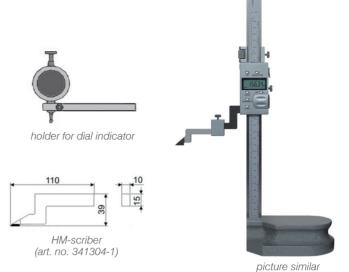
## Electr. Digital Height and Marking Gauges

- 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, 300, 500, 800, 1500 and 2000 mm

## Options

- data transfer via cable, art. no. 209001
- HM-scriber
  - 0 600 mm (art. no.: 341302-1) 0 – 1000 mm (art. no.: 341304-1)
- holder for dial indicator
  - 0 600 mm (art. no.: 341302-3)
- 0 1000 mm (art. no.: 341304-3)







ART NO	→lıııılııııl← mm / inch	mm / inch	max. IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	→↓← Immimil mm	<b>→mm</b> guide bar	→ mm ← size of base	€	CC
341303	600 / 24	0.02	0.05	0.02	31 x 10.5	180 x 120 x 54	<del>434.40</del> 325.80	on request
341305	1000 / 40	0.02	0.07	0.02	50 x 16	250 x 150 x 73	<del>1.047.90</del> 785.93	on request

NEW

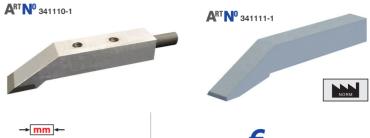
## Electr. Digital Height and Marking Gauge

- with data output RS232 C
- · stainless steel guideway, with fine adjustment
- LCD display with clear reading
  On/Off switch, zero-setting at any position
- reading switchable mm/inch
- Data-Hold, Preset function
- max. slidingspeed 1.5 m/sec
- · carbide tipped steel scriber, exchangeable
- at zero-position the scriber coincides exactly with the base
- sturdy base, cast iron made, lacquered
- incl. 1x 1.5 V battery (type LR44, art. no.: 90213), with operation manual





- for Height and Marking Gauge
- art. no. 341110-1 suitable for art. no. 341110
- art. no. 341111-1 suitable for art. no. 341116+341119

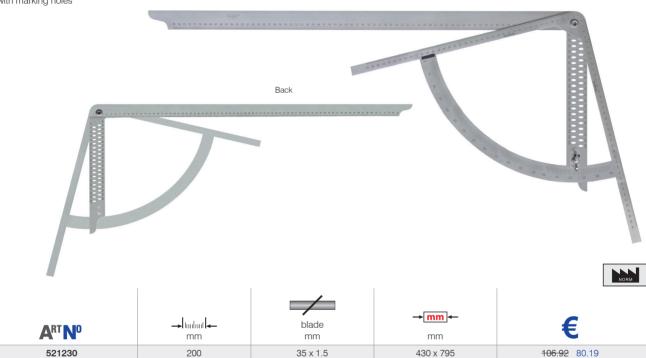


	ARTARO	→mm	<i>E</i>
	ART NO	mm	•
	341110-1	60 x 10 x 9	<del>26.06</del> 19.55
	341111-1	100 x 12.2 x 11	<del>16.90</del> 12.68

## Carpenter's Square "Alpha" Classic

- stainless steel
- with fixing screw
- with cm-graduation and degree reading
- · with marking holes







## Magnetic Measuring and Clamping V-Block

- especially engineered for toolmakers etc.
- · made of hardened steel
- with V-cut 90°, finely ground with On/Off-rotary switch made of aluminium magnetic base with finely ground prism
- plane, parallel and squared machined







<b>A</b> rt <b>N</b> <sup>0</sup>	→[ <u>mm</u> ]←	for shaft-ø mm	parallelism tolerance ± mm	prism N	surface N	€
330113	100 x 70 x 96	ø 6 – 72	0,004	650	1800	<del>1.366.00</del> 1.024.50



## 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





steel pair	→ <mark>mm</mark> ←
333042	75 x 55 x 55









## **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
- bevelled edges finely ground and lapped, with insulation handle





ART NO	→Imiliani ← €		CC	
310325	150	<del>18.51</del> 13.88	on request	
310328	300	<del>47.92</del> 35.94	on request	



· Inner padding made of soft foam



ART NO		→limbud mm	€
	2399504	75 – 100	<del>20.15</del> 15.11







www.vogel-germany.de





Any questions?

We are pleased to advise.



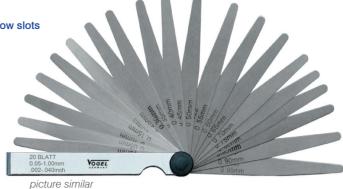


## **Feeler Gauge Sets**

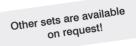
tolerance acc. to T2



- hardened spring steel, conical shaped blades, 100 mm length
- · nickel plated case with lock nut
- thickness tolerance in relation to the metric sizes
- art. no. 412002: sizes in mm and inch on each blade
- art. no. 411003-M: sizes in mm on each blade









ART NO	quantity of blades	→ luuluul ← mm / inch	compilation	€	CC
412002	10	0.038 - 0.63 .0015025	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	<del>2.28</del> 1.71	on request
411003-M	10	0.05 – 0.80	0.05 / 0.10 / 0.15 / 0.20 / 0.30 / 0.40 / 0.50 / 0.60 / 0.70 / 0.80 mm	<del>2.15</del> 1.61	on request



## Feeler Gauge Set, 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



picture	simila	1

ART NO	quantity of blades	→luuluul mm / inch	compilation	€	CC
413107	0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.35 / 0.40 / 0.45 / 0.50 / 0.55 / 0.60 / 0.05 - 1.00 0.65 / 0.70 0.75 / 0.80 / 0.85 / 0.90 / 0.95 / 1.00 mm		<del>8.66</del> 6.50	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 / 0.10	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	_
0.20	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
0.30	0.009	0.007
0.35	0.011	0.007
0.40 / 0.45	0.012	0.008
0.50 / 0.55	0.014	0.009
0.60 / 0.65	0.014	0.009
0.70 / 0.75	0.017	0.012
0.80 / 0.85	0.019	0.013
0.90 / 0.95	0.022	0.014
1.00	0.024	0.016

nominal thickness mm	T2 (A2) +/- mm	T3 (A3) +/- mm
1.10	0.024	0.017
1.20	0.024	0.018
1.30	0.028	0.019
1.40	0.028	0.021
1.50	0.028	0.022
1.60	0.033	0.023
1.70	0.033	0.024
1.80	0.033	0.026
1.90	0.035	0.027
2.00	0.035	0.028

INOX



# Feeler Gauge Set, made from brass tolerance acc. to T2

- 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	→luuluutl← mm	compilation	€	CC
414007	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	<del>17.09</del> 12.82	on request

# Valve Regulation Gauge Set 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 bladedelivery bulk packed or in foil
- tolerance in relation to the metric sizes





ART NO singly packed	quantity of blades	→luuluul mm / inch	compilation	€
415107	7	0.10 - 0.50 .004020	0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 / 0.50 mm .004 / .006 / .008 / .010 / .012 / .016 / .020 inch	<del>1.47</del> 1.10

## **Screw Pitch Gauges**

- · for internal and external measurements of threads
- · fine cutted threads





ART NO	quantity of blades	→lıııılıııl mm / inch	thread type	graduation		€
471010	20	0.40 – 7.00 mm	metr. 60° SI	7.0 / 6.5 / 6.0 / 5.5 / 5.0 / 4.5 / 4.0 / 3.5 / 3.0 / 2.5	2.0 / 1.75 / 1.5 / 1.25 / 1.0 / 0.8 / 0.75 / 0.7 / 0.5 / 0.4	<del>4.79</del> 3.59
471013	48	0.40 - 7.0 / 4 - 62	whitw. / metr. SI	combined	19/20/22/24/25/26/28/ 30/32/36/40/48/60/62 2.0/1.75/1.5/1.25/1.0/0.8 /0.75/0.7/0.5/0.4	<del>6.14</del> 4.61





















## **Spark Plug Gauge**

- suitable for craftsmen and industry
- with hardened steel pins, in plastic holders mounted
- with PL lamellae
- incl. bender





ART NO	quantity of pins	→lıııılıııl- mm	graduation mm		€
472701	8	0.40 – 1.00 mm	0.40 / 0.50 / 0.60 / 0.70	0.75 / 0.80 / 0.90 / 1.0	<del>6.05</del> 4.54

# Hole Gauge

- flat version
- rear side with rounded edges
- special steel, hardened and fine ground
- laser engraved graduation



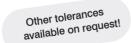


				₩ NORM
ART NO	→luuluul- mm	mm	→ <mark>mm</mark> ←	€
472320	1.0 – 15.0	0.1	178 x 12 x 2	<del>5.36</del> 4.02



## Setting Ring Gauge, acc. to DIN 2250 C, DIN ISO 286/1

• special steel, hardened, finely ground and lapped









ART NO setting ring	ø mm	€	CC
370770-0020	2.0	<del>133.42</del> 100.07	on request

## Limit Thread Plug Gauge Set **Limit Plug Gauge Set**

- · acc. to DIN tolerances
- · special steel, hardened, fine ground



ART NO	plug gauge set	GO	"No-Go"	contents mm	€	CC
390801	<b>✓</b>	<b>✓</b>	<b>✓</b>	M3/M4/M5/M6/M8/M10/M12	<del>145.46</del> 109.10	on request

## 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
  calibration certificate available by extra charge



ART NO	tolerance class	quantity per set	pcs.	nominal size mm	steps mm	€	CC
351023	2	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 10.0	<del>277.28</del> 207.96	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
- · calibration certificate available by extra charge



ART NO	tolerance class	quantity per set	nominal size mm	€	CC
350184	1	5	600 / 700 / 800 / 900 / 1000	<del>3.055.62</del> 2.291.72	on request































## **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	→ <mark>mm</mark> ←	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	<del>345.68</del> 259.26



## Precision Parallel Support Sets, magnetic

- NEW
- hardened ( $\sim$ 60 HRC), black anodized with magnetic inserts, reduce the clamping time by up to  $\sim$  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	→ <mark>mm</mark> ←	€
260621	15 / 30 / 35 / 37 / 39	0.005	0.01	125 x 2.5	<del>107.38</del> 80.54



## **Precision Inspection Frame Spirit Level**

- · 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







CC **→ mm ←** 0.02 mm/m 360317 300 x 300 x 40 <del>1.718,22</del> 1.288,67 on request

### **BARCOL Impressor, Hardness Tester**

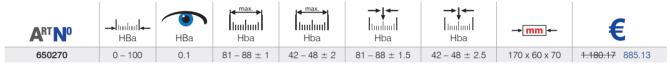
- portable device, one hand use, for fast and location independent hardness testing with Bluetooth  $^{\circledR}$  data output and with software
- Applications:

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







## **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
- 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

#### 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







UNIT C	~230V DIN ISO	ASTM	BS	C€	СС
21					

ART NO	at least workpiece thickness mm	max. hardness of workpiece HLD	Max. → HIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	→mm	€	CC
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	<del>1.239.51</del> 929.63	inclusive









### Shore Hardness Tester "Durometer" • analog model

- portable device for measuring the hardness for elastomers and plastics Shore: rubber, elastomers, neoprene rubber, silicon, vinyl, soft plastics, leather, felt and similar materials

max. spring load

Ν

8.064

- rugged metal housing, compact design
- with drag pointer, with needle protection
- 2 different models of Shores

ART NO

650720

- measuring needle made of special steel, needle guidance is linear mounted
- · incl. test block, with operation manual



art. no. 659210: Prüf- and Test stand





indentor

type

blunt taper

→ mm →

100 x 64 x 35

meas.-face

mm

ø 18



DIN	ASTM

<del>190.68</del> 135.00























designed to measure the thickness of ferrous (Fe) or non-ferrous materials (NFe)

→luuluul•

0 - 100 HA

- 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







needle

°/mm

35° / ø 0.9

#### 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  $\sim$  +60 °C, operation temperature 0 °C  $\sim$  +40 °C, rel. humidity < 70 %RH
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual







ART NO	→ luuluull← wood		← max. →   	<b>→mm</b> mm	€
641006	5 % – 40 %	1.0 %	±1.0 % Rh+0.5	129 x 63 x 32	<del>36.73</del> 27.55



### 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















measurement probes







USB cable for charging

IEC / EN

**A**RT **N**<sup>0</sup> 640317-2



ART NO	→luuluul AC	→ludud DC	overload category	resistance	→ <mark>mm</mark> ←	€
640384	0 – 750 V	0 – 1000 V	CAT III / 600 V CAT IV / 1000 V	60 MΩ	167 x 90 x 50	<del>94.32</del> 70.74

#### **Infrared Laser Thermometers**

- 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  $\sim$  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  $\sim$  +60 °C, operation temperature 0 °C  $\sim$  +50 °C
- relative humidity 10 90 %RH, emissivity adjustable
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual

#### Option

For art. no. 640314: spare probe (art. no. 649303)



ART N<sup>0</sup> 640314







ART NO	→luuluul⊷ °C	°C	max.	→  <b>←</b> 	measuring optics	→ <mark>mm</mark> ←	€
640314	-30 ~ +550	0.1	±4.0 / ±4 %	±1.0	12:1	170 x 135 x 50	<del>50.09</del> 37.57
640317-2	-50 ~ +1300	0.1	±2.0 / ±2 %	±1.0	16:1	170 x 135 x 50	<del>131.85</del> 98.89





















## **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  $\sim$  50 °C, rel. Humidity < 80 %RH
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual













<b>→</b> lımlıml <b>←</b>
capacity device digits
0 – 100









- 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  $\sim$  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  $\sim$  +70 °C, operation temperature 0 °C  $\sim$  +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







charging by power supply possible (only when using rechargeable batteries)















ART NO		dB	luuluul dB	linearity range dB	<b>→mm ←</b> mm	€	CC
641106	40 - 80 / 50 - 100 / 60 - 110 / 80 - 130	0.1	±1.5	50	220 x 80 x 35	<del>89.15</del> 66.86	inclusive

max.

### **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, 31/2 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  $\pm$ 0.1 % / °C storage temperature -20 °C  $\sim$  +70 °C, operation temperature 0 °C  $\sim$  +45 °C
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual





ART NO	→ luuluul - LUX	LUX	< 10.000 LUX	> 10.000 LUX	→ <b>  ←</b> 	<b>→mm</b> mm	€	CC
640342	1 – 100.000	1	±4 %	±5 % ±10 Digits	±2 %	130 x 72 x 30	<del>50.69</del> 38.02	on request



39

## **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  $\sim$  +70 °C, operation temperature -10 °C  $\sim$  +45 °C
- · without Data output
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with operation manual

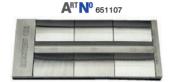


O.		
max.	→mm	€
°C		

ART NO	wind speed m/s	speed m/s	temperature °C	wing speed	temperature	<b>→mm</b> ←	€
641205	0,3 ~ 30	0.1	0.2°	±0.1 Digt	±2°	165 x 85 x 38	<del>44.48</del> 33.36

## Surface Finish Specimen "RUGOTEST"

- acc. to the norms NF E 05-501, ISO/R 468 und ISO 2632
- for testing surface roughness by sight and touch method (with finger-tip)
- available for all standards machining methods
- · wear-resistant and made of stainless steel
- · delivery with description





ISO

ART NO	machining method	quantity of plates	comparaison range Ra	ISO class	→ <mark>mm</mark> ←	€
651001	general (standard)	27	0.05 – 12.5	N2 - N10	120 x 90	<del>330.51</del> 247.88
651003	shot / grit (coarse + fine)	18	0.0125 – 25.0	N0 - N11	120 x 90	<del>278.26</del> 208.70
651102	turning	6	0.4 – 12.5	N5 - N10	110 x 50	<del>174.38</del> 130.79
651105	cylindrical grinding	8	0.025 - 3.2	N1 - N8	130 x 50	<del>179.61</del> 134.71
651107	spark erosion	6	0.4 – 12.5	N5 - N10	110 x 50	<del>179.61</del> 134.71

### **Infrared Thermometer**

- · Infrared measurement
- · fast and contactless measurement
- 50 sets data memory
- · Sound and light warning
- Large LCD display, with clear reading and backlighting
- auto. OFF < 30 sec., relative humidity: < 85 %
- incl. 1x 9 V battery (type 6LR61, art. no.: 90006), with users manual







CC

CC
inclusive









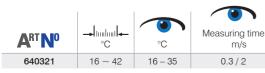












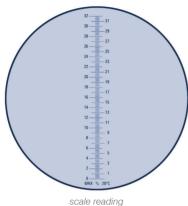
m/s

0.3/2



### 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

application range
lubricants, coolant liquids, fruit, juices, wines, etc.

limilmil 0 – 32 % Brix ±0.20 %

→ mm < 170 x ø-29

33.78 25.34







- optical precision instrument for measuring the optimal concentration of liquids
- rugged housing with rubberautom. OFF in 1 minutewith protective cap

- with protective cap incl. Pipette, cleaning cloth and screwdriver for the battery compartment incl. 1,5 V battery (Typ AAA, art. no.: 90002),
- with operation manual













ART NO	application range	→  tunluul <b> </b>	max.	→ <mark>mm</mark> ←	€
653400	lubricants, coolant liquids, fruit, juices, wines, etc.	0 – 50 % Brix	±0.2 %	120 x 60 x 27	<del>261.57</del> 196.18

## Miscellaneous

## **Inspection Tool Kit**

- multipart set, especially for garages, mechanics, plumbers, etc.
  well assembled kit for professional users
- 5-piece set.
- 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





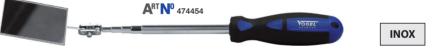


ART NO	telescope bar	LED	mirror ø 50 mm	mirror 60 x 40 mm	magnet	€
474470	✓	✓	✓	✓	✓	<del>58.44</del> 43.83

## **Professional Inspection Mirrors**

- with telescope bar
- stainles steel telescope bar
- 360° rotatatable and swivel joint
- insulated handle





	ART NO	→luuluul l← mm	→ <mark>mm</mark> ←	€
	474453	~ 620	ø 50	<del>16.50</del> 12.38
_	474454	~ 620	43 x 65	<del>19.49</del> 14.62

## **Professional Inspection Mirrors**

- · with telescope bar
- · stainles steel telescope bar
- 360° rotatatable and swivel joint
- art. no. 474461: Mirror image with 5x magnification, with insulated handle
- art. no. 474464: Mirror image with 3x magnification, with clip





ART NO	→luuluul l← mm	→ <mark>mm</mark> ←	€
474461	~ 510	ø 55	<del>26.94</del> 20.21
474464	~ 470	ø 24	<del>17.12</del> 12.84



























# **Miscellaneous**



## **Professional LED Illuminated Magnifiers**

- 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



















voltage

magnification

1.75 x

1.75 x

field of view

mm

ø 127

190 x 160



total throat mm	€
900	<del>86.53</del> 64.90
900	<del>132.85</del> 99.64

## 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

ART NO

600350

600354

- units in PSI, Bar, Kgf/cm², Kpa, switchable
- reading 0.1 PSI; 0.01 Bar;
- 0.01 Kgf/cm<sup>2</sup>; 1 Kpa • incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual







ı <b> </b> —	<del>                                     </del>	€

 $\epsilon$ 

ART NO	for cars	→ IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	→lıııılıııl Bar / Kgf/cm²	→limlimil← kPa		€
214460	<b>✓</b>	0 – 100	0-7/0-7	0 – 700	1 %	<del>11.10</del> 8.33

## Miscellaneous

## 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
- with 1.5 V battery (type LR44, art. no.: 90213), with lanyard, protection pouch and operation manual



<b>A</b> RT <b>N</b> 0	→lııılıııl- sec.	indicating range hrs. / min. / sec.	LCD digits	digit height mm	→ <u>mm</u> ←	€
580505	1/100	9 / 59 / 59	6	11	85.5 x 64 x 22	<del>35.28</del> 26.46

## 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	<b>→</b> luuluul <b>←</b>			lıııılıııl vial	→ <u>mm</u> ←	€
711020	0 – 225°	0.05°	0.1°	1 mm/m = ±0.057°	440 x 60 x 25	<del>142.89</del> 107.17

max.

max.

### Data Cable and Accessorie for Electr. Digital Devices

• compatible with Microsoft Excel



ART NO	article description	€	
3420195	USB - Mini-USB interface box with data key and with foot switch port optional, additional available: foot switch (art. no.: 209011)	<del>153.37</del> 115.03	

























## 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 € 7.90 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

Vogel Germany GmbH & Co. KG, August 2022







The promotional prices listed in this brochure are valid from 15th August - 31st December 2022. Only while stocks last. Price changes reserved.

Our known sales, delivery and payment conditions apply exclusively.

All prices in this promotion are understood, unless otherwise stated in the offer, ex warehouse, strictly net, plus statutory VAT, packaging, insurance and transportation costs.

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Interseroh Manufacturer No.: 113216