

# MEASURING INSTRUMENTS

# D



ALPA  
Mitutoyo  
V.V.V. TECH

## D0 2 - 16

Digital and vernier calipers



ALPA  
Mitutoyo  
BOWERS

## D1 17 - 29

Digital and analogue micrometers



ALPA  
Mitutoyo  
TECLOCK  
KANETEC

## D2 30 - 45

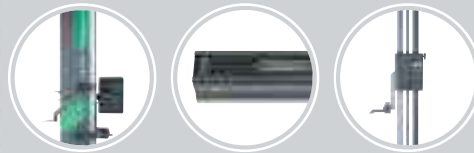
Dial gauges, bore gauges, dial gauges stands



ALPA  
KERFOLG  
HAIMER  
TESCHORN

## D3 45 - 49

Digital and analogic sensors, centering devices, zero setters, inspection plates



ALPA  
Mitutoyo  
TRIMOS

## D4 49 - 58

Protractors, height gauges, dividers, prisms, parallels, squares, rulers and levels



ALPA  
GPOX

## D5 59 - 64

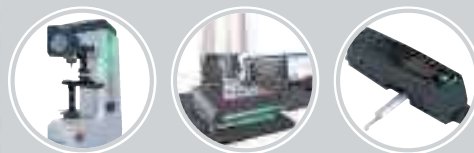
Threaded plug and gauges, pin gauges, gauge blocks



ALPA  
FASTBAND

## D6 65 - 67

Screws pitch gauges, thickness gauges



ALPA  
Mitutoyo  
Vision

## D7 68 - 85

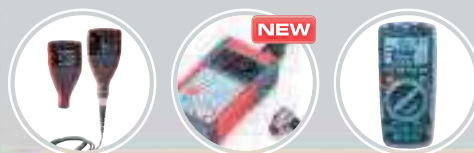
Hardness testers, microscopes, lenses, profile projectors, measuring machines



ALPA  
KERN

## D8 86 - 89

Dynamometers and scales



elcometer  
KERN

## D9 89 - 95

Non destructive testing



# MEASUREMENT INSTRUMENTATION ICONS

<b>0.1 mm</b> Decimal measurement	<b>IP 40</b> Standard IP40	<b>1.5V AAA</b> Lithium battery 1,5V - AAA	<b>LCD</b> LCD Display
<b>0.01 mm</b> Centesimal measurement	<b>IP 54</b> Standard IP54	<b>1.5V AA</b> Lithium battery 1,5V - AA	<b>LCD</b> Large LCD display
<b>0.001 mm</b> Millesimal measurement	<b>IP 65</b> Standard IP65	<b>1.5V LR44</b> Lithium battery 1,5V - LR44	<b>mm inch</b> Conversion
<b>0.002 mm</b> Millesimal measurement	<b>IP 66</b> Standard IP66	<b>1.5V SR44</b> Lithium battery 1,5V - SR44	Rotating dial
<b>0.005 mm</b> Millesimal measurement	<b>IP 67</b> Standard IP67	<b>3V CR2025</b> Lithium battery 3V - CR2025	Rod Depth (flat)
<b>0.0001 mm</b> Deci-Millesimal measurement	<b>DIN</b> Standard DIN	<b>3V CR2032</b> Lithium battery 3V - CR2032	Rod Depth (round)
Spindle Ø 6.5 mm	<b>10°C</b> Operating temperature	<b>9V MN1604</b> Lithium battery 9V - MN1604	Contact surfaces in hard metal
Spindle Ø 8 mm	<b>-10°C</b> Storage temperature	<b>SHOCK PROOF</b> Shock resistant	Data Output
Spindle Ø 10 mm	Inspection report with declaration of conformity	<b>ABS</b> ABS (Absolute zero)	Bluetooth
Soft case	Hard case (metal, wood or plastic)	<b>INOX</b> Stainless steel hardened	

## DIGITAL CALIPERS IP67 WITH PRESET

ALPHA MEGATry EVO

IP 67, 0.01 mm, ABS, LCD, INOX, mm inch, 3V CR2032, PDF

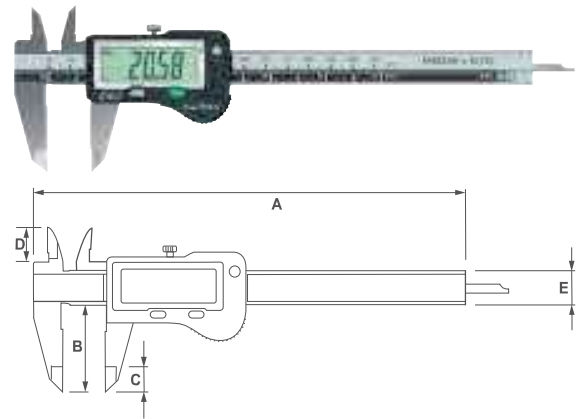
ART. AA014

0,01 mm Resolution - Digital caliper with Swiss technology, unrivaled protection against penetration of particles and liquids. Vernier with locking screw system, automatic on/off button, auto power off after 20 minutes of inactivity, incremental measuring and zero-setting at any position, data output. Memorized position in pause mode with maximum speed displacement of 2.5 m/sec. Structure mechanics tempered, rectified stainless steel, superior comfort thanks to its ergonomic design and sturdy structure, 3,5 mm. Preset function included.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	E mm	Rod
D0010150NDP	161,00	0 ÷ 150	235	40	11	16	16 x 3,5	■
D0010150P	185,00	0 ÷ 150	235	40	11	16	16 x 3,5	■
D0010150NDT	170,00	0 ÷ 150	235	40	11	16	16 x 3,5	●
D0010150T	180,00	0 ÷ 150	235	40	11	16	16 x 3,5	●
D0010200	290,00	0 ÷ 200	290	50	14	19	16 x 4	■
D0010300	355,00	0 ÷ 300	388	64	14	19	16 x 4	-

The products are available in chapter D

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity - cable RS232
D0002USB	201,00	Proximity - cable USB



## DIGITAL CALIPERS IP67

ALPHA PRO67

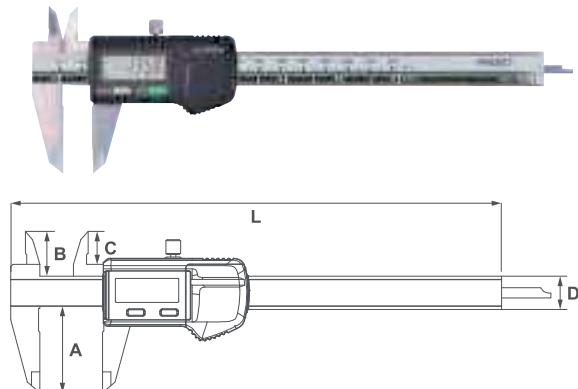
IP 67, 0.01 mm, LCD, INOX, mm inch, 3V CR2032, PDF

ART. AA017

0,01mm resolution - Digital caliper with electronics of a very high degree of protection against particles and liquids, even while in temporary submersion. Vernier with locking screw system, ON/OFF button, incremental measuring and zero-setting at any position.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	L mm	Rod
D0007150T	141,00	0 ÷ 150	40	22	16	16	235	●
D0007150P	141,00	0 ÷ 150	40	22	16	16	235	■
D0007200	185,00	0 ÷ 200	50	24	19	16	285	■
D0007300	236,00	0 ÷ 300	60	26	21	16	400	■

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DIGITAL CALIPERS IP67

Mitutoyo



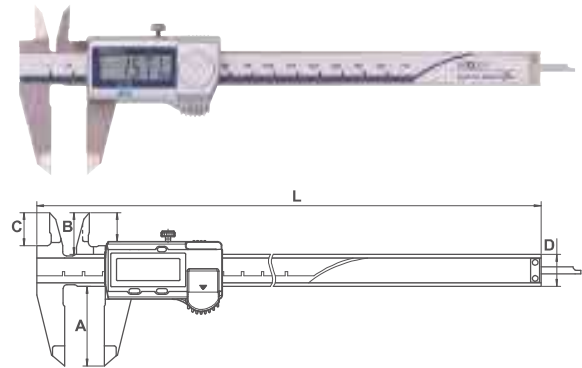
### ART. SERIES 500

Resolution 0.01 mm - Robust caliper for use in a wide range of applications. The IP67 protection rating allows it to be used in the presence of lubricants, powders and coolants. Exceptional battery life.

Tech. Code	GR47 Euro	Range mm	A mm	B mm	C mm	d Ø mm	L mm	Rod
D0012150PND	196,00	0 ÷ 150	40	21	16.5	16	233	■
D0012150TND	197,00	0 ÷ 150	40	21	16.5	16	233	●
D0012150	249,00	0 ÷ 150	40	21	16.5	16	233	■
D0012200ND	271,00	0 ÷ 200	50	24.5	20	16	290	■
D0012200	316,00	0 ÷ 200	50	24.5	20	16	290	■
D0012300ND	390,00	0 ÷ 300	64	27.5	21.8	20	404	■
D0012300	(418,00)	0 ÷ 300	64	27.5	21.8	20	404	■

Model D0012...ND without data output.

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1.5V SR44
D0004USBA	138,00	Digimatic cable Input Tool Direct, model IP67, 2 m - USB
D0001RS232A	98,00	Digimatic cable with data key, model IP, 1 mt - RS232



## DIGITAL CALIPERS IP54 WITH ABSOLUTE FUNCTION

ALPA ABSolutus

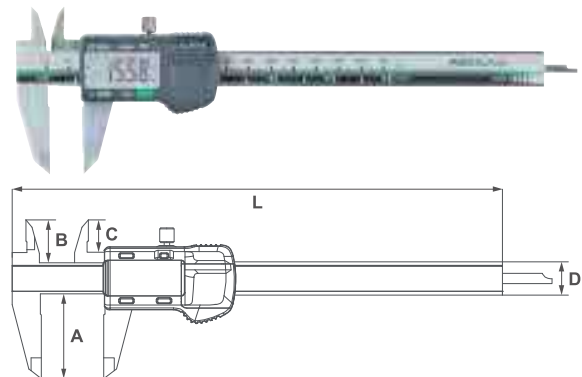


### ART. AA019

0.01mm resolution - Digital caliper with electronics of a very high degree of protection against penetration of particles and liquids. Vernier with locking screw system, ON/OFF button, incremental measuring and zero-setting at any position. Absolute origin measuring function.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	L mm	Rod
D0009150P	80,00	0 ÷ 150	40	19	16	16	235	■
D0009150T	80,00	0 ÷ 150	40	19	16	16	235	●
D0009200	112,00	0 ÷ 200	50	24	19	16	285	■
D0009300	158,00	0 ÷ 300	60	28	21	16	390	■

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DIGITAL CALIPERS

ALPA PICKall



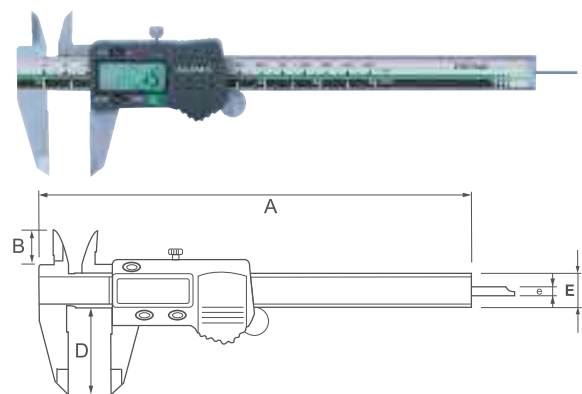
### ART. AA020

0.01mm resolution (ON/OFF) button and automatic switch ON, four measuring functions, zero setting at any position, vernier with wheel drive and locking screw (round rod only for D0026150T, flat rod for other models).

Tech. Code	GR45 Euro	Range mm	A mm	B mm	D mm	e mm	E mm
D0026150T	76,00	0 ÷ 150	235	16	40	ø 1,5	1.5
D0026150P	76,00	0 ÷ 150	235	16	40	3,8 x 1,3	1.5
D0026200	105,00	0 ÷ 200	290	18	50	3,8 x 1,3	3.5
D0026300	158,00	0 ÷ 300	380	18	62	4,8 x 2,8	3.5

D0026150T - Flat rod

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DIGITAL CALIPERS WITH ABSOLUTE FUNCTION

Mitutoyo



### ART. SERIE 500

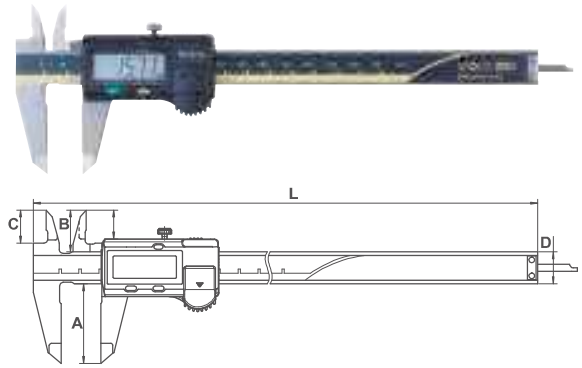
Resolution 0,01 mm Digimatic AOS Calibers for quick and accurate measurements: Equipped with a new AOS Inductive encoder (Advance Onsite Sensor) already present on the waterproof gauges.

Thanks to the adoption of the electromagnetic Induction encoder ABS, these gauges are not affected by the presence of oil or water (except 300 mm field) on the surface of the scale. The ABSOLUTE system eliminates the need to reset the Instrument to every switch on. The high quality finish of the sliding surfaces generates smooth and accurate slinging. 9 mm character height dimension for easy reading. Long lasting battery.

Tech. Code	GR47 Euro	Range mm	A mm	B mm	C mm	D mm	L mm	Rod
D0034150PND	130,00	0 ÷ 150	40	21	16,5	16	233	■
D0034150TND	130,00	0 ÷ 150	40	21	16,5	16	233	●
D0034150P	166,00	0 ÷ 150	40	21	16,5	16	233	■
D0034200ND	209,00	0 ÷ 200	50	24,5	20	16	290	■
D0034200	234,00	0 ÷ 200	50	24,5	20	16	290	■
D0034300	328,00	0 ÷ 300	64	27,5	22	20	404	■

Model D0034...ND without data output.

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1,5V SR44
D0004USBC	(121,00)	Digimatic cable Input Tool Direct, 2 m - USB



## DIGITAL CALIPERS WITH PRESET

ALPA

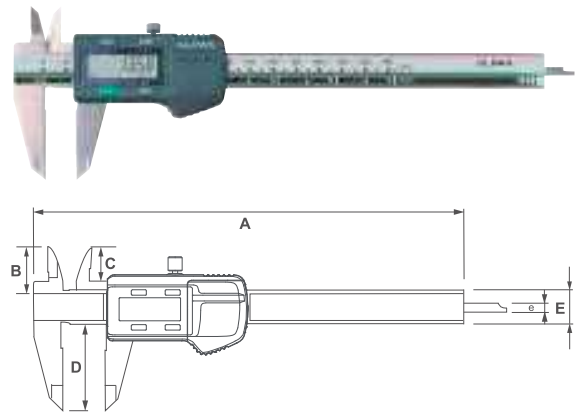


### ART. AA021

Resolution 0.01mm - ON/OFF button, zero setting at any position, slider with thumb wheel and locking screw. Preset function included.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	e mm	E mm
D0024150	52,00	0 ÷ 150	235	18	15	40	3.7	16
D0024200	75,00	0 ÷ 200	285	18	16	50	3.7	16
D0024300	120,00	0 ÷ 300	400	21	17	62	3.7	16

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DIGITAL CALIPERS IP67

ALPA MEGAline

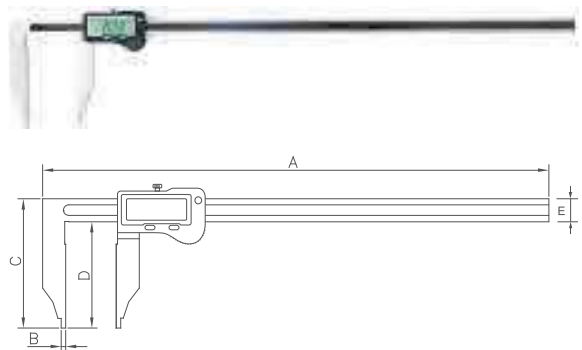


### ART. AA029

0,01mm resolution - Swiss technology with data output and protection IP67 (full submersion) also cable connected. Automatic power on, by moving the vernier along its rod (SIS system), pausing after 20 min, when not in use, pause setting kept stored with max movement speed of 2,5 m / sec. Structure mechanics in tempered, reclassified stainless steel. Function preset included. Wooden box package.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	E mm
D0049300	625,00	0 ÷ 300	425	5	117	100	17 x 5
D0049400	695,00	0 ÷ 400	525	5	117	100	17 x 5
D0049500	750,00	0 ÷ 500	625	5	117	100	17 x 5
D0049600	853,00	0 ÷ 600	725	5	117	100	17 x 5

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity-cable RS232





## DIGITAL CALIPERS IP67

ALPAA MEGAline

IP 67		0,01 mm	LCD	INOX	mm inch	3V CR2032			
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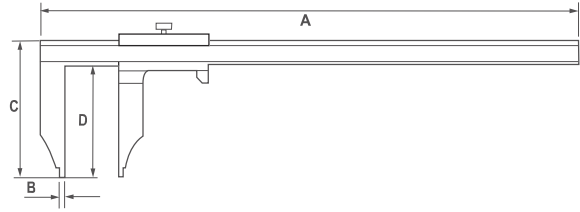
ART. AA033

Resolution 0,01mm -Swiss technology, hardened stainless steel, protected against the penetration of dust and water resistant, caliper with locking screw. Provided with wooden case.

- Preset function
- SIS: Smart Inductive System (patent)
- Conversion mm/inch
- Control report with a statement of compliance

Tech. Code	GR45 Euro	Range mm	D mm	A mm	B mm	C mm	Weight kg
D0057500/125	1181,00	0 ÷ 500	0.04	660	5	148	2,05
D0057500/150	(1219,00)	0 ÷ 500	0.04	660	5	177	2,25
D0057600/125	(1219,00)	0 ÷ 600	0.04	800	5	148	2,45
D0057600/150	(1417,00)	0 ÷ 600	0.04	800	5	177	2,65
D0057800	(1733,00)	0 ÷ 800	0.04	1000	5	177	2,95
D00571000	(2071,00)	0 ÷ 1000	0.04	1200	10	182	3,15

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232



## CARBON FIBRE DIGITAL CALIPERS

ALPAA MEGAline

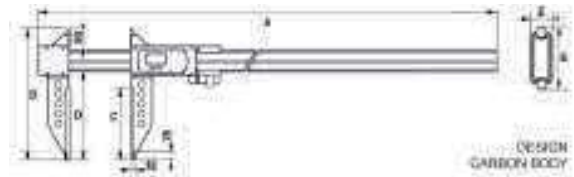
IP 54		0,01 mm	LCD	INOX	mm inch	3V CR2032			
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ART. AA040

Resolution 0.01 mm - TiN coated jaws, data output, mm/in conversion, water-resistant electronics, screw locking. Wooden box package.

Tech. Code	GR45 Euro	Range mm	D mm	A mm	B mm	C mm	E mm	Weight kg
D00541000/150	(2180,00)	0 ÷ 1000	150	1310	247	125	47 x 16	2,5
D00541000/300	(3600,00)	0 ÷ 1000	300	1310	397	240	47 x 16	2,8
D00541000/500	(4400,00)	0 ÷ 1000	500	1310	597	440	47 x 16	3,2
D00541500/150	(3395,00)	0 ÷ 1500	150	1810	247	125	47 x 16	3,2
D00541500/200	(3700,00)	0 ÷ 1500	200	1810	297	160	47 x 16	3,3
D00541500/300	(4255,00)	0 ÷ 1500	300	1810	397	240	47 x 16	3,5
D00541500/500	(5172,00)	0 ÷ 1500	500	1810	597	440	47 x 16	3,9
D00542000/150	(3654,00)	0 ÷ 2000	150	2310	247	125	47 x 16	3,3
D00542000/200	(4073,00)	0 ÷ 2000	200	2310	297	160	47 x 16	3,5
D00542000/300	(5152,00)	0 ÷ 2000	300	2310	397	240	47 x 16	3,7
D00542000/500	(5931,00)	0 ÷ 2000	500	2310	597	440	47 x 16	4,1
D00542500/200	(5332,00)	0 ÷ 2500	200	2810	297	160	47 x 16	3,7
D00542500/300	(5966,00)	0 ÷ 2500	300	2810	397	240	47 x 16	3,9
D00543000/200	(6051,00)	0 ÷ 3000	200	3310	297	160	47 x 16	4,0
D00543000/300	(6531,00)	0 ÷ 3000	300	3310	397	240	47 x 16	4,2

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0003USB	261,00	Cable Opto - USB
D0003RS232	175,00	Cable Opto - RS232



## DIGITAL CALIPERS

ALPAA

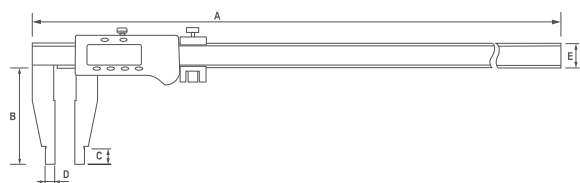
IP 40		0,01 mm	ABS	LCD	INOX	mm inch	3V CR2032			
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ART. AA050

0.01mm resolution - Chromium plated satin scale (ON/OFF) button, incremental zero setting or restoration of absolute scale (ABS), Micrometric adjustment and locking screw vernier.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	E mm	Weight kg
D0050300	222,00	0 ÷ 300	440	100	18	10	24	0,8
D0050500	325,00	0 ÷ 500	680	150	18	10	24	1
D0050600	470,00	0 ÷ 600	780	150	18	10	24	1,3
D0050600/300	720,00	0 ÷ 600	800	300	18	10	24	4,5
D0050800/150	592,00	0 ÷ 800	1000	150	16	10	31	2
D00501000	860,00	0 ÷ 1000	1230	150	16	10	31	2,5
D00501000/300	1580,00	0 ÷ 1000	1230	300	16	10	42	6
D00501500	2219,00	0 ÷ 1500	1800	300	16	10	42	6,5
D00502000	(2602,00)	0 ÷ 2000	2300	300	16	10	42	8
D00503000	(4834,00)	0 ÷ 3000	3300	300	16	10	42	10,5

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DIGITAL CALIPERS IP66

ALPHA

IP	0,01	LCD	INOX	mm	3V			
66	mm			inch	CR2032			

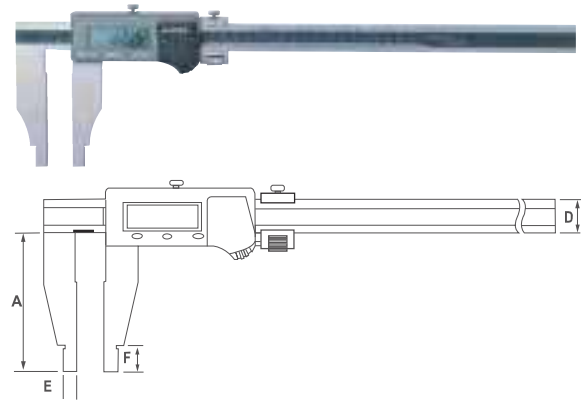
ART. AA045

0,01mm resolution - Stainless steel caliper equipped with a large display and micrometric adjustment, water-proof.

Tech. Code	GR45 Euro	Range mm	A mm	D mm	E mm	F mm
D0052300	325,00	0 ÷ 300	100	24	10	18
D0052500	559,00	0 ÷ 500	150	24	10	18
D0052600	645,00	0 ÷ 600	150	24	10	18
D00521000	(1030,00)	0 ÷ 1000	150	31	10	24

While stocks last

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DIGITAL DEPTH CALIPERS IP67

ALPHA MEGAline

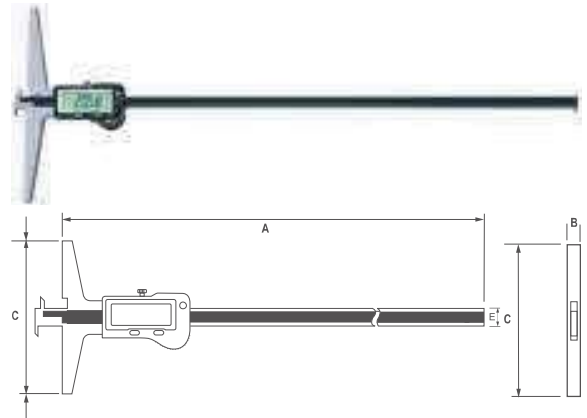
IP	0,01	ABS	LCD	INOX	mm	3V			
67	mm				inch	CR2032			

ART. AA059

0,01mm resolution - Swiss technology with data output and protection IP67. (full submersion) also cable connected. Automatic power on, by moving the vernier along its rod. (SIS system) pausing after 20 min when not in use, pause setting kept stored with max movement speed of 2.5 m/sec. Tempered rectified stainless steel structure with interchangeable plunger pull/push on the same floor, block screw and double hook. Provided with wooden case.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	E mm
D0104300	750,00	0 ÷ 300	410	12	150	12 x 4
D0104400	(781,00)	0 ÷ 400	510	12	150	12 x 4
D0104500	(864,00)	0 ÷ 500	610	12	150	12 x 4
D0104600	(952,00)	0 ÷ 600	710	12	150	12 x 4

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity-cable RS232



## DIGITAL DEPTH CALIPERS WITH PUSH ROD IP67

ALPHA MEGAline

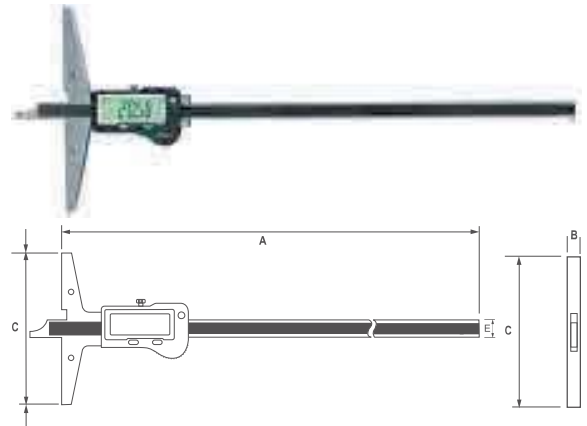
IP	0,01	ABS	LCD	INOX	mm	3V			
67	mm				inch	CR2032			

ART. AA054

0,01mm resolution - Swiss technology with data output and protection IP67. (full submersion) also cable connected. Automatic power on, by moving the vernier along its rod. (SIS system) pausing after 20 min when not in use, pause setting kept stored with max movement speed of 2.5 m/sec. tempered structure with pushing tip. Provided with wooden case.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	E mm
D0106300	675,00	0 ÷ 300	410	12	150	12 x 4
D0106400	(781,00)	0 ÷ 400	510	12	150	12 x 4
D0106500	(864,00)	0 ÷ 500	610	12	150	12 x 4
D0106600	(952,00)	0 ÷ 600	710	12	150	12 x 4

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity-cable RS232



## DIGITAL DEPTH CALIPERS WITH MOBILE BRIDGE IP67

ALPAA MEGAline

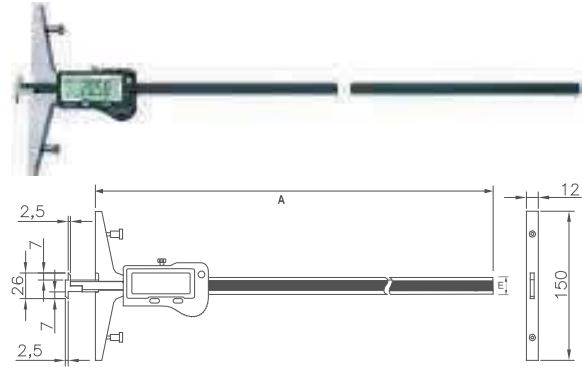


ART. AA064

0,01mm resolution - Swiss technology with data output and protection IP67. (full submersion) also cable connected. Automatic power on, by moving the vernier along its rod. (SIS system) pausing after 20 min when not in use, pause setting kept stored with max movement speed of 2.5 m/sec. Structure mechanics in tempered, rectified stainless steel with interchangeable plungers pull/push on the same floor, block screw and double hook. Provided with wooden case.

Tech. Code	GR45 Euro	Range mm	A mm	E mm
D0103300	900,00	0 ÷ 300	410	12 x 4
D0103400	(939,00)	0 ÷ 400	510	12 x 4
D0103500	(1103,00)	0 ÷ 500	610	12 x 4
D0103600	(1221,00)	0 ÷ 600	710	12 x 4
D0103800	(1774,00)	0 ÷ 800	910	12 x 4
D01031000	(2187,00)	0 ÷ 1000	1110	12 x 4

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232



## MOVABLE BRIDGES

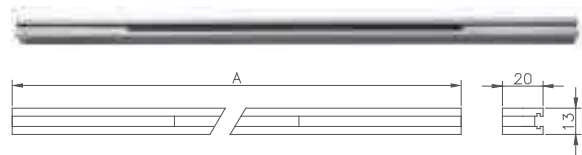
ALPAA

INOX

ART. ACC08

Movable bridge for mounting depth caliper code D0103.

Tech. Code	GR45 Euro	A mm	Weight kg
D0112400	597,00	400	0.570
D0112500	(690,00)	500	0.690
D0112600	(892,00)	600	0.830



## SMALL HOLES DEPTH DIGITAL CALIPERS IP67

ALPAA MEGAline

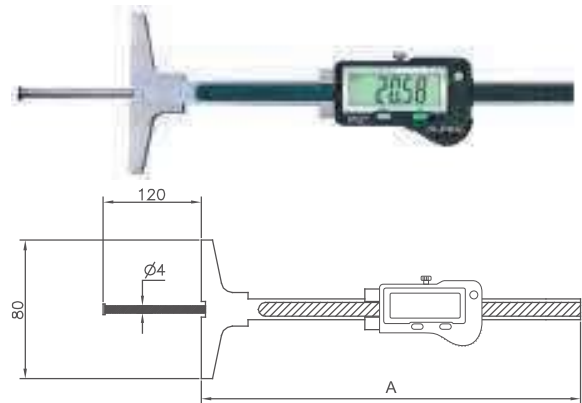


ART. AA083

0,01mm resolution - Swiss technology with data output and protection IP67. (full submersion) also cable connected. Automatic power on, by moving the vernier along its rod. (SIS system) pausing after 20 min when not in use, pause setting kept stored with max movement speed of 2.5 m/sec. Structure mechanics in tempered, rectified stainless steel. Hole diameter minimum from 6 mm. Provided with wooden case.

Tech. Code	GR45 Euro	Range mm	A mm	Bar section mm	Pin mm
D0111120	(720,00)	0 ÷ 120	220	4	7,8 x 0,9
D011120S	(646,00)	0 ÷ 120	220	4	5,8 x 0,6

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232



## DIGITAL DEPTH CALIPERS IP54

ALPAA

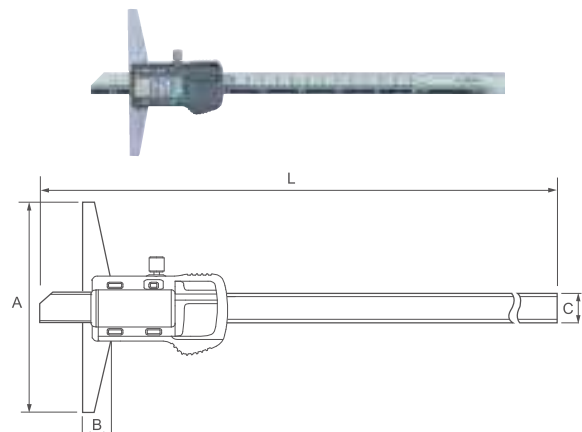


ART. AA101

0.01mm resolution - Vernier with locking screw system, ON/OFF button, incremental measuring and zero-setting at any position. Absolute origin measuring function. mm/inch conversion.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	L mm
D0021200	137,00	0 ÷ 200	100	11	14,5	285
D0021300	220,00	0 ÷ 300	150	13,5	14,5	390

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DOUBLE HOOK DIGITAL DEPTH CALIPERS IP54

ALPAA

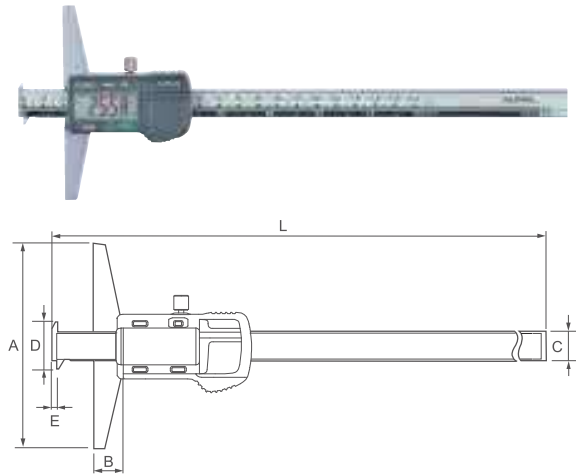
IP	0,01	ABS	LCD	INOX	mm	3V		
54	mm				inch	CR2032		

ART. AA103

0,01mm resolution - Vernier with locking screw system, ON/OFF button, incremental measuring and zero-setting at any position. Absolute origin measuring function. mm/inch conversion.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	E mm	L mm
D0022200	202,00	0 ÷ 200	100	11	14,5	26,4	4	285
D0022300	270,00	0 ÷ 300	150	13,5	14,5	26,4	4	390

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## PIN TYPE DIGITAL DEPTH CALIPERS IP54

ALPAA

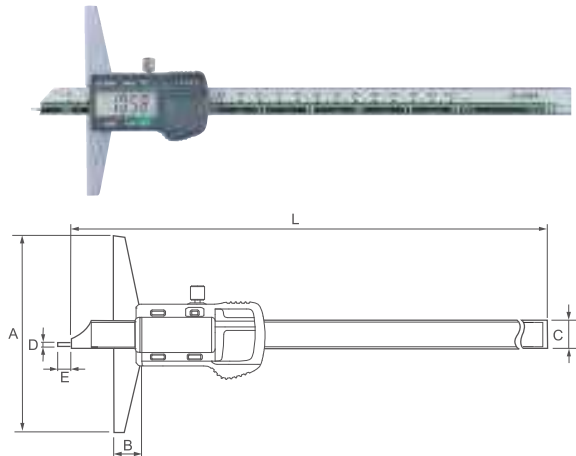
IP	0,01	ABS	LCD	INOX	mm	3V		
54	mm				inch	CR2032		

ART. AA105

0,01mm resolution - Vernier with locking screw system, ON/OFF button, incremental measuring and zero-setting at any position. Absolute origin measuring function. mm/inch conversion.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	E mm	L mm
D0023200	169,00	0 ÷ 200	100	11	14,5	∅ 1,5	6	285
D0023300	235,00	0 ÷ 300	150	13,5	14,5	∅ 1,5	6	390

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## INSIDE GROOVES DIGITAL CALIPERS IP67

ALPAA MEGAline

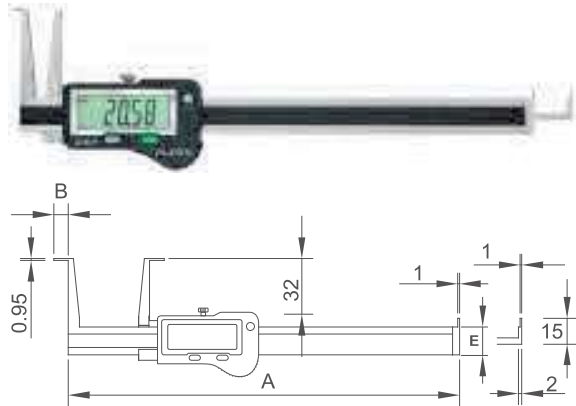
IP	0,01	ABS	LCD	INOX	mm	3V		
67	mm				inch	CR2032		

ART. AA086

0,01mm resolution - Swiss technology with data output and protection IP67. (full submersion) also cable connected. Automatic power on, by moving the vernier along its rod. (SIS system) pausing after 20 min when not in use, pause setting kept stored with max movement speed of 2.5 m/sec. Structure mechanics in tempered, rectified stainless steel. Locking screw. Provided with ABS casing.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	E mm
D014610170	(680,00)	10 ÷ 170	230	3,5	16,5 x 4
D014620180	(651,00)	20 ÷ 180	230	8,5	16,5 x 4

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity-cable RS232



## INSIDE GROOVES DIGITAL CALIPERS

ALPAA

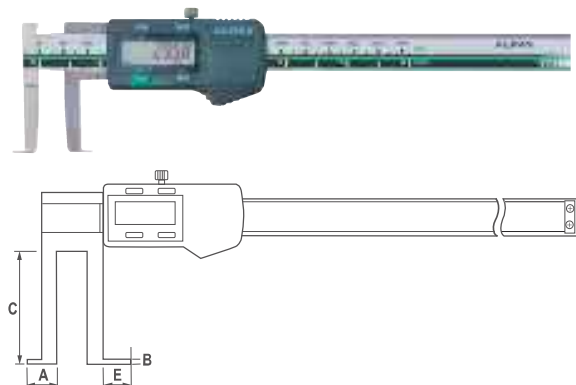
IP	0,01	LCD	INOX	3V		
40	mm			CR2032		

ART. AA179

0,01mm resolution - Metal casing, ON/OFF button, vernier with locking screw, pre-setting function.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	E mm
D0156150	155,00	14 ÷ 150	12	1	30	5
D0156200	205,00	18.5 ÷ 200	13	1	40	5
D0156300	284,00	17 ÷ 300	15	1.5	50	5
D0156500	404,00	35 ÷ 500	33	1.5	120	8

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DIGITAL CALIPERS WITH INTERCHANGEABLE TIPS

ALPAA

IP	0,01	LCD	INOX	mm	3V		i
40	mm			inch	CR2032		PDF

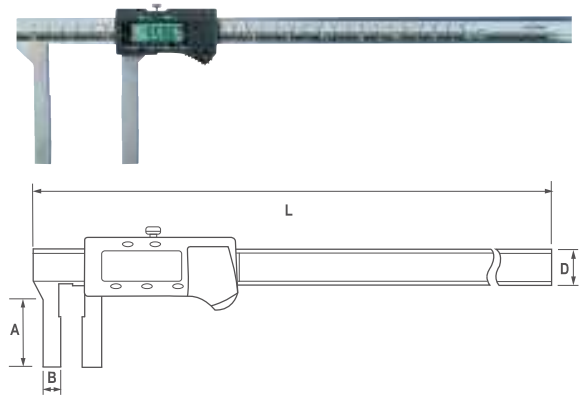
ART. AA077

0.01mm resolution (ON/OFF) button, zero setting at any position and incremental zero setting (ABS), vernier with locking screw, complete with a set of M2.5 thread probe tips. Useful for external and internal measure.

Different tips to be ordered separately, see table at page D.41

Tech. Code	GR45 Euro	Range internal mm	Range External mm	A mm	B mm	D mm	L mm
D0160300	490,00	40 ÷ 300	0 ÷ 300	75	12	19	430
D0160500	650,00	50 ÷ 500	0 ÷ 500	88	16	23	680

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## INSIDE/OUTSIDE GROOVES DIGITAL CALIPERS IP67

ALPAA MEGAline

IP	0,01	LCD	INOX	mm	3V		i
67	mm			inch	CR2032		PDF

ART. AA084

Swiss made electronics, resolution 0,01 mm with data output and protection IP67 - Hardened stainless steel structure, ON/OFF button, zero setting at any position, cursor with locking screw, interchangeable threaded caps. Provided with couple of spherical threaded caps 3 mm and wooden case.

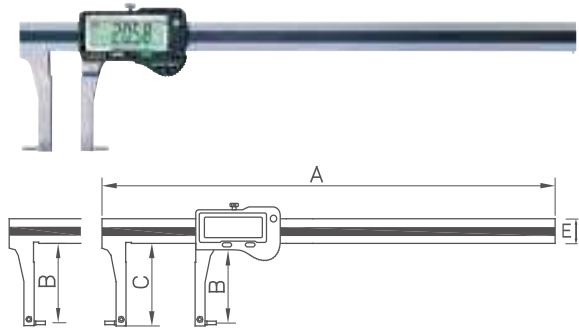
D0182250 - Complete with a pair of terminal cylindricals with spherical contact Ø 2,5mm

D0182350 and D0182450 - Complete with a pair of terminal cylindricals with spherical contact Ø 3mm and adapting sleeves M2,5

Different tips to be ordered separately, see page D.41

Tech. Code	GR45 Euro	Range int./ext. mm	A mm	B int./est. mm	C mm	E mm
D0182250	960,00	24 ÷ 250/0 ÷ 210	332	52 / 61	64	16.5 x 4
D0182350	1100,00	42 ÷ 400/0 ÷ 320	470	96 / 100	103	17 x 5
D0182450	1180,00	42 ÷ 500/0 ÷ 420	570	96 / 100	103	17 x 5

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232



## INSIDE/OUTSIDE GROOVES DIGITAL CALIPERS IP54

ALPAA MEGAline

IP	0,01	LCD	INOX	mm	3V		i
54	mm			inch	CR2032		PDF

ART. AA081

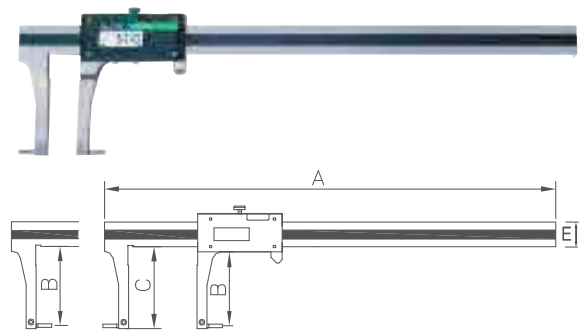
Swiss made electronics, resolution 0,01 mm - Hardened stainless steel structure, protected against dust, water resistant, ON/OFF button, zero setting at any position, cursor with locking screw, interchangeable threaded caps. Provided with couple of spherical threaded caps and wooden case.

D0181650 - Complete with a pair of cylindrical terminals Ø 3mm and adapting sleeves M2,5

Different tips to be ordered separately, see page D.41

Tech. Code	GR45 Euro	Range int./ext. mm	A mm	B int./est. mm	C mm	E mm
D0181650	(1539,00)	44 ÷ 650/0 ÷ 570	720	96 / 100	103	22x5

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0003USB	261,00	Cable Opto - USB
D0003RS232	175,00	Cable Opto - RS232





## UNIVERSAL DIGITAL CALIPERS WITH DIAL INDICATOR IP54

ALPA MEGAline

IP	0,01	LCD	INOX	mm	3V	i
54	mm			inch	CR2032	PDF

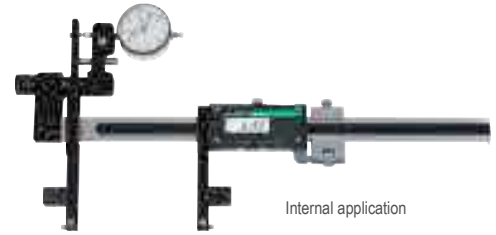
### ART. AA120

Accuracy  $\pm 0,02$  mm. Resolution 0,01 mm.  
Protected against dust, water resistant, Swiss made electronics, ON/OFF button, zero setting at any position, cursor with locking screw, fine adjustment, interchangeable threaded caps. Provided with dial gauge 0,01  $\varnothing$  40 mm, pair of spherical threaded caps  $\varnothing$  3 mm. Analogical version available on request.

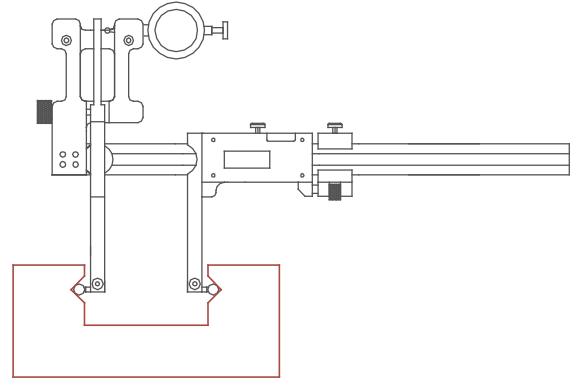
Different tips to be ordered separately, see page D.41

Tech. Code	GR45 Euro	Range mm	Bar section mm	Resolution mm
D0325200	2069,00	20 + 200 x 60	18 x 4	0.01
D0325300	2650,00	24 + 300 x 80	22 x 5	0.01
D0325500	2770,00	24 + 500 x 80	22 x 5	0.01

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0003USB	261,00	Cable Opto - USB
D0003RS232	175,00	Cable Opto - RS232



Internal application



## INSIDE/OUTSIDE DIGITAL CALIPERS WITH LONG POINTS

ALPA

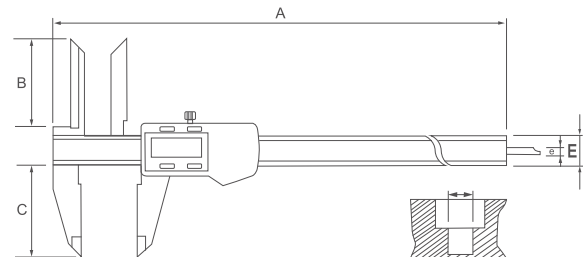
IP	0,01	LCD	INOX	mm	3V	i
40	mm			inch	CR2032	PDF

### ART. AA104

0.01mm resolution - metal casing, satin-chromed scale, ON/OFF button, zero setting at any position, vernier with locking screw.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	e mm	E mm
D0061150	191,00	0 + 150	235	45	40	3,7 x 1,5	16 x 4
D0061200	185,00	0 + 200	285	45	50	3,7 x 1,5	16 x 4
D0061300	279,00	0 + 300	400	45	62	3,7 x 1,5	16 x 4

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## INSIDE GROOVES DIGITAL CALIPERS WITH INTERCHANGEABLE TIPS

ALPA

IP	0,01	LCD	INOX	3V	i
40	mm			CR2032	PDF

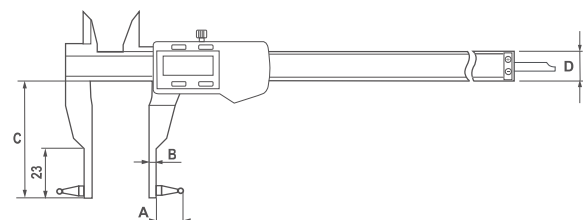
### ART. AA176

0.01mm resolution - metal casing, ON/OFF button, zero setting at any position, vernier with locking screw, pre-setting function.

Tips to be ordered separately, see table page D.41

Tech. Code	GR45 Euro	Measuring range x sphere $\varnothing 1 - \varnothing 6.5$	Measuring range x sphere $\varnothing 7 - \varnothing 12$	A mm	B mm	C mm	D mm
D0151150	224,00	34 + 150 mm	46 + 150 mm	12/18	5	50	23
D0151200	262,00	34 + 200 mm	46 + 200 mm	12/18	5	50	23

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DIAL CALIPERS

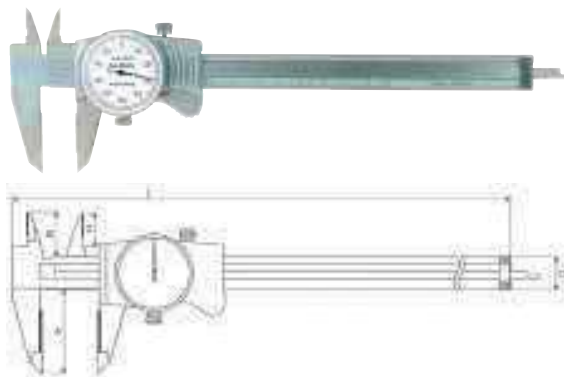
ALPA



### ART. D0210

Rotating dial device with locking screw, satin-chromed scale and guarded rack, vernier with locking-screw.

Tech. Code	GR45 Euro	Range mm	Resolution mm	A mm	B mm	C mm	D mm	L mm
D021015002	60,00	0 ÷ 150	0.02	40	20	14	16	235
D021015001	64,00	0 ÷ 150	0.01	40	20	14	16	235
D021020002	80,00	0 ÷ 200	0.02	50	21	17	16	285
D021020001	85,00	0 ÷ 200	0.01	50	21	17	16	285
D021030002	125,00	0 ÷ 300	0.02	62	22	16	16,5	400
D021030001	151,00	0 ÷ 300	0.01	62	22	16	16,5	400



## DIAL CALIPERS

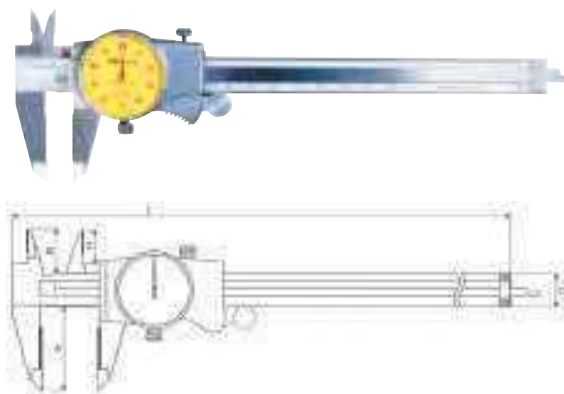
Mitutoyo



### ART. SERIE 500

Rotating dial with locking screw and new font more readable characters, rod in hardened ground steel, slide gauge with locking screw.

Tech. Code	GR47 Euro	Range mm	Resolution mm	A mm	B mm	C mm	D mm	L mm
D0213150001	136,00	0 ÷ 150	0.01	40	21	16,5	16	231
D0213200001	258,00	0 ÷ 200	0.01	50	24,5	20	16	288



## DIAL CALIPERS

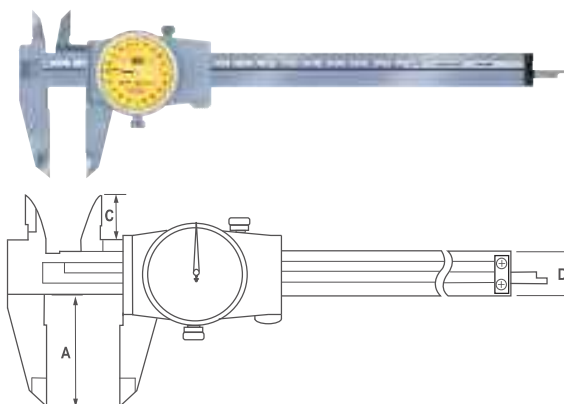
VWV TSP



### ART. CCMA-M

Rotating dial device with locking screw, patented shock-proof device, satin-chromed scale and hardened, ground guarded rack, vernier with locking-screw.

Tech. Code	GR49 Euro	Range mm	Resolution mm	A mm	C mm	D mm
D0216150001	(138,00)	0 ÷ 150	0.01	40	13	15.5
D0216150002	(130,00)	0 ÷ 150	0.02	40	13	15.5



## MONOBLOCK VERNIER CALIPERS

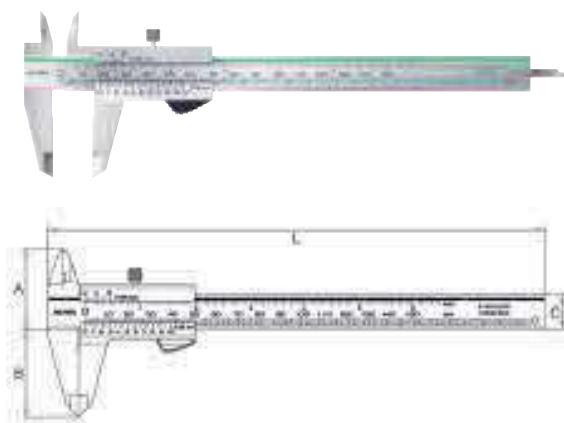
ALPA



### ART. AB012

Vernier 1/20 resolution 0,05 mm, high precision, caliper and cursor in hardened steel, matt chrome scale, cursor with locking screw.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	L mm
D0205100	41,00	0 ÷ 100	30	30	13 x 3	170
D0205150	41,00	0 ÷ 150	37	40	16 x 3	228
D0205200	65,00	0 ÷ 200	40	50	16 x 3,6	286
D0205300	131,00	0 ÷ 300	42	60	16 x 4	400



## MONOBLOCK VERNIER CALIPERS

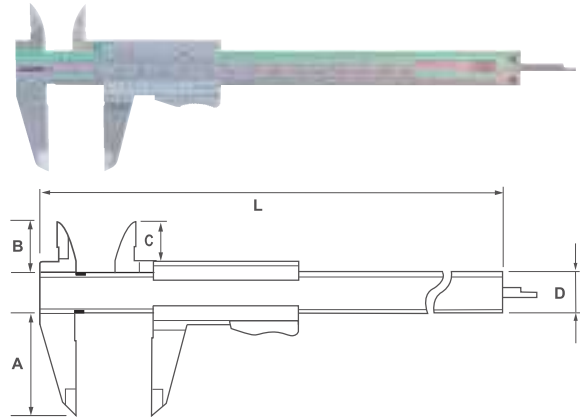
ALPA



### ART. AB011

Vernier 1/20 reading 0.05 mm, matt chrome scale, latch with lever locking.

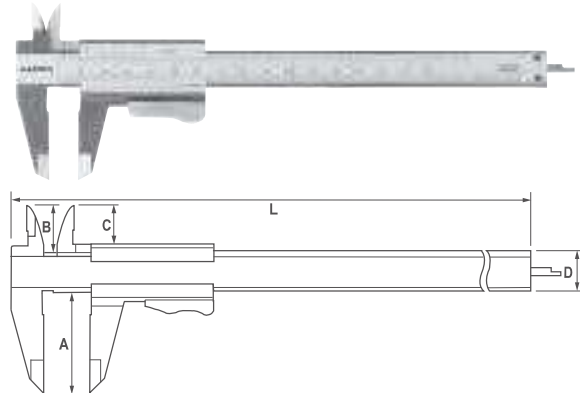
Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	L mm
D0206150	47,00	0 ÷ 150	40	20	15	16 x 3	230
D0206200	65,00	0 ÷ 200	50	21	17	16 x 3	280



### ART. AB025

Vernier 1/20 reading 0.05 mm, matt chrome scale, slider with lever lock.

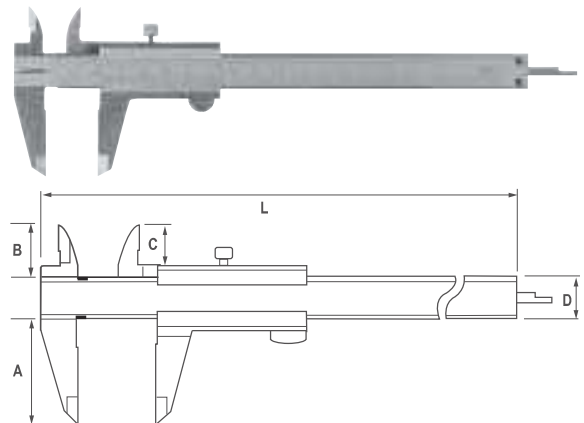
Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	L mm
D0225150	29,00	0 ÷ 150	40	20	15	16	230
D0225200	43,00	0 ÷ 200	50	21	17	16	280



### ART. AB017

Monoblock stainless steel structure, vernier 1/20, graduation 0.05 mm. Matt-chrome finish scale. Locking screw.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	L mm
D0235100	28,00	0 ÷ 100	40	18	13	11	160
D0235150	27,00	0 ÷ 150	40	20	15	16	230
D0235200	38,00	0 ÷ 200	50	21	17	16	280
D0235300	78,00	0 ÷ 300	60	17	27	19	400



## MONOBLOC VERNIER CALIPERS

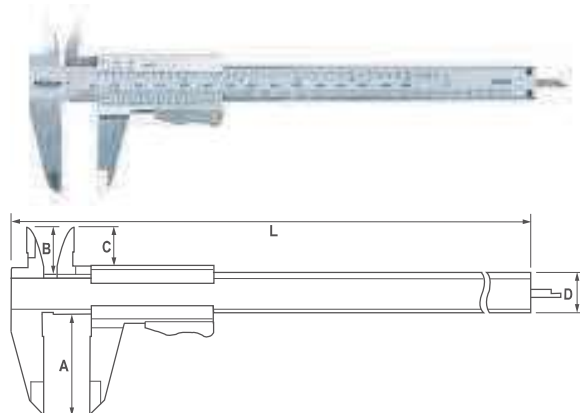
Mitutoyo



### ART. SERIES 531

Nonius 1/20 reading 0.05 mm. Matt chrome scale. Slider with lever lock. Standard version.

Tech. Code	GR47 Euro	Range mm	A mm	B mm	C mm	D mm	L mm
D0226150	45,00	0 ÷ 150	40	21.5	17	16	229



## MONOBLOCK VERNIER CALIPERS

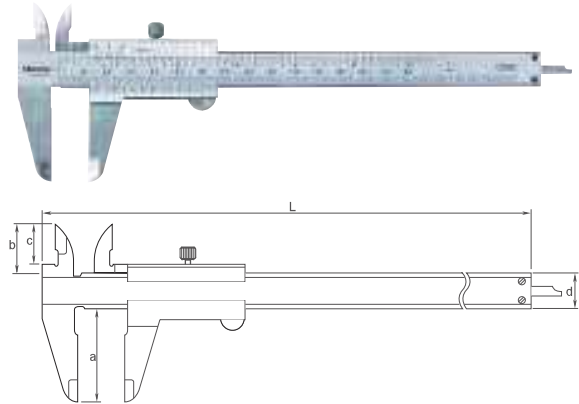
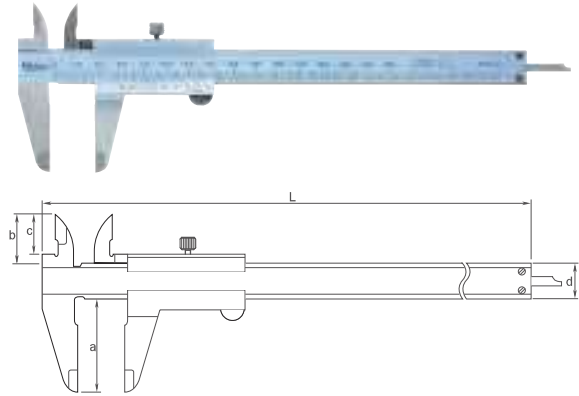
Mitutoyo



### ART. SERIE 530

Vernier 1/50 resolution 0,02 mm, high precision, caliper and cursor in hardened steel, matt chrome scale, cursor with locking screw.

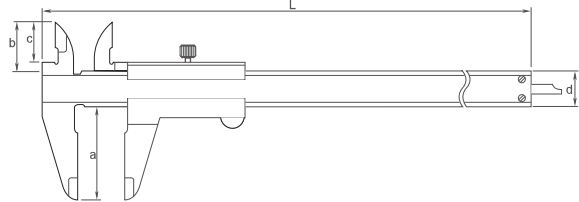
Tech. Code	GR47 Euro	Range mm	a mm	b mm	c mm	d mm	L mm
D0227150	44,00	0 ÷ 150	40	21	17	16	229
D0227200	72,00	0 ÷ 200	50	24,5	20,5	16	288
D0227300	222,00	0 ÷ 300	64	27,5	22	20	404



### ART. SERIE 530

Vernier 1/20 resolution 0,05 mm, caliper and cursor in hardened steel, matt chrome scale, cursor with locking screw.

Tech. Code	GR47 Euro	Range mm	a mm	b mm	c mm	d mm	L mm
D0228150	36,00	0 ÷ 150	40	21	17	16	229
D0228200	92,00	0 ÷ 200	50	24,5	20,5	16	288



## MONOBLOCK VERNIER CALIPERS

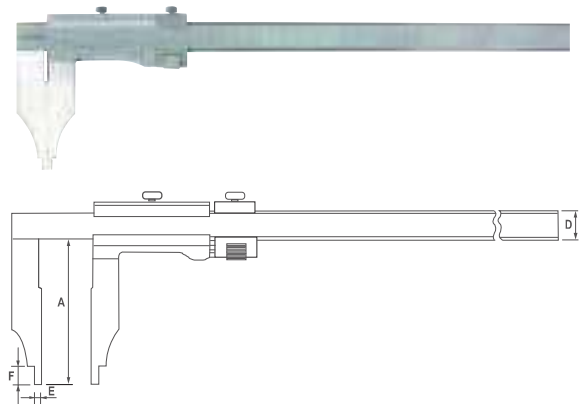
ALPA



### ART. AB035

Monoblock Stainless steel structure, vernier 1/50, 0.02 mm reading, satin-chromed scale, vernier with micrometric-adjustment, locking-screw.

Tech. Code	GR45 Euro	Range mm	A mm	D mm	E mm	F mm
D0240300/90	158,00	0 ÷ 300	90	20	5	12
D0240300/150	273,00	0 ÷ 300	150	24	5	12
D0240400/125	300,00	0 ÷ 400	125	25	10	15
D0240500/150	325,00	0 ÷ 500	150	28	10	15
D0240600/150	390,00	0 ÷ 600	150	28	10	15
D0240600/200	492,00	0 ÷ 600	200	28	10	15
D0240600/300	780,00	0 ÷ 600	300	30	10	15
D0240800/150	513,00	0 ÷ 800	150	32	10	20
D02401000/150	740,00	0 ÷ 1000	150	32	10	20
D02401000/300	1125,00	0 ÷ 1000	300	32	10	20
D02401000/500	1900,00	0 ÷ 1000	500	32	10	20
D02401500/200	1594,00	0 ÷ 1500	200	40	10	20
D02401500/300	(2052,00)	0 ÷ 1500	300	40	10	20
D02402000/300	(2780,00)	0 ÷ 2000	300	40	10	20
D02403000/300	(4400,00)	0 ÷ 3000	300	40	10	20



### ART. AB030

Hardened stainless steel monoblock caliper. Satin-chromed readout scale. Etched, precision graduation, easy to read and long-lasting. Raised slider for easy movement. Slider locking screw with micrometric adjustment and lapped contact surfaces. Slide stop at beam end. Serial number. Manufactured according to DIN 862. Supplied in case.

Tech. Code	GR45 Euro	Range mm	Accuracy mm	A mm	E mm	D mm
D0250300	(629,00)	0 ÷ 300	± 0.02	90	5	24 x 5
D0250400	(699,00)	0 ÷ 400	± 0.02	90	5	24 x 5
D0250500	(830,00)	0 ÷ 500	± 0.02	115	10	28,5 x 6
D0250600	(1013,00)	0 ÷ 600	± 0.02	115	10	28,5 x 6
D0250800	(1205,00)	0 ÷ 800	± 0.02	150	10	38,5 x 8
D02501000	(1336,00)	0 ÷ 1000	± 0.02	150	10	38,5 x 8
D02501200	(1923,00)	0 ÷ 1200	± 0.02	150	10	38,5 x 8
D02501500	(2564,00)	0 ÷ 1500	± 0.02	150	10	38,5 x 8
D02502000	(3855,00)	0 ÷ 2000	± 0.02	200	10	48 x 10,5

## INSIDE GROOVES VERNIER CALIPERS

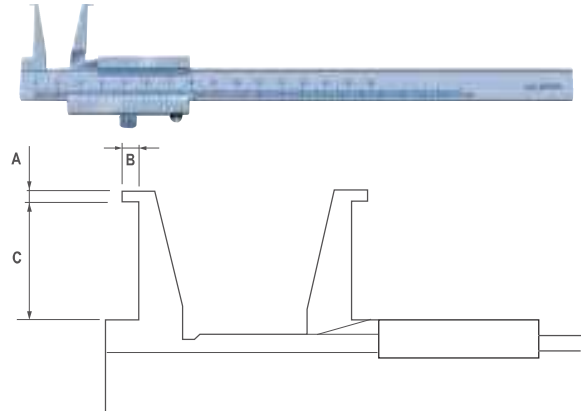
ALPA



ART. AB067

Stainless steel structure, vernier 1/20, 0.05 mm reading, satin-chromed scale, vernier with locking-screw.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	Weight g
D0270160	92,00	9.5 + 160	0.9	3	25	190
D0270200	148,00	26 + 200	3	7	60	200
D0270300	231,00	60 + 300	5	10	100	250



## DEPTH VERNIER CALIPERS

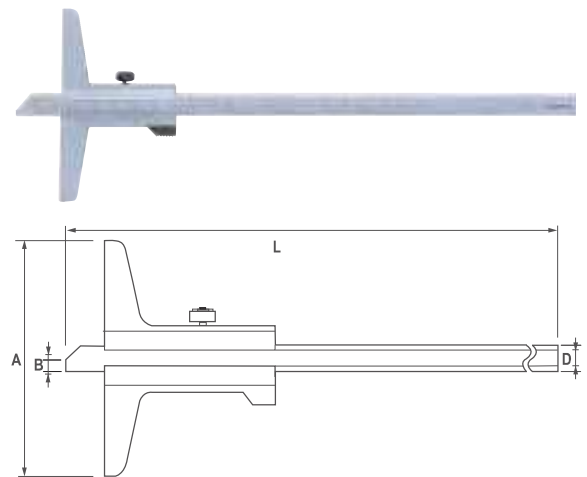
ALPA



ART. AB055

Stainless steel structure, vernier 1/20, 0.05 mm reading, satin-chromed scale, vernier with locking-screw.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	D mm	L mm
D0310150	41,00	0 + 150	100	5	10	250
D0310200	55,00	0 + 200	100	5	10	300
D0310400	131,00	0 + 400	150	4	11	500
D0310500	180,00	0 + 500	150	4	11	600
D03101000	683,00	0 + 1000	200	7.5	18	1160



## DOUBLE HOOK DEPTH VERNIER CALIPERS

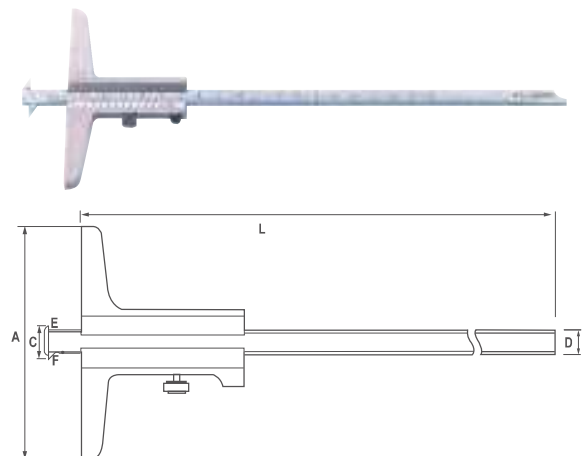
ALPA



ART. AB062

Stainless steel structure, vernier 1/20, 0.05 mm reading, satin-chromed scale, vernier with locking-screw.

Tech. Code	GR45 Euro	Range mm	A mm	C mm	D mm	E mm	F mm	L mm
D0320200	129,00	0 + 200	100	22	10	6	6	260
D0320300	152,00	0 + 300	100	22	10	6	6	370





## GEAR TOOTH DIGITAL CALIPERS

ALPA

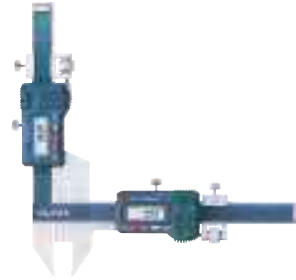
IP	0,01	LCD	INOX	mm	1,5V	
40	mm			inch	SR44	

ART. AA140

Stainless steel digital caliper monoblock, suitable for measuring the thickness of the teeth of the spur gears bevel with straight or helical teeth. LCD display 8 mm. Carbide jaws. Locking and fine adjustment screw system on both sides, micrometric adjustment, on/off button, zero setting at any position, mm/inch conversion.

Tech. Code	GR45 Euro	Module	Resolution mm	Weight g
D03311/25DIG	251,00	1 - 25	0.01	400
D03315/50DIG	317,00	5 - 50	0.01	400

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1,5V SR44



## GEAR TOOTH VERNIER CALIPERS

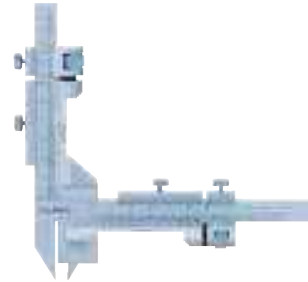
ALPA

INOX	
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ART. AB140

Stainless steel structure, graduation 0,02mm double vernier caliper. Locking screw system, Micrometric movement, carbide measurement surfaces.

Tech. Code	GR45 Euro	Module	Resolution mm
D03301/25	120,00	1 - 25	0.02
D03305/50	213,00	5 - 50	0.02



## WELD SEAM CALIPERS

ALPA

IP	0,01	LCD	INOX	1,5V		
40	mm			SR44		

ART. D0335

Chromed stainless steel, 60° - 70° - 80° - 90° angles

Tech. Code	GR45 Euro	Range mm	Model
D03350/20DIG	101,00	0 + 20	Digital
D03350/20MEC	39,00	0 + 20	Mechanical

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1,5V SR44



## Related products

### WRK CUT RESISTANCE GLOVES COATED IN POLYURETHANE - C CUT

Tech. Code	Size	EU size
K234607	7	S
K234608	8	M
K234609	9	L
K234610	10	XL

Product available in CAP K





# Mitutoyo

## Measure your business

### SINCE 1934

## DIGITAL MICROMETERS IP67

ALPA MEGAwHz

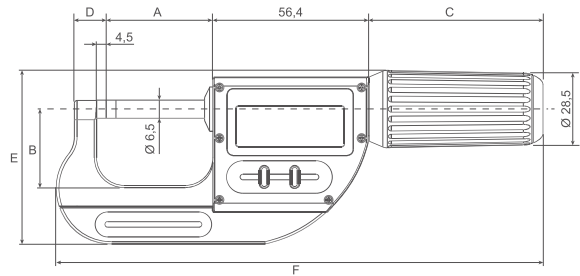


### ART. BA010

Automatic wake-up by moving the thimble, sleeping mode after 20 min. when not in use. Position memorized in sleeping mode (S.I.S. system), absolute system. Water protected for heavy work with coolants and lubricants, protection rating IP67 according to IEC 60529, even when connected. Measuring range 0-102 mm covered by just 3 instruments, set of 3 micrometers available 0-102 mm. Quick measuring cylinder displacement (10 mm / rotation). Adjustable measuring force 5N/10N (D1111000030), repeatability never achieved before. Thimble made of special material. Proximity cable. Non-rotating spindle.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	E mm	F mm
D1111000030	451,00	0 ÷ 30	37.3	27.5	68	12.5	63	181
D1111030060	649,00	30 ÷ 66	73.3	43	74	13.5	86	230
D1111066102	802,00	66 ÷ 102	109.3	60	74	14.5	106	269

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232



## DIGITAL MICROMETERS IP67

BOWERS

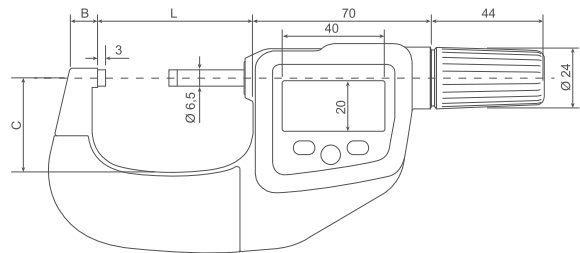


### ART. BA015

Resolution 0.001 mm - Automatic wake-up by moving the thimble. Automatic power off. Protection rating IP67. Data transfer via Bluetooth. Displacement of thimble 1 mm / turn.

Tech. Code	GR45 Euro	Range mm	B mm	C mm	L mm
D1113025	560,00	0 ÷ 25	7.5	25	32.5
D1113050	710,00	25 ÷ 50	11	37	61
D1113075	770,00	50 ÷ 75	11.5	50	86
D1113100	810,00	75 ÷ 100	13.5	63	112

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## QUICK FEED DIGITAL MICROMETERS IP65

ALPA Exacto



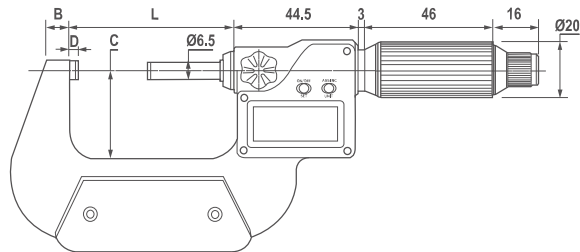
### ART. BA020

0.001mm resolution - Protection against water splash and particles, equipped with hardened metal contact surfaces. Ø 6,5 mm spindle, ON/OFF button - zero/ABS - mm/inch

Each rotation is equal to 2mm.

Tech. Code	GR45 Euro	Range mm	B mm	C mm	D mm	L mm
D1105025	185,00	0 ÷ 25	6	25	3	34.5

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1.5V SR44



## DIGITAL MICROMETERS IP65

Mitutoyo

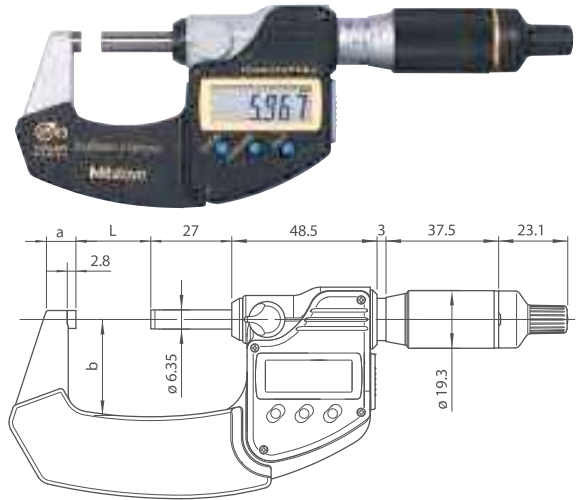


### ART. SERIE 293 - QUANTUMIKE

This micrometer, with a screw pitch of 2mm/rev, offers a speed of displacement of the stem four times higher than that of a common micrometer. The QuantuMike offers an Instrumental error of only  $\pm 1\mu\text{m}$  (for models with 75mm or less). The double clutch allows the use of the Instrument with one hand. The IP65 protection grants an excellent resistance to liquids and powders. Data output.

Tech. Code	GR47 Euro	Range mm	a mm	b mm	L min. mm
D110700025	369,00	0 + 25	9	25	0

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1.5V SR44
D0004USBB	(138,00)	Digimatic cable Input Tool Direct, model IP65, 2 mt - USB
D0001RS232B	102,00	Digimatic cable with data key model IP6x, 1 mt-RS232



## DIGITAL MICROMETERS IP65

ALPAV Exacto

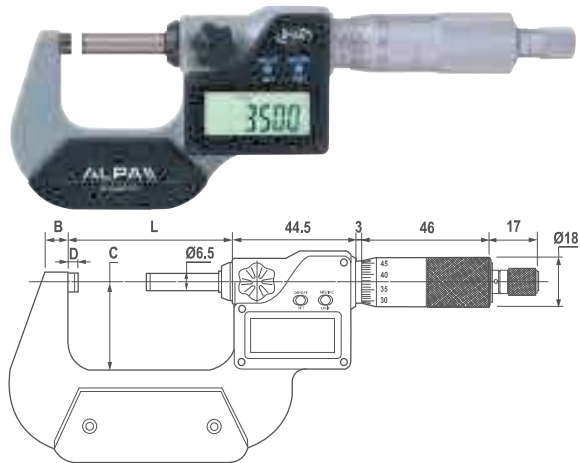


### ART. BA025

0.01 mm resolution - excellent protection against penetration of particles and splash, absolute/incremental measuring at any position, satin-chromed graduated thimble with sensitive friction, click-stop device, heat-insulated frame cover. Function to return to absolute scale.

Tech. Code	GR45 Euro	Range mm	B mm	C mm	D mm	L mm
D1110000025	141,00	0 + 25	6	25	3	34.5
D1110025050	165,00	25 + 50	8	32	3	59.5
D1110050075	222,00	50 + 75	8	44.5	3	84.5
D1110075100	265,00	75 + 100	8	57	3	109.5
D1110100125	282,00	100 + 125	10	70	3	135
D1110125150	297,00	125 + 150	10	82	3	160.5
D1110150175	333,00	150 + 175	12	94.5	5.5	186
D1110175200	355,00	175 + 200	12	107	5.5	211.5
D1110200225	393,00	200 + 225	23	129	5.5	236
D1110225250	426,00	225 + 250	23	142.5	5.5	261.5
D1110250275	453,00	250 + 275	23	155	5.5	287
D1110275300	480,00	275 + 300	23	170	5.5	310

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1.5V SR44



## DIGITAL MICROMETERS IP65

Mitutoyo

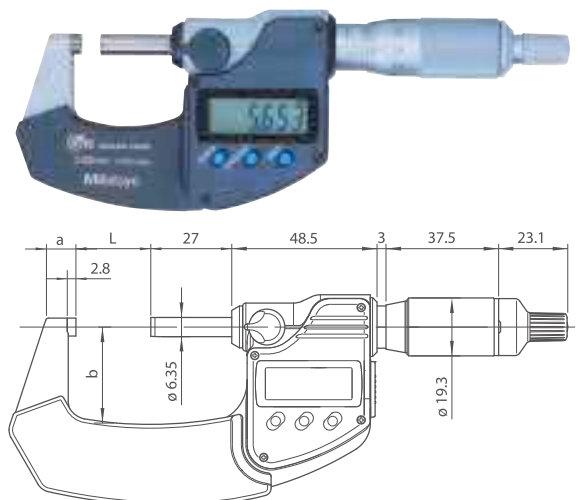


### ART. SERIE 293

High accuracy micrometer. Offers a high resistant structure structure and IP65 protection. Incredible accuracy with  $\pm 1\mu\text{m}$  of Instrument error (models with measuring range 75 mm or less). Clutch on the shank.

Tech. Code	GR47 Euro	Range mm	a mm	b mm	L min. mm
D1109000025	237,00	0 + 25	6,5	25	0
D1109025050	332,00	25 + 50	7,5	32,5	25
D1109050075	400,00	50 + 75	10,1	47	50
D1109075100	456,00	75 + 100	11,5	60	75

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1.5V SR44



## DIGITAL MICROMETERS

ALPAA Exacto

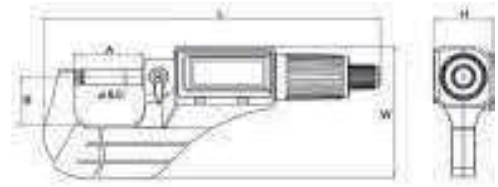


ART. BA027

Resolution 0.001 mm - Tungsten carbide tipped, heat-insulated painted frame cover.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	L mm	W mm	H mm
D111225	90,00	0 + 25	31.5	22.5	155	60.2	27.3
D111250	120,00	25 + 50	56.5	31	185.4	77.9	27.3

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## EXTERNAL MICROMETERS WITH DIAL INDICATOR

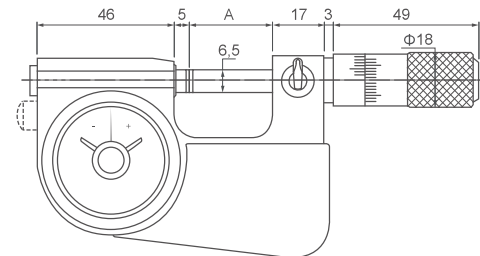
ALPAA Exacto



ART. BB040

Tungsten carbide tipped retractable anvil with indicator for precision measurement of mass-produced parts, 0.001 mm resolution. Tolerance reference values in relation to the go/not go based measurements, adjustable anvil control switch, satin-chromed graduated thimble with sensitive friction, stop lever, heat-insulated frame cover.

Tech. Code	GR45 Euro	Range mm	A mm	L mm
D112000025	376,00	0 + 25	28.50	96.50
D1120025050	400,00	25 + 50	53.50	121.50



## EXTERNAL MICROMETERS

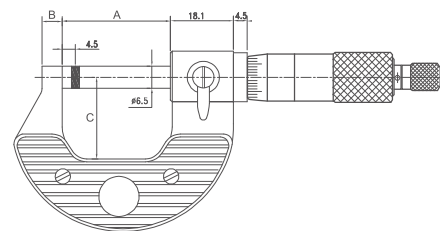
ALPAA Exacto



ART. BB002

0.01 mm resolution - Ø 6,5 mm spindle. Sensitive clutch on the graduated drum to allow measurement with one hand, bow with thermo-insulating pillows.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm
D112500025	42,00	0 + 25	7.1	32.5	25.5
D1125025050	64,00	25 + 50	7.1	57.5	30.5
D1125050075	83,00	50 + 75	8	83	45
D1125075100	88,00	75 + 100	8	108	58
D1125100125	108,00	100 + 125	8	133	67.5
D1125125150	120,00	125 + 150	8	158	82
D1125150175	158,00	150 + 175	8	183	93
D1125175200	206,00	175 + 200	8	208	108





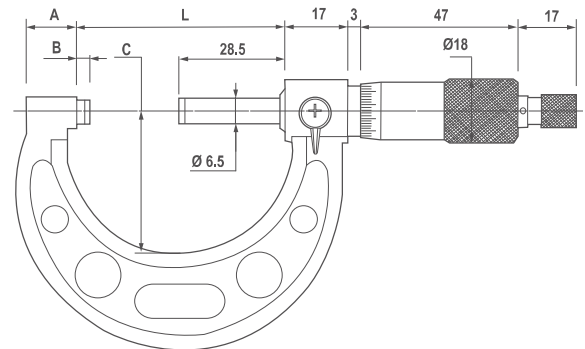
## EXTERNAL MICROMETERS



ART. BB015

0.01 mm resolution - 6,50 mm  $\varnothing$  spindle - satin-chromed graduated feeding unit assay, sensitive friction, stop lever, painted frame cover.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	L mm
D116000025	35,00	0 + 25	9	3	28	32
D1160025050	38,00	25 + 50	14	3	38	57
D1160050075	41,00	50 + 75	15	3	49	82
D1160075100	45,00	75 + 100	15	3	60	107
D1160100125	51,00	100 + 125	16.5	3	73	133
D1160125150	58,00	125 + 150	16.5	3	85	158
D1160150175	70,00	150 + 175	19.4	3	104	183
D1160175200	73,00	175 + 200	19.4	3	117	209
D1160200225	85,00	200 + 225	19.4	3	130	234
D1160225250	93,00	225 + 250	19.4	3	142	260
D1160250275	104,00	250 + 275	19.4	3	155	285
D1160275300	112,00	275 + 300	19.4	3	168	310



## EXTERNAL MICROMETERS

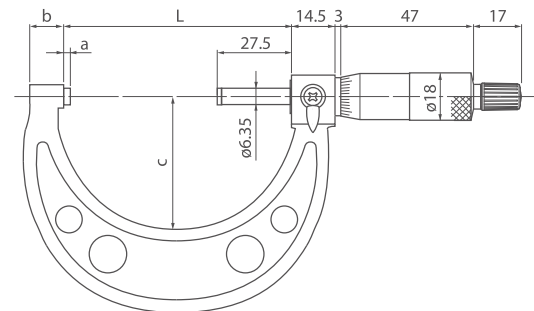


ART. SERIE 103

Resolution 0,01 mm - spindle diameter 6,35mm. Matt graduated thimble, sensitive friction, locking lever, painted frame.

Tech. Code	GR47 Euro	Range mm	a mm	b mm	c mm	L mm
D116500025	57,00	0 + 25	2.8	9	28	30,3
D1165025050	81,00	25 + 50	2.8	10	38	55,3
D1165050075	107,00	50 + 75	2.8	12	46	80,3
D1165075100	115,00	75 + 100	2.8	14	57	105,3
D1165100125	180,00	100 + 125	5.3	17	76	132,8
D1165125150	201,00	125 + 150	5.7	19	90	158,2
D1165150175	223,00	150 + 175	6.1	20	102	183,6
D1165175200	244,00	175 + 200	6.3	19	115	208,8

Mitutoyo



## EXTERNAL MICROMETERS SET



ART. BB020

0.01mm resolution - satin-chromed graduated feeding unit assay sensitive friction, stop lever, painted frame cover.

Tech. Code	GR45 Euro	Range mm	Instruments n°
D1175SET4	135,00	0 + 100	4
D1175SET6	230,00	0 + 150	6
D1175SET12	710,00	0 + 300	12

ALPA



## EXTERNAL MICROMETERS IN SET

Mitutoyo



### ART. SERIE 103

Resolution 0,01 mm - Spindle diameter 6,35mm. Matt graduated thimble, sensitive friction, locking lever, painted frame.

Tech. Code	GR47 Euro	Range mm	Instruments n°
D1177SET6	581,00	0 + 150	6



## EXTERNAL MICROMETERS

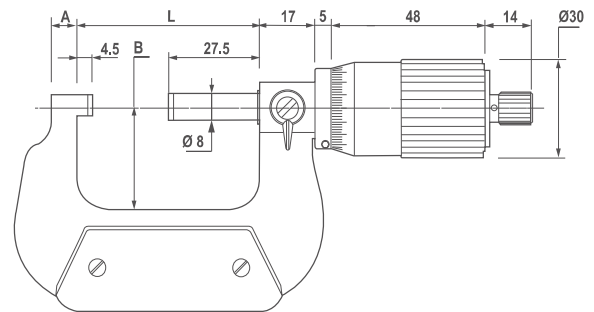
ALPAIN Exacto



### ART. BB030

Resolution 0.01 mm - Spindle diameter 8 mm.  
Screw thread pitch 1 mm, large satin chrome finish graduated thimble, sensitive friction drive, lever lock, heat-insulating frame cover.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	L mm
D1140000025	82,00	0 + 25	6	24	32
D1140025050	86,00	25 + 50	8	32	57
D1140050075	96,00	50 + 75	8	45	82
D1140075100	120,00	75 + 100	8	57	107
D1140100125	147,00	100 + 125	8	70	133
D1140125150	(160,00)	125 + 150	8	82	173
D1140150175	(180,00)	150 + 175	8	95	183
D1140175200	(213,00)	175 + 200	8	107	209



## MICROMETER HOLDER BASE

ALPAIN



### ART. BC060

Cast iron painted base, with light alloy clamps.  
For micrometers designed for up to 100mm measuring range.

Tech. Code	GR45 Euro	Material	Dimension mm
D12501	31,00	Cast Iron	165 x 115



## LARGE EXTERNAL MICROMETERS

ALPA Exacto



0.01

mm 6.5 mm

i

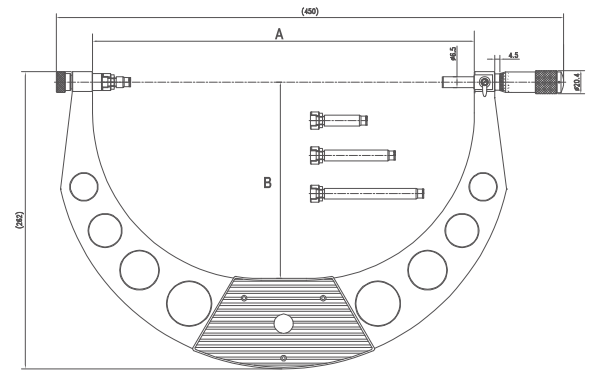
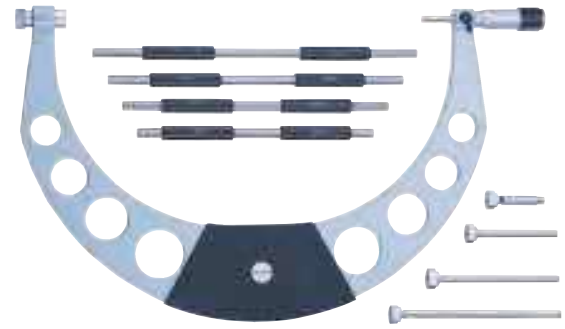
PDF

### ART. BB004

Ø 8 mm spindle, 0.01 mm resolution.

Satin-chromed graduated feeding unit assay, sensitive friction positioned onto the feeding unit assay, heat-insulating frame cover.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	Weight kg
D1123200300	501,00	200 ÷ 300	337	175	1.7
D1123300400	850,00	300 ÷ 400	437	225	2.5
D1123400500	932,00	400 ÷ 500	537	275	3



## LARGE EXTERNAL MICROMETERS

ALPA Exacto



0.01

mm 10 mm

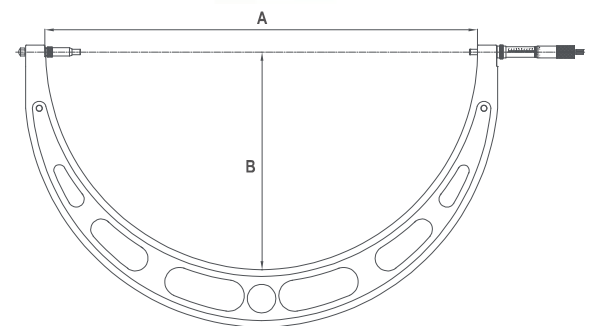
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### ART. BB008

Ø 10 mm spindle, 0.01 mm resolution.

Satin-chromed graduated thimble with sensitive friction, heat-insulating frame cover.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	Weight kg
D1124500600	1309,00	500 ÷ 600	644	325	3.7
D1124600700	1750,00	600 ÷ 700	745	375	4.3
D1124700800	2050,00	700 ÷ 800	846	425	4.6
D1124800900	2350,00	800 ÷ 900	948	475	5.6
D11249001000	2780,00	900 ÷ 1000	1050	525	6.8



## LARGE EXTERNAL MICROMETERS

ALPA



ART. BB006

Tungsten carbide tipped, 0.01mm reading - Satin-chromed graduated thimble with sensitive friction, stop lever, painted frame cover. Complete with zero-setting standards. Provided with interchangeable anvils

Tech. Code	GR45 Euro	Range mm	Arc structure
D12100100	180,00	0 ÷ 100	Full
D1210100200	279,00	100 ÷ 200	Full
D1210200300	295,00	200 ÷ 300	Full

Tech. Code	GR45 Euro	Range mm	Arc structure
D1210300400	347,00	300 ÷ 400	Tubular
D1210400500	403,00	400 ÷ 500	Tubular
D1210500600	475,00	500 ÷ 600	Tubular
D1210600700	561,00	600 ÷ 700	Tubular
D1210700800	653,00	700 ÷ 800	Tubular
D1210800900	787,00	800 ÷ 900	Tubular
D12109001000	879,00	900 ÷ 1000	Tubular
D121010001200	1525,00	1000 ÷ 1200	Tubular
D121012001400	1703,00	1200 ÷ 1400	Tubular
D121014001600	(1837,00)	1400 ÷ 1600	Tubular
D121016001800	(2037,00)	1600 ÷ 1800	Tubular
D121018002000	(2276,00)	1800 ÷ 2000	Tubular



### Related products

#### WRK POLYESTER GLOVES POLYURETHANE COATED

Tech. Code	Size	EU size
K23117	7	M
K23118	8	L
K23119	9	XL



The products are available in chapter K



# CALIBRATION LAB

Our experience in the field of measuring instruments goes back a long way to when companies started talking about ISO 9000 quality certification and the consequent need to periodically calibrate measuring and testing instruments. This increasingly pressing need of our customers led to the LINK CALIBRATION SERVICE LAB being established, which guarantees a high reliability and speed of the services provided. Our laboratory is able to calibrate instruments for the most varied applications in the various industrial sectors such as aerospace, automotive, medical, food and beverage and mechanical engineering in general.

## INSPECTION CERTIFICATE UNI EN ISO 9001:2008

Document issued by which reference to primary national standards is ensured.

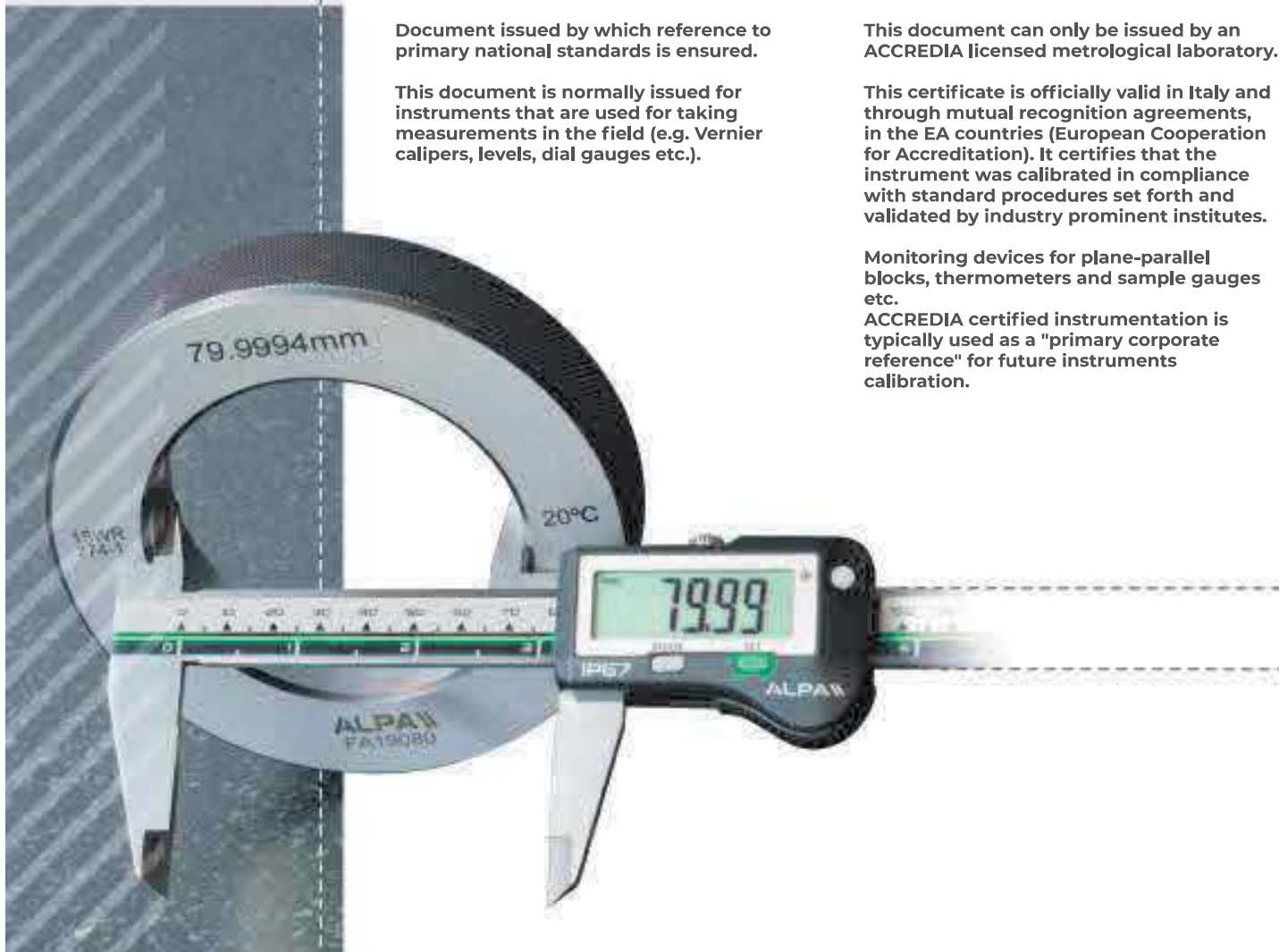
This document is normally issued for instruments that are used for taking measurements in the field (e.g. Vernier calipers, levels, dial gauges etc.).

## ACCREDIA CALIBRATION CERTIFICATE

This document can only be issued by an ACCREDIA licensed metrological laboratory.

This certificate is officially valid in Italy and through mutual recognition agreements, in the EA countries (European Cooperation for Accreditation). It certifies that the instrument was calibrated in compliance with standard procedures set forth and validated by industry prominent institutes.

Monitoring devices for plane-parallel blocks, thermometers and sample gauges etc.  
ACCREDIA certified instrumentation is typically used as a "primary corporate reference" for future instruments calibration.





### THREE POINTS INTERNAL MICROMETERS - BLUETOOTH - IP67



IP 67

0,001 mm
LCD
3V CR2032



#### ART. BA211

The digital micrometers XT give the operator the benefit of the traditional quality of Bowers tools combined electronic IP67 advance. The large range of the XT mechanical range allows, upon request of special heads, to solve the most different measurements issues. Heads to measure threads, grooves, deep holes and many other applications available on request.

Compositions in a wooden case complete with calibration rings.  
UKAS calibration certificates of micrometers and rings.

Tech. Code	GR45 Euro	Range mm	Depth mm	Accuracy $\mu$ m	$\varnothing$ ring mm
D1269025035	1952,75	25 + 35	66	4	35
D1269035050	2022,30	35 + 50	80	4	35
D1269050065	2247,00	50 + 65	80	5	65
D1269065080	2245,93	65 + 80	80	5	65
D1269080100	2210,00	80 + 100	100	5	80

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232

### THREE POINTS INTERNAL MICROMETERS SET - BLUETOOTH - IP67



IP 67

0,001 mm
LCD
3V CR2032



#### ART. BA212

Bowers Internal micrometers XT series are also available in kits. This way it is possible to economize on the cost of the rings: a ring can calibrate two instruments. New bluetooth technology. Each composition is equipped with calibration rings and UKAS related certification on both micrometers and rings.

Supplied in a wooden case.

Tech. Code	GR45 Euro	Range mm	Measuring heads pcs	Setting ring pcs
D1277006010SET	1714,00	6 + 10	2	1
D1277010020SET	2264,90	10 + 20	3	2
D1277020050SET	3097,60	20 + 50	3	2
D1277050100SET	3437,50	50 + 100	3	2
D1277100150SET	2890,80	100 + 150	2	1
D1277100200SET	(5554,00)	100 + 200	4	2
D1277150200SET	(3493,00)	150 + 200	2	1

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232

### FAST ACTION DIGITAL MICROMETERS - BLUETOOTH - IP67



IP 67

0,001 mm
LCD
3V CR2032



#### ART. BA225

Electronic micrometers for internal use. Fast action gun of high repeatability ideal for series checks. Electronic IP67 with 3 pre-set, tolerance, min/max. Contacts in hard metal. Measurement of holes starting from  $\varnothing$ 25 mm. Resolution 0,001 mm.

Compositions in a wooden case complete with calibration rings.  
UKAS calibration certificates of micrometers and rings.

Tech. Code	GR45 Euro	Range mm	Depth mm	Accuracy $\mu$ m	$\varnothing$ ring mm
D1276025035	1948,00	25 + 35	66	4	35
D1276035050	1996,00	35 + 50	80	4	35
D1276050065	2044,00	50 + 65	80	5	65
D1276065080	2044,00	65 + 80	80	5	65
D1276080100	2325,11	80 + 100	85	5	80

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232

## FAST ACTION DIGITAL MICROMETERS SET - BLUETOOTH - IP67



ART. BA242

Internal micrometers Bowers series XTH in kits. In this way it is possible to save on the costs of the rings. A ring can calibrate two instruments. Each composition is supplied with calibration rings and UKAS calibration certificate relative to both.

Supplied in a wooden case.

Tech. Code	GR45 Euro	Range mm	Measuring heads pcs	Setting ring pcs
D1286006010SET	1776,00	6 + 10	2	1
D1286006020SET	2745,60	6 + 20	5	3
D1286010020SET	2291,30	10 + 20	3	3
D1286020050SET	2978,80	20 + 50	3	3
D1286020100SET	4892,80	20 + 100	6	4
D1286050100SET	3324,20	50 + 100	3	2
D1286100150SET	2978,80	100 + 150	2	1
D1286100200SET	(6299,70)	100 + 200	4	2
D1286150200SET	(3955,60)	150 + 200	2	1

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity-cable RS232



## DIGITAL MICROMETERS FOR SMALL HOLES IN SET - IP65



ART. BA270

Digital bore gauge to check diameters, ovalization and conicity. New slimline digital display. Switchable resolution 0,01/0,001/0,0005 mm. Data output with proximity sensor. Repeatability 0,001 mm. Supplied with setting rings and UKAS certificates. Hard chromed contact points.

Depth stop and stand on request.

Tech. Code	GR45 Euro	Range mm
D1288150245	(2042,00)	1,50 + 2,45
D1288365635	(2467,42)	3,65 + 6,35
D1288225635	(4034,97)	2,25 + 6,35

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity-cable RS232



## BOREHOLE MICROMETERS WITH ANALOGUE READOUT



ART. BB300

Resolution 0.005 mm, carbide contacts analogue micrometer heads with auto-centering, blind bore measurements starting from Ø 12.5 mm.

Compositions in a wooden case, complete with calibration rings. UKAS calibration certificates of micrometers and rings.

Tech. Code	GR45 Euro	Range mm	Depth mm	Accuracy µm	Ø ring mm
D1290006008	493,00	6 + 8	58	4	8
D1290008010	454,00	8 + 10	58	4	8
D1290010012,5	454,00	10 + 12,5	58	4	12,5
D1290012,5016	454,00	12,5 + 16	62	4	12,5
D1290016020	460,00	16 + 20	62	4	20
D1290020025	512,00	20 + 25	66	4	20
D1290025030	726,00	25 + 35	66	4	35
D1290035050	740,00	35 + 50	80	4	35
D1290050065	830,00	50 + 65	80	5	65
D1290065080	887,00	65 + 80	80	5	65
D1290080100	1125,00	80 + 100	100	5	80
D1290100125	(1130,00)	100 + 125	115	6	125
D1290125150	(1308,00)	125 + 150	115	6	125
D1290150175	(1681,00)	150 + 175	115	7	175
D1290175200	(2055,87)	175 + 200	115	7	175
D1290200225	(2589,00)	200 + 225	118	8	225
D1290225250	(2863,31)	225 + 250	118	8	225
D1290250275	(3116,82)	250 + 275	118	9	275
D1290275300	(3256,93)	275 + 300	118	9	275



## BOREHOLE MICROMETERS WITH ANALOGUE READOUT IN SET



ART. BB310

Bowers SXTA analogue bore gauges in set.  
An economical solution considering the possibility of calibrating two gauges with only one ring.  
Every set is supplied with micrometers, rings and UKAS certificates.

Supplied in a wooden case.



Tech. Code	GR45 Euro	Range mm	Measuring heads pieces	Setting ring pieces
D1295006010SET	773,00	6 ÷ 10	2	1
D1295010020SET	1164,73	10 ÷ 20	3	2
D1295020050SET	1840,00	20 ÷ 50	3	2
D1295050100SET	2481,00	50 ÷ 100	3	2
D1295100150SET	1950,00	100 ÷ 150	2	1

## THREE POINTS INTERNAL MICROMETERS

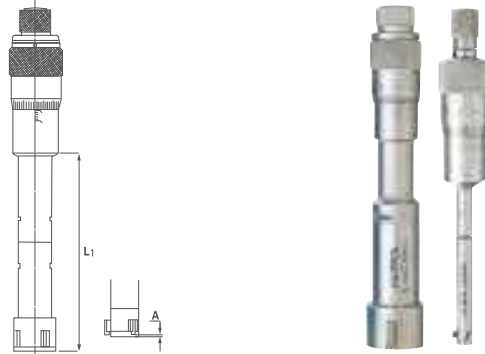


ART. BB270

Measurement range 6-12 mm reading 0.001, over 0.005 mm.  
Graduated thimble with sensitive friction, satin-chromed version.  
Complete with setting ring and extension rod.

Tech. Code	GR45 Euro	Range mm	Ring Ø mm	Extension mm	L1 mm	A mm
D1310006008	355,00	6 ÷ 8	6	100	54.5	1.5
D1310008010	355,00	8 ÷ 10	8	100	54.5	1.5
D1310010012	355,00	10 ÷ 12	10	100	54.5	1.5
D1310012016	260,00	12 ÷ 16	16	150	80	0.5
D1310016020	260,00	16 ÷ 20	16	150	80	0.5
D1310020025	328,00	20 ÷ 25	25	150	90	0.5
D1310025030	328,00	25 ÷ 30	25	150	90	0.5
D1310030040	383,00	30 ÷ 40	40	150	97	0.5
D1310040050	437,00	40 ÷ 50	40	150	97	0.5
D1310050063	437,00	50 ÷ 63	62	150	114	0.5
D1310062075	465,00	62 ÷ 75	62	150	114	0.5
D1310075088	492,00	75 ÷ 88	87	150	114	0.5
D1310087100	524,00	87 ÷ 100	87	150	114	0.5

NOTE: DIGITAL VERSION ALSO AVAILABLE

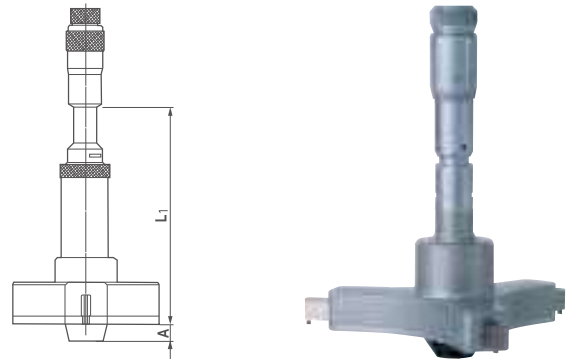


ART. BB271

0.005 mm resolution.  
Graduated thimble with sensitive friction, chromed version.  
Rings to be ordered separately. See page D.59

Tech. Code	GR45 Euro	Range mm	Extension mm	L1 mm	A mm
D1311100125	570,00	100 ÷ 125	150	145	16
D1311125150	570,00	125 ÷ 150	150	145	16
D1311150175	560,00	150 ÷ 175	150	145	16
D1311175200	560,00	175 ÷ 200	150	145	16
D1311200225	790,00	200 ÷ 225	150	145	16
D1311225250	790,00	225 ÷ 250	150	145	16
D1311250275	790,00	250 ÷ 275	150	145	16
D1311275300	790,00	275 ÷ 300	150	145	16

NOTE: DIGITAL VERSION ALSO AVAILABLE



## THREE POINTS INTERNAL MICROMETERS SET



ART. BB272

Complete with zero-setting rings and extension rods (100 mm - 150 mm).

Tech. Code	GR45 Euro	Range mm	Single tools mm	Rings Ø mm	Extension mm
D1315006012	742,00	6 ÷ 12	6-8 / 8-10 / 10-12	6 / 8 / 10	100
D1315012020	480,00	12 ÷ 20	12-16 / 16-20	16	150
D1315020040	900,00	20 ÷ 40	20-25 / 25-30 / 30-40	25 / 40	150
D1315040100	1760,00	40 ÷ 100	40-50 / 50-63 / 62-75 / 75-88 / 87-100	40 / 62 / 87	150



## INSIDE MICROMETERS WITH MODULARS EXTENSION RODS

ALPA



ART. BB250

0.01 mm resolution - modular inside micrometers including an inside micrometric head and several extension rods. Micrometric head features a hardened steel contact surface. Supplied in a wooden box package.

Tech. Code	GR45 Euro	Range mm	Micron. head mm	Ø mm	Extensions mm
D137550300	164,00	50 ÷ 300	50 ÷ 65	16	13 - 25 - 50 (2pcs) - 100
D137550600	224,00	50 ÷ 600	50 ÷ 65	16	13 - 25 - 50 100 - 150 - 200
D1375501000	590,00	50 ÷ 1000	50 ÷ 65	16	13 - 25 - 50 - 100 (2pcs) 150 - 200 - 300
D1375501500	1050,00	50 ÷ 1500	50 ÷ 65	16	13 - 25 - 50 - 100 (2pcs) 150 - 200 (2pcs) - 300 (2pcs)
D13751502000	1200,00	150 ÷ 2000	150 ÷ 175	23	25 - 50 (2pcs) - 100 200 (2pcs) - 400 (3pcs)
D137510003000	2130,00	1000 ÷ 3000	150 ÷ 175	28	50 - 100 (2pcs) - 200 500 - 1000



## EXTERNAL THREADS DIGITAL MICROMETERS IP65

ALPA Exacto



ART. BA080

0.001 mm resolution - digital micrometer with IP65 protection against particles, supplied with 60° metric anvils.

Tech. Code	GR45 Euro	Range mm	Anvils 60° Included	Accuracy mm
D1340025	295,00	0 ÷ 25	1 - 2 - 3 - 4 - 5	± 0.002
D13402550	317,00	25 ÷ 50	2 - 3 - 4 - 5 - 6	± 0.002
D13405075	343,00	50 ÷ 75	3 - 4 - 5 - 6	± 0.002
D134075100	358,00	75 ÷ 100	3 - 4 - 5 - 6	± 0.003
D1340100125	404,00	100 ÷ 125	4 - 5 - 6	± 0.003
D1340125150	437,00	125 ÷ 150	4 - 5 - 6	± 0.003

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1.5V SR44



Anvils 60°		
n°	Metric thread Pitch / mm	Thread UN - UNC - UNF Pitch / inch
1	0,4 - 0,5	64 - 48
2	0,6 - 0,9	44 - 28
3	1,0 - 1,75	24 - 14
4	2,0 - 3,0	13 - 9
5	3,5 - 5,0	8 - 5
6	5,5 - 7,0	4,5 - 3,5

## SPARE ANVILS SET

ALPA



ART. BC010

Set measuring threaded inserts metric and whitworth

Tech. Code	GR45 Euro	Set	Thread
D1350SET	164,00	0,4 ÷ 0,5 - 0,6 ÷ 0,9 - 1,0 ÷ 1,75 2,0 ÷ 3,0 - 3,5 ÷ 5,0 - 5,5 ÷ 7,0	Metric
D1355SET	241,00	60 ÷ 48 TPI - 48 ÷ 40 TPI - 40 ÷ 32 TPI - 32 ÷ 24 TPI 24 ÷ 18 TPI - 18 ÷ 14 TPI - 14 ÷ 10 TPI 10 ÷ 7 TPI - 7 ÷ 4,5 TPI - 4,5 ÷ 3,5 TPI	Whitworth



## EXTERNAL THREADS MICROMETERS

ALPAA Exacto

0,01 mm INOX



ART. BB105

Used for 60° thread setting (metric and UN) or 55° (Whitworth standards), average diameter measures. 0.01mm resolution - Graduated thimble with sensitive friction, locking screw system, provided with 60° metric anvils and setting stand. Non-rotating spindle.



Tech. Code	GR45 Euro	Range mm	Anvils 60° Included
D1345025	147,00	0 ÷ 25	1 - 2 - 3 - 4 - 5
D13452550	153,00	25 ÷ 50	2 - 3 - 4 - 5 - 6
D13455075	162,00	50 ÷ 75	3 - 4 - 5 - 6
D134575100	208,00	75 ÷ 100	3 - 4 - 5 - 6
D1345100125	222,00	100 ÷ 125	4 - 5 - 6
D1345125150	241,00	125 ÷ 150	4 - 5 - 6
D1345150175	266,00	150 ÷ 175	4 - 5 - 6
D1345175200	302,00	175 ÷ 200	4 - 5 - 6

## DIGITAL DISK MICROMETERS FOR GEARS IP65

ALPAA Exacto

IP 0,001 mm LCD INOX mm 1,5V SR44

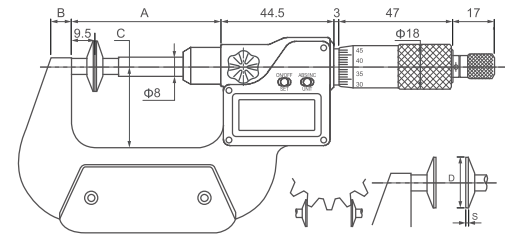
ART. BA050

0.001mm resolution - Digital Micrometer with disk contact surfaces and 8mm-diam non rotating spindle. Zero-setting function, ABS/INC, IP65 protection against particles, ON/OFF button, mm/inch conversion.



Tech. Code	GR45 Euro	Range mm	D Ø mm	A mm	B mm	C mm	S mm
D1365025	250,00	0 ÷ 25	20	59.5	8	32	0.7
D13652550	294,00	25 ÷ 50	20	85.5	8	44.5	0.7
D13655075	312,00	50 ÷ 75	20	109.5	8	57	0.7
D136575100	322,00	75 ÷ 100	20	134.5	10	70	0.7

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1.5V SR44



## DISK MICROMETERS FOR GEARS

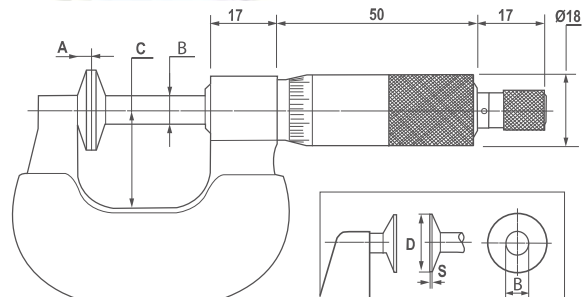
ALPAA Exacto

0,01 mm

ART. BB075

0.01mm resolution - with disk measuring faces, lapped measuring surfaces, lock lever.

Tech. Code	GR45 Euro	Range mm	Backing pad Ø mm	A mm	B mm	C mm	S mm
D1370025	104,00	0 ÷ 25	20	32	8	32	0.7
D13702550	121,00	25 ÷ 50	20	57	8	44.5	0.7
D13705075	140,00	50 ÷ 75	20	85	8	57	0.7
D137075100	160,00	75 ÷ 100	20	107	10	70	0.7
D1370100125	174,00	100 ÷ 125	30	133	10	82	0.9
D1370125150	190,00	125 ÷ 150	30	158	12	94.54	0.9
D1370150175	208,00	150 ÷ 175	30	183	12	107	0.9
D1370175200	243,00	175 ÷ 200	30	209	12	120	0.9





## ELECTRONIC MEASURING GAUGES FOR INTERNAL MEASUREMENT - IP54

ALPA MEGAline



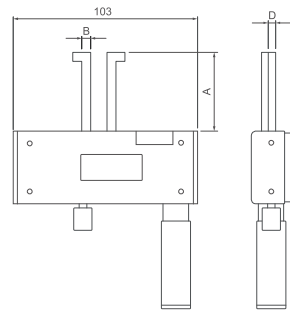
### ART. BA390

Sylvac electronic with preset, 0.01 mm resolution. Supplied with interchangeable tips with threaded attachment M 2.5. Calibrated spherical head 3 mm diameter plus 2 threaded extensions (20 mm\40 mm) with M 2.5 attachment.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	D mm
D21002246	(693,00)	22 + 114	50	4.5	3.5

For extensions see range D2388

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0003USB	261,00	Cable Opto - USB
D0003RS232	175,00	Cable Opto - RS232



## ELECTRONIC MEASURING GAUGES FOR INTERNAL MEASUREMENT - IP54

ALPA MEGAline

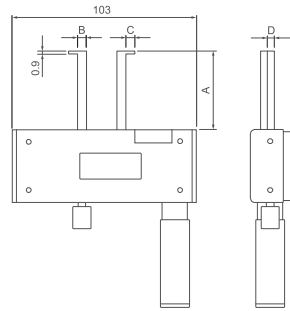


### ART. BA370

Sylvac electronic with preset, 0.01 mm resolution.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm	Ø min hole mm
D21010630	(616,00)	6 + 29	50	4.0	2.0	3.0	8
D21010832	(700,00)	8 + 32	50	4.5	3.5	3.0	10
D21011236	(616,00)	12 + 36	50	4.5	5.5	3.5	12
D21013256	(700,00)	32 + 56	50	4.5	5.5	3.5	32
D21014266	(700,00)	42 + 66	50	4.5	5.5	3.5	42

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0003USB	261,00	Cable Opto - USB
D0003RS232	175,00	Cable Opto - RS232



## ELECTRONIC MEASURING GAUGES FOR EXTERNAL MEASUREMENT - IP54

ALPA MEGAline

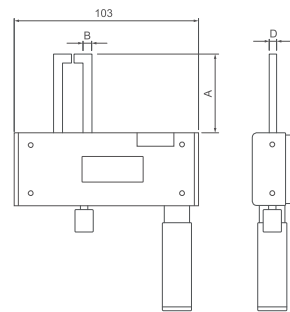


### ART. BA380

Sylvac electronic with preset, 0.01 mm resolution. Supplied with Interchangeable tips with threaded attachment M 2,5 calibrated spherical head 3 mm diameter.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	D mm
D21040024	(616,00)	0 + 22	50	4.5	3.5
D21041741	(700,00)	19 + 44	50	4.5	3.5

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0003USB	261,00	Cable Opto - USB
D0003RS232	175,00	Cable Opto - RS232



## DIGITAL INSTRUMENTS FOR EXTERNAL SEEGER MEASUREMENTS WITH ON-AXIS NOZZLES - IP54

ALPA MEGAline

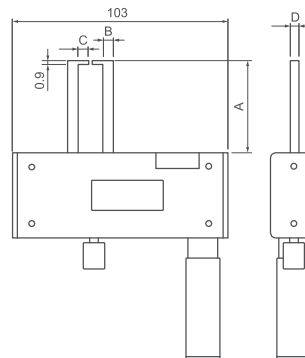


### ART. BA395

External electronic measuring gauge seeger. Sylvac electronics. 0.01 mm resolution.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	C mm	D mm
D21070024	(700,00)	0 + 24	50	4.5	5.5	3.5
D21072044	(710,00)	20 + 44	50	4.5	5.5	3.5

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0003USB	261,00	Cable Opto - USB
D0003RS232	175,00	Cable Opto - RS232





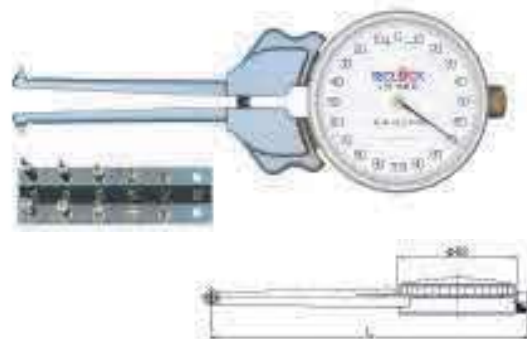
## HIGH PRECISION FAST INTERNAL DIAL SNAP GAUGES

0,01  
mm



ART. BB365

Registered anti-shock 2 mm movement for high precision measurement. Cast iron frame, maximum stability and repeatability, large, easy to read dial. Interchangeable pointed anvils to measure deep and narrow grooves. Accuracy 0.02 mm.



Tech. Code	GR45 Euro	Range mm	L mm	Spare contact points
D2115020034	426,00	20 ÷ 34	165	7 sets M2,5
D2115030060	400,00	30 ÷ 60	170	5 sets M3,5
D2115055150	420,00	55 ÷ 150	183	6 set M3,5

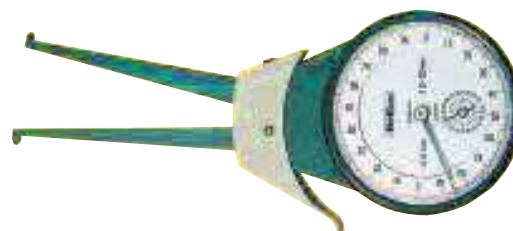
## FAST INTERNAL DIAL SNAP GAUGES

0,01  
mm



ART. BB360 - BB362

A saving costs economy thanks to its mass production, light weight frame, hardened stainless steel spherical contacts, rotatable dial. Accuracy ± 0,04 mm, resolution 0.01 mm



Tech. Code	GR45 Euro	Range mm	L mm	A mm	B mm	C mm
D2116003009	(369,00)	3 ÷ 9	40	2,3	1,1	2,4
D2116006018	(226,00)	6 ÷ 18	40	2,3	1,1	2,8
D2116010030	(339,00)	10 ÷ 30	64	2,3	2,2	4,5
D2116030050	(339,00)	30 ÷ 50	64	2,3	14,5	17,0
D2116050070	(399,00)	50 ÷ 70	64	2,3	11,5	14,0

## DIAL GAUGES FOR INTERNAL MEASUREMENTS

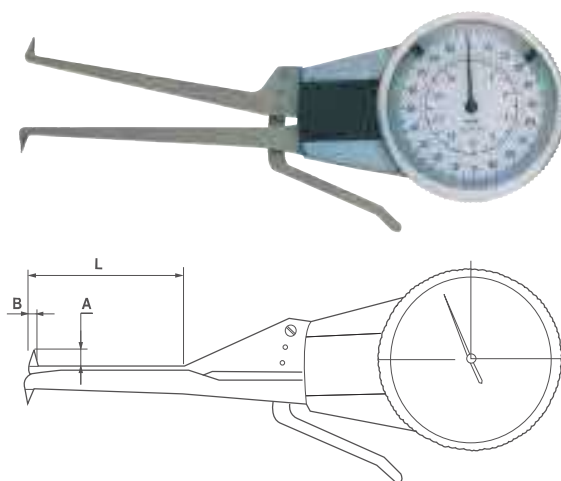
0,01  
mm



ART. BB367

0.01mm resolution - arms are specifically engineered to perform hard-to-access locations measurements.

Tech. Code	GR45 Euro	Range mm	L mm	B mm	A mm
D21100515	220,00	5 ÷ 15	20	1,0	1,5
D21101020	234,00	10 ÷ 20	25	1,5	3,0
D21101030	284,00	10 ÷ 30	55	2,0	3,5
D21102030	234,00	20 ÷ 30	30	2,0	6,5
D21103040	234,00	30 ÷ 40	30	2,5	9,0
D21104050	250,38	40 ÷ 50	30	2,5	9,0
D21104060	313,51	40 ÷ 60	80	3,0	8,5



## DIAL GAUGES FOR EXTERNAL MEASUREMENTS

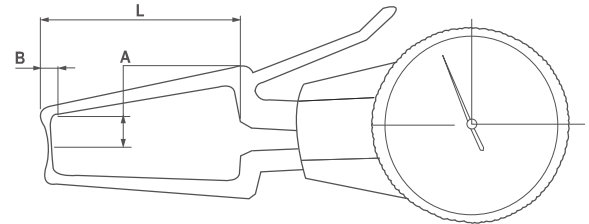
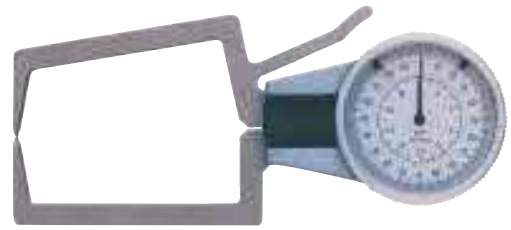
ALPA



ART. BB377

0.01 mm resolution - Ensuring measuring pressure all along the entire measuring range.

Tech. Code	GR45 Euro	Range mm	A mm	B mm	L mm
D21200020	246,00	0 + 20	25	6.5	80
D21202040	273,00	20 + 40	25	6.5	80
D21204060	315,65	40 + 60	25	6.5	80



## BORE GAUGES RANGE 18 - 150 MM 0.001 RESOLUTION

TECLOCK®



ART. DA042

Maximum accuracy and reliability for high accuracy tests (Japanese class A), Traditional bore gauge measuring system, Low dilatation frame, Non-conducting material handle. Carbide moving contact, interchangeable anvils with hardened stainless steel sphere, ø 8 mm dial gauge clamping shank. Accuracy 2 µm, repeatability 2 µm.

Tech. Code	GR45 Euro	Range mm	Measuring depth mm	N° contacts
D22221835	331,00	18 + 35	150	9
D22223560	348,00	35 + 60	150	6
D222250150	410,00	50 + 150	150	11

NOTE: Dial gauge not included



## BORE GAUGES FOR BLIND HOLES

TECLOCK®



ART. DA045

The special head allows to inspect bores at 2,5 mm from the bottom. Maximum accuracy and reliability for high accuracy tests (Japanese class A), traditional bore gauge measuring system, low dilatation frame, non-conducting material handle. Carbide moving contact, interchangeable anvils with hardened stainless steel sphere, ø 8 mm dial gauge clamping shank. Accuracy 2 µm, repeatability 2 µm.

Tech. Code	GR45 Euro	Range mm	Measuring depth mm	Meas. from the bottom mm
D22241535	400,00	15 + 35	150	2.5
D22243560	420,00	35 + 60	150	2.5
D222450150	470,00	50 + 150	150	2.5

NOTE: Dial gauge not included



## BORE GAUGES RANGE 6-18 MM 0.001 RESOLUTION

TECLOCK®



ART. DA040

Maximum accuracy and reliability for high accuracy tests (Japanese class A). Carbide moving contact, interchangeable anvils with hardened steel sphere (9 pieces). Low dilatation frame, non-conducting material handle, ø 8 mm dial gauge clamping shank. Accuracy 2 µm, repeatability 2 µm.

Tech. Code	GR45 Euro	Range mm	Measuring depth mm	N° contacts
D22210610	505,00	6 + 10	50	9
D22211018	456,00	10 + 18	100	9

NOTE: Dial gauge not included



## BORE GAUGES WITH STEEL CONTACTS

ALPA



ART. DA010A

Supplied without indicator, hardened steel head, heat-insulating handle, Ø 8mm clamping shank for dial gauge.



Tech. Code	GR45 Euro	Range mm	Depth mm	Contacts
D22251535	340,00	15 ÷ 35	175	Steel
D222530100	355,00	30 ÷ 100	250	Steel
D222550160	390,00	50 ÷ 160	250	Steel
D2225100300	635,00	100 ÷ 300	350	Steel
D2225100500	869,00	100 ÷ 500	650	Steel
D2225100500S	760,00	100 ÷ 500	350	Steel

## BORE GAUGES WITH CARBIDE CONTACTS

ALPA



ART. DA010W

Great strength and reliability for heavy duty in the workshops and in testing, transmission granted by the anchor movement.

Carbide moving contact, ø 8 mm clamping shank for dial gauge.



Tech. Code	GR45 Euro	Range mm	Depth mm	Contacts
D22261535	337,00	15 ÷ 35	175	HM
D222630100	373,00	30 ÷ 100	250	HM
D222650160	428,00	50 ÷ 160	250	HM
D2226100300	750,00	100 ÷ 300	350	HM
D2226100500	974,00	100 ÷ 500	650	HM
D2226100500S	946,00	100 ÷ 500	350	HM

## DIAL BORE GAUGES



ART. D2210

Steel heads and contact points, heat-insulating handle, Ø 8mm dial indicator coupling point, 0.01 dial gauge included.



Tech. Code	GR45 Euro	Range mm	Depth mm
D2210018035	120,00	18 ÷ 35	125
D2210035050	100,00	35 ÷ 50	150
D2210050160	120,00	50 ÷ 160	150
D22100160250	150,00	160 ÷ 250	400
D22100250450	166,70	250 ÷ 450	400

## BORE GAUGES SET

Mitutoyo



ART. SERIES 511

Supplied with digital comparator.

Tech. Code	GR47 Euro	Range mm	Single tools mm
D2230018150	(1011,00)	18 ÷ 150	18-35 / 35-50 / 50-150



## BORE GAUGES SET



ART. D2215

Dial holder ø 8mm. 0,01 dial gauge included.

Tech. Code	GR45 Euro	Range mm	Single tools mm
D2215018160	300,00	18 ÷ 160	18-35 / 35-50 / 50-160



## DIGITAL INDICATORS IP67

ALPA MEGArod

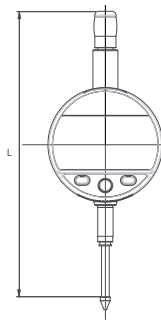


### ART. CA010

Robust construction, water resistant. IP67 protection according to IEC 60529, even connected. New technology with configurable menus. Broad choice of functions (min/max, delta, tol, factor, preset, auto off, ecc.). Automatic wake-up and sleeping mode, Absolute system. Ø 8 mm stem.

Tech. Code	GR45 Euro	Range mm	Resolution mm	L mm
D23291250001	653,00	0 ÷ 12,5	0.001	138
D2329250001	721,00	0 ÷ 25	0.001	185.6
D2329500001	1244,00	0 ÷ 50	0.001	279.8

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232



## MULTIFUNCTION DIGITAL INDICATORS

ALPA MEGArod

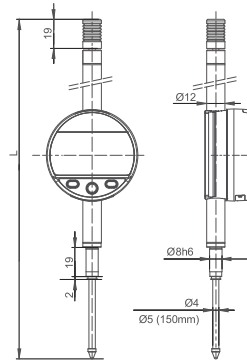


### ART. CA015

Robust frame, water and coolant resistant. New technology with configurable menus. wide selection of features (min/max, delta, tol, factor, preset, auto off, etc.). Automatic wake-up and sleeping mode, Absolute system. Wide choice of options: Min/Max/Delta, Factor, Preset, Auto Off, etc...

Tech. Code	GR45 Euro	Range mm	Resolution mm	L mm
D23311250001	540,00	0 ÷ 12,5	0.001	122.8
D2331125001	490,00	0 ÷ 12,5	0.01	122.8
D2331250001	670,00	0 ÷ 25	0.001	138.8
D233125001	495,00	0 ÷ 25	0.01	138.8
D2331500001	987,00	0 ÷ 50	0.001	242
D233150001	898,00	0 ÷ 50	0.01	242

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232



## DIGITAL DIAL INDICATORS

ALPA MEGArod

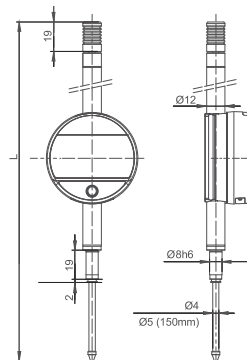


### ART. CA018

Robust construction, water and coolant resistant. New technology with configurable menus. Automatic wake-up and sleeping mode, Absolute system. Ø 8 mm stem.

Tech. Code	GR45 Euro	Range mm	Resolution mm	L mm
D23301250001	453,00	0 ÷ 12,5	0.001	122.7
D2330125001	371,00	0 ÷ 12,5	0.01	122.7
D2330250001	485,00	0 ÷ 25	0.001	148.3
D233025001	420,00	0 ÷ 25	0.01	148.3
D2330500001	920,00	0 ÷ 50	0.001	263
D233050001	830,00	0 ÷ 50	0.01	263

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0002RS232	201,00	Proximity -cable RS232



## DIGITAL DIAL INDICATORS

Mitutoyo

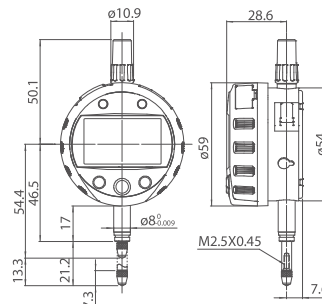


### ART. SERIES 543

Multifunctional ABSOLUTE Digimatic dial indicators, robust and easy to use. ABSOLUTE scale, which means there is no need to reset the instrument every time you switch it on. Large font size for easy reading. 330° rotatable display. Display block function against unwanted use. Spindle Ø 8 mm.

Tech. Code	GR47 Euro	Range mm	Resolution mm
D23562540001	498,00	0 - 25.4	0.001

While stocks last



## DIGITAL DIAL INDICATORS

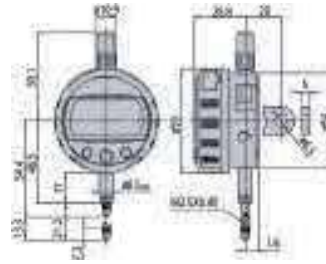
Mitutoyo



### ART. SERIE 543

ABSOLUTE Digital dial indicators. The zero setting takes place only once with storage until the next battery replacement. Measurement accuracy even at maximum speeds. Large display with easy to read characters. Stem  $\varnothing$  8 mm.

Tech. Code	GR47 Euro	Range mm	Resolution mm
D2354127001	177,00	0 - 12,7	0,01



## DIGITAL DIAL INDICATORS

ALPA 5 Functions

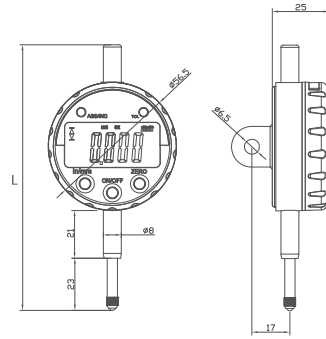


### ART. CA020 - CA021

Digital dial gauge with large display, zero setting at any position, conversion mm/inch,  $\varnothing$  8 mm stem, ON/OFF button.

Tech. Code	GR45 Euro	Range mm	Resolution mm	L mm
D222912,5	120,00	0 + 12,5	0.01	117
D222912,50,001	145,00	0 + 12,5	0.001	117
D222925	167,00	0 + 25	0.01	117
D222950	295,00	0 + 50	0.01	117

Tech. Code	GR49 Euro	Model
D99133V	5,30	Battery 3V CR 2025



## DIGITAL COMPARATORS

Mitutoyo



### ART. SERIE 543

Multifunctional digital comparators sturdy and easy to use ABSOLUTE Digimatic. ABSOLUTE scale which allows you not to reset the instrument each time you turn it on. Large font size for easy reading. New function for programming calibrations. Possibility to customize the keys for setting the comparator. Display lock function against unwanted use, display rotates 330°, stem  $\varnothing$  8 mm. New bi-directional S1 data output.

Tech. Code	GR47 Euro	Range mm	Resolution mm
D23471270001	433,00	0 - 12,7	0,0005
D23475080001	824,00	0 - 50,8	0,0005



NEW

## DIGITAL DIAL INDICATORS

Mitutoyo



### ART. SERIES 543

ABSOLUTE Digimatic dial indicator ID-N. Its slim body design makes it ideal for multi-point measurements. The ABSOLUTE system means there is no need to reset the instrument every time you switch it on. It has excellent resistance against water and dust (IP66) that allows it to be used in the presence of lubricants and coolants. Switchable display orientation provides more mounting options. GO/±NG judgement function

Tech. Code	GR47 Euro	Range mm	Resolution mm
D23481270001	378,00	0 - 12,7	0.001



## DIGITAL DIAL INDICATORS

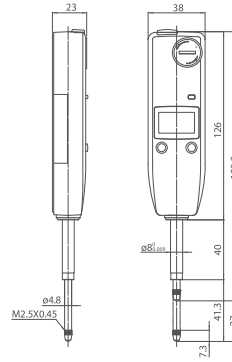
Mitutoyo



### ART. SERIE 575

ABSOLUTE Digital dial Indicators resistant and easy to use. The zero setting takes place only once with storage until the next battery replacement. Measurement accuracy even at maximum speeds. Large display with easy to read characters. Stem  $\varnothing$  8 mm.

Tech. Code	GR47 Euro	Range mm	Resolution mm
D2349254001	247,00	0 - 25,4	0,01



## DIAL INDICATOR $\varnothing$ 58

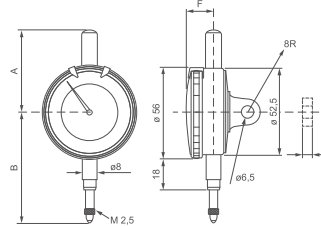
ALPA



### ART. CB026

Analogue dial indicator  $\varnothing$  58 mm. Range 1 mm. Stainless steel stem and hardened steel tip,  $\varnothing$  8 mm stem.

Tech. Code	GR45 Euro	Excursion mm	Resolution mm	A mm	B mm	F mm
D23611	101,00	1	0.001	42,8	60.7	18.5



## DIAL INDICATOR $\varnothing$ 56

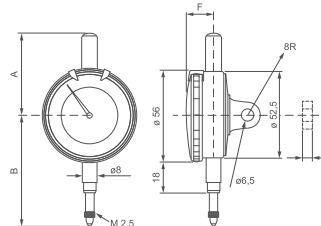
TECLOCK



### ART. CB022

Movement on jewel bearings, aluminium no-glare satin finish on case. Total range 1mm, hardened stainless steel stem.  $\varnothing$  8 mm stem.

Tech. Code	GR45 Euro	Excursion mm	Resolution mm	A mm	B mm	F mm	G mm	H mm
D23631	166,00	1	0.001	40	62	15.5	20	7.5



## DIAL INDICATORS $\varnothing$ 58

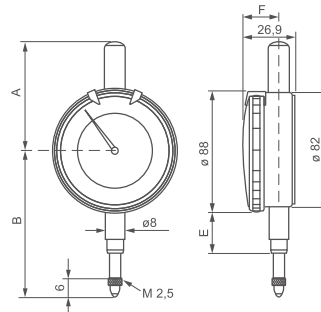
ALPA



### ART. CB023

Shock-proof movement on jeweled bearings, no-glare satin finish on case, hardened stainless steel stem. Accuracy between 3  $\mu$ m.

Tech. Code	GR45 Euro	Excursion mm	Resolution mm	A mm	B mm
D23551	78,00	1	0.001	40	59





## DIAL INDICATORS Ø 58

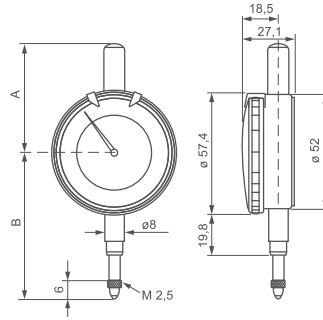
ALPAIN



### ART. CB008

Metal casing and ring nut - tolerance indicators DIN 879, quality movement, Ø 8 mm cylindrical stem.

Tech. Code	GR45 Euro	Excursion mm	Resolution mm	A mm	B mm
D235912	218,00	12	0.002	42,8	68,5



## DIAL INDICATORS Ø 40

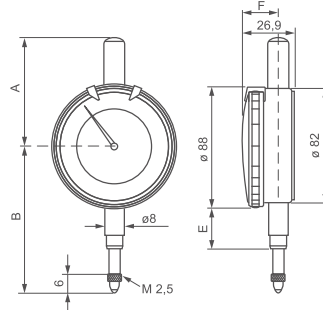
ALPAIN



### ART. CB006

Travel 5 mm. Accuracy according to UNI 4180. Stainless Steel rod and shaft, Ø 8 mm cylindrical stem.

Tech. Code	GR45 Euro	Excursion mm	Resolution mm	A mm	B mm
D23525	57,00	5	0.01	28,6	48,5



## DIAL INDICATORS Ø 58

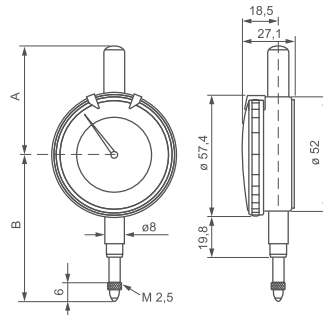
ALPAIN



### ART. CB005

Shock-proof mechanism (only for D235110), accuracy according to UNI4180, stainless steel rod and shaft, Ø8mm cylindrical mount.

Tech. Code	GR45 Euro	Excursion mm	Resolution mm	A mm	B mm
D235110	43,00	10	0.01	42,8	68,5
D235125	87,00	25	0.01	42,8	80,9
D235130	95,00	30	0.01	42,8	80,9



## DIAL INDICATORS Ø 60

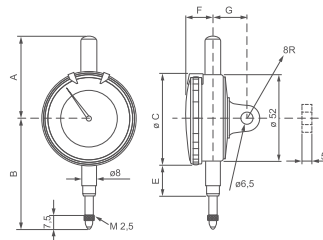
TECLOCK®



### ART. CB010

Japan made, Ø 56mm dial, registered mechanism, accuracy according to DIN 878.

Tech. Code	GR45 Euro	Excursion mm	Resolution mm	A mm	B mm	C mm	E mm	F mm	G mm
D236210	49,00	0 ÷ 10	0.01	48	65	56	18	15,8	20
D236210FP	49,00	0 ÷ 10	0.01	48	65	56	18	15,8	-



## DIAL INDICATORS Ø 88

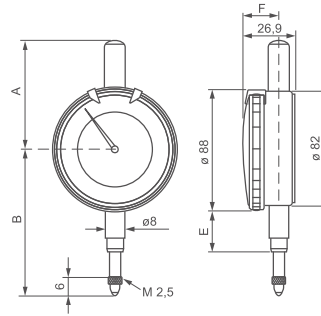
ALPAIN



ART. CB007

Movement on jewel bearings, hardened stainless steel stem and spindle. Double dial reading.

Tech. Code	GR45 Euro	Excursion mm	Resolution mm	A mm	B mm
D235350	207,00	0 + 50	0.01	61.1	130.7



## DIAL INDICATORS Ø 80

ALPAIN

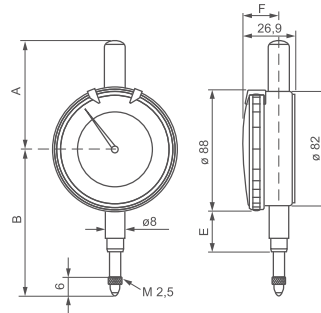


ART. CB020

Movement on rubies, stainless steel stem and spindle. Ø 8 mm stem.

Tech. Code	GR45 Euro	Excursion mm	Resolution mm	A mm	B mm	D mm	E mm	F mm
D235710	161,00	10	0.01	41	85	52	30	15
D235730	(240,00)	30	0.01	60	110	52	30	15
D235750	(370,00)	50	0.01	105	127	60	70	19
D2357100	(601,00)	100	0.01	164	218	60	24	17

D2357100 cylindrical stem Ø 10 mm h6.



## DIAL INDICATORS Ø 40

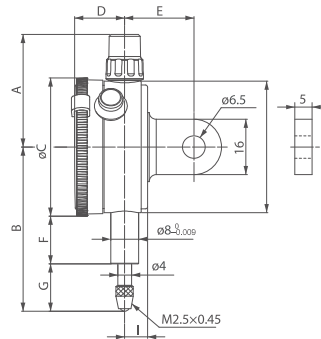
Mitutoyo



ART. SERIE 1

Compact metric model, dial Ø 40 mm, rod and shank in stainless steel, cylindrical shank Ø 8. Accuracy according to DIN 878

Tech. Code	GR47 Euro	Excursion mm	A mm	B mm	C mm	D mm	F mm	G mm	I mm
D23695	74,00	0 + 5	32,5	47,5	40	14,5	13,8	13,7	6,6



## DIAL INDICATORS Ø 57

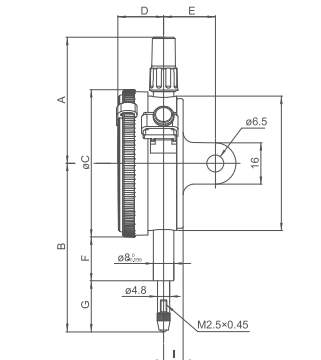
Mitutoyo



ART. SERIE 2

Standard metric model Ø 57mm, stainless steel stem, cylindrical connection, Ø 8mm. Accuracy according to DIN 878.

Tech. Code	GR47 Euro	Excursion mm	B mm	C mm	D mm	E mm	F mm	G mm	I mm
D236810	46,00	0 + 10	47,2	65,2	57	18,1	20	16,9	19,8



## ANALOG PRECISION DIAL INDICATORS

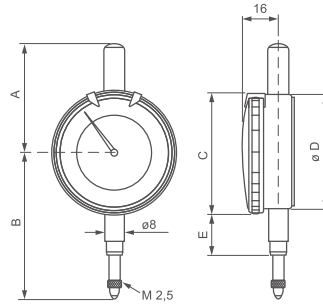
ALPAA



### ART. CB014

0.01 mm resolution - Metal casing and ring nut, steel tips.  $\varnothing$  8 mm stem.

Tech. Code	GR45 Euro	Range mm	Diameter mm	A mm	B mm	C mm	D mm	E mm
D237005	35,00	0 $\pm$ 5	0.01	38.5	49	40	35	13
D237010	30,00	0 $\pm$ 10	0.01	41	69	56	52.5	15.5
D237025	43,00	0 $\pm$ 25	0.01	40	85	60	53	17
D237030	70,00	0 $\pm$ 30	0.01	44.5	90	60	53	18
D237050	100,00	0 $\pm$ 50	0.01	50	129.5	80	75	30.5



## DIAL TEST ACCESSORIES

ALPAA



### ART. CC070

DIAL TEST ACCESSORIES

Tech. Code	GR45 Euro	Description	Meas. mm
D2312A1	19,00	1. Fixing shank with dovetail clamp	$\varnothing$ 4
D2312A2	19,00	2. Fixing shank with dovetail clamp	$\varnothing$ 8
D2312A3	(99,00)	3. Long swivel holder, cylindrical shank and dovetail clamp.	$\varnothing$ 8 x 90
D2312A4	28,00	4. Holding shoulder for perpendicular models with cylindrical shank. Clamping point for fixing shank and dovetail clamp.	$\varnothing$ 8 x 25 $\varnothing$ 4
D2312A5	(180,00)	5. Long swivel holder, cylindrical shank, dovetail clamp and fine adjustment.	$\varnothing$ 8 x 125



## PRECISION LEVER TEST INDICATORS

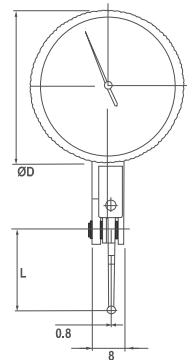
ALPAA MEGAtast



### ART. CB050

Swiss made high quality lever dial indicator (according to DIN 2270). Automatic reversal of the stylus direction of rotation. Rotable bezel for zero setting. High precision movement mounted on 6 ruby bearings. Carbide ball stylus  $\varnothing$  2 mm, adjustable within 270° and interchangeable mounted on micro ball bearings. 1 dove tail 8mm  $\varnothing$ .

Tech. Code	GR45 Euro	Excursion mm	$\varnothing$ D mm	Resolution mm	L mm
D2290022812	153,00	0.2	27,4	0.002	12
D2290023712	189,00	0.2	37	0.002	12
D2290052836	173,00	0.5	27,4	0.01	36
D2290053736	212,00	0.5	37	0.01	36
D2290082812	142,00	0.8	27,4	0.01	12
D2290083712	160,00	0.8	37	0.01	12



## LEVER TEST INDICATORS

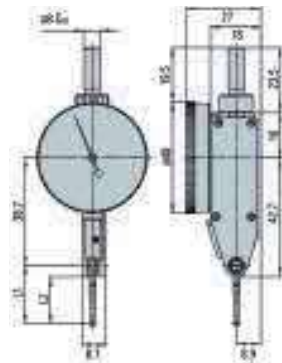
Mitutoyo



### ART. SERIE 513

Quality lever test Indicators (in compliance with the DIN 2270 standard). The structure is without friction that allows automatic reversal of the stylus direction of rotation. The roating bevel and crystal, built in a single piece increase resistance to water and dust. Anti-reflective crystal with anti-scratch coating. Rotable bezel for zero setting. High precision movement mounted on rubies and bearings, gears and pinions that guarantee fluid movements, silent, rapid and precise measurements.  $\varnothing$  2mm hard metal sphere. Dovetail connection  $\varnothing$  8mm

Tech. Code	GR47 Euro	Excursion mm	Measurement force N	$\varnothing$ mm	Resolution mm	L1 mm	L2 mm
D2320084021	102,00	0.8	0,01 $\pm$ 0,3	40	0.01	20,9	17,4



## VERTICAL LEVER TEST INDICATORS

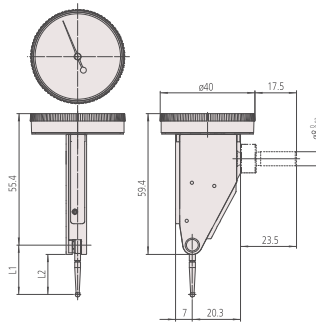
Mitutoyo



ART. SERIE 513

Quality lever test Indicators (in compliance with the DIN 2270 standard). The structure is without friction that allows automatic reversal of the stylus direction of rotation. The roating bevel and crystal, built in a single piece increase resistance to water and dust. The anti-reflective crystal with anti-scratch coating. Rotable bezel for zero setting. High precision movement mounted on rubies and bearings, gears and pinions that guarantee fluid movements, silent, rapid and precise measurements. Ø 2mm hard metal sphere. Dovetail connection Ø 8mm.

Tech. Code	GR47 Euro	Excursion mm	Measurement force N	Diameter mm	Resolution mm	L1 mm	L2 mm
D2325084021	126,00	0,8	0,01 + 0,3	40	0,01	20,9	17,4



## LEVER TEST INDICATORS

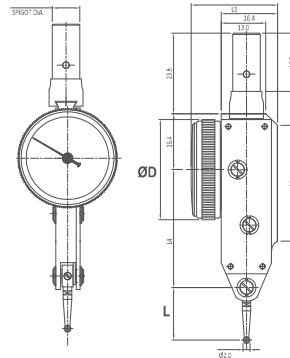
ALPA



ART. CB052

High quality and reliability dial lever test indicator, swiss made components (according to DIN 2270). Rotable bezel for zero setting. Dove tail snug. Carbide ball stylus Ø 2 mm.

Tech. Code	GR45 Euro	Excursion mm	Ø D mm	Resolution mm	L mm
D2316022913	159,00	0,2	29	0,002	13
D2316023813	165,00	0,2	38	0,002	13
D2316082912	97,00	0,8	29	0,01	12
D2316082934	136,00	0,8	29	0,01	34
D2316083812	112,00	0,8	38	0,01	12
D2316083834	156,00	0,8	38	0,01	34



## LEVER TEST INDICATORS

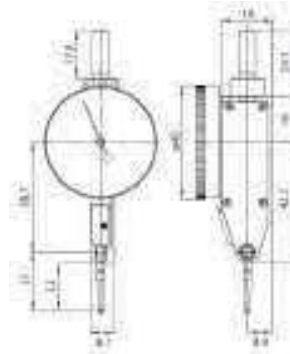
Mitutoyo



ART. SERIES 513

Drastically improved durability, sensitivity and visibility. The flat glare-free dial face allows the graduations to be read easily. The O-ring seal on the bezel has provides a smooth rotation and prevents dust and oil from getting into the instrument. Multi-layer scratch resistant coating on the dial

Tech. Code	GR47 Euro	Range mm	Measuring force N	Ø mm	Resolution mm	L1 mm	L2 mm
D232114045	167,00	1	0,01-0,2	40	0,01	44,5	41



INTERCHANGEABLE MEASUREMENT TIPS



Tech. Code	GR45 Euro	Description		Tech. Code	GR45 Euro	Description	
D2388010	3,00	Ball point tips Steel M2,5 - 6g		D2388032	52,00	Angular contact tips M2,5 - 6g - ball ø 2mm	
D2388012AC D2388012MD	8,00 86,00	Flat tips Steel M2,5 - 6g Flat tips HM M2,5 - 6g		D2388034	12,00	Spherical tips with bent contact point M2,5 - 6g	
D2388016	12,00	Conical tips 45° Steel M2,5 - 6g		D2388038	17,00	Revolving blade tips	
D2388018	17,00	Spherical probe tips Ruby M2,5 - 6g		D2388040	6,00	Blade tips profile ø 3mm M2,5 - 6g	
D2388020	13,00	Cylindrical tips ø 1,5mm M2,5 - 6g		D2388042	10,00	Flat tips ø 4,5mm M2,5 - 6g	
D2388022	56,00	Cylindrical rounded tips R 1,5mm M2,5 - 6g		D2388044AC D2388044MD	6,00 46,00	Cylindrical Steel tips M2,5 - 6g Cylindrical HM tips M2,5 - 6g	
D2388024	12,00	Conical tips M2,5 - 6g		D2388048	23,00	Cylindrical tips M2,5 - 6g	
D2388026	6,00	Spherical tips 16 mm length - M2,5 - 6g		D2388050	148,00	Roller point length 8,7mm M2,5 - 6g	
D2388028	125,00	Tips 90° M2,5 - 6g		D2388052	37,00	Flat tips ø 20mm M2,5 - 6g	
D2388030	139,00	Offset contact tips HM M2,5 - 6g		D2388058L10 D2388058L15 D2388058L20 D2388058L30 D2388058L40 D2388058L50	10,00	Steel extensions M2,5 - 6g L 10, 15, 20, 30, 40, 50 mm	
D2388054D1 D2388054D1,5 D2388054D2 D2388054D2,5 D2388054D3 D2388054D3,5 D2388054D4 D2388054D4,5 D2388054D5 D2388054D5,5 D2388054D6 D2388054D6,5	17,00	Spherical tips M2,5 - 6g Series from ø 1 - 6,5 Progression 0,5		D2388056D7 D2388056D7,5 D2388056D8 D2388056D8,5 D2388056D9 D2388056D9,5 D2388056D10 D2388056D10,5 D2388056D11	20,00	Spherical tips M2,5 - 6g Series from ø 7 - 11 Progression 0,5	



## SET OF DEPTH EXTENSIONS AND BASE FOR DIAL INDICATORS

ALPA



### ART. D2390

Hardened chromed steel and lapped measuring surface, complete with extension units.

Tech. Code	GR45 Euro	Extensions mm	Base mm
D2390SET1	153,00	10/20/30/40/50/60/70/80/90	80 x 16
D2390SET2	71,00	Only base	100 x 19



## MAGNETIC DIAL INDICATOR STANDS MB-B

KANATEC



### ART. CD010

Featuring a superior quality pure-cobalt magnetic base, it's a highly dependable KANATEC Japanese product, designed for heavy-duty by a leader in the marketplace.

Magnetic base with V-groove, chromed arm, clamping shaft  $\varnothing$  8 mm.

Tech. Code	GR45 Euro	Magnetic force kg	Column dimension mm	Arm dimension mm	Micrometrical adjustment	Base mm
D250580160	72,00	80	12 x 160	10 x 150	No	60 x 50 x 55



## MAGNETIC DIAL INDICATOR STANDS MB-BV

KANATEC



### ART. CD010

Featuring a superior quality pure-cobalt magnetic base, it's a highly dependable KANATEC Japanese product, designed for heavy-duty by a leader in the marketplace.

Magnetic base with V-groove, chromed arm, clamping shaft  $\varnothing$  8 mm.

Tech. Code	GR45 Euro	Magnetic force kg	Column dimension mm	Arm dimension mm	Micrometrical adjustment	Base mm
D250680180	(96,00)	80	12 x 180	10 x 150	Yes	60 x 50 x 55



## MAGNETIC DIAL INDICATOR STANDS MB-F2

KANATEC



### ART. CD010

Featuring a superior quality pure-cobalt magnetic base, it's a highly dependable KANATEC Japanese product, designed for heavy-duty by a leader in the marketplace.

Magnetic base with V-groove, chromed arm, clamping shaft  $\varnothing$  8 mm.

Tech. Code	GR45 Euro	Magnetic force kg	Column dimension mm	Arm dimension mm	Micrometrical adjustment	Base mm
D250780194	164,00	80	12 x 194	10 x 150	No	60x50x55





## FLEXIBLE MAGNETIC DIAL INDICATOR STANDS

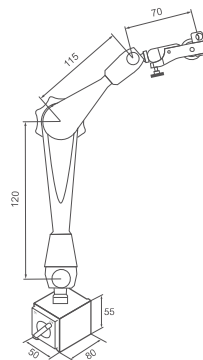
ALPAA



### ART. CD016

Flexible anvils, centre locking device and micrometric adjustment, magnetic base with flat and V-shaped, rectified surfaces, ø 8 mm dial gauge coupling.

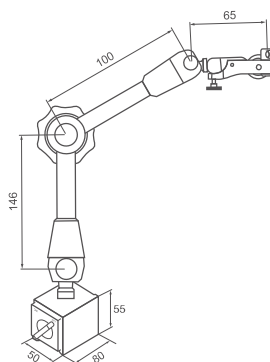
Tech. Code	GR45 Euro	Locking	Base mm	Magnetic force kg	Max. extension mm
D2512MEC100	228,00	Mechanical	80 x 50 x 55	100	340
D2512R100	72,00	Only base	80 x 50 x 55	100	-



### ART. CD018

Flexible anvils, centre locking device and micrometric adjustment, magnetic base with flat and V-shaped, rectified surfaces, ø 8 mm dial gauge coupling.

Tech. Code	GR45 Euro	Locking	Base mm	Magnetic force kg	Max. extension mm
D2513IDR100	220,00	Hydraulic	80 x 50 x 55	100	340
D2512R100	72,00	Only base	80 x 50 x 55	100	-



## JOINTED MAGNETIC KEY SWITCH HOLDER

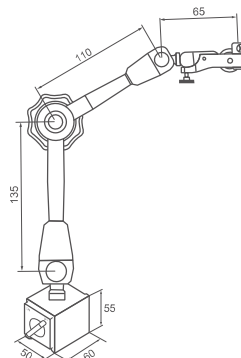
ALPAA



### ART. CD021

Flexible anvils, centre locking device and micrometric adjustment, magnetic base with flat and V-shaped, rectified surfaces, ø 8 mm dial gauge coupling.

Tech. Code	GR45 Euro	Locking	Base mm	Magnetic force kg	Max. extension mm
D2516MEC80	114,00	Mechanical	60 x 50 x 55	80	340
D2516R80	67,00	Solo base	60 x 50 x 55	80	-



## EXTENDED MAGNETIC DIAL INDICATOR STANDS

ALPAA



### ART. CD022

Arms 500x500 mm, gauge holder ø 8 mm, magnetic base 100 Kg, fine adjustment device.

Tech. Code	GR45 Euro	Base mm	Magnetic force kg	Max. extension mm
D2522MECC500	(257,00)	80 x 50 x 55	100	1000



## MAGNETIC DIAL INDICATOR STANDS

ALPA



ART. CD022

MAGNETIC DIAL INDICATOR STANDS

Tech. Code	GR45 Euro	Base mm	Magnetic force kg	Max. extension mm
D2523MECC100	(164,00)	80 x 50 x 55	100	490



## MAGNETIC DIAL GAUGE STANDS

ALPA



ART. D2520

Magnetic base with flat and V-shaped surfaces and  $\varnothing$  8 mm dial gauge coupling.

Tech. Code	GR45 Euro	Base mm	Magnetic force kg	Max. extension mm
D2520MEC60	25,00	50 x 65 x 70	60	340



## MEASURING STANDS

ALPA



ART. D2530

Painted cast iron base and dial gauge locking, fine grinded column and plate,  $\varnothing$  8 mm dial gauge coupling.

Tech. Code	GR45 Euro	Base mm	Column h mm	Arm mm
D2530070200	(178,00)	$\varnothing$ 78	230	75

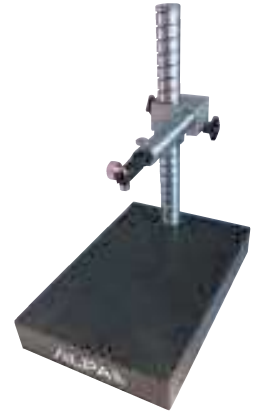




ART. CD040

DIN 876/00 compliant flatness and accuracy, sturdy, highly stable structure, hardened and grinded stainless steel stand column and fine-lapped surface, Ø 8 mm dial gauge coupling.

Tech. Code	GR45 Euro	Base mm	Column Ø x h mm	Column	Arm mm
D253520	(366,00)	300 x 200	30 x 300	Chrome-plated	Useful 180 - Ø 25 with micrometric screw
D253530	(225,00)	250 x 160	25 x 200	Nickel-plated	Useful 75 without micrometric screw
D253540	(450,00)	300 x 200	30 x 300	Chrome-plated and threaded	Useful 180 - Ø 25 with micrometric screw



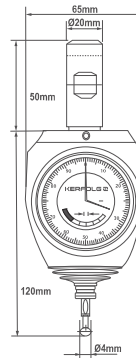
ANALOG 3D DIAL TASTERS IP67



ART. D3006

Highly accurate and versatile instrument for workstations, milling machines and electrical discharge machines. Engineered to make it easy to position the axes of the mandrel precisely and to quickly determine the "zero" point of the workpiece. Works on all axes (x - y - z). The indicator always moves in the same direction, displaying the distance from the workpiece without having to make any calculations. Easy to read dial, sturdy structure; it can be stored next to the machine along with other tools.

Tech. Code	GR49 Euro	Indication accuracy mm	Shank Ø mm
D30061	364,00	0.01	20



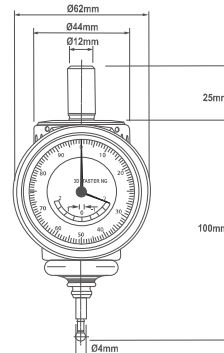
ANALOG 3D TASTERS IP67



ART. 3D NEW GENERATION

3D UNIVERSAL technical features, enhanced mechanics, compact design.

Tech. Code	GR49 Euro	Indication accuracy mm	Shank Ø mm
D30161	364,00	0,01	12



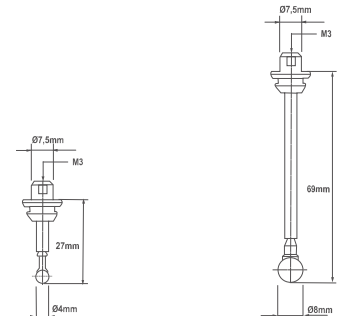
PROBE TIPS SPARE PARTS



ART. 80362 - 80363

PROBE TIPS SPARE PARTS  
Compatible with D3006 and D3016

Tech. Code	GR49 Euro	Ø mm	Length mm	Material
D30184	39,00	4	27	Ceramic
D30188	69,00	8	69	Ceramic



## ANALOG 3D DIAL TASTERS

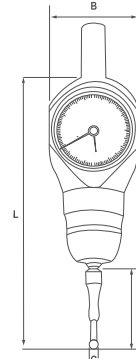


### ART. P00163D012

Tschorn 3D-taster stands out for its sturdy structure and engaging compact design. Its unique mechanism ensures great versatility when accurate measuring of a work piece is required.

Measuring of all axle directions (X / Y / Z) by simple reading on the indicator itself. The "0" indicator allows for the vertical axle to exactly match the work piece edge. Indication accuracy 0,01 mm.

Tech. Code	GR49 Euro	A mm	B mm	C mm	L mm	Shank Ø mm
D30172	356,00	27	44	3	118	12



## PROBE TIPS - SPARE PARTS



### ART. P00163D003-6

#### PROBE TIPS - SPARE PARTS

Tech. Code	GR49 Euro	Sup. art.	Material	Ø x L mm
D30193C	38,00	P00163C003	Ceramic	3 x 27
D30196C	(69,00)	P00163C006	Ceramic	6 x 62



## ELECTRONIC EDGE FINDERS



### ART. D3020

LED light and audible electronic centering devices, LED-lit 360° display with audible beep allowing centering or alignment of a workpiece with tool holder axis and height and depth measurements, specifically suitable for "zero" start point search on machine tools, 1.5V SUM5 R1 micro batteries (included).

Tech. Code	GR45 Euro	Shank Ø mm	Contact ball Ø mm
D30201	145,00	20	10
D3020R1	9,00	Spring	-



## ELECTRONIC EDGE FINDERS LUMINOUS



### ART. D3023

Accurate measurement with probing accuracy of less than 5µm on all three axes. 360° bright display. 23A 12V battery power supply (included).

Tech. Code	GR45 Euro	Shank Ø mm	Contact ball Ø mm
D30231	242,00	20	10

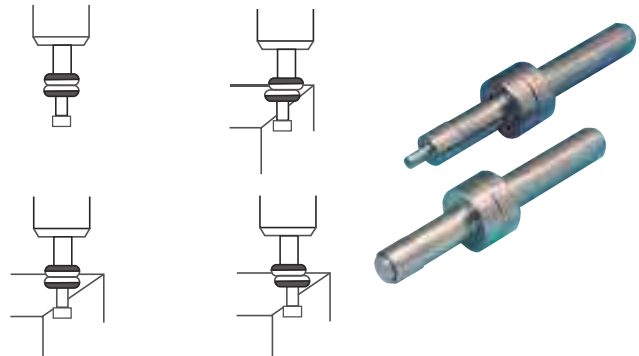


## HIGH ACCURACY MECHANICAL EDGE FINDERS

### ART. D3021

High precision visual centering system (+/- 0,005) (through lower face movement upon workpiece contact), suitable for typical centering operations (recommended speed 600/800 rpm).

Tech. Code	GR49 Euro	Shank Ø mm	Contact ball Ø mm
D30211	57,50	10	10
D30212	62,40	10	10 / 4
D3021R1	12,40	Molla	Spare part Ø 10
D3021R2	12,40	Molla	Spare part Ø 10/4

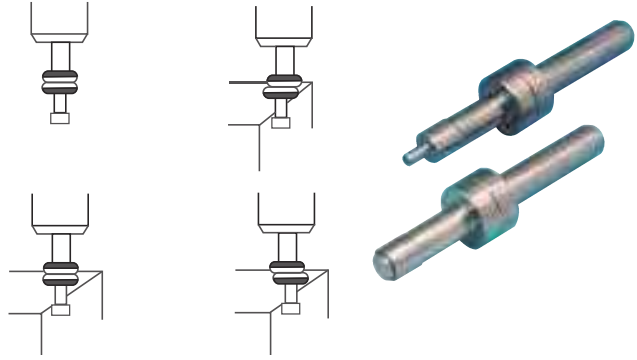


## MECHANICAL EDGE FINDERS

### ART. D3025

Simple and fast visual centering system (through lower face movement upon workpiece contact), suitable for typical centering operations (recommended speed 400/600 rpm).

Tech. Code	GR45 Euro	Shank Ø mm	Contact ball Ø mm
D30251	21,30	10	10
D30252	22,00	10	10 / 4
D3020R1	9,00	Spring	-



## ZERO SETTERS WITH LED

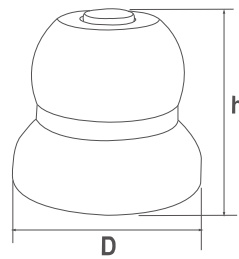


### ART. D3030

A fast and accurate device for zero setting procedures of tools on standard and CNC machines. After positioning the setting instrument onto the machine bench, approach tool until it lightly touches the plate, a luminous LED will be turned on upon all throughout its range. Chromed steel stand with magnetic insert block for horizontal-position.

Tech. Code	GR49 Euro	D mm	h mm	Tolerance mm
D30301	174,30	55	50	± 0.005

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1.5V SR44



## ZERO SETTERS

ALPA



### ART. HA200

Fast and accurate gauge to zero-set tools on traditional and CNC machines. Put the gauge on machine plane, approach with the tool and push the plate until dial gauge goes to the preset value. Hardened aluminium construction, with hardened stainless steel plate, reading 0,01 mm, magnetic base for horizontal use, ± 0.005 mm tolerance on zero-set height.

Tech. Code	GR45 Euro	Excursion mm	Zero-set mm
D31351	200,00	5	50
D31352	229,00	5	100



## BLACK GRANITE INSPECTION PLATES WITH STAND

ALPA

### ART. HA122

DIN 876/0 compliant flatness and accuracy. Non-magnetic and electrically insulated black granite allows a higher accuracy on surface finishing and internal stress absence.

Painted rectangular section structure made from stainless steel, designed for both cast iron and granite surfaces, adjustable swing brake leveling foot/tips system.

Tech. Code	GR45 Euro	Dimension mm	Weight kg
D3205630	(675,00)	630 x 400 x 80	92
D32051000	(1300,00)	1000 x 630 x 140	315



## GRANITE INSPECTION PLATES

ALPA



### ART. HA120

DIN 876/0 compliant flatness and accuracy. Non-magnetic and electrically insulated black granite allows a higher accuracy on surface finishing and internal stress absence.

Tech. Code	GR45 Euro	Dimension mm	Accuracy ± μm	Weight kg
D3200250	(87,78)	250 x 160 x 40	3,0	5
D3200300	(119,00)	300 x 200 x 50	3,0	9
D3200400	(201,00)	400 x 400 x 60	3,0	32
D3200630	(284,00)	630 x 400 x 80	4,0	62
D3200800	(445,00)	800 x 500 x 100	4,0	130
D32001000	(820,00)	1000 x 630 x 140	4,0	260
D32001200	(1413,00)	1200 x 800 x 160	5,0	460
D32001600	(2900,16)	1600 x 1000 x 180	6,0	900
D32002000	(3504,00)	2000 x 1000 x 220	6,0	1300

MORE SIZES AVAILABLE UPON REQUEST



## IRON STANDS FOR INSPECTION PLATES

ALPA

### ART. HA125

Steel structure with painted rectangular section, suitable for both cast iron and granite plates, adjustment levelling and anti-fitting tips. On request drawer with lock.

Tech. Code	GR45 Euro	Dimension mm	Weight kg
D3210600*	(394,00)	600 x 400	30
D32101000	(489,00)	1000 x 630	55
D32101200	(551,00)	1200 x 800	80
D32101500	(780,00)	1500 x 1000	100
D32102000	(810,00)	2000 x 1000	120

\* Suitable for 630x400x80 e 800x500x100 surfaces



## ENGINEER'S BLUE

### ART. HA154

Ideal for locating high areas while scraping or components contact points so to obtain assembly accuracy. It operates by having the reference surface, which is blue, contacting the surface to be measured; the areas to be scraped will be highlighted in blue. Will not dry out nor harden, long service life.

Tech. Code	GR45 Euro	Weight g
D3250200	67,00	200





## DETERGENT FOR LAPPED SURFACES

ALPA

### ART. HA155

Special liquid detergent for lapped surfaces.

Tech. Code	GR45 Euro	Package	Quantity L
D3252500	19,00	Jar	0,5
D32525KG	67,00	Can	5



## POLISHING OIL FOR GRANITE

ALPA

### ART. BLACK LIGHT

BLACK LIGHT is a product studied and formulated to protect, revive, preserve and polish the floors in diabase granite.

The product can be used on any granite surface even outside controlled environments, therefore usable in any metalworking work shops.

BLACK LIGHT contains only chemically Improved components of vegetable origin to maximize the protective, revitalizing and product safety features.

The product, being formulated only with compounds having plant origin, is without a safety data sheet, therefore is not dangerous for humans.

The product does not contain substances classified as dangerous for the health of the environment in accordance with the provisions of the regulation of the (UE) 1272/2008 (CLP) (and subsequent amendments and adjustments) in quantities that require the declaration.

Tech. Code	GR45 Euro	Package	Quantity ml
D32570500	13,00	Jar	500
D32575000	67,00	Can	5000



## UNIVERSAL DIGITAL BEVEL PROTRACTORS

ALPA



### ART. EA012

30° and 5/1000° resolution - ON/OFF button, zero setting at any position, 360° / 180° x 2 / 90° x 4 display mode, micrometric adjustment, adjustable square for undersquare and small angles.

Tech. Code	GR45 Euro	Rod mm
D4110300	465,00	300

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## BEVEL PROTRACTORS WITH MAGNIFIER

ALPA



### ART. EB022

5' arc resolution - satin-chromed vernier gauge, micrometric adjustment, adjustable square for undersquare and small angles.

Tech. Code	GR45 Euro	Rod mm
D4115300	90,00	200 - 300



## BEVEL PROTRACTORS

ALPA



### ART. D4120

5' arc resolution - satin-chromed vernier gauge.

Tech. Code	GR45 Euro	Rod mm
D4120300	58,30	300



## DIGITAL UNIVERSAL PROTRACTORS WITH SPIRIT LEVEL

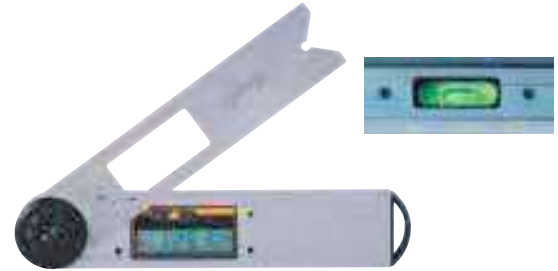


ART. D4130

0.05° resolution - aluminium body, ON/OFF button.

Tech. Code	GR45 Euro	Range	Accuracy	Dimension mm
D4130360	(90,00)	360°	± 0,2°	254 x 50 x 36

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## WORKSHOP ALTIMETER

ALPA MEGAtower LT



ART. GA040

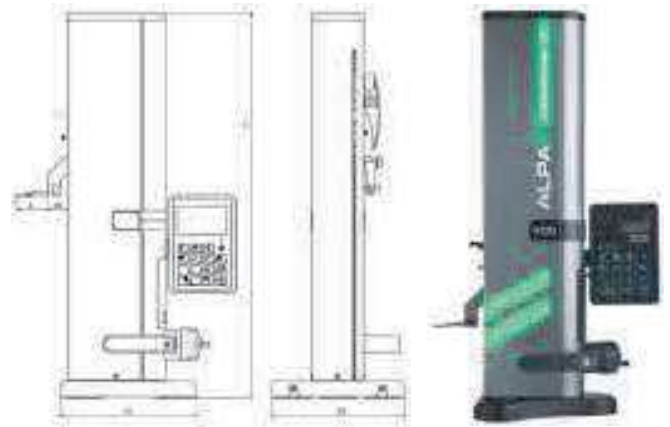
Resolution 0.001 mm.

Measurement force N 0.75 ÷ 1.5. Swiss-built altimeter, sturdy, accurate and reliable. High contrast and easy to use display with RS232 and USB interface. Supplied with Ø 4 mm probe in ruby, calibration sample and protective sheet.

Functionality:

- Measuring range 400 mm
- Resolution 0.001 mm
- Repeatability 3 µm (Ø: 5)
- Measurement force N 0.75 ÷ 1.5
- Extremely easy to use

Tech. Code	GR46 Euro	Range mm	A mm	B mm	C mm
D4100400	4010,00	400	278	270	780



## HEIGHT GAUGES IP67

ALPA MEGAtower



ART. GA050

Totally made in Switzerland, IP67 enclosed, it guarantees high durability, accuracy and repeatability.

The easy to use display provides directly accessible functions.

This feature allows everyone an easy and quick handling.

To make easier the displacement all along measuring table, it is equipped with air cushion.

Functionality:

- Measuring ranges 400 and 700 mm
- Resolution 0.001 mm
- Repeatability 2 (Ø : 4)
- Measurement force N 0.75 ÷ 1.5 mm
- Extremely easy to use
- Electronically adjustable measuring force
- Autonomy: 40 h (lithium-ion batteries)
- RS232 et USB interfaces

Supplied with:

- Insert with ruby ball Ø4 mm L90 mm (D4206RB490)
- Calibration report on master
- Calibration report on measuring rule
- Calibration report on orthogonality
- Protection cover

Tech. Code	GR46 Euro	Measuring range with extension mm	Max error µm	Perpendicularity error µm
D4200400	5552,00	508	5	10
D4200700	6000,00	812	5	15

Tech. Code	GR45 Euro	MODEL
D4201USB	33,00	USB - Mini cable



## PROBES WITH HM SPHERE

ALPA



ART. GA052

PROBES WITH HM SPHERE



Tech. Code	GR45 Euro	d	D	L1	L2
		mm	mm	mm	mm
D4203MD175	(457,00)	1	8	70	75
D4203MD280	(467,00)	2	8	70	80
D4203MD2130	(769,00)	2	8	120	130

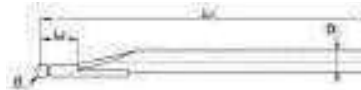
## PROBES WITH RUBY SPHERE

ALPA



ART. GA052

PROBES WITH RUBY SPHERE



Tech. Code	GR45 Euro	d Ø	D	L1	L2
		mm	mm	mm	mm
D4206RB490	(257,00)	4	8	90	14
D4206RB5129	(350,00)	5	8	129	14

## PROBE HOLDER EXTENSIONS

ALPA



ART. GA051

PROBE HOLDER EXTENSIONS



Tech. Code	GR45 Euro	Ø	Material	Length
		mm		mm
D4202PROL	(1690,70)	8	Ceramic	330

## ACCESSORIES FOR HEIGHT GAUGES - KIT 7 PIECES

ALPAIN



### ART. GA052

Equipment:	Pieces:
- Measuring insert with carbide ball Ø4mm L=80mm	1
- Insert holder 90° Ø4mm L=65mm	1
- Insert holder with pin Ø2mm L=97mm	1
- Measuring insert holder L=124mm M2.5	1
- Measuring insert with ball contact Ø2mm M2.5	1
- Disc shaped measuring insert Ø18mm	1
- Hexagonal wrenches 2.5mm	1

Tech. Code	GR45 Euro	Pieces
D4204KIT7	(881,10)	7



## ACCESSORIES FOR HEIGHT GAUGES - KIT 16 PIECES

ALPAIN



### ART. GA052

Equipment:	Pieces:
- Measuring insert with carbide ball Ø4mm	1
- Measuring insert with carbide ball Ø4mm L=80mm	1
- Measuring insert with carbide pin 1mm L=78mm	1
- Swivel holder Ø8mm and Ø4mm L=150mm	1
- Insert holder 90° Ø4mm L=65mm	1
- Insert holder with pin Ø2mm L=97mm	1
- Measuring insert holder L=95mm M2.5	1
- Measuring insert holder L=124mm M2.5	1
- Measuring insert holder L=200mm M2.5	1
- Measuring insert with ball contact Ø2mm M2.5	1
- Disc shaped insert Ø18mm	1
- Measuring insert with ball M1.4 1mm	1
- Measuring insert with ball M1.4 2mm	1
- Measuring insert with ball M1.4 3mm	1
- Wrench open hand 1.5mm	1
- Hexagonal wrenches 2.5mm	1

Tech. Code	GR45 Euro	Pieces
D4207KIT16	(2143,90)	16



## ACCESSORIES FOR HEIGHT GAUGES - KIT 20 PIECES

ALPAIN



### ART. GA052

Equipment:	Pieces:
- Measuring insert with ball contact Ø2mm M2.5	1
- Measuring insert with 4 pins M2.5 Ø1.5mm	1
- Disc shaped insert Ø7.7mm	1
- Disc shaped insert Ø11.5mm	1
- Corner insert 1mm	1
- Measuring insert with carbide ball M1.4 1mm	1
- Measuring insert with carbide ball M1.4 2mm	1
- Measuring insert with carbide ball M1.4 3mm	1
- Holder M2.5 measuring insert for M2.5 and M1.4	1
- Measuring insert holder L=80mm M2.5	1
- Measuring insert holder with pin Ø1mm x 10mm	1
- Measuring insert with ruby ball Ø2mm	1
- Measuring insert with holder Ø1mm	1
- Knife edge insert L=88mm	1
- Measuring insert holder Ø4mm	1
- Swivel insert holder Ø8mm e Ø4mm	1
- Wrench open hand 1.5mm	1
- Hexagonal wrench insert 1.5mm	1
- Hexagonal wrench insert 2.5mm	1
- Plastic hose with protective cap Ø12mm L=50mm	1

Tech. Code	GR45 Euro	Pieces
D4208KIT20	(2561,00)	20



## HEIGHT GAUGES WITH 2D ELECTRONIC



### ART. D4215

Totally manufactured in Switzerland extremely accurate and reliable.  
Manual and two speed motorized handlings integrated into the same control.  
2D New electronic with interface touch-screen intuitive easy and simple to use.  
Air cushion for easy displacement.

#### Functionality:

- Measuring ranges: 400 - 700 - 1100 mm
- Resolution: 0,0001 mm
- Repeatability:pm 1 (Ø : 2)
- Measuring force: N 0,75 ÷ 1,5
- Extremely easy to use
- Electronically adjustable measuring force
- Autonomy 12 ore (battery lithium-ion)
- Interfaces RS232 e USB

#### Supplied with:

- Probe in ruby Ø4 mm L90 mm (D4206RB490)
- RDT on master
- RDT on measurement line
- RDT on ortogonalità
- Protective cover

Tech. Code	GR50 Euro	Measuring range extended mm	Max error mm	Perpendicularity error mm
D4215400	(-)	719	2 + L/400	5
D4215700	(-)	1023	2 + L/400	8
D42151100	(-)	1422	2 + L/400	11

AVAILABILITY LIMITED TO CERTAIN COUNTRIES ONLY



## DOUBLE COLUMN DIGITAL HEIGHT GAUGES

ALPA Exacto



### ART. GA075

0.01mm resolution - Rectified cast iron base on 4 support points.  
Polished chrome steel columns, supplied with squared stainless steel scriber adjustable by using housed key.  
Silvac electronics system provided with preset and RS232 data output.  
Rapid movement button.

Tech. Code	GR45 Euro	Range mm
D4205300	(1199,00)	0 ÷ 300
D4205600	(1496,00)	0 ÷ 600
D42051000	(1802,00)	0 ÷ 1000
D4205AC	(315,00)	Dial and probe snug

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032
D0003USB	261,00	Cable Opto - USB
D0003RS232	175,00	Cable Opto - RS232



## DOUBLE COLUMN DIGITAL HEIGHT GAUGES

Mitutoyo



### ART. SERIE 192

Resolution 0.01 / 0.005 mm - Digital height gauges, high accuracy performance but simple to use. The double column structure ensures high measurement accuracy. Supplied with micrometri adjustment , carbide tip scriber.  
Data Output.

Tech. Code	GR47 Euro	Range mm
D4209300	1030,00	0 ÷ 300
D4209600	1414,00	0 ÷ 600



## DIGITAL HEIGHT GAUGES

ALPAIN

0,01	LCD	INOX	mm	1,5V	
mm			inch	SR44	

### ART. GA080

0.01mm resolution - Satin-chromed scale, ON/OFF button, zero-setting at any position, incremental zero setting and restoration of absolute scale (ABS), last displayed value hold feature (HOLD mode), micrometric adjustment, marker with HM tip. Suitable for marking and height testing procedures.

Tech. Code	GR45 Euro	Range mm
D4210300	271,00	0 ÷ 300
D4210500	420,00	0 ÷ 500
D42101000	1100,00	0 ÷ 1000
D42101500	1780,00	0 ÷ 1500
D4210AC	55,00	Gauge holder coupling
D4220AT	52,00	Sensor coupling

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1,5V SR44



## DIGITAL HEIGHT GAUGES WITH CHROMED STEEL CASING

ALPAIN

0,01	LCD	INOX	mm	1,5V	
mm			inch	SR44	

### ART. GA095

0.01mm resolution - Chromed steel casing, satin-chromed scale, ON/OFF button, zero-setting at any position, rapid thumb wheel movement, micrometric adjustment, with carbide tip scriber. Suitable for scribing and height testing procedures.

Tech. Code	GR45 Euro	Range mm
D4220300	421,00	0 ÷ 300
D4220600	770,00	0 ÷ 600
D4220AC	55,00	Gauge holder coupling
D4220AT	52,00	Sensor coupling

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1,5V SR44



## DIAL HEIGHT GAUGES

ALPAIN

0,01	INOX	
mm		

### ART. GB010

0.01mm resolution - Double counter reading and zero setting at any position, handle-operated double guiding column, carbide tip scriber. Suitable for scribing and height testing procedures.

Tech. Code	GR45 Euro	Range mm
D4230300	306,00	0 ÷ 300
D4230600	557,00	0 ÷ 600
D4230AC	51,00	Gauge holder coupling
D4230AT	50,00	Sensor coupling





## HEIGHT GAUGES

ALPAIN

INOX



ART. GB020

Height gauge cast iron base, graduated stainless steel rod with fine adjustment. Carbide-tipped scriber. Resolution 0.02mm.

Tech. Code	GR45 Euro	Range mm
D4240300	257,00	0 ÷ 300
D4240600	356,00	0 ÷ 600
D4240RP300	52,00	Spare tip 300
D4240RP600	57,00	Spare tip 600



D

## PAIRS OF PARALLEL X-BLOCKS

ALPAIN

ART. HA035

1/100mm tolerance - Stress-resistant steel, 4 V-shaped 90° grooves.

Tech. Code	GR45 Euro	Dimension mm	Lodging diameters mm
D4510075075	(120,00)	75 x 75	5 ÷ 60
D4510100080	(170,00)	100 x 80	5 ÷ 80
D4510120090	(186,00)	120 x 90	5 ÷ 80
D4510150100	(250,00)	150 x 100	5 ÷ 85



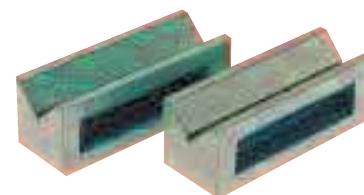
## PAIRS OF PARALLEL V-BLOCKS

ALPAIN

ART. HA050

1/100mm tolerance - Stress-resistant steel, V-shaped 90° grooves.

Tech. Code	GR45 Euro	Dimension mm	Lodging diameters mm
D4520150055	(115,00)	150 x 55	5 ÷ 42
D4520200070	(150,00)	200 x 70	5 ÷ 56



## STAINLESS STEEL FLAT EDGE SQUARES 90°

ALPAIN

INOX



ART. HA085

Hardened flat square stainless steel. Entirely grinded faces. High precision, made and tested to very strict procedures. Serial number. Manufactured according to DIN 875/0. Supplied in case.

Tech. Code	GR45 Euro	Dimension mm	Section mm
D46115040	(78,00)	50 x 40	15 x 5
D4611075050	(105,00)	75 x 50	20 x 8
D4611100070	(113,00)	100 x 70	20 x 8
D4611150100	(140,00)	150 x 100	25 x 8
D4611200130	(235,00)	200 x 130	30 x 8
D4611250165	(280,00)	250 x 165	40 x 9
D4611300200	(367,00)	300 x 200	40 x 9



## BEVELED EDGE SQUARES 90°

ALPA



ART. HA090

Two-bevelled edge square flat version stainless steel.  
The two chamfered and lapped sides allow more accurate visual control.  
Entirely grinded. High precision, made and tested to very strict procedures.  
Serial number. Manufactured as per DIN 875/00. Supplied in case.



Tech. Code	GR45 Euro	Dimension mm	Section mm
D46135040	(96,00)	50 x 40	15 x 5
D4613075050	(113,00)	75 x 50	20 x 8
D4613100070	(122,00)	100 x 70	20 x 8
D4613150100	(166,00)	150 x 100	25 x 8
D4613200130	(235,00)	200 x 130	30 x 8
D4613250165	(288,00)	250 x 165	40 x 9
D4613300200	(445,00)	300 x 200	40 x 9

## STAINLESS STEEL SQUARES WITH BASE

ALPA



ART. HA075

90° hardened stainless steel square with base.  
Entirely grinded faces. High precision, made and tested to very strict procedures. Serial number. Manufactured according to DIN 875/0. Supplied in case.



Tech. Code	GR45 Euro	Dimension mm	Section mm
D46165040	(131,00)	50 x 40	15 x 5
D4616075050	(148,00)	75 x 50	20 x 8
D4616100070	(175,00)	100 x 70	20 x 8
D4616150100	(218,00)	150 x 100	25 x 8
D4616200130	(262,00)	200 x 130	30 x 8
D4616250165	(315,00)	250 x 165	40 x 9
D4616300200	(420,00)	300 x 200	40 x 9

## BEVELED STRAIGHT EDGES



ART. D4620

Ruler to control flatness. In stainless steel with insulated handle.  
In compliance with DIN 874/00 standards.

Tech. Code	GR49 Euro	Dimension mm
D462050	12,00	50
D462075	17,60	75
D4620100	21,30	100
D4620125	22,20	125
D4620150	26,90	150
D4620200	33,30	200
D4620250	44,40	250
D4620300	56,00	300
D4620400	75,00	400
D4620500	133,30	500



## HORIZONTAL SPIRIT LEVELS

ALPA



ART. EB051

Special frame made of nickel-chrome cast iron with natural curing, prismatic base for perfect support on flat and cylindrical surfaces, vial sensibility 0.02 mm, second transverse vial, hand scraped contact surface, aluminum case.

Tech. Code	GR45 Euro	Length mm	Sensitivity mm/m
D4701150	(273,00)	150	0,02
D4701200	(295,00)	200	0,02
D4701250	(350,00)	250	0,02



## HORIZONTAL SPIRIT LEVELS

ALPAA



### ART. EB055

Corrugated alloy cast iron body with prismatic base, shock-proof vials, heat-insulating clamps. With aluminum case.

Tech. Code	GR45 Euro	Length mm	Sensitivity mm/m
D4700150002	170,00	150	0.02
D4700200002	192,60	200	0.02
D4700250002	196,00	250	0.02
D4700300002	218,00	300	0.02



## HORIZONTAL SPIRIT LEVELS GRINDED

ALPAA



### ART. EB060

Base V-groove suitable for flat surfaces or cylinders, delivered in rigid case.

Tech. Code	GR45 Euro	Length mm	Sensitivity mm/m
D4702100	120,00	100	0.05
D4702150	142,00	150	0.05
D4702200	169,06	200	0.05
D4702250	170,00	250	0.05
D4702300	195,00	300	0.05



## HORIZONTAL SPIRIT LEVELS

ALPAA



### ART. EB035

Manufactured in nichel-chrome cast iron frame. Fine grinded surface. Flat base with V-groove. Serially numbered, manufactured according to DIN 877. Thermal-insulated grip. The vial is visible both from above and laterally.

Tech. Code	GR45 Euro	Length mm	Sensitivity mm/m
D4703150	(454,00)	150	0.02
D4703200	(490,00)	200	0.02
D4703300	(600,00)	300	0.02



## SQUARED SCRAPED SPIRIT LEVELS

ALPAA



### ART. EB040

Special frame made of nickel-chrome cast iron, four 90° fine grinded surfaces, 2 flat and 2 V-shaped for checking flat and cylindrical, horizontal and vertical surfaces, vial sensibility 0.02 mm, insulation board handle with vial protection. Supplied in hard box.

Tech. Code	GR45 Euro	Dimension mm	Sensitivity mm/m
D4706150	390,00	150 x 150	0.02
D4706200	502,00	200 x 200	0.02



## SQUARE SPIRIT LEVELS

ALPAA



### ART. D4705

Corrugated alloy cast iron frame, 90° surfaces, two flat and two prismatic surfaces from 150 x 150 mm to 250 x 250 mm, only in range 100 x 100 one prismatic surface. Shock-proof vials, heat-insulating handle.

Tech. Code	GR45 Euro	Dimension mm	Sensitivity mm/m
D4705100005	252,00	100 x 100	0.05
D4705150005	241,00	150 x 150	0.05
D4705200005	262,00	200 x 200	0.05
D4705250005	325,28	250 x 250	0.05
D4705150002	251,00	150 x 150	0.02
D4705200002	289,00	200 x 200	0.02
D4705250002	316,00	250 x 250	0.02



## SQUARE SPIRIT LEVELS

ALPA



### ART. EB030

Manufactured in nichel-chrome cast iron frame.  
Fine grinded surface, 2 plane and 2 prismatic faces.  
Serial number, manufactured according to DIN 877.  
Thermal-insulated grip.  
The vial is visible both from above and laterally.

Tech. Code	GR45 Euro	Dimension mm	Sensitivity mm/m
D4707150	(820,00)	150 x 150	0,02
D4707200	(752,00)	200 x 200	0,02



## DIGITAL PROTRACTOR/ INCLINOMETERS

ALPA



### ART. EA021

0,1° resolution 360° (4 x 90°) protractor level and inclinometer, ON/OFF button. Zero setting at any position, last displayed value hold feature (HOLD mode). 3V battery supply (included).

Tech. Code	GR45 Euro	Dimension mm	Accuracy	Repeatability
D47101	108,00	150 x 30 x 50	0° - 10° ± 0,1° 10° - 90° ± 1,5%	± 0,1°

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## DIGITAL PROTRACTOR/INCLINOMETERS

SPi



### ART. EA020

Digital level, 360° (4x90°) protractor and inclinometer.  
Zero setting at any position.

Tech. Code	GR45 Euro	Resolution
D4713001	760,00	0.01°
D471301	473,00	0.1°

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## MINI DIGITAL INCLINOMETERS WITH MAGNETIC FIXING SYSTEM



### ART. D4715

Portable device for angle monitoring, zero-setting at any position, supplied along with storage case, measurement range 180°.

Tech. Code	GR49 Euro	Dimension mm	Resolution	Accuracy	Repeatability
D471501	67,00	50 x 50 x 32	0.10°	± 0.20°	± 0.10°

Tech. Code	GR49 Euro	Model
D99113V	5,50	Battery 3v cr2032



## MAGNETIC SPIRIT LEVELS



### ART. D4720

0-360° range of usage, permanent vertical position indicator, ideal to check pieces in any position.

Tech. Code	GR49 Euro	Dimension mm	Sensitivity
D47201	117,00	93 x 79 x 16	0,083°
D47202	240,00	140 x 130 x 20	0,05°



## GO/ NO GO PLUG GAUGES

ALPAA

ART. FA187

Hardened steel, H7 tolerance.

Tech. Code	GR45 Euro	Ø mm
D55103	(29,00)	3
D55104	(29,00)	4
D55105	(29,00)	5
D55106	(29,00)	6
D55107	(29,00)	7
D55108	(29,00)	8
D55109	(29,00)	9
D551010	(29,00)	10
D551011	(29,00)	11
D551012	(29,00)	12
D551013	(29,00)	13
D551014	(29,00)	14
D551015	(29,00)	15
D551016	(29,00)	16
D551017	(29,00)	17
D551018	(29,00)	18
D551019	(29,00)	19
D551020	(29,00)	20
D551021	(33,00)	21
D551022	(33,00)	22
D551023	(33,00)	23
D551024	(33,00)	24

Tech. Code	GR45 Euro	Ø mm
D551025	(33,00)	25
D551026	(33,00)	26
D551027	(33,00)	27
D551028	(33,00)	28
D551029	(33,00)	29
D551030	(33,00)	30
D551032	(40,00)	32
D551033	(40,00)	33
D551034	(40,00)	34
D551035	(40,00)	35
D551036	(40,00)	36
D551037	(40,00)	37
D551038	(40,00)	38
D551040	(40,00)	40
D551042	(49,00)	42
D551044	(49,00)	44
D551045	(49,00)	45
D551046	(49,00)	46
D551047	(49,00)	47
D551048	(49,00)	48
D551050	(49,00)	50
D551052	(67,00)	52

Tech. Code	GR45 Euro	Ø mm
D551055	(67,00)	55
D551056	(67,00)	56
D551058	(67,00)	58
D551060	(67,00)	60
D551062	(67,00)	62
D551065	(67,00)	65
D551068	(84,00)	68
D551070	(76,00)	70
D551072	(94,00)	72
D551075	(88,00)	75
D551078	(94,00)	78
D551080	(88,00)	80
D551082	(101,00)	82
D551085	(111,00)	85
D551088	(111,00)	88
D551090	(101,00)	90
D551092	(118,00)	92
D551095	(112,00)	95
D551098	(118,00)	98
D551100	(112,00)	100



## GO/NG LIMIT PLUG GAUGES SET

ALPAA

ART. FA188

GO/NG limit plug gauges set in hardened steel. Tolerance H7. Supplied in wooden case.

Composition

D551615: Ø 32 - 34 - 35 - 36 - 38 - 40 - 42 - 44 - 46 - 48 - 50 - 52 - 55 - 58 - 60 mm

D551626: Ø 3 - 4 - 5 - 6 - 7 - 8 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 20 - 21 - 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 30 mm

Tech. Code	GR45 Euro	Pieces n°
D551615	(790,00)	15
D551626	(830,00)	26



## SETTING RINGS FOR BORE GAUGES AND MICROMETERS

ALPAA

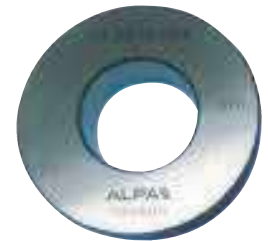
ART. FA190

Manufactured according to DIN 2250-C standard.

Tech. Code	GR45 Euro	Ø mm
D551704	(59,00)	4
D551705	(59,00)	5
D551706	(61,00)	6
D551707	(59,00)	7
D551708	(59,00)	8
D551709	(59,00)	9
D551710	(57,00)	10
D551711	(57,00)	11
D551712	(57,00)	12
D551713	(57,00)	13
D551714	(57,00)	14
D551715	(57,00)	15
D551716	(57,00)	16
D551717	(57,00)	17
D551718	(57,00)	18
D551719	(57,00)	19
D551720	(61,00)	20
D551721	(61,00)	21
D551722	(61,00)	22
D551723	(61,00)	23
D551724	(61,00)	24
D551725	(61,00)	25
D551726	(61,00)	26
D551727	(61,00)	27
D551728	(61,00)	28

Tech. Code	GR45 Euro	Ø mm
D551729	(61,00)	29
D551730	(61,00)	30
D551732	(61,00)	32
D551733	(62,00)	33
D551734	(61,00)	34
D551735	(61,00)	35
D551736	(62,00)	36
D551737	(61,00)	37
D551738	(61,00)	38
D551740	(77,00)	40
D551742	(77,00)	42
D551744	(77,00)	44
D551745	(77,00)	45
D551746	(82,00)	46
D551747	(77,00)	47
D551748	(77,00)	48
D551750	(77,00)	50
D551752	(87,00)	52
D551755	(87,00)	55
D551756	(87,00)	56
D551758	(87,00)	58
D551760	(104,00)	60
D551762	(114,00)	62
D551765	(114,00)	65
D551768	(114,00)	68

Tech. Code	GR45 Euro	Ø mm
D551770	(114,00)	70
D551772	(114,00)	72
D551775	(114,00)	75
D551778	(114,00)	78
D551780	(125,00)	80
D551782	(125,00)	82
D551785	(162,00)	85
D551788	(155,00)	88
D551790	(155,00)	90
D551792	(155,00)	92
D551795	(162,00)	95
D551798	(155,00)	98
D5517100	(201,00)	100
D5517110	(229,00)	110
D5517120	(259,00)	120
D5517125	(259,00)	125
D5517130	(292,00)	130
D5517140	(360,00)	140
D5517150	(322,00)	150
D5517175	(492,00)	175
D5517225	(742,00)	225
D5517250	(827,00)	250
D5517275	(954,00)	275





## COARSE PITCH THREADED GAUGES



ART. FA225

Hardened steel.

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Gauges	Type
D5520T204	(52,00)	2 x 0,4	6H	Plug	G/NG
D5520AP204	(74,00)	2 x 0,4	6G	Ring	GO
D5520ANP204	(74,00)	2 x 0,4	6G	Ring	NG
D5520T2,5045	(52,00)	2,5 x 0,45	6H	Plug	G/NG
D5520AP2,5045	(74,00)	2,5 x 0,45	6G	Ring	GO
D5520ANP2,5045	(74,00)	2,5 x 0,45	6G	Ring	NG
D5520T305	(39,00)	3 x 0,5	6H	Plug	G/NG
D5520AP305	(43,00)	3 x 0,5	6G	Ring	GO
D5520ANP305	(43,00)	3 x 0,5	6G	Ring	NG
D5520T407	(37,00)	4 x 0,7	6H	Plug	G/NG
D5520AP407	(41,00)	4 x 0,7	6G	Ring	GO
D5520ANP407	(41,00)	4 x 0,7	6G	Ring	NG
D5520T508	(37,00)	5 x 0,8	6H	Plug	G/NG
D5520AP508	(41,00)	5 x 0,8	6G	Ring	GO
D5520ANP508	(41,00)	5 x 0,8	6G	Ring	NG
D5520T61	(37,00)	6 x 1	6H	Plug	G/NG
D5520AP61	(41,00)	6 x 1	6G	Ring	GO
D5520ANP61	(41,00)	6 x 1	6G	Ring	NG
D5520T8125	(37,00)	8 x 1,25	6H	Plug	G/NG
D5520AP8125	(41,00)	8 x 1,25	6G	Ring	GO
D5520ANP8125	(41,00)	8 x 1,25	6G	Ring	NG
D5520T1015	(37,00)	10 x 1,5	6H	Plug	G/NG
D5520AP1015	(46,00)	10 x 1,5	6G	Ring	GO
D5520ANP1015	(46,00)	10 x 1,5	6G	Ring	NG
D5520T12175	(37,00)	12 x 1,75	6H	Plug	G/NG
D5520AP12175	(46,00)	12 x 1,75	6G	Ring	GO

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Gauges	Type
D5520ANP12175	(46,00)	12 x 1,75	6G	Ring	NG
D5520T142	(46,00)	14 x 2	6H	Plug	G/NG
D5520AP142	(61,00)	14 x 2	6G	Ring	GO
D5520ANP142	(61,00)	14 x 2	6G	Ring	NG
D5520T162	(46,00)	16 x 2	6H	Plug	G/NG
D5520AP162	(61,00)	16 x 2	6G	Ring	GO
D5520ANP162	(61,00)	16 x 2	6G	Ring	NG
D5520T1825	(65,00)	18 x 2,5	6H	Plug	G/NG
D5520AP1825	(72,00)	18 x 2,5	6G	Ring	GO
D5520ANP1825	(72,00)	18 x 2,5	6G	Ring	NG
D5520T2025	(66,00)	20 x 2,5	6H	Plug	G/NG
D5520AP2025	(90,00)	20 x 2,5	6G	Ring	GO
D5520ANP2025	(90,00)	20 x 2,5	6G	Ring	NG
D5520T2225	(66,00)	22 x 2,5	6H	Plug	G/NG
D5520AP2225	(90,00)	22 x 2,5	6G	Ring	GO
D5520ANP2225	(89,00)	22 x 2,5	6G	Ring	NG
D5520T243	(66,00)	24 x 3	6H	Plug	G/NG
D5520AP243	(95,00)	24 x 3	6G	Ring	GO
D5520ANP243	(95,00)	24 x 3	6G	Ring	NG
D5520T273	(91,00)	27 x 3	6H	Plug	G/NG
D5520AP273	(117,00)	27 x 3	6G	Ring	GO
D5520ANP273	(117,00)	27 x 3	6G	Ring	NG
D5520T3035	(106,00)	30 x 3,5	6H	Plug	G/NG
D5520AP3035	(127,00)	30 x 3,5	6G	Ring	GO
D5520ANP3035	(127,00)	30 x 3,5	6G	Ring	NG



## FINE PITCH THREADED GAUGES



ART. FA210 - FA215 - FA220

G/NG pads, G rings, NG rings in hardened steel.

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Gauges	Type
D5530T81	(41,00)	8 x 1	6H	Plug	G/NG
D5530AP81	(73,00)	8 x 1	6G	Ring	GO
D5530ANP81	(73,00)	8 x 1	6G	Ring	NG
D5530T10075	(64,00)	10 x 0,75	6H	Plug	G/NG
D5530AP10075	(76,00)	10 x 0,75	6G	Ring	GO
D5530ANP10075	(89,00)	10 x 0,75	6G	Ring	NG
D5530T101	(41,00)	10 x 1	6H	Plug	G/NG
D5530AP101	(47,00)	10 x 1	6G	Ring	GO
D5530ANP101	(47,00)	10 x 1	6G	Ring	NG
D5530T10125	(41,00)	10 x 1,25	6H	Plug	G/NG
D5530AP10125	(47,00)	10 x 1,25	6G	Ring	GO
D5530ANP10125	(47,00)	10 x 1,25	6G	Ring	NG
D5530T121	(41,00)	12 x 1	6H	Plug	G/NG
D5530AP121	(47,00)	12 x 1	6G	Ring	GO
D5530ANP121	(47,00)	12 x 1	6G	Ring	NG
D5530T12125	(41,00)	12 x 1,25	6H	Plug	G/NG
D5530AP12125	(47,00)	12 x 1,25	6G	Ring	GO
D5530ANP12125	(47,00)	12 x 1,25	6G	Ring	NG
D5530T1215	(41,00)	12 x 1,5	6H	Plug	G/NG
D5530AP1215	(47,00)	12 x 1,5	6G	Ring	GO
D5530ANP1215	(47,00)	12 x 1,5	6G	Ring	NG
D5530T141	(47,00)	14 x 1	6H	Plug	G/NG
D5530AP141	(53,00)	14 x 1	6G	Ring	GO
D5530ANP141	(53,00)	14 x 1	6G	Ring	NG
D5530T14125	(47,00)	14 x 1,25	6H	Plug	G/NG
D5530AP14125	(53,00)	14 x 1,25	6G	Ring	GO
D5530ANP14125	(53,00)	14 x 1,25	6G	Ring	NG
D5530T1415	(47,00)	14 x 1,5	6H	Plug	G/NG
D5530AP1415	(53,00)	14 x 1,5	6G	Ring	GO
D5530ANP1415	(53,00)	14 x 1,5	6G	Ring	NG
D5530T161	(47,00)	16 x 1	6H	Plug	G/NG
D5530AP161	(53,00)	16 x 1	6G	Ring	GO
D5530ANP161	(53,00)	16 x 1	6G	Ring	NG
D5530T1615	(47,00)	16 x 1,5	6H	Plug	G/NG
D5530AP1615	(53,00)	16 x 1,5	6G	Ring	GO
D5530ANP1615	(53,00)	16 x 1,5	6G	Ring	NG
D5530T181	(60,00)	18 x 1	6H	Plug	G/NG
D5530AP181	(63,00)	18 x 1	6G	Ring	GO
D5530ANP181	(63,00)	18 x 1	6G	Ring	NG
D5530T1815	(60,00)	18 x 1,5	6H	Plug	G/NG
D5530AP1815	(63,00)	18 x 1,5	6G	Ring	GO
D5530ANP1815	(63,00)	18 x 1,5	6G	Ring	NG
D5530T201	(60,00)	20 x 1	6H	Plug	G/NG
D5530AP201	(69,00)	20 x 1	6G	Ring	GO
D5530ANP201	(69,00)	20 x 1	6G	Ring	NG
D5530T2015	(60,00)	20 x 1,5	6H	Plug	G/NG
D5530AP2015	(69,00)	20 x 1,5	6G	Ring	GO

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Gauges	Type
D5530ANP2015	(69,00)	20 x 1,5	6G	Ring	NG
D5530T2215	(60,00)	22 x 1,5	6H	Plug	G/NG
D5530AP2215	(77,00)	22 x 1,5	6G	Ring	GO
D5530ANP2215	(77,00)	22 x 1,5	6G	Ring	NG
D5530T241	(60,00)	24 x 1	6H	Plug	G/NG
D5530AP241	(77,00)	24 x 1	6G	Ring	GO
D5530ANP241	(77,00)	24 x 1	6G	Ring	NG
D5530T2415	(60,00)	24 x 1,5	6H	Plug	G/NG
D5530AP2415	(77,00)	24 x 1,5	6G	Ring	GO
D5530ANP2415	(77,00)	24 x 1,5	6G	Ring	NG
D5530T242	(73,00)	24 x 2	6H	Plug	G/NG
D5530AP242	(97,00)	24 x 2	6G	Ring	GO
D5530ANP242	(97,00)	24 x 2	6G	Ring	NG
D5530T2515	(73,00)	25 x 1,5	6H	Plug	G/NG
D5530AP2515	(97,00)	25 x 1,5	6G	Ring	GO
D5530ANP2515	(97,00)	25 x 1,5	6G	Ring	NG
D5530T2615	(73,00)	26 x 1,5	6H	Plug	G/NG
D5530AP2615	(69,00)	26 x 1,5	6G	Ring	GO
D5530ANP2615	(69,00)	26 x 1,5	6G	Ring	NG
D5530T2715	(76,00)	27 x 1,5	6H	Plug	G/NG
D5530AP2715	(86,00)	27 x 1,5	6G	Ring	GO
D5530ANP2715	(86,00)	27 x 1,5	6G	Ring	NG
D5530T2815	(76,00)	28 x 1,5	6H	Plug	G/NG
D5530AP2815	(86,00)	28 x 1,5	6G	Ring	GO
D5530ANP2815	(86,00)	28 x 1,5	6G	Ring	NG
D5530T301	(101,00)	30 x 1	6H	Plug	G/NG
D5530AP301	(135,00)	30 x 1	6G	Ring	GO
D5530ANP301	(135,00)	30 x 1	6G	Ring	NG
D5530T3015	(90,00)	30 x 1,5	6H	Plug	G/NG
D5530AP3015	(111,00)	30 x 1,5	6G	Ring	GO
D5530ANP3015	(111,00)	30 x 1,5	6G	Ring	NG
D5530T3215	(90,00)	32 x 1,5	6H	Plug	G/NG
D5530AP3215	(111,00)	32 x 1,5	6G	Ring	GO
D5530ANP3215	(114,00)	32 x 1,5	6G	Ring	NG
D5530T3415	(114,00)	34 x 1,5	6H	Plug	G/NG
D5530AP3415	(126,00)	34 x 1,5	6G	Ring	GO
D5530ANP3415	(126,00)	34 x 1,5	6G	Ring	NG
D5530T3615	(114,00)	36 x 1,5	6H	Plug	G/NG
D5530AP3615	(125,00)	36 x 1,5	6G	Ring	GO
D5530ANP3615	(125,00)	36 x 1,5	6G	Ring	NG
D5530T362	(90,00)	36 x 2	6H	Plug	G/NG
D5530AP362	(114,00)	36 x 2	6G	Ring	GO
D5530ANP362	(114,00)	36 x 2	6G	Ring	NG
D5530T4015	(90,00)	40 x 1,5	6H	Plug	G/NG
D5530AP4015	(127,00)	40 x 1,5	6G	Ring	GO
D5530ANP4015	(127,00)	40 x 1,5	6G	Ring	NG





## UNC THREADED GAUGES

ALPA

### ART. FA255

Hardened steel.

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Plug
D5525348	(206,70)	# 3 - 48	2B	G/NG
D5525440	(81,62)	# 4 - 40	2B	Go/NoGo
D5525540	(81,62)	# 5 - 40	2B	G/NG
D5525632	(67,84)	# 6 - 32	2B	G/NG
D5525832	(67,84)	# 8 - 32	2B	G/NG
D55251024	(81,62)	# 10 - 24	2B	G/NG
D55251224	(67,84)	# 12 - 24	2B	G/NG
D55251420	(64,00)	1/4" x 20	2B	G/NG
D55251618	(64,00)	5/16" x 18	2B	G/NG
D55253816	(64,00)	3/8" x 16	2B	G/NG

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Plug
D552571614	(67,84)	7/16" x 14	2B	G/NG
D55251213	(67,84)	1/2" x 13	2B	Go/NoGo
D552591612	(89,04)	9/16" x 12	2B	G/NG
D55255811	(89,04)	5/8" x 11	2B	G/NG
D55253410	(106,00)	3/4" x 10	2B	G/NG
D5525789	(127,00)	7/8" x 9	2B	G/NG
D552518	(148,00)	1" x 8	2B	G/NG
D55251147	(187,62)	1" 1/4 x 7	2B	G/NG
D55251126	(206,70)	1" 1/2 x 6	2B	G/NG



### ART. FA260

Hardened steel.

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Ring
D5526348	(170,00)	# 3 - 48	2A	GO
D5526440	(85,00)	# 4 - 40	2A	GO
D5526540	(90,00)	# 5 - 40	2A	GO
D5526632	(56,00)	# 6 - 32	2A	GO
D5526832	(80,00)	# 8 - 32	2A	GO
D55261024	(80,00)	# 10 - 24	2A	GO
D55261224	(80,00)	# 12 - 24	2A	GO
D55261420	(80,00)	1/4" x 20	2A	GO
D552651618	(80,00)	5/16" x 18	2A	GO
D55263816	(56,00)	3/8" x 16	2A	GO

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Ring
D552671614	(80,00)	7/16" x 14	2A	GO
D55261213	(71,02)	1/2" x 13	2A	GO
D552691612	(97,00)	9/16" x 12	2A	GO
D55265811	(97,00)	5/8" x 11	2A	GO
D55263410	(120,00)	3/4" x 10	2A	GO
D5526789	(129,32)	7/8" x 9	2A	GO
D5526018	(180,00)	1" x 8	2A	GO
D55261147	(230,00)	1" 1/4 x 7	2A	GO
D55261126	(260,00)	1" 1/2 x 6	2A	GO



### ART. FA265

Hardened steel.

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Ring
D5527348	(170,00)	# 3 - 48	2A	NG
D5527440	(90,00)	# 4 - 40	2A	NG
D5527540	(90,00)	# 5 - 40	2A	NG
D5527632	(56,00)	# 6 - 32	2A	NG
D5527832	(80,00)	# 8 - 32	2A	NG
D55271024	(80,00)	# 10 - 24	2A	NG
D55271224	(80,00)	# 12 - 24	2A	NG
D55271420	(80,00)	1/4" x 20	2A	NG
D552751618	(80,00)	5/16" x 18	2A	NG
D55273816	(80,00)	3/8" x 16	2A	NG

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Ring
D552771614	(80,00)	7/16" x 14	2A	NG
D55271213	(80,00)	1/2" x 13	2A	NG
D552791612	(97,00)	9/16" x 12	2A	NG
D55275811	(97,00)	5/8" x 11	2A	NG
D55273410	(120,00)	3/4" x 10	2A	NG
D5527789	(153,70)	7/8" x 9	2A	NG
D552718	(180,00)	1" x 8	2A	NG
D55271147	(230,00)	1" 1/4 x 7	2A	NG
D55271126	(260,00)	1" 1/2 x 6	2A	NG



## UNF THREADED GAUGES

ALPA

### ART. FA240

Hardened steel.

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Plug
D5528356	(206,70)	# 3 - 56	2B	G/NG
D5528448	(81,62)	# 4 - 48	2B	G/NG
D5528544	(81,62)	# 5 - 44	2B	G/NG
D5528640	(67,84)	# 6 - 40	2B	G/NG
D5528836	(67,84)	# 8 - 36	2B	G/NG
D55281032	(64,00)	# 10 - 32	2B	G/NG
D55281228	(67,84)	# 12 - 28	2B	G/NG
D55281428	(64,00)	1/4" x 28	2B	G/NG
D552851624	(64,00)	5/16" x 24	2B	G/NG
D55283824	(64,00)	3/8" x 24	2B	G/NG

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Plug
D552871620	(64,00)	7/16" x 20	2B	Go/NoGo
D55281220	(64,00)	1/2" x 20	2B	G/NG
D552891618	(71,00)	9/16" x 18	2B	G/NG
D55285818	(71,00)	5/8" x 18	2B	G/NG
D55283416	(84,00)	3/4" x 16	2B	Go/NoGo
D55287814	(84,00)	7/8" x 14	2B	Go/NoGo
D5528112	(128,26)	1" x 12	2B	G/NG
D552811412	(128,26)	1" 1/4 x 12	2B	G/NG
D552811212	(127,00)	1" 1/2 x 12	2B	G/NG



### ART. FA245

Hardened steel.

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Ring
D5529356	(106,00)	# 3 - 56	2A	GO
D5529448	(89,04)	# 4 - 48	2A	GO
D5529544	(89,04)	# 5 - 44	2A	GO
D5529640	(71,02)	# 6 - 40	2A	GO
D5529836	(71,02)	# 8 - 36	2A	GO
D55291032	(71,02)	# 10 - 32	2A	GO
D55291228	(71,02)	# 12 - 28	2A	GO
D55291428	(67,00)	1/4" x 28	2A	GO
D552951624	(71,02)	5/16" x 24	2A	GO
D55293824	(71,02)	3/8" x 24	2A	GO

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Ring
D552971620	(67,00)	7/16" x 20	2A	GO
D55291220	(67,00)	1/2" x 20	2A	GO
D552991618	(77,38)	9/16" x 18	2A	GO
D55295818	(77,38)	5/8" x 18	2A	GO
D55293416	(91,00)	3/4" x 16	2A	GO
D55297814	(91,00)	7/8" x 14	2A	GO
D55290112	(144,16)	1" x 12	2A	GO
D552911412	(144,16)	1" 1/4 x 12	2A	GO
D552911212	(145,00)	1" 1/2 x 12	2A	GO



## ART. FA250

NG ring in hardened steel.

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Ring
D55310356	(106,00)	# 3 - 56	2A	NG
D55310448	(89,04)	# 4 - 48	2A	NG
D55310544	(90,00)	# 5 - 44	2A	NG
D55310640	(71,02)	# 6 - 40	2A	NG
D55310836	(71,02)	# 8 - 36	2A	NG
D553101032	(71,02)	# 10 - 32	2A	NG
D553101228	(71,02)	# 12 - 28	2A	NG
D553101428	(71,02)	1/4" x 28	2A	NG
D5531051624	(71,02)	5/16" x 24	2A	NG
D553103824	(71,02)	3/8" x 24	2A	NG

Tech. Code	GR45 Euro	Ø for pitch	Tolerance	Ring
D5531071620	(71,02)	7/16" x 20	2A	NG
D553101220	(67,00)	1/2" x 20	2A	NG
D5531091618	(73,00)	9/16" x 18	2A	NG
D553105818	(77,38)	5/8" x 18	2A	NG
D553103416	(96,46)	3/4" x 16	2A	NG
D553107814	(91,00)	7/8" x 14	2A	NG
D55310112	(144,16)	1" x 12	2A	NG
D5531011412	(144,16)	1" 1/4 x 12	2A	NG
D5531011212	(145,00)	1" 1/2 x 12	2A	NG



## GAS ISO 228 THREADED GAUGES

## ART. FA270 - FA275 - FA280

Hardened steel.

Tech. Code	GR45 Euro	Ø for pitch	Gauges	Type
D5540T1/8	(82,00)	1/8" - 28	Plug	G/NG
D5540AP1/8	(103,00)	1/8" - 28	Ring	Go
D5540ANP1/8	(103,00)	1/8" - 28	Ring	NG
D5540T1/4	(85,00)	1/4" - 19	Plug	G/NG
D5540AP1/4	(98,00)	1/4" - 19	Ring	Go
D5540ANP1/4	(98,00)	1/4" - 19	Ring	NG
D5540T3/8	(86,00)	3/8" - 19	Plug	G/NG
D5540AP3/8	(105,00)	3/8" - 19	Ring	Go
D5540ANP3/8	(105,00)	3/8" - 19	Ring	NG
D5540T1/2	(88,00)	1/2" - 14	Plug	G/NG
D5540AP1/2	(118,00)	1/2" - 14	Ring	Go

Tech. Code	GR45 Euro	Ø for pitch	Gauges	Type
D5540ANP1/2	(118,00)	1/2" - 14	Ring	NG
D5540T3/4	(101,00)	3/4" - 14	Plug	G/NG
D5540AP3/4	(120,00)	3/4" - 14	Ring	Go
D5540ANP3/4	(120,00)	3/4" - 14	Ring	NG
D5540T1	(127,00)	1" - 11	Plug	G/NG
D5540AP1	(165,00)	1" - 11	Ring	Go
D5540ANP1	(165,00)	1" - 11	Ring	NG
D5540T11/8	(170,00)	1 1/8" - 11	Plug	G/NG
D5540AP11/8	(168,00)	1 1/8" - 11	Ring	Go
D5540ANP11/8	(168,00)	1 1/8" - 11	Ring	NG



Note: From 1 3/4 diameter, G/NG plugs are supplied in pairs

## NPT THREADED GAUGES

## ART. FA285

Plug with conical thread.

Tech. Code	GR45 Euro	Ø for pitch
D553511627	(161,00)	1/16" x 27
D553501827	(137,00)	1/8" x 27
D553501418	(138,00)	1/4" x 18
D553503818	(141,00)	3/8" x 18
D553501214	(146,00)	1/2" x 14
D553503414	(151,00)	3/4" x 14

Tech. Code	GR45 Euro	Ø for pitch
D553501115	(176,00)	1" x 11,5
D5535114115	(255,00)	1" 1/4 x 11,5
D5535112115	(295,00)	1" 1/2 x 11,5
D553502115	(306,00)	2" x 11,5
D553502128	(373,12)	2" 1/2 x 8
D5535038	(401,00)	3" x 8



## ART. FA286

Ring with conical thread.

Tech. Code	GR45 Euro	Ø for pitch
D553611627	(319,06)	1/16" x 27
D553601827	(275,00)	1/8" x 27
D553601418	(254,00)	1/4" x 18
D553603818	(254,00)	3/8" x 18
D553601214	(258,00)	1/2" x 14
D553603414	(263,00)	3/4" x 14

Tech. Code	GR45 Euro	Ø for pitch
D553601115	(283,00)	1" x 11,5
D5536114115	(415,52)	1" 1/4 x 11,5
D5536112115	(443,00)	1" 1/2 x 11,5
D553602115	(469,58)	2" x 11,5
D55362128	(586,18)	2" 1/2 x 8
D5536038	(692,18)	3" x 8



## 2 IN 1 THREADED GAUGES - GO/NO GO

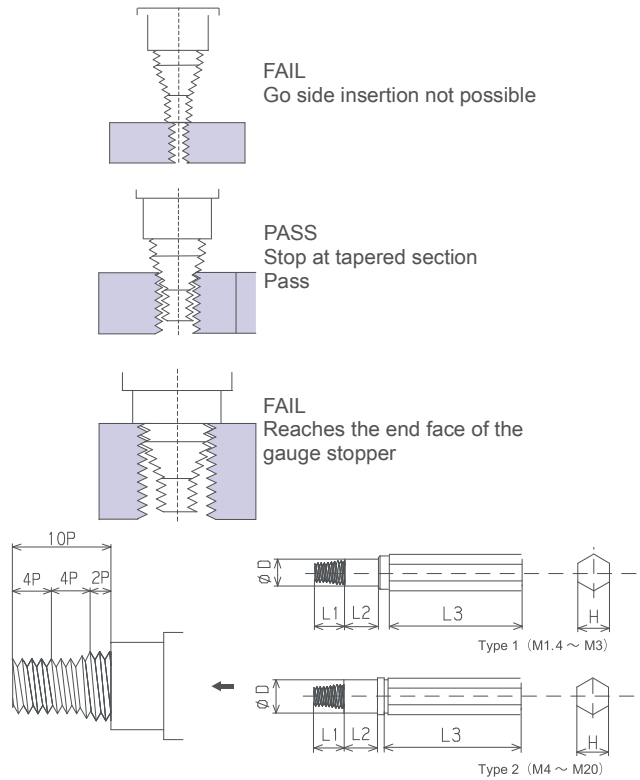
### ART. FA305

Innovative tool that improves the efficiency of the thread control through Go/No Go test with one simple operation.

Errors of entrance is cancelled by the section driven GO.

- Hexagon handle removable aluminium
- Special steel 58 HRC
- Control certificate included

Tech. Code	GR45 Euro	Thread	P pitch mm	L1 mm	L2 mm	D mm	L3 mm	H mm
D5550M3	(134,82)	M3	0.2	5	6	7	30	10
D5550M4	(125,19)	M4	0.7	7	9	8	40	10
D5550M5	(121,98)	M5	0.8	8	8	8	40	10
D5550M6	(117,70)	M6	1.0	10	9	10	40	10
D5550M7	(117,70)	M7	1.0	10	9	10	40	10
D5550M8	(120,91)	M8	1.25	12.5	10	12	40	10
D5550M10	(126,26)	M10	1.5	15	11	14	40	12
D5550M12	(138,03)	M12	1.75	17.5	11.5	16	40	12
D5550M14	(142,31)	M14	2.0	20	12	18	40	17
D5550M16	(189,39)	M16	2.0	20	12	20	40	17
D5550M18	(211,86)	M18	2.5	25	13	22	40	17
D5550M20	(230,05)	M20	2.5	25	13	24	40	17



## PIN GAUGE SETS

ALPA



### ART. FA185

HRC 61/64 steel,  $\pm 0.002$ mm tolerance, roughness set at 0.025 micron Ra, roundness set at 0.0005 mm, taper at 0.001mm.

Tech. Code	GR45 Euro	No. of pieces	Dim. mm	Progr. mm
D56100,51001	280,00	51	0,50÷1	0,01
D561011001	379,00	91	1÷10	0,1
D5610101601	350,00	61	10÷16	0,1
D5610162001	350,00	41	16÷20	0,1
D561018005	562,00	141	1÷8	0,05
D5610812005	379,00	81	8÷12	0,05
D561012005	337,00	39	1÷20	0,5
D56101,012001	358,00	100	1,01÷2	0,01
D56102,013001	358,00	100	2,01÷3	0,01
D56103,014001	358,00	100	3,01÷4	0,01
D56104,015001	370,00	100	4,01÷5	0,01
D56105,016001	370,00	100	5,01÷6	0,01
D56106,017001	411,00	100	6,01÷7	0,01
D56107,018001	411,00	100	7,01÷8	0,01
D56108,019001	411,00	100	8,01÷9	0,01
D56109,0110001	411,00	100	9,01÷10	0,01



## CERAMIC GAUGE BLOCK SETS



### ART. FA100

Impressive specifications, the best offered by research on materials, thanks to an exclusive process of molecular transformation, OPUS ceramic zircon offers a mechanical strength which preserves its entirety in case of accident fall.

- excellent abrasion resistance, with wear up to 10 times less compared to hardened steel.
- excellent corrosion resistance
- low thermal conductivity
- high dimensional stability
- hand-lapped surfaces

Every block has a serial number.

Dimensional tolerance conformed to DIN 861, ISO 3650 and BS 4311 standards.

Compositions available in wooden box, or singles, always with **UKAS calibration certificate** in C class on 5 points included in the price.

Available, on demand, different compositions and single box.



Tech. Code	GR45 Euro	Degree of accuracy	No. of pieces
D5690470	(4050,00)	0	47
D5690471	(3500,00)	1	47

## GAUGE BLOCK SETS



### ART. FA010

Special stainless steel gauge blocks. Hardness more than 63HRC.

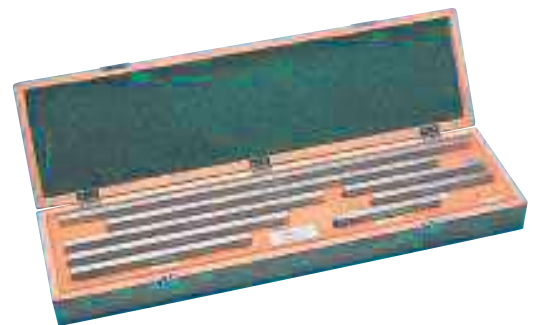
Tech. Code	GR45 Euro	Degree of accuracy	No. of pieces
D57101030	1158,00	0	103
D57101031	750,00	1	103
D57101032	430,00	2	103
D5710870	889,00	0	87
D5710871	610,00	1	87
D5710872	341,00	2	87
D5710470	614,00	0	47
D5710471	390,00	1	47
D5710472	246,00	2	47
D5710320	449,00	0	32
D5710321	286,00	1	32
D5710322	177,00	2	32



### ART. FA050

Special stainless steel gauge blocks. Hardness more than 63HRC.

Tech. Code	GR45 Euro	Degree of accuracy	No. of pieces
D571581	1400,00	1	8

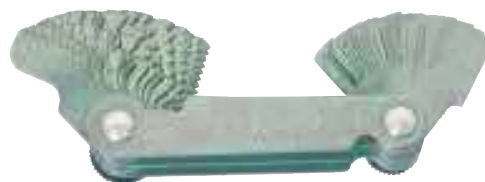


## THREAD PITCH GAUGES

### ART. D6150

Steel blades.

Tech. Code	GR49 Euro	Type	Checkable threads
D61501	8,30	52 blades	METRIC - WHIT. 55°
D61502	11,10	Triple	METRIC - GAS - WHIT. 55°



## RADIUS GAUGES FOR CONCAVE AND CONVEX MEASUREMENTS

### ART. D6160

Steel blades.

Tech. Code	GR49 Euro	Radius
D616017	9,30	1 - 7
D61607,515	14,00	7,5 - 15
D616015,525	15,70	15,5 - 25

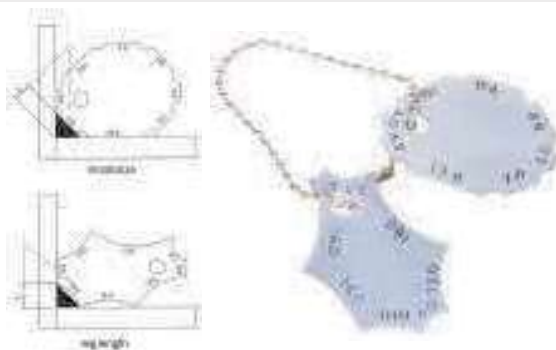


## WELD SEAM CALIPERS

### ART. AB149

Stainless steel, punched on both sides.

Tech. Code	GR45 Euro	Fillet size mm	Accuracy mm
D616510	33,00	4, 5, 6, 7, 8, 9, 10	0,5



## FILLET WELD GAUGES 7 BLADES

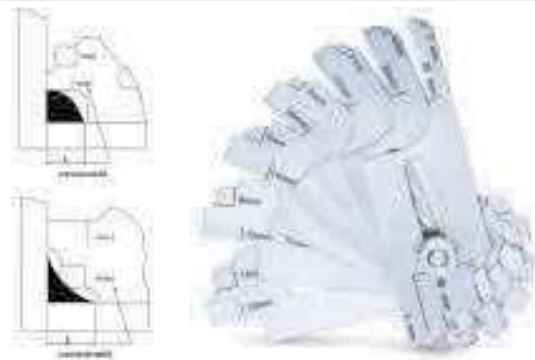
ALPA

### ART. AB150

To measure concave and convex welds. 7 blades are included. Two concave and convex sizes of welds for each blade.

Stainless steel made. Size marked on both faces.

Tech. Code	GR45 Euro	Fillet size mm	Accuracy mm
D616725	57,00	3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 19, 22, 25	± 0,5

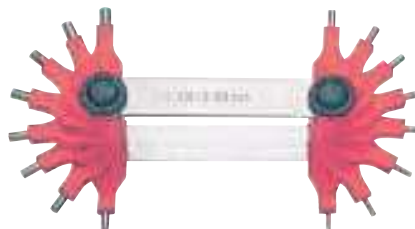


## JET GAUGES WITH STEEL PINS

### ART. D6180

Steel pins, resin stands.

Tech. Code	GR49 Euro	Pin no.	Ø mm	Progression mm
D618020	8,30	20	0,45 - 1,5	0,05
D618016	9,00	16	1,5 - 3,0	0,10



## THICKNESS GAUGES

ART. D6170

Hardened and grounded steel blades, metal housing.

Tech. Code	GR49 Euro	Blade no.	Thickness mm
D617013	3,00	13	0.05 - 0.10 - 0.15 - 0.20 - 0.25 - 0.30 - 0.40 0.50 - 0.60 - 0.70 - 0.80 - 0.90 - 1.00
D617020	3,90	20	0.05 - 0.10 - 0.15 - 0.20 - 0.25 - 0.30 - 0.40 0.50 - 0.55 - 0.60 - 0.65 - 0.70 - 0.75 - 0.80 0.85 - 0.90 - 0.95 - 1.00



## BRASS SHIM ROLLS MS 63

ART. D6210

Plastic housing.

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length m
D62100,025	33,00	0.025	150	2.5
D62100,050	36,70	0.050	150	2.5
D62100,075	38,30	0.075	150	2.5
D62100,100	42,50	0.100	150	2.5
D62100,150	47,60	0.150	150	2.5
D62100,200	55,50	0.200	150	2.5
D62100,250	63,40	0.250	150	2.5
D62100,300	71,50	0.300	150	2.5
D62100,400	79,40	0.400	150	2.5
D62100,500	89,90	0.500	150	2.5



## STAINLESS STEEL SHIM ROLLS 18CR 9 NI

ART. D6215

Plastic housing.

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length m
D62150,050	81,90	0.050	150	2.5
D62150,100	83,20	0.100	150	2.5
D62150,150	89,90	0.150	150	2.5
D62150,200	107,10	0.200	150	2.5
D62150,300	131,00	0.300	150	2.5



## CARBON STEEL TAPES

**FASTBAND**

ART. D6220

Tapes in 1,1274 carbon steel, width 13 mm (\* thickness 0,01 and 0,02 mm in stainless steel).

Tape length 5 metres. Plastic housing case.

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length m
D62200,01*	100,40	0.01	13	5
D62200,02*	51,40	0.02	13	5
D62200,03	16,80	0.03	13	5
D62200,04	16,80	0.04	13	5
D62200,05	15,70	0.05	13	5
D62200,06	15,70	0.06	13	5
D62200,07	15,70	0.07	13	5
D62200,08	15,70	0.08	13	5
D62200,09	15,70	0.09	13	5
D62200,10	15,70	0.10	13	5
D62200,15	18,10	0.15	13	5
D62200,20	15,70	0.20	13	5
D62200,25	15,70	0.25	13	5
D62200,30	15,70	0.30	13	5

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length m
D62200,35	15,70	0.35	13	5
D62200,40	15,70	0.40	13	5
D62200,45	15,70	0.45	13	5
D62200,50	15,70	0.50	13	5
D62200,55	19,60	0.55	13	5
D62200,60	19,60	0.60	13	5
D62200,65	19,60	0.65	13	5
D62200,70	19,60	0.70	13	5
D62200,80	19,60	0.80	13	5
D62200,85	19,60	0.85	13	5
D62200,90	19,60	0.90	13	5
D62200,95	19,60	0.95	13	5
D62201,00	19,60	1.00	13	5





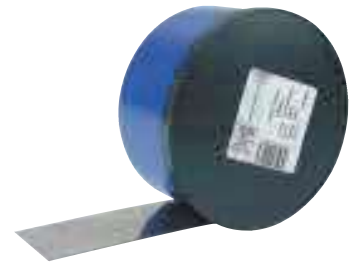
## CALIBRATED CARBON STEEL TAPES

### ART. D6226

Precision carbon steel tape roll 1,1274 50 mm width and 5 meters length.

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length m
D62260,03	59,70	0.03	50	5
D62260,04	58,50	0.04	50	5
D62260,05	55,50	0.05	50	5
D62260,06	41,10	0.06	50	5
D62260,07	41,10	0.07	50	5
D62260,08	41,10	0.08	50	5
D62260,09	41,10	0.09	50	5
D62260,10	40,00	0.10	50	5
D62260,12	43,40	0.12	50	5
D62260,15	43,40	0.15	50	5
D62260,18	42,60	0.18	50	5
D62260,20	42,10	0.20	50	5

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length m
D62260,25	42,60	0.25	50	5
D62260,30	43,40	0.30	50	5
D62260,35	46,60	0.35	50	5
D62260,40	46,60	0.40	50	5
D62260,45	46,60	0.45	50	5
D62260,50	46,60	0.50	50	5
D62260,60	74,00	0.60	50	5
D62260,70	74,00	0.70	50	5
D62260,80	74,80	0.80	50	5
D62260,90	74,80	0.90	50	5
D62261,00	74,80	1.00	50	5



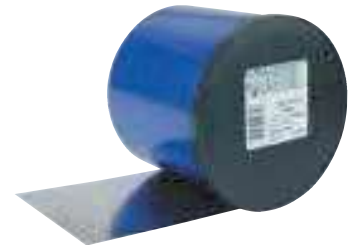
## CALIBRATED STAINLESS STEEL TAPES

### ART. D6230

Precision stainless steel tape rolls 1,4310 100 mm width and 5 meters length.

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length m
D62300,01	200,80	0.01	100	5
D62300,02	130,10	0.02	100	5
D62300,03	103,10	0.03	100	5
D62300,04	96,50	0.04	100	5
D62300,05	87,90	0.05	100	5
D62300,06	87,90	0.06	100	5
D62300,07	87,90	0.07	100	5
D62300,08	87,90	0.08	100	5
D62300,09	87,90	0.09	100	5
D62300,10	83,20	0.10	100	5
D62300,12	83,20	0.12	100	5
D62300,15	83,20	0.15	100	5
D62300,20	102,70	0.20	100	5
D62300,25	107,70	0.25	100	5
D62300,30	102,70	0.30	100	5

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length m
D62300,35	125,00	0.35	100	5
D62300,40	119,60	0.40	100	5
D62300,45	142,00	0.45	100	5
D62300,50	137,60	0.50	100	5
D62300,55	182,00	0.55	100	5
D62300,60	182,00	0.60	100	5
D62300,65	208,70	0.65	100	5
D62300,70	205,70	0.70	100	5
D62300,75	236,30	0.75	100	5
D62300,80	221,00	0.80	100	5
D62300,85	236,30	0.85	100	5
D62300,90	223,80	0.90	100	5
D62300,95	239,10	0.95	100	5
D62301,00	229,70	1.00	100	5



## CALIBRATED STAINLESS STEEL STRIPES

### ART. D6236

Precision carbon steel stripes 1,1274 - 1,2003 in packages of 10 pieces 50 mm width and 300 mm length.

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length mm
D62360,03	42,10	0.03	50	300
D62360,04	42,10	0.04	50	300
D62360,05	35,00	0.05	50	300
D62360,06	28,20	0.06	50	300
D62360,07	28,50	0.07	50	300
D62360,08	28,50	0.08	50	300
D62360,09	28,50	0.09	50	300
D62360,10	28,50	0.10	50	300
D62360,12	29,00	0.12	50	300
D62360,15	29,00	0.15	50	300
D62360,18	29,80	0.18	50	300
D62360,20	29,80	0.20	50	300

Tech. Code	GR49 Euro	Thickness mm	Width mm	Length mm
D62360,25	29,80	0.25	50	300
D62360,30	29,80	0.30	50	300
D62360,35	32,20	0.35	50	300
D62360,40	32,20	0.40	50	300
D62360,45	32,20	0.45	50	300
D62360,50	32,20	0.50	50	300
D62360,60	52,80	0.60	50	300
D62360,70	52,80	0.70	50	300
D62360,80	52,50	0.80	50	300
D62360,90	52,80	0.90	50	300
D62361,00	52,80	1.00	50	300



## CALIBRATED CARBON STEEL STRIPES KIT

### ART. D6245

Precision carbon steel stripe 1,1274 - 1,2003 kit.

Tech. Code	GR49 Euro	Assortment mm	Width mm	Length mm
D6245KIT1	57,60	21 pieces from 0,01 to 1,00	25	300
D6245KIT2	99,10	25 pieces from 0,01 to 1,00	50	300
D6245KIT3	82,30	23 pieces from 0,03 to 1,00	50	300
D6245KIT4	41,10	11 pieces from 0,02 to 1,00	50	300



## DIGITAL SHORE HARDNESS TESTERS



### ART. D7120

A large display allows instant SHORE value reading, by lightly pressing the instrument onto the piece for a few seconds, AGV function enables the average detection of several points (max 9), automatic switch off. Power supply: 4 AAA-type 1.5V batteries (included). Weight: 160 g.

Tech. Code	GR49 Euro	Shore	Use HA (HC, HD)	Res	Dimensions mm
D7120A	(608,00)	A	Soft rubber and plastic, elastomers	0.1	162 x 65 x 28
D7120D	(659,00)	D	Hard and thermoplastic rubbers	0.1	162 x 65 x 28

Tech. Code	GR49 Euro	Model
D99251,5V	5,40	- AAA-type 1.5 battery



## HARDNESS SHORE TEST BLOCKS



### ART. D7130

Hardness test plates to be used with Shore A and D Hardness testers in their analogue and digital versions

Tech. Code	GR49 Euro	Version	Content set pcs
D7130A	(238,00)	SHORE A	7
D7130D	(159,00)	SHORE D	3



## SHORE HARDNESS TESTERS



### ART. LB202

Specifically designed used to detect non-destructively the hardness of rubber, plastic, sponges and related materials.

The Shore is the scale most widely used in the field of hardness measurements of thermoplastic elastomers. The symbol 0 indicates that penetration has entered up to the maximum depth while as the symbol of 100 indicates a lack of penetration in the sample.

When Shore A is above 90 Shore D is recommended, applied with a sharper measurement. When Shore A is below 5 Shore E is recommended.

The Shore hardness testers are suitable for the quality control in the production of rubber and plastic also for the maintenance of sockets/gaskets.

Tech. Code	GR45 Euro	Scale HA (HL, HD)	Use
D7110A	(220,00)	SHORE A 0-100	Neoprene, common rubber, soft pvc, elastomers, leather, etc.
D7110D	(295,00)	SHORE D 0-100	Formica, plexiglass, hard plastic, plastic fibers, polyethylene, etc.
D7110E	(299,00)	SHORE E 0-100	Hard foam, rubber, plastics, etc.



## MANUAL STANDS FOR SHORE ANALOG HARDNESS TESTERS



### ART. D7140

Shore hardness tester stands (analogue) - the measuring method is just as important as the instruments used.

This stands series allows to operate in optimal conditions to ensure realistic readings with the max repeatability.

Tech. Code	GR49 Euro	Dimension mm	For models	Weight kg
D7140A	(494,00)	100 x 212 x 2 x 250	A - C	5



## ROCKWELL HARDNESS TESTERS

ALPA | Schwer

### ART. LB060

Universal hardness tester for ROCKWELL scale measurement on ferrous materials, main features as follows:

- Cast iron support structure, testing max height 170mm, depth capacity 165mm
- Hydraulic load application system with weight method, UNI-DIN-ASTM standard compliant 60/100/150kgf loads for ROCKWELL A, B, and C scales
- N. 1 Ø 150mm flat surface for workpiece positioning, N.1 Ø 55mm flat surface and N. 1 flat surface with V-shaped adapter to measure cylindrical objects

Equipment:	Pieces
- Indenter with diamond cone	1
- Ball indenter Ø 1/16"	1
- Spare balls	5
- HRC 20-30 specimen	1
- HRC 60-70 specimen	1
- HRB 20-30 specimen	1

Tech. Code	GR46 Euro	Composition Pieces	Weight kg
D722001	(1746,00)	10	80



## DIGITAL MANUAL ROCKWELL HARDNESS TESTERS

ALPA | Schwer



### ART. LA720

Hardness tester for ROCKWELL scale measurement on ferrous materials, main features as follows:

- Cast iron support structure, testing max height 170mm, depth capacity 165mm
- Hydraulic load application system with weight method, UNI-DIN-ASTM standard compliant 60/100/150kgf loads for ROCKWELL A, B and C scales
- Reading on digital display with USB output
- N.1 Ø 150mm flat surface for workpiece positioning, N.1 Ø 55mm flat surface and N.1 flat surface with V-shaped adapter to measure cylindrical objects.
- Supplied complete with user manual.

Equipment:	Pieces
- Indenter with diamond cone	1
- Sphere indenter Ø 1/16"	1
- HRC 20-30 specimen	1
- HRC 60-70 specimen	1
- HRB 20-30 specimen	1

Tech. Code	GR46 Euro	Composition Pieces	Weight kg
D722101	2392,00	10	87





ART. LB151

Universal analogic hardness test with the following features:

- Rockwell (hra,hrb,hrc), Brinell, Vickers scales
- Cast iron structure, maximum height testing piece 170 mm, max dept 165 mm
- Motorized and temporized load application
- Pre-load 10 kgf, load 60-100-150 kfg for Rockwell A, B,C scales
- Load 31.2-62.5-187.5 kgf for Brinell scales
- Load 30-100 kgf for Vickers scales
- For Rockwell scales reading on analogue dial gauge
- For Brinell and Vickers scales reading with microscope included in the base scope

Equipment:	Pieces
Diamond Rockwell Indenter	1
Diamond Vickers Indenter	1
Ball Indenter Ø 1/16" for Rockwell B scale	1
Ball Brinell Indenter 2,5 mm	1
Ball Brinell Indenter 5 mm	1
Specimen HRC 20-33	1
Specimen HRC 57-70	1
Specimen HRB 85-100	1
Specimen HV 30	1

Tech. Code	GR46 Euro	Composition Pieces	Weight kg
D723101	4253,00	9	96



"TOUCH SCREEN" PORTABLE HARDNESS TESTERS - WITH PRINTER



ART. LA760

Rebound impact device for hardness testing, an all new approach to measure anything that cannot be measured by using a static durometer. Used to monitor flat and cylindrical surfaces on different kinds of material, its stand device allows piece-counting for specific workpieces or small sets requiring a bearing area. Heavy load portable durometer, allows to obtain results similar to those of a universal hardness tester.

It can be easily operated in different positions and suit several test situations, allows hard-to-access location measurements also on workpieces of different sizes. Especially suited for internal hollow sections, involute gears and uneven shapes, it can operate in tight areas and in any position, for pieces of whatever shape and size.

- Leeb scale measurement range and hardness conversion in Rockwell (HRC and HRB), Brinell (HB), Vickers (HV) and Shore (HS) scales
- Control keyboard, protected from penetration of particles and liquids, suitable for workshop use
- Integrated data storage processor
- Working temperature 0°C ~ 50°C (32°F - 122°F)
- Processed workpiece: Min weight: 5kg, Min thickness: 5mm, Min thickness of layers: 0.8mm
- Min. radius of curved surface: 11mm
- Infrared and USB data output for printer connection
- Power supply: 3.7V rechargeable lithium battery (included)

Tech. Code	GR45 Euro	Resolution	Accuracy	Dimension mm	Weight g
D721501	(2061,00)	1HL, 1HV, 1HB 0.1HRC, 0.1HRB 1HS, 1MPa	±6HL (HL=800)	135 x 83 x 24	230



LEEB IMPACT HARDNESS TESTERS



ART. LA758

Scale measurement range: Leeb and scales HL, HB, HRB, HRC, HV, HS,  $\sigma_b$ . Measuring range: HLD (200-960) - HRC (19.8-68.5) - HRB (13.5-100) - HB (30-651) - HV (80-976) - HS (26.4-99.5) -  $\sigma_b$  (375-2639), with D type probe (Standard). Accuracy:  $\pm 6$  HLD (HLD=800), repeatability < 6 HLD (HLD=800). Impact direction: 360° selectable. Materials: iron, cast iron, stainless steel, aluminium, etc. Minimum measurable piece weight: 5 Kg. Display: luminated LCD display in english. Memory: 100 groups. USB connection (Standard) with software included and 2 1.5V AA type batteries.

Standard GB/T 17394-1998, ASTM A956.

Tech. Code	GR45 Euro	Resolution	Dimension mm	Weight g
D7216STR	1650,00	1 HL - 1 HV - 1 HB 0,1 HRB - 0,1 HRC - 0,1 HS	76 x 37 x 153 h	280



## LEEB IMPACT HARDNESS TESTERS



ART. LA759

Scale measurement range: Leeb and scales HL, HB, HRB, HRC, HV, HS,  $\sigma_b$ .  
 Measuring range: HLD (200-960) - HRC (19.8-68.5) - HRB (13.5-100) - HB (30-651) - HV (80-976) - HS (26.4-99.5) -  $\sigma_b$  (375-2639), with D type probe (Standard) and DL probe (Optional). Accuracy:  $\pm 6$  HLD (HLD=800), repeatability  $< 6$  HLD (HLD=800). Impact direction: 360° selectable. Materials: iron, cast iron, stainless steel, aluminium, etc. Minimum measurable piece weight: 5 Kg. Display: 45 mm OLED display with 169x128 pixels resolution in english. Memory: 1000 groups. 6 results per group and 1 average value, USB connection for research, data output. Equipped with software for data transmission, storage and print out. AAA type lithium battery, with automatic power off after 3 minutes of not use.

Standard GB/T 17394-1998, ASTM A956.

Tech. Code	GR45 Euro	Resolution	Dimension mm	Weight g
D7217INT	1800,00	1HL - 1HV - 1HB 0.1HRB - 0.1HRC - 0.1HS	46 x 23 x 150 h	110



## PORTABLE ROUGHNESS TESTER

ALPAA



ART. LA251LITE

PORTABLE ROUGHNESS TESTER with 90° rotating diamond probe and optical signal transmission. Gauss filter. Interchangeable tip. 8 parameters, ISO 4287 compliant (Ra, Rq, Rt, Rz, Rc, Rmax, Rsm, Rpc), 5 parameters ISO 12085 compliant (Pt, R, AR, Rx, PPc). The extremely small size (the smallest available) and fast battery charging, via the USB cable, make this instrument a turning point in the conception of shape-measuring instruments. The application can be downloaded to your mobile phone and computer in order to download data via Bluetooth.

Tech. Code	GR46 Euro	Dimension mm
D7240LITE	2350,00	125 x 31 x 30



## PORTABLE ROUGHNESS TESTERS

ALPAA FACETest 25



ART. LA250

Face Test 25 roughness is a highly-versatile hand-held device. Suitable for both horizontal and vertical measuring, 90°, V-shaped, flat surfaces, internal and external diameters, mounted on stand supports. Gauss filter, 8 parameters, ISO 4287 compliant (Ra, Rq, RMS), Rt, Rz, Rc, Rmax, Rsm, Rpc, 5 parameters ISO 12085 compliant (Pt, R, AR, Rx, PPL), profile and capacity curve data transmission to the printer (printer supplied as optional). Output connection to PC with advanced computing program (optional) and graphs printing, new electronics with large display, 0,001  $\mu$ m resolution, Z400/mm measurement range designed for higher friction coefficient measurements (sanding, embossing etc.). Supplied with standard tester, roughness samples and instruction manual. Face test 25 plus may also mount special interchangeable testers as well as extensions for depth drilling measurement. Basic software and USB cable are included.

Optional  
 - ST1 stand with granite plate 300 x 200

Tech. Code	GR46 Euro	Description	Measuring range Z $\mu$ m	Display
D7241GRAF	2100,00	Interchangeable pick up	$\pm 300$	Graphic





## ROUGHNESS TESTERS SJ-210

Mitutoyo

LCD

### ART. 178-560-11D

This is a portable measuring instrument that allows you to easily and accurately measure surface roughness.

The SJ-210 offers you the following benefits:

- Skid system gives you user friendly and intuitive menu navigation
- It works independently of mains power, allowing you to make on-site measurements
- The 6.0 cm [2.4"] colour graphic, back-lit LCD gives you excellent readability
- It performs roughness analyses conform to various international standards (EN ISO, VDA, ANSI, JIS) and customized settings
- Data memory: up to 10 measurement conditions and a measurement profile can be stored
- Optional memory card: to expand the range of applications
- Calculation results, assessed profiles, bearing and amplitude curves can be displayed
- Operation by keys on the front and under the sliding cover
- Support of 21 languages



Tech. Code	GR50 Euro	Detector measurement force M	Angle point stylus	Radius of stylus point µm
D7232210	2410,00	0,75	60°	2

## STANDS FOR ROUGHNESS TESTERS

Mitutoyo

### ART. SERIES 178

Stand for roughness testers with granite base and column with micrometric positioning.

Tech. Code	GR50 Euro	Column Ø mm	Column h mm	Granite base mm
D7237STAT	(905,00)	50	506	400 x 250 x 60



## STANDS FOR ROUGHNESS TESTERS

ALPA

### ART. LA255

Stand for roughness testers with granite base and column with micrometric positioning.

Tech. Code	GR46 Euro	Column Ø mm	Column h mm	Granite base mm
D7244STAT	(776,00)	40	300	600 x 400 x 40



## ROUGHNESS SPECIMENS KIT

ALPA

### ART. LA265

The set consists of 30 plates reproducing the most important and widespread machining works, such as lapping, grinding, drilling, milling and turning, with different roughness between 0,05 and 12,5 µm in Ra. Useful for corresponding indicative comparison. (NB Not suitable for roughness tester calibration or verification).

Tech. Code	GR45 Euro	Description
D724530	340,00	30 Comparison specimens set





## HIGH PERFORMANCES ROUGHNESS TESTERS

ALPAA FACEstest 80



### ART. LA255

Backlit liquid crystal TFT 5.7" 256 -colour display with touch screen technology; 46 parameters measured according to the international Roughness Index - profile-waviness 1000µm measurement range, auto travel according to cut-off, also selectable from 1 up to 10 times the cut-off (0.8 mm). Built-in thermal printer to display graph and numerical data reports, 0.001µm resolution, USB output.

Portable laboratory roughness tester- Professional translator with internal metrological reference. Maximum traverse length of 50 mm. Precision measurement with 0.32 mm min traverse length ( 4 x 0.08 + 0.20 mm) SB10 and SB60 dual pick-up. For accurate roughness measurement: radial roughness (pipes, balls). With diamond sensor stylus.



Tech. Code	GR46 Euro	Range µm	Type
D724301	(4750,00)	1000	Portable travel unit
D724302	(7150,00)	1000	Table travel unit

## PORTABLE ROUGHNESS/SURFACE PROFILER TESTERS

ALPAA WRP



### ART. LA253

This new roughness/surface profiler tester has a revolutionary approach to roughness measurements. 7 Inches wide 16 million colour touch screen display. 75 roughness parameters following the principle international regulations. Integrated CAD system for profile analysis. Measuring range 3000µm roughness and profilometry probe. Resolution 0.1 nm (0.0001 µm) on 3000 µm. Automatic saving of last 6 measure, manual saving up to 1000 measurements for profilometry and 4000 measurements for roughness (graphics+parameters).

- Measurement range: Z=3000 µm for roughness Z=3000 µm for profile tester
- Resolution: 0.1 nm (0.0001 µm) on ± 1500 µm
- Cut-off length: 0.08 – 0.25 - 0.8 – 2.5 – 8mm
- Cut-off number: from 1 to 20 cut-off (within 60mm)
- Traverse length: X = 60 mm
- Pick-up: interchangeable inductive (only carbon tips)
- Measurement parameters: 75 parameters
- ISO Ra, Rq, Rt, Rz, Rp, Rv, Rc, Rsk, Rku, RSm, RΔq, RΔa, RΔc, Rmr, RPc, RLo, Rlr, Rzjs, RHSC, Pa, Pq, Pq, Pv, Pc, Psk, Pku, PSm, PΔq, PΔc, PPc, PLo, Plr, PHSC, Wa, Wq, Wt, Wz, Wp, Wv, Wc, Wsk, Wku, WSm, WΔq, WΔc, WPC, WLo, Wlr, WHSC, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2, W, Wx, Rke, Rpk, Rvke, Mr1e, Mr2e, A1e, A2e
- ISO 12085: Pt, R, AR, Rx, Wte, Aw
- DIN 4768: Rmax
- VDA2007: WDSm, WDC, WDT
- Unit of measurement: millimeters and inches
- Interface: graphic 7" touch screen display
- Languages: Italian, French, English, German, Spanish, Portuguese, Japanese, Chinese, Korean
- Memory: Up to 4000 roughness measurements and 1000 profilometry measurement

#### Standard equipment:

- Probe for roughness with diamond cone angle 90 ° radius 2 µm, probe for profile with a chisel angle 11°, the profile software are included
- Calibration specimen for the roughness Ra = 2.97 µm
- Charger



Tech. Code	GR46 Euro	Description
D7246RP	(14100,00)	Rugoprofilometro portatile
D7246KITP	(973,00)	3mm Profile tester set (specimens for calibration)

## DIGITAL MICROSCOPES COMPLETE WITH STAND

GAZE D-200



### ART. D7255

A user-friendly microscope, ideal for image capture and footage. Integrated LED illumination, two focus phases, can also be used without stand. Equipped with a specific software featuring comprehensive measurement functionalities, such as distance, range, etc.

#### TECHNICAL SPECIFICATIONS:

- 10x to 200x magnification
- 1.3 megapixel resolution camera
- Adjustable light LED
- USB power supply
- Windows XP and Vista compatible.

Tech. Code	GR45 Euro	Resolution	Dimension mm	Plan mm	Weight g
D7255C/SFTW	199,00	1280 x 1024	150 x 175	120 x 175	110

Picture is used for purely demonstrative purposes, supplied without computer.



## STEREO MICROSCOPES

**KERN**

### ART. OSF

Practical and robust binocular microscope, with integrated handle and fixed mechanical stand. The ergonomic shape and the high-precision adjustable mechanics offer a high level of functionality and allow you to work quickly and efficiently. The standard incident and transmitted light LED illuminator ensures continuously adjustable illumination of the specimen.

A dust cap and eye shields are included.

Technical data:

Greenough Optics

45° inclined tube

Interpupillary distance: 55 - 75 mm

Diopter compensation on one side only

Tech. Code	GR50 Euro	Magnification STD	Lens	Field of View mm	Dimension mm	Weight kg
D725810X	(410,00)	10X	1X - 2X - 3X	20	230 x 180 x 275	2,3



**NEW**

## LED ILLUMINATED MAGNIFIERS

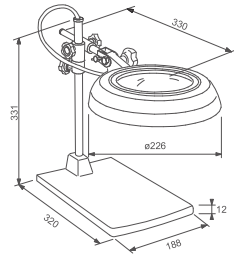


### ART. LA900

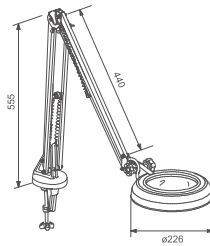
Illuminated magnifier full LED lamp unit with dimming, with a wide magnification range from 2x to 15x (on demand), thanks to interchangeable circular lenses.

LED light source estimated life time 40.000 hours (life time estimated/not guaranteed).  
75% energy consumption reduction compared to standard fluorescent lamps.

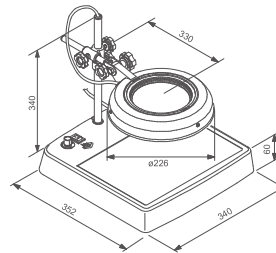
Tech. Code	GR45 Euro	Magnification	Weight kg	Arm dimension mm	Shape
D7247A2X	690,00	2x	2.2	-	A



Tech. Code	GR45 Euro	Magnification	Weight kg	Arm dimension mm	Shape
D7247B2X	840,00	2x	2.8	1.000	B



Tech. Code	GR45 Euro	Magnification	Weight kg	Arm dimension mm	Shape
D7247C2X	1250,00	2x	3.2	-	C



## HALOGEN MAGNIFIERS



### ART. LA950

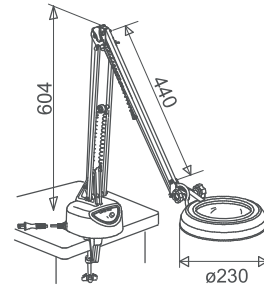
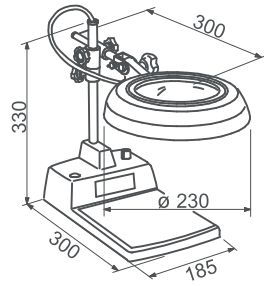
Halogen magnifying lenses. Simple and reliable, combines high quality components and competitive price.

Tech. Code	GR45 Euro	Magnification	Weight kg	Arm dimension mm	Shape
D7248A2X	264,00	2x	2.7	-	A

While stocks last

Tech. Code	GR45 Euro	Magnification	Weight kg	Arm dimension mm	Shape
D7248B2X	367,00	2x	3.0	1.000	B

While stocks last



## LED ILLUMINATED MAGNIFIERS



### ART. LA920

Illuminated magnifier full LED lamp unit, with a wide magnification range from 2x to 15x (on demand), thanks to interchangeable circular lenses.

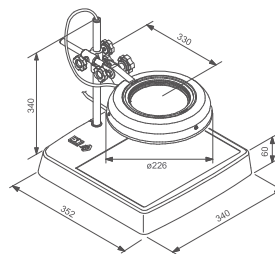
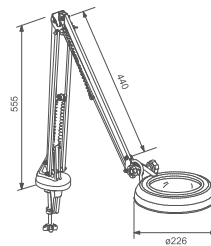
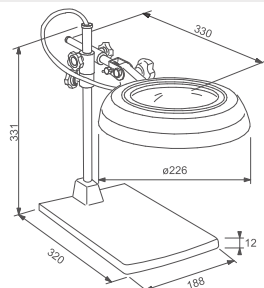
LED light source estimated life time 40.000 hours (life time estimated/not guaranteed).

75% energy consumption reduction compared to standard fluorescent lamps.

Tech. Code	GR45 Euro	Magnification	Weight kg	Arm dimension mm	Shape
D7249A2X	342,00	2x	2.1	-	A
D7249A4X	585,00	4x	2.1	-	A

Tech. Code	GR45 Euro	Magnification	Weight kg	Arm dimension mm	Shape
D7249B2X	436,00	2x	2.7	1.000	B
D7249B4X	654,00	4x	2.7	1.000	B

Tech. Code	GR45 Euro	Magnification	Weight kg	Arm dimension mm	Shape
D7249C2X	865,00	2x	3.2	-	C
D7249C4X	1080,00	4x	3.2	-	C



## MAGNETIC MAGNIFIERS 5X

### ART. D7260

Scratch-resistant lens, shock-proof transparent plastic body, provided with two magnets on both sides for a safe and easy positioning even upright wherever data or image enhanced visibility is required.

Tech. Code	GR49 Euro	Magnification	Ø lens mm
D7260305X	50,00	5x	30



## MAGNIFYING GLASSES

### ART. D7262

Plastic acrylic lens.

Tech. Code	GR49 Euro	Magnification	Dimension mm
D726250	14,20	3x - 6x	50
D726275	16,80	2,5x - 5x	75



## DOUBLE MAGNIFYING GLASSES

### ART. D7265

Glass lens with anti-scratch coating, metal framing; Ø 20mm lens being inserted into the Ø 75mm one, its two different magnifications provide a near-universal application in precision work.

Tech. Code	GR49 Euro	Magnification lens Ø 75	Magnification lens Ø 20
D726575205X	92,00	2,5x	5x



### ART. D7266

Ergonomical rubber grip wire stand for hand-free uses.

Tech. Code	GR49 Euro	Magnification	Dimension mm
D72668550	31,30	2x - 6x - 10x	85 x 50



## FOLDING MAGNIFIERS

### ART. D7267

Plastic acrylic lens.

Tech. Code	GR49 Euro	Magnification	Ø lens mm
D726730	13,20	5x	30



### ART. D7268

Plastic acrylic lens.

Tech. Code	GR49 Euro	Magnification	Ø lens mm
D726820	24,70	6x	20

While stocks last



## MAGNIFYING GLASSES

### ART. D7269

Plastic magnifying glasses

Tech. Code	GR49 Euro	Magnification	Ø lens mm	External dimension mm
D726925	16,30	10x	25	Ø 50 x 45



## STANDING MAGNIFIERS 10X

### ART. D7270

A high-magnification capacity coupled with a large viewing area, shock-proof cylindrical plastic body, transparent base.

Tech. Code	GR49 Euro	Magnifications	Visual field mm	Ø lens mm
D7270302510X	49,00	10x	30	25



## ADJUSTABLE FOCUS MAGNIFYING GLASSES

### ART. D7271

Achromatic lens system, scale measuring reticle in mm, shock-proof plastic body, focus adjustment function, transparent, removable reticle holder base.

\* Additional reticles for different scale measurements can be supplied.

Tech. Code	GR49 Euro	Magnifications	Visual field mm	Ø lens mm
D7271282010X	177,00	10x	28	46



### ART. D7272

Plastic magnifying glasses.

Tech. Code	GR49 Euro	Magnification	Ø lens mm
D727230	17,50	5x - 10x - 15x	30



## LED MAGNIFIERS

### ART. D7273

With LED-light and glass lens batteries included (2 x LR14).

Tech. Code	GR49 Euro	Magnification	Ø lens mm	Total length mm
D727350	23,40	3,5x	50	195
D727390	31,00	2,5x	90	230



## LIGHT MAGNIFIERS 10X

### ART. D7275

A model that combines the excellent power of magnification and the field of view with the possibility to illuminate when the point to be examined is needed, body in shock-proof plastic body, transparent base. Power supply 2 C-type 1.5 V batteries (not included).

Tech. Code	GR49 Euro	Magnifications	Visual field mm	Ø lens mm
D7275302510X	64,00	10x	30	25



## SCALE MAGNIFIER KIT 10X



### ART. D7277

Achromatic lens system, shock-proof plastic body, focus adjustment function, transparent, removable reticle holder base.

Tech. Code	GR49 Euro	Magnifications	Visual field mm	Ø lens mm
D7277262010X	(342,00)	10x	26	20



## PEN MICROSCOPES

### ART. D7278

A limited dimension, practical microscope, also supplied complete with measuring reticles.

Tech. Code	GR49 Euro	Magnification
D727825X	110,00	25x

### ART. D7279

3 mm viewing area Complete with focus adjustment and measuring reticle.

Tech. Code	GR49 Euro	Magnification	Visual field mm
D727925X	267,00	25x	3



## ILLUMINATION FOR POCKET MAGNIFYING LENSES

### ART. D7280

Lighting device for a clear and sharp observation of the object to be measured. Supplied without lens

Tech. Code	GR49 Euro	Magnification	Visual field mm	Ø lens mm
D72802044	49,00	10x	32	47



## OPTICAL AND CONTACT DIGITAL TACHOMETERS

LCD

1,5V



← →

AA

### ART. D7310

Optical/contact model - instrument equipped with removable head for contact and distance rotating pieces checking procedures by using a laser beam and a small portion of reflecting seal tape applied onto a rotating workpiece; storage device enables a display viewing after last measurement reading and min/max values. Optical model only for laser beam measurements.

Power supply: 4 AA-type 1.5 batteries (included).

Main features:

- 2.5 rpm ÷ 99.999 (optical) measurement range
- rpm 0.5 ÷ 19.999 measurement range (contact measurements)
- m/min 0.05 ÷ 1999.9 measurement range (tapeline measurements).

Tech. Code	GR49 Euro	Type	Measuring distance mm	Accuracy
D73101	250,00	Optical/Mechanical	50 ÷ 500	± 0.05% + 1 dgt

Tech. Code	GR49 Euro	Tipo
D99301,5V	5,30	AA 1,5V





## CONTACT DIGITAL TACHOMETERS

0,01 mm	LCD	1,5V AA	
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ART. D7325

To measure either rotational or traveling speed. Operating by means of contact sensors. Extremely useful in workshop environments and in the manufacturing industry. Extremely sturdy, energy efficient instrument, ideal for in-field measuring.

Dimensions. 205 x 72 x 36mm Weight 158g

Tech. Code	GR49 Euro	Resolution	Speed Rot. Contact
D7325TACHIM03	168,00	0.01/0.1/1	0.5 + 19.999

Tech. Code	GR49 Euro	Tip
D99301,5V	5,30	AA 1.5V



## VIDEOENDOSCOPES

ALPAIN

IP 67		
		

ART. LA490

Compact portable inspection camera to display the applications for a clear view in tight spots, not visible at glance.

3.5", wide angle LCD screen, to view, store and review pictures and footage.

Images can also be displayed directly on a TV screen, or stored and transferred to a PC using a USB cable.

SD mini card allows direct video recording or picture storage. An easy-to-transport standalone device, excellent for assessing damages, or simple diagnosis. Instant viewing of footage and image captures directly recorded on a high resolution TFT screen or external monitor. File transferred to computer by using a USB interface. Flexible 3m cable camera, 5.5mm diameter micro wide angle. Adjustable LED light for optimal view in all applications. In addition to the 45° and 90° mirrors supplied, the instrument can be easily equipped with several mirrors featuring different angles.

Cables of different sizes can also be supplied, as an optional item.

Equipment:

- Basic device with USB cable
- Probe diam. 5,5 with front cam
- AV2 cable for TV display
- 2GB SD card
- Spare battery
- Power adapter

Tech. Code	GR45 Euro	Equipment	Probe m
D72906404801	1119,00	Basic device with USB cable + Probe + AV2 cable + SD card + Battery + Power adapter	1
D72906404803	1473,00	Basic device with USB cable + Probe + AV2 cable + SD card + Battery + Power adapter	3

Performance:

- Semi-rigid cable, oil-proof and abrasion resistant
- N.4 enhanced illumination LEDs
- High speed video recording and image capture
- 2GB memory
- 300,000 pixel high definition resolution



Included



\* Optional



\* Optional

## VIDEOENDOSCOPES PROBES



ART. D7295

VIDEOENDOSCOPES PROBES

Tech. Code	GR45 Euro	Description
D7295CAVO1	576,00	Probe 1 m
D7295CAVO3	808,00	Probe 3 m



## DIGITAL CHRONOMETERS

LCD

### ART. PROFIL 5

Seven digits display for 1/100 sec readings, watch and calendar functions. MODE - LIGHT button, SPLIT-RESET button, addition, interval detection, clearing functions. Power supply: 1 AA-type 1.5 battery (included).

Tech. Code	GR49 Euro	Description	Dimension mm
D75101	76,00	Sturdy ABS shock-proof and splash-proof casing.	80 x 57 x 17
Tech. Code	GR49 Euro	Tipo	
D99301,5V	5,30	AA 1.5V	



## INFRARED THERMOMETERS



### ART. D7620

Remote temperature measuring instrument with a built-in laser pointer, large backlit LCD display, °C (Celsius) to °F (Fahrenheit) switching, min. / max. alarm threshold setting, automatic switch off. IP54. Power supply: 9V battery (included).

Tech. Code	GR49 Euro	Range	Measuring ratio	Accuracy
D76201	(286,00)	-50°+800°(C) / -58° +1472°(F)	16:1	-50° - 0° ± 2.5° 0° - +1370° ±1.5%



## TYPE-K DIGITAL THERMOMETERS



### ART. D7630

Instruments used for K-probe temperature measuring. A wide selection of probes to fit a variety of fields of application: surface temperature, single point tempt, within fluids or materials, environment Celsius/Fahrenheit automatic conversion, suitable for any industrial requirements. Weight: 192 g.

Resolution ± :

- 0,1°C from -50 ~ 199,9°C

- 1°C from 200°C ~ 1300°C

Tech. Code	GR49 Euro	Range	Accuracy	Dimension mm
D7630TERMDIGK	(176,00)	-50 ~ 1300°C Varying according to probe type	0,3% + 1°C from -50 ~ 799,9°C 0,3% + 2°C from 200°C ~ 1300°C	160 x 79 x 43



## PROBES FOR K-TYPE DIGITAL THERMOMETERS

### ART. D7631

PROBES FOR K-TYPE DIGITAL THERMOMETERS

Tech. Code	GR49 Euro	Model	Application
D7631SONDA01	(34,00)	SATP-01 (-50-200°C)	Surfaces



### ART. D7632

PROBES FOR K-TYPE DIGITAL THERMOMETERS

Tech. Code	GR49 Euro	Model	Sensor mm
D7632SONDA02	(52,00)	SATP-02 (-50-500°C)	80



### ART. D7635

PROBES FOR K-TYPE DIGITAL THERMOMETERS

Tech. Code	GR49 Euro	Model	Application
D7635SONDA202	(132,00)	SATP-202 (-50-750°C)	Surfaces



## PROBES FOR DIGITAL THERMOMETERS

### ART. D7633

PROBES FOR DIGITAL THERMOMETERS

Tech. Code	GR49 Euro	Model	Sensor mm
D7633SONDA03	(107,00)	SATP-03 (-50-750°C)	500



### ART. D7634

PROBES FOR K-TYPE DIGITAL THERMOMETERS

Tech. Code	GR49 Euro	Model	Sensor mm
D7634SONDA04	(109,00)	SATP-04 (-50-1000°C)	500



## INFRARED THERMOMETERS



### ART. D7640

Non-contact temperature measurement instruments Infrared thermometers are extremely easy to use, nearly immediate feedback time, safe data measurement (Celsius and Fahrenheit scales) even in cases where standard instruments would not operate. Compact, user friendly, complete with its carrying pouch with belt clip, make it usable even by less-experienced users. Suitable for any industrial sector.



Tech. Code	GR49 Euro	Range	Resolution
D7640TERMOINFR	184,00	-25°C ~ 560°C	0,2°C

Tech. Code	GR49 Euro	Model
D99159V	5,30	Battery 9V Transistor

## THERMOMETERS BY PROBE



NEW

### ART. D7651

One channel instrument for rapid temperature detection, provides continuous display of min/max values, acoustic alarm indicates when the threshold values are exceeded, HOLD button to lock the instantaneous measurement on the display. Large backlit LCD display. Power supply: 3xAA transistor battery (included). TOPSAVE shockproof housing (optional).

Tech. Code	GR49 Euro	Temperature range °C	Resolution °C	Readout accuracy °C
D76511	216,00	-50 +1000	-50 ~ +500 0,1 +500 ~ +1000 1	-50 ~ +900 ±0,5 +900 ~ +1000 ±0,7



## THERMOCOUPLE PROBES FOR PROBE THERMOMETERS

### ART. 0602 - 1993

Watertight probe with widened measuring tip for flat surfaces.

Tech. Code	GR49 Euro	Temperature range °C	Accuracy class
D76521	110,30	-60 ~ +400	2



### ART. 0602 - 0393

Spring loaded thermocouple rapid probe suited to provide positive contact also with irregular surfaces.

Tech. Code	GR49 Euro	Temperature range °C	Accuracy class
D76541	229,00	-60 ~ +300	2



### ART. 0602 - 1293

Waterproof immersion/penetration probe suitable for semisolid materials. Ideal in plastic measurements.

Tech. Code	GR49 Euro	Temperature range °C	Accuracy class
D76561	72,50	-60 ~ +400	2



LA110

The new ALPA SCOPE is the maximum expression of Baty technology applied to optical machines. The measuring range (250 x 125 x 150 mm and 300 x 300 x 200 mm), the completeness of the equipment, the FUSION software and the ultra-high-resolution camera (3.22 Megapixels) allow fast, complete, reliable and very precise measurements. The non-contact measurement is carried out by means of a microzoom lens of the highest quality, motorised and software-controlled, with parfocal and paracentric optics. Optical magnification from 30X to 200X and digital magnification up to 350X with double monitor.

Contact with Renishaw TP20 touch probe software lighting system, with 64 ring white leds with collimated profile lighting. WINDOWS operating system and FUSION programme.



- High resolution 0.5µm scales for increased accuracy E1 (2+L/100) µm
- Plate with light alloy column
- 3.2 Megapixels camera, motorized micro-zoom optics
- Renishaw TP20 touch probe and accessories
- TP20 contact probe
- Double monitor as standard
- Master for setting pixels as standard, accuracy E1(2+L/100) µm

PRICES ON REQUEST

SETTING CALIBRATION AND MEASURING BENCH



ART. LA015

- Fastest, easiest to use, most reliable, precise, solid and long lasting
- Made of stabilized cast iron
- Light alloy heads
- Hard metal reset switches (HM lapped finish)
- Glass support optical scales with absolute and incremental correction
- Large display with settings keyboard, frictioned handwheel, high precision adjustment sliding block
- Push and pull preload for reliable measurements
- Wide array of accessories available on request for a variety of control operations



Tech. Code	GR46 Euro	Range mm	Accuracy µm	Weight kg
D7710400	(-)	1 ÷ 400	1,5 + L/400	50
D7710700	(-)	1 ÷ 700	1,5 + L/400	60
D77101000	(-)	1 ÷ 1000	1,5 + L/400	70

- Price on request

## MANTIS COMPACT STEREO VIEWERS



### ART. COMPACT

Mantis Compact is a stereo viewer able to provide 3-dimensional images designed for freedom of head movement employing patented eyepieceless technology. Ideal instrument for all inspection, manipulation and rework tasks requiring low magnification.

- Fast lens replacement 2x, 4x, 6x e 8x (not included).
- LED cool white light, actual colour viewing, for over 10.000 shadeless viewing hours.
- A wide range of supports. Articulating arm for tasks requiring greater extension, high-stability column support, diascopic lighting.



Tech. Code	GR48 Euro	Description	Magnifications
D7830MANTISCO	(1905,00)	Basic Instrument	2X - 8X
D7830COMP4X	(118,00)	Objective lens	4X
D7830COMP6X	(189,00)	Objective lens	6X
D7830COMP8X	(453,00)	Objective lens	8X

## MANTIS ELITE STEREO VIEWERS



### ART. ELITE

Mantis is a patented eyepieceless stereo microscope ensuring great 3D images with the highest levels of comfort, for a fatigue-free, high quality productive viewing Up to 20x magnifiers make Mantis Elite a high-performance stereoscopic viewer fit to a wide range of tasks.

- 2 x up to 20x with quick replacement table stand (not included).
- Cool white LED light source, actual colour viewing, over 10.000 shadeless viewing hours.
- Superior ergonomics for an increased quality and productivity.
- Outstanding hand/eye coordination for inspection and manipulation tasks.
- Long working distances and excellent large field of view for manipulation and reworks sample tasks. Articulated arm for applications requiring extended reach.
- Vast choice of high-stability column support. Articulated arm for application which need more extension. High-stability column support with optional diascopic lighting.

#### Fatigue-free viewing

Patented technology ensuring the operators superior freedom of head movement, great ergonomics and hand/eye coordination, the ability to wear eyeglasses if required.

State of the art optical performances is what Mantis Elite represents. It is also a great alternative to traditional stereo microscopes, for a wide range of inspections, manipulation and rework requiring excellent hand/eye coordination.



Tech. Code	GR48 Euro	Description	Magnifications
D7850MANTISEL	(3480,00)	Basic Instrument	2X - 20X
D7850ELITE4X	(205,00)	Objective lens	4X
D7850ELITE6X	(532,00)	Objective lens	6X
D7850ELITE8X	(689,00)	Objective lens	8X
D7850ELITE10X	(721,00)	Objective lens	10X

## EVOCAM VIDEO-MICROSCOPES II

### ART. EVOCAM II

Exceptional digital video inspection system of FULL-HD 1080p, designed to capture images and create reports in all simplicity at a push of a button. Superb clarity of live video images at up to 60 FPS: interchangeable image frequency (50 fps and 60 fps). Wide field vision with 30.1 zoom.

Ideal for quality control, testing, inspection and documentation.

- A base with a high stability arm for larger samples
- Monitor 24" FULL LED HD included
- HDMI output and USB 3.0

Wide range of lens not included

Tech. Code	GR48 Euro	Magnifications	Working distance mm
D789003	(6010,00)	EVOCAM II Machine	106
Tech. Code	GR48 Euro	Max digital	
D7890063X	(322,00)	0,62X	





## OPTICAL MEASURING SYSTEM



### ART. SWIFT

The simplest and most intuitive measuring two-axis system. The most cost-effective alternative to the simplest and most intuitive measuring two-axis system. The most cost-effective alternative to a standard optical profile projector, an outstanding quality price ratio

- Measuring range 200 x 100 mm
- Transmitted and reflected source of light
- Image display on 22" touch-screen
- Windows 10 operating system computer

Two-axis measuring, Measures exporting in standard format and Excel, photo included

- System installation and assembly
- Basic knowledge training for the software and system operators provided

Tech. Code	GR48 Euro	Description	Magnifications
D7905K2S11	(15850,00)	SWIFT PRO CAM Machine	20x



## VERTICAL PROFILE PROJECTOR



### ART. LA050

Robust vertical profile projector, stage travel 155 x 55 mm, with fast movement handle, 0,5 µm optical scales, 3 axis digital display (X Y and angles), data processing unit with functions like radius, angles, distance between objects, etc., backlit LCD display. Screen diameter ø 300 mm, profile illumination and 2000 programming elements, IRDA port, RS232 output, DXF file transmission, lens magnification 10X. Maximum height for piece to measure 43 mm, maximum weight on the stage 15 kg.

Tech. Code	GR46 Euro	Measuring range mm	Lens magnification
D7952300	7900,00	150 x 50	10x

ALPHA Profil



## HORIZONTAL PROFILE PROJECTOR



### ART. LA020

Horizontal profile projector with new structure and metal cabinet for increased stability and rigidity. Heidenhain 0.5 µm scales, Heidenhain Quadra-Check 220 viewer with large backlit LCD screen and geometric processor and two-coordinate measuring program for calculating angles, radii, centre distances, references, with 2000 programming blocks, IRDA port, RS232 output, DXF file transmission. High brightness 340 mm diameter screen. Equipped with angle reader. Chromium-plated steel table, 175x100 mm strokes on high-precision guides. Dual-fibre diascopic and episcopic lighting. The objective can be chosen between 10X - 20X - 50X to be purchased separately.

Installation and training not included.

Tech. Code	GR46 Euro	Measuring range mm	Ø Screen mm	Measurement system
D7954FT2E	(15800,00)	175 x 100	340	FT2E

ALPHA Profil



## DIGITAL HANGING SCALES

KERN



### ART. HDB

Stainless steel hook, LCD display with 12mm high digits, HOLD mode button freezing load value for 5 seconds; automatic shutdown if no load change occurs within 5 minutes. Power supply: 2 AAA-type 1.5V batteries (included).

Tech. Code	GR50 Euro	Max capacity	Division
D85105K5	65,00	5 kg	g
D851010K10	65,00	10	10

Tech. Code	GR49 Euro	Model
D99251,5V	5,40	- AAA-type 1.5 battery



### ART. CH

Stainless steel hook, LCD display with 11mm high digits, 100 cm-retractable measuring tape, HOLD mode multi-function button freezing load value for 5 seconds until any key is pressed; automatic shutdown if no load change occurs within 3 minutes (this function can be disabled). Power supply: transistor-type 9V battery (included).

Tech. Code	GR50 Euro	Max capacity	Division
D852015K20	80,00	15 kg	g
		20	20

Tech. Code	GR49 Euro	Model
D99159V	5,30	Battery 9V Transistor



### ART. HCN

Practical digital crane scale, ideal for quick checkweighing at incoming and outgoing goods.

Possibility of displaying the peak load.

Stainless steel housing, IP65 dust and splash protection.

Convenient second display on the back of the scale.

Supplied with 2 1.5 V AA batteries, autonomy up to 200 h

Tech. Code	GR50 Euro	Max. capacity	Division
D8525050K100	150,00	100 kg	g
D8525100K200	150,00	50	200
			100

NEW



## ANALOG FORCE GAUGES

ALPA



### ART. LB300

Accessory series which is essential to obtain max performances from your dynamometer. Ideal to operate if paired with internal load cell dynamometers and related supports. Special clamps upon request.

Tech. Code	GR45 Euro	Range	Resolution	Accuracy	Excursion
		N	N	±	
D8550DINAN20N	180,00	20	0.001	1%	Variable according to model
D8550DINAN50N	180,00	50	0.01	1%	Variable according to model
D8550DINAN100N	180,00	100	0.01	1%	Variable according to model
D8550DINAN200N	180,00	200	0.1	1%	Variable according to model
D8550DINAN500N	180,00	500	0.1	1%	Variable according to model



## PRECISION DIGITAL SCALES

KERN



### ART. EMB

Platform scale, good performances, large LCD display, 15mm high digits, ON-TARE button and display clears up digits when weighing (ex. when tare weight is removed), automatic shutdown if no load change occurs within 3 minutes (this function can be disabled). Power supply: two AA-type 1.5V batteries (included), 230V adapter (optional).

Tech. Code	GR50 Euro	Max capacity g	Division g	Plate Ø
D86205000,1	63,00	500	0.1	150
D86202201	60,00	2200	1.0	150

Tech. Code	GR49 Euro	Tipo
D99301,5V	5,30	AA 1,5V



## LABORATORY SCALES

KERN



### ART. PCD

Precision laboratory scales with separate platform. PRE-TARE function for the advance manual deduction of a known container weight, useful for filling controls. Programmable measuring unit (eg. direct display in filament length g/m<sup>2</sup> weight, etc.) Level and adjustable feet for exact leveling of the scale; for maximum precision weighing results. Standard windproof cage. Rigid protection cover included in the supply. Power supply: 230V / 50 Hz current.

Tech. Code	GR50 Euro	Max capacity g	Resolution step g	Plate Ø mm
D8625250	385,00	250	0,001	105



### ART. 440

Suitable for industrial and laboratory purposes, stainless steel weighing platform, large backlit LCD display, featuring 15mm high digits; automatic shutdown if no load change occurs within 3 minutes (this function can be disabled). Power supply: 230V/50 Hz (also powered by 9V batteries, not included).

#### Functions:

- ON/OFF: switch on and shutdown
- PRINT: data transfer and printing:
- TARE: tare zero setting
- MODE/CAL: calibration, piece counting, percentage weighing and selection of the unit of measurement
- SET/M: weight control of each single ingredient of a mixture

Tech. Code	GR50 Euro	Max capacity g	Division g	Plate mm
D86302000	315,00	2000	0.1	130 x 130
D86306000	240,00	6000	1.0	150 x 170



## DIGITAL COUNTING SCALES

KERN



### ART. CXB

Basic model for professional use, with EC type approval (M) counting resolution of 30,000 points. Certified by OPTIONAL.

Accurate counting guaranteed by the automatic reference optimization for an improved average value of the single piece weighing; known reference weight and amount of required pieces are configurable from keyboard. Programmable quantities and weights, fill-to-target acoustic signal upon reaching required value. Sum-by-lot and sum-by-weight totalization function.

Power supply with internal battery, approx 60 hour useful working duration, standard; charging time of approx 8h, charge condition indicator on display. Backlighting turns off after 5 seconds for increased energy saving.

The outer structure is ribbed with grooves for an effective water removal, provided with packing rings on upper inlet holes. PRE-TARE function for manual subtraction of a known container weight.

#### TECHNICAL SPECIFICATIONS

- Large backlit LCD display, 18mm high digits
- Weighing platform dimensions (stainless steel): 300 x 225mm
- Scale dimensions LxDxH 300 x 330 x 110mm
- Net weight ca. 4kg
- Room temperature -10°C/40°C

Tech. Code	GR50 Euro	Max capacity kg	Division (d) g	Repeatability g	Min piece weight g/piece
D8655K3G02	350,00	3	0.2	0.2	1
D8655K6G05	350,00	6	0.5	0.5	2
D8655K15G1	355,00	15	1	1	5
D8655K30G2	350,00	30	2	2	10



## PLATFORM SCALE

KERN



### ART. EOB

Classic model between balances for parcels and for veterinary use. Stainless steel weighing plate with painted steel structure. 4-key command. Wall bracket, standard, for mounting the indicator device. Weighing surface (WxD): 305 x 315 mm. Net weight approx.: 3,8 Kg.

#### Functions:

- ON/OFF: switching on and off
- HOLD: allows the calculation of a stable average weight value in case of movement
- UNIT: unit measurement switching
- TARE: tare reset

Tech. Code	GR50 Euro	Max capacity kg	Resolution step g	Reproducibility g	Linearity g
D8660035K10	(200,00)	35	10	10	±10
D8660060K20	(200,00)	60	20	20	±40
D8660150K50	(200,00)	150	50	50	±50



## DIGITAL COUNTING SYSTEMS

KERN



### ART. CCS

COUNTING LARGE AMOUNTS OF SMALL PIECES  
COUNTING RESOLUTION ≥ 3 MILLION POINTS

This highly accurate KERN CCS counting system, comprising a KERN KFP counting scale and a KERN CFS, can successfully replace a wide range of piece counting scales.

#### KERN KFP quantity scale

Counting of piece quantities can be conducted with the most accuracy on its weighing platform (= weighing bridge).

- Stainless steel platform, painted steel sub-framing
- Single-point aluminum load cell (1x3000 e)
- IP65 Protection
- Weighing platform (stainless steel).  
400 x 300 x 128mm (CCS 30K0.1 - CCS 60K0.1)  
500 x 400 x 137mm (CCS 60K0.1L - CCS 150K0.1)  
650 x 500 x 142mm (CCS 150LK0.1L - CCS 300K0.1)

#### KERN CFS reference scale

This professional KERN CFS piece counting scale can also be used as a standalone unit thanks to the weighing platform connection, successfully meeting the most stringent standards with regards to accuracy, weighing area and volume of goods.

- Large backlit LCD display, 20mm high digits
- Keyboard setting, number of reference units required, known reference weight
- PLU memory for one hundred pieces totalization function with additional text
- Tolerance range for check weighting
- Fill-to- target function. Programmable target weight
- Optical and acoustic signaling upon reaching target value
- Accurate Counting. Automatic reference optimization gradually improves the average value of the single piece weighing
- Dimensions (LxPxA) 320 x 330 x 125mm
- Weighing platform (stainless steel 320 x 230mm)
- Net weight approx. 3.8kg.

Tech. Code	GR50 Euro	Max cap. KFP kg	Max cap. CFS kg	Division (d) g	Min pcs weight g/piece
D8650K30G10	(720,00)	30	6	0.1	1
D8650K60G20	(770,00)	60	3	0.01	0.5
D8650K150G50	(810,00)	150	6	0.1	1
D8650K300G100	(1220,00)	300	3	0.01	0.5



## SCALES FOR PALLETS

KERN



### ART. UIB

Pallet scale in powder coated steel, 4 aluminum load cells coated with silicone, IP67 protection. It can be easily transported thanks to the presence of wheels and handles. Rigid protection cover included. Weighing surface (LxP): 1195 X 840 mm.

- Large LCD display, digit height 25 mm
- Indicator device size: W x D x H 260 x 115 x 70 mm
- Indicator cable length 5m
- Tamb: 10/+40
- Possible battery operation, 4x1.5 V AA (on request)

Tech. Code	GR50 Euro	Port. max kg	Resolution step kg	Net weight approx. kg
D86800600	(1110,00)	600	0.2	55
D86801500	(1110,00)	1500	0.5	55
D86803000	(1110,00)	3000	1	55





## FLOOR SCALES

KERN

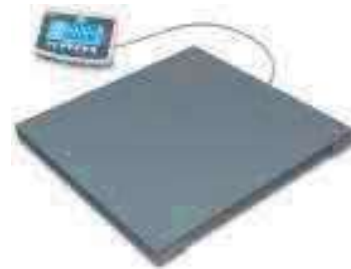
IP	LCD	INOX
67	← →	

### ART. BFB

Ideal for weighing cases, boxes, small-sized pallets, painted milled steel non-skid platform, level and adjustable feet, large back lit LCD display, 52 mm digits, the indicator can be placed away from the base by using its 5m cable complete with wall stand, auto power off, load unaltered for three minutes, function can be disabled. 230V/50 Hz electric power supply.

### Functions:

- ON/OFF: switch on and shutdown
- HOLD: allows for a stable weighing value even in presence of scale movement, holds the displayed weight value until Hold button is pressed again
- UNIT: unit of measurement conversion
- TARE: tare zero setting



Tech. Code	GR50 Euro	Description	Max capacity kg	Dimension mm
D86901500	(1640,00)	Platform	1500	1000x1000x85
D8690AR	(430,00)	Ramp up	-	1000x760x85
D8690AS	(170,00)	Stand	-	750 h

## DIGITAL MULTIMETERS

### ART. D9111

Professional all-purpose multimeter able to perform many measurements that are not possible with traditional instruments. CE marked, compliant with standards IEC EN 61010-1 CAT. III 1000V - CAT. IV 600V. Backlit LCD display, light shows which connections to use. Auto power off after 15 min. Power supply: 1 x 9V battery (not included).



Tech. Code	D91111	
GR49	Euro	151,00
Tension (AC/DC)	V	400m, 4, 40, 100, 250
Current (AC/DC)	A	400μ, 4m, 40m, 400m, 10
Frequency	Hz	5, 50, 500, 5k, 50k, 500k, 10M
Continuity	Ω	<50
Resistance	Ω	400, 4k, 40k, 400k, 4M, 40M
Brightness	Lux	4000 - 40000
Capacity	F	50n, 500n, 5μ, 50μ, 100μ
Noise level	dB	35 - 100
RH Humidity		33 - 99
Temperature	°C	-20 +1300 (Thermocouple)
Temperature	°C	-20 +40 (Internal sensor)

Tech. Code	D99159V	
GR49	Euro	5,30
Model	Battery 9V Transistor	

## DIGITAL AMPEROMETRIC PLIERS

### ART. D9216

Amperometric pliers/Multimeter, allow to perform current measurements (up to 1000A) without disconnecting the user CE, CAT. III 600V. 16mm LCD display with back-lightening illuminated pliers. Supplied with custody case. Auto-off function after 30 min. Power supply 3 batteries x 1,5V AAA (not Included).



Tech. Code	D921601	
GR49	Euro	166,00
Tension (DC)	V	4V - 40V - 400V - 600V - 1000V
Tension (AC)	V	4V - 40V - 400V - 600V - 700V
Current (ac/dc)	Ah	400A - 600A - 1000A
Duty cycle		0,1 - 99,9%
Resistance	Ω	400 - 4K - 40K - 400K - 4M - 40M

Tech. Code	D99251,5V	
GR49	Euro	5,40
Model	- AAA-type 1.5 battery	

## DIGITAL AMPEROMETRIC PLIERS

### ART. D9217

Amperometric pliers specific for precise measurements at low current values. Ideal for measuring leakage current or absorptions on cars without having to disconnect the load. CE marked, CAT. III 600V, CAT. III 300V. It is equipped with a useful forch function for working in dark areas. The large LCD display with LED eases reading. Supplied with custody case. Auto-off function after 7 min. Power supply: 2 x 1,5V AAA (not included).



Tech. Code	D921701	
GR49	Euro	177,00
Current (dc)	Ah	1mA - 80 A
Current (ac)	Ah	1mA - 80 A

Tech. Code	D99251,5V	
GR49	Euro	5,40
Model	- AAA-type 1.5 battery	

## DIGITAL COATING THICKNESS GAUGES



### ART. D9305

The brand new portable instrument by Elcometer features a high contrast colour LCD display with auto rotation, thickness measurement capability to  $\pm 1\%$ , dust and waterproof equivalent to IP65, USB and Bluetooth data output for accurate coating thickness measurement (Chrome, paint, galvanizing, rubber, etc.) on ferrous or non-ferrous metals. There are available three different models, each gauge provides the user with increasing functionality and could have integral or separate probe. Large easy to read high contrast auto-rotating display, language selectable and easy to use menu, measuring range 0-1500  $\mu\text{m}$ , IP65 protection, supplied with calibration masters and factory conformity certificate.

Tech. Code	GR46 Euro	Description
D9305FEES	1110,00	Digital coating thickness gauges with external probe
D9305FEIN	920,00	Integral ferrous coating thickness gauge
D9305FENFES	1652,00	Separate probe ferrous/non ferrous coating thickness gauge



## DIGITAL COATING THICKNESS GAUGES



### ART. D9320

INTERNAL PROBE. Instrument is used for non-destructive measurement of coating thickness on metallic bases. With an operating principle (parasite magnetic inductive) these instruments may detect thickness in insulating coating (e.g. enamel, paint, etc.) not ferromagnetic ones (aluminum, zinc, etc.) used as ferromagnetic coating (e.g. steel, iron, etc.). Furthermore, they can detect insulation thickness (e.g. enamel, paint, etc.) of non ferromagnetic coating (aluminum, zinc, etc.). Ideal for quality control in production lines and in any other industrial sector where coating control is required (galvanic, automotive, nautical, construction, etc.).

Note: Instruments measure also tungsten carbide coating on stainless steel.  
Compliant to standards: ISO2178, ISO-2361, DIN, ASTM, BS.

Dimensions: 126 x 65 x 27 mm Weight 81 g

Tech. Code	GR49 Euro	Mode	Measuring range $\mu\text{m}$	Measureale thickness min. mm	Resolution $\mu\text{m}$	Accuracy $\mu\text{m}$
D9320INT	(697,00)	Ferroso Non Ferroso	0~1250	0.3	0,1	$\pm 1\sim 3\%n$ / $\pm 2,5\pm 1\sim 3\%n$ / $\pm 2,5$

Tech. Code	GR49 Euro	Model
D99251,5V	5,40	- AAA-type 1.5 battery



## DIGITAL COATING THICKNESS GAUGES



### ART. D9325

EXTERNAL PROBE - Instruments used for non-destructive measurement of coating thickness of magnetic and non-magnetic metallic bases. With an operating principle (parasite magnetic inductive) these instruments may detect thickness in insulating coating (e.g. enamel, paint, etc.) not ferromagnetic ones (aluminum, zinc, etc.) used as ferromagnetic coating (e.g. steel, iron, etc.). Furthermore, they can detect insulation thickness (e.g. enamel, paint, etc.) of non ferromagnetic coating (aluminum, zinc, etc.). Ideal for quality control in production lines and in any other industrial sector where coatings control is required (galvanic, automotive, nautical, construction, etc.)  
Equipment: 1 probe Fe, 1 probe NFe, reference standards set, 1 iron zero setting base.

Note: Instruments measure also tungsten carbide coating on stainless steel.  
Compliant to standards: ISO2178, ISO-2361, DIN, ASTM, BS.

Dimensions: 126 x 65 x 27mm Weight 81 g

Tech. Code	GR49 Euro	Mode	Measuring range $\mu\text{m}$	Measureale thickness min. mm	Resolution $\mu\text{m}$	Accuracy $\mu\text{m}$
D9325EST	(697,00)	Ferrous Non Ferrous	0~1250	0.3	0,1	$\pm 1\sim 3\%n$ / $\pm 2,5\pm 1\sim 3\%n$ / $\pm 2,5$

Tech. Code	GR49 Euro	Model
D99251,5V	5,40	- AAA-type 1.5 battery





## ULTRASONIC THICKNESS GAUGES

KERN

LCD	1.5V	
	AA	

NEW

### ART. TO-EE

Ultrasonic thickness gauges for the non-destructive thickness control of metals, plastics, ceramics, composite materials, epoxides, glass and others.

New technology with automatic sensor adaptation.

Double measuring mode to detect the thickness of the material, ECO-ECO and PLUS-ECO.

Detection of material thickness regardless of the presence of a coating.

Large color display, internal memory capable of accommodating up to 100 sets of data and USB port for conveniently downloading them to the PC.

Triple measurement mode: point measurement, continuous scan measurement and calculation of the difference between the measured value and a manually determined thickness.

Alarm when a manually programmed limit value (upper and lower) is exceeded.

Operation with 2 AA batteries and autonomy of at least 100 hours, adjustable pause time and settable display shutdown.

Supplied with:

ATU-US12 measuring probe

2 AA batteries

Contact gel approx. 60ml

Sturdy case



Tech. Code	GR50 Euro	Range ECO-ECO mm	Range PLUS-ECO mm	Division mm	Probe l x Ø cm	Precision	Head Ø cm
D9340075600	(1490,00)	3 - 100	0,75 - 600	0,01	100 x 1	+/-0,4%	1

## ULTRASONIC THICKNESS GAUGES

0.01	LCD	1.5V			
mm		SR44			

### ART. D9338

Ultrasonic thickness gauges - instrument designed for a non-destructive thickness measuring of ultrasound conductive materials. Mainly used to measure thickness of boxed structures, centre sections of large sheets, tubing, tanks, pressurized containers, panels. Mainly used for quality management in production lines and maintenance inspections so to detect samples corrosion conditions, data output upon request.

Dimensions 149 x 73 x 32 Weight 160g, power supply 2 AA 1.5 battery set (included).

Standard equipment:

- Instrument body
- SAPBN-90° probe (1,2 - 230 mm)
- Coupling fluids
- Shock-proof casing

Tech. Code	GR49 Euro	Range mm	Accuracy mm	Resolution mm	Speed m/s	Main storage	In-use conditions
D9338075300	(921,00)	0.75 ÷ 300 (ref. steel)	±0.5% n + 0.04 (ref. steel)	0.1/0.01	1000 - 9999	20 allocations (99 values each,)	0 - 40 °C / 10 - 90% RH

Tech. Code	GR49 Euro	Model
D99051,5V	5,30	Battery 1.5V SR44



### ART. D9342

#### PROBES FOR ULTRASONIC THICKNESS GAUGES

Tech. Code	GR49 Euro	Frequency MHz	Ø mm	Measuring range (steel) mm	min Ø mm	Use
D93421223090	(319,00)	5	10	1.2 ÷ 230	20 x 3	Standard /90°



## COUPLING FLUIDS

### ART. USTM

Coupling fluid specific for ultrasonic instruments. Completely soluble in water, recommended for all procedures where gel is required. Suitable for acoustic transmission, non-irritating, non-corrosive, non-abrasive, salt-free and dermatologically tested. For external use only.

Tech. Code	GR49 Euro (23,00)	Weight g 50
D9347FLUIDO	(23,00)	50



## VIBRATION METERS



### ART. D9610

Instruments used for non-destructive measurement of vibration parameters such as acceleration, average quadratic value of speed (effective value) and deviation. This type of vibro meters are extremely fit to perform bearing, machinery, plants and related components maintenance checks Compact design, user friendly, ideal for in-field measurement Compliant to standard: ISO2954.

Acceleration (10Hz - 1KHz / 10Hz - 10KHz) 0.1 ~ 400 m/s<sup>2</sup>  
 RMS speed (10Hz - 1KHz) 0.1 ~ 400 mm/s  
 Deviation (10Hz - 1KHz) 0.001 ~ 4.0 mm

Power supply 4 x 1.5V AAA (UM4) battery set - Battery level  
 Dimensions 124 x 62 x 30 mm  
 Weight 120 g (battery set not included)

Equipment: - Casing - Magnetic base - Piezoelectric pressure transducer - 2 tips  
 Optional accessories: Cable and software - headset - SIT and/or RDT certificate

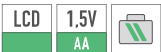
Tech. Code	GR49 Euro (808,00)	RPM	Frequency	Accuracy	In use conditions
D9610VIBROMT	(808,00)	60 ~ 9990 r/min	from 0,1 up to 20 KHz	± 5%+2	0 ~ 50 °C ≤ 90%RH

Tech. Code	GR49 Euro (5,30)	Tipo
D99301,5V	5,30	AA 1,5V



## GLOSSMETER



### ART. D9450

Instrument used for non-destructive control. Used to measure gloss of materials such as painted and /or polished surfaces Depending on detection system, measures will be optimal for several degrees of gloss intensity. In order to further enhance their versatility some instruments also feature multiple detection methods. Gloss meters can suit several tasks: furniture manufacturers, automotive and all those industry sectors where surface gloss intensity is essential. Compliant to standards: ISO2813, ASTM D523, DIN-67530, ISO7668, GB9754.

Features:  
 - Automatic calibration  
 - Type A light  
 - 20°, 60°, 85° angles  
 - 10mm high LCD display  
 - Silicon photodiode sensor  
 - Measurement surface 11 x 54 mm  
 - Measured area 20°=10x10mm 65°=10x20mm 80°=7x24  
 - Power supply: 1 AA type battery

Equipment:  
 Hard casing - Calibration plate  
 Optional accessories: Calibration ratio

Dimensions: 142 x 32 x 64 mm - weight 320 g

Tech. Code	GR49 Euro (1292,00)	Repeatability Gloss points	Measuring range Gloss units	Resolution Gloss units	Accuracy Gloss points
D9450GLOSSMT	(1292,00)	± 0.4	0 ÷ 199.9	0.1	± 1.5



## HYGRO METERS FOR MATERIALS

LCD	1.5V
← →	AAA

ART. D9710

Instrument used for non-destructive measuring of relative moisture content in materials According to type of sensor, contact or in fission ones, the instrument detects relative moisture content employing two different physical principles, capacitive and resistance. Instruments can measure a wide range of materials such as wood (over 150 species), fibreglass, sand, leather, gravel, paper, brickwork, etc.

Tech. Code	GR49 Euro	Measuring range moisture	Moisture accuracy ±	Dimension mm	Weight g
D9710IGRO01	(319,00)	0 ~ 80%	0.5%	165 x 62 x 26	175

Tech. Code	GR49 Euro	Model
D99251,5V	5,40	- AAA-type 1.5 battery



## HYGROMETERS FOR MATERIALS - PROBES

ART. D9720

HYGROMETERS FOR MATERIALS - PROBES

Tech. Code	GR49 Euro	Model
D9720SOND-2	(134,00)	G type probe



## THERMO HYGROMETERS FOR ENVIRONMENTS WITH INTERNAL SENSOR

LCD	9V	
← →	MN1604	

ART. D9755

Instruments used to measure environmental humidity with reference to temperature and relative moisture content parameters Superior accuracy, user friendly, compact design, ideal instrument for all production line tasks, for construction works, in industrial agriculture, wherever such parameter need to be monitored, such as in workshops, plants, office premises, libraries, laboratories, warehouses, IT unit storage premises.

Thermo hygrometer with 01 resolution internal sensor

Dimensions: 202 x 72 x 37 mm - Weight 215 g

Tech. Code	GR49 Euro	Measuring range moisture	Measuring range Temperature	Accuracy moisture	Accuracy Temperature
D9755TERMOIG02	(200,00)	10 ~ 95% RH	-10 ~ 65°C	2.5% ± 1% RH	± 0.5°C

Tech. Code	GR49 Euro	Model
D99159V	5,30	Battery 9V Transistor



## ANEMOMETERS

LCD	1.5V	
← →	AAA	

ART. D9770

Instrument for measuring wind speed According to model, several data can be measured such as, speed, temperature, direction, Beaufort scale (indirect) and flow rate. User friendly, compact dimensions, sturdy: ideal for all in-field measurements. Suited for any areas with wind flows.

±2%n+0.1 Accuracy - 0.1 Resolution.

Dimensions: 156 x 67 x 28 mm - Weight 375 g

Tech. Code	GR49 Euro	Measuring range Air speed	Measuring range Air flow	Measuring range Scale intervals	Measuring range Temperature
D9770ANEMOMT	(262,00)	0.4~45.0 m/s 1.4~162.0 km/h 80~8860 ft/min 0.8~88.0 knots	0.004~9999 m3/min 0.013~9999 ft3/min	0~12	0~60°C / 32~140°F

Tech. Code	GR49 Euro	Model
D99251,5V	5,40	- AAA-type 1.5 battery



## BATTERIES

### ART. D9905

- D357/303 SR44 1,5V button cell battery

Tech. Code	GR49 Euro
D99051,5V	5,30



### ART. D9920

- C-type 1,5V battery

Tech. Code	GR49 Euro
D99201,5V	5,30



### ART. D9911

- DL2032 - CR2032 3V button cell battery

Tech. Code	GR49 Euro
D99113V	5,50



### ART. D9925

- AAA-type 1,5V battery

Tech. Code	GR49 Euro
D99251,5V	5,40



### ART. D9936

- DL1632 - CR1632 3V button cell battery

Tech. Code	GR49 Euro
D99360,3V	5,60



### ART. D9930

- AA-type 1,5V battery

Tech. Code	GR49 Euro
D99301,5V	5,30



### ART. D9913

- DL2025 - CR2025 3V button cell battery

Tech. Code	GR49 Euro
D99133V	5,30



### ART. D9935

- D-type 1,5V battery

Tech. Code	GR49 Euro
D99351,5V	7,75



### ART. D9915

- MN1604 Transistor-type 9V battery

Tech. Code	GR49 Euro
D99159V	5,30



ACCORDING TO IN-STOCK PRODUCT AVAILABILITY, PRODUCTS BRANDS DELIVERED MAY VARY WHILE MAINTAINING THEIR QUALITY UNALTERED.

### CALIBRATION REPORTS FOR CALIPERS NEW

Description	Size mm	GR46 Euro
Calibration reports for vernier calipers	0 ÷ 200	22,00
	201 ÷ 300	28,00
	301 ÷ 500	36,00
	501 ÷ 1000	50,00

Description	Size mm	GR46 Euro
Calibration reports for depth vernier calipers	0 ÷ 300	28,00

### CALIBRATION REPORTS MICROMETERS NEW

Description	Size mm	GR46 Euro
Calibration reports for external micrometers	0 ÷ 25	22,00
	26 ÷ 50	24,00
	50 ÷ 75	26,00
	75 ÷ 100	28,00
	100 ÷ 125	35,00
	125 ÷ 150	39,00
	150 ÷ 175	43,00
	175 ÷ 200	47,00
	200 ÷ 225	53,00
	225 ÷ 250	59,00
	250 ÷ 275	66,00
275 ÷ 300	73,00	

Description	Size mm	GR46 Euro
Calibration reports for two / three points inside micrometers	0 ÷ 100	43,00
	101 ÷ 200	59,00
	201 ÷ 300	69,00



### CALIBRATION REPORTS FOR INDICATORS NEW

Description	Size mm	GR46 Euro
Calibration reports for mechanical indicators	0 ÷ 100	27,00

Description	Size mm	GR46 Euro
Calibration reports for digital indicators	0 ÷ 100	27,00

Description	Size mm	GR46 Euro
Calibration reports for lever test indicators	-	27,00

### CALIBRATION REPORTS FOR PLUG GAUGES NEW

Description	Size mm	GR46 Euro
Calibration reports for plug gauges	0 ÷ 50	14,00
	50 ÷ 75	20,00
	75 ÷ 100	22,00

Description	Size mm	GR46 Euro
Calibration reports for GO/ NO GO plug thread gauges	0 ÷ 20	21,00
	20 ÷ 50	24,00

Description	Size	GR46 Euro
Calibration reports for NTP go plug thread gauges	0" ÷ 1"	33,00
	1" ÷ 2"	54,00
	2" ÷ 3"	65,00

### CALIBRATION REPORTS FOR RINGS NEW

Description	Size mm	GR46 Euro
Calibration reports for gauges	1 ÷ 5	14,00
	5 ÷ 50	14,00
	50 ÷ 100	22,00
	100 ÷ 150	26,00
	150 ÷ 200	33,00
	200 ÷ 275	46,00

Description	Size mm	GR46 Euro
Calibration reports for threaded gauges	2 ÷ 20	16,00
	20 ÷ 40	19,00

Description	Size	GR46 Euro
Calibration reports for threaded gauges NPT	0" ÷ 3/4"	29,00
	1" ÷ 1 1/2"	36,00
	2" ÷ 2 1/2"	45,00
	3" ÷ 6"	53,00