145 YEARS
1879–2024

SARATOOLS.com
POWER TO PRODUCE
A BRAND OF SARTORIUS WERKZEUGE

01.07.2026

TOOL CATALOGUE

THAT'S POWER TO PRODUCE





Dear Customer,

The new SARTORIUS Tools Catalog 2026 has arrived: compact, practical, and consistently tailored to the requirements of your daily work.

Since our foundation in 1879, we have stood for reliability, quality, and strong partnerships. As a machining specialist, we understand the day-to-day challenges of manufacturing and know what truly matters in practice: precise results, efficient processes, and dependable solutions.

With more than 45,000 products, our own brands ATORN and ORION, and a comprehensive range of services, we offer you a powerful all-in-one solution. While ATORN represents the highest standards of quality and performance, we are gradually transforming our previous brand SARA into our new entry-level value brand, ORION.

We offer particular expertise in the fields of machining, workholding, metrology, and environmental technology. These areas are complemented by services such as calibration, regrinding, and repairs, ensuring you can rely on maximum support in your daily operations.

A special highlight is our SARABOT, our smart automation solution for part loading. It helps you streamline processes, save valuable time, and sustainably increase productivity.

We sincerely thank you for your trust and look forward to continuing to support you as a reliable partner, with expert knowledge, a strong product portfolio, and solutions that truly add value to your daily work.

SARTORIUS Werkzeuge GmbH & Co. KG

Özcan Esen
Managing Director

Karsten Bloch
Managing Director



WE ARE GLOBAL. BUT WE'RE LOCAL TOO.

POWER TO PRODUCE is for everyone. That is why we have built up a large network of sales partners throughout Europe, so that you can always rely on SARTORIUS. No matter where you are. No matter where you work.

OUR DISTRIBUTION PARTNERS:

Austria
Bosnia and Herzegovina
Bulgaria
Croatia
Czech Republic
Denmark
Estonia
Finland
Greece
Hungary
Iceland
Italy
Kazakhstan
Latvia
Lithuania
Macedonia
Netherlands
Norway
Poland
Portugal
Romania
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Ukraine
Uzbekistan



OUR PRODUCT PARTNERS

Professional products for almost any application. It's no coincidence – and it's all down to our many partners. Partners with high-quality, innovative products. Partners like:

Mahr · GG · palbit CUTTING TOOLS SOLUTIONS · VAN HOORN CARBIDE · Mitutoyo

kitagawa EUROPE · ARIANA · BAUER SÜDLOHN · SAUTER · PFERD

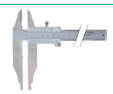
RÖHM · Dümmel WERKZEUGFABRIK · FAHRION PRÄZISION · bedrunka+hirth

MAPAL · EPPINGER SMARTER TOOLING SOLUTIONS · diebold Goldring-Werkzeuge · amf

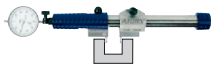
pig · FILTERMIST · IMC · NOGA · REVENDO

Measuring equipment

Hand-held measuring equipment

INFO	Vernier calliper	1341
	Vernier calliper	1342
	Digital sliding calliper	1347
	Digital special-purpose vernier callipers	1351
	Workshop vernier callipers	1354
	Depth callipers	1360
	IP67 digital sliding depth gauge	1361
INFO	Outside micrometers	1366
	Outside micrometers	1368
	Digital outside micrometers	1371
	Digital outside micrometer QuantuMike	1374
	Adjustable gap gauges	1375
	Depth gauges	1385
	Micrometer heads	1385
	Inside micrometers	1387
	Belső mikrométerek	1388
INFO	Belső mikrométerek	1391
	Inside micrometers with three-point contacts	1392
	Internal precision instruments	1401
	Bore gauge	1403

Special measuring instruments

	IFM chamfer gauge	1404
INFO	UNICHECK	1405
	Universal measuring instrument UNICHECK	1406

Dial indicators

INFO	Dial indicators	1408
	Digital dial indicators	1414
	Quick-acting thickness gauge	1422
	Fast display callipers	1422
INFO	Lever dial indicators	1425
	Lever dial indicators	1425

Height meters and marking-out instruments

	Height meters and marking-out instruments	1428

Data transfer

	Signal cables and interfaces	1434
	Wireless data transmission	1437
	Mini processor	1438

Tool pre-setting

	Test mandrels	1439
	Tool pre-setting devices	1442

Gauge blocks and gauges

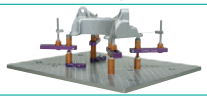
INFO	Gauge blocks	1443
	Gauge blocks	1444
	Plain and thread gauges	1450

Angle and angle gauge

	Goniometer	1458
	Angle	1460

Aid

	Marking-out instruments, Scribing calliper	1462
	Line gauges	1464
	Tape measures and folding rulers	1466
	Grinding and feeler gauges	1469
	Foil strips (Precision thick-ness gauge strip)	1471
	Stands	1473
	Measuring tables	1473
	Measuring and inspection plates	1479
	Concentricity gauges	1482

	Prisms	1483
	Clamping systems	1485
	Inclinometers	1486
	3D probes, edge finders, centring devices	1488

Optics

	Magnifying glasses	1493
	Microscopes	1496
	Profile projectors	1499
	Data processing system	1500

Roughness, linear scales

	Roughness meters	1501
INFO	Linear scale	1505
	Linear scales	1506

Layer, hardness, temperature, force, mass

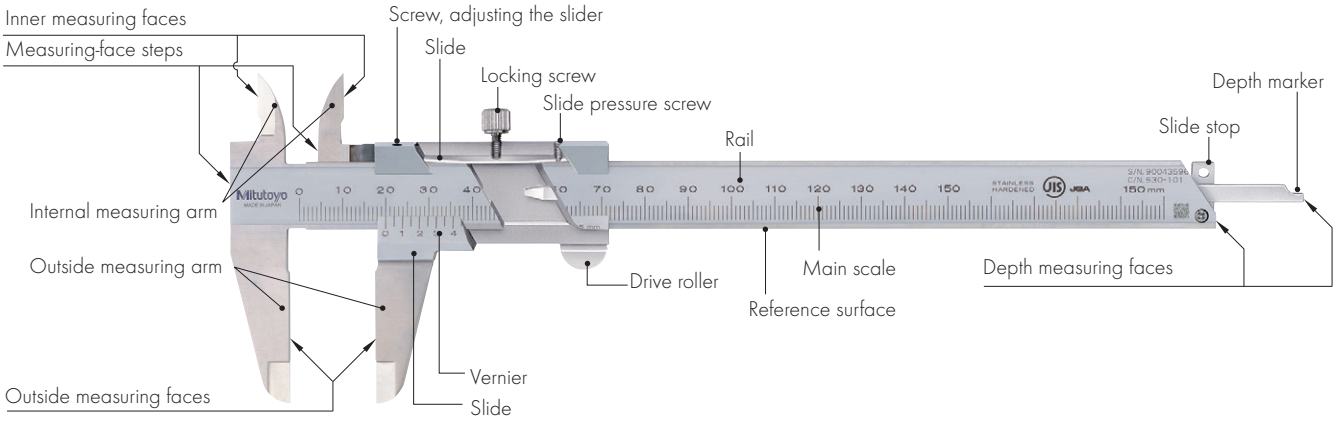
	Layer thickness measuring instruments	1508
	Rebound hardness tester	1509
	Force measuring instruments	1510
	Counting scales	1511

Summary of icons used for measuring technology

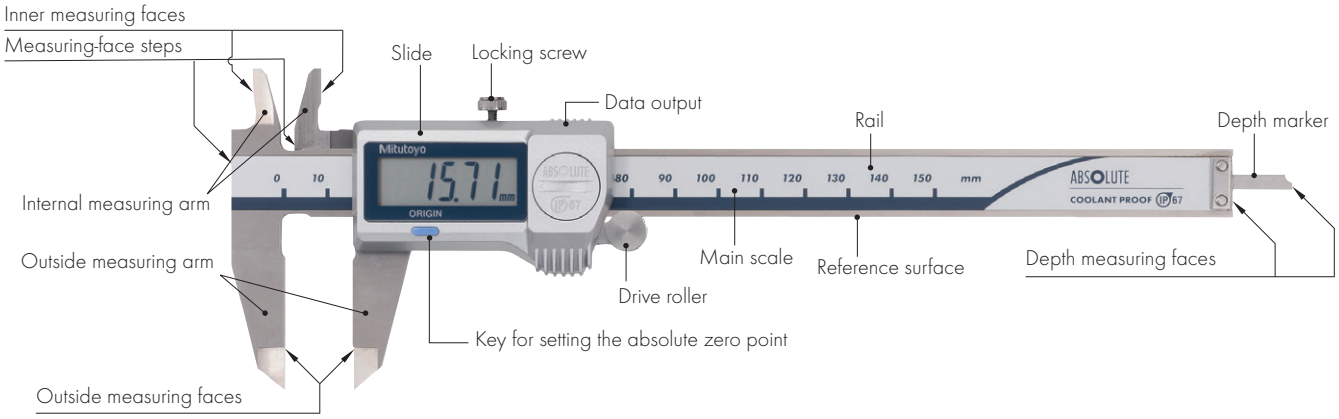
INFO

Thread angle	55° 60°		
IP protection class	IP55 IP64 IP67		
DIN standard constructional dimensions	Werks-norm Accuracy and execution in accordance with company standard	DIN 13 Accuracy and execution according to DIN	ähnl. DIN 2250 C Accuracy and execution similar to DIN
Gauge block standard	DIN EN ISO 3650 Accuracy and execution according to DIN		
Tolerance standard	DIN 13 6g H7 DIN 874		
Depth gauge	Ø 1,5 mm Depth gauge round Ø 1.5 mm	Standard depth gauge	
Material property	INOX Stainless steel	All parts hardened	
	Carbide-tipped measuring faces (Micrometers)	Carbide-tipped measuring faces (Sliding callipers)	
Spindle pitch	0,5 mm 1 mm 2 mm		
Function	Run-out measurement		
Reading	0,0001 mm 0,001 mm 0,01 mm		
Unit	inch mm		
Measuring system	ABSO-LUTE KEEP-TRONIC		
Packing, scope of delivery	Stable box	Plastic case	Test certificate included
Data output format	Digi-matic RS232C USB		

Analog Vernier caliper

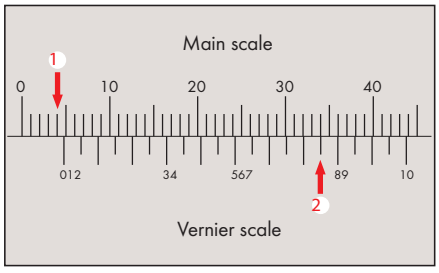


Absolute Digimatic caliper



Reading off the scale

Vernier caliper

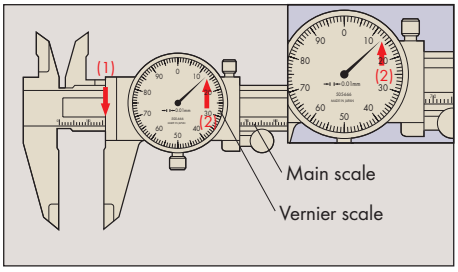


Graduation 0.05 mm

(1)	Reading off main scale	4 mm
(2)	Reading off Vernier scale	0.75 mm
	Reading	4.75 mm

Reading off the scale

Dial calliper



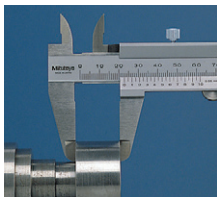
Graduation 0.01 mm

(1)	Reading off main scale	16 mm
(2)	Reading off Vernier scale	0.13 mm
	Reading	16.13 mm

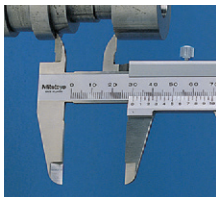
Note: Above left, 0.75 mm (2) is read at the position at which a graduation stripe of the main scale is aligned with a graduation of the Vernier scale.

Application examples

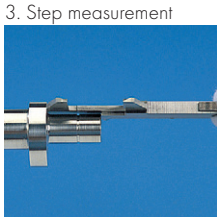
1. Outside measurement



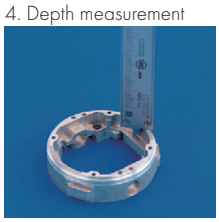
2. Inside measurement



3. Step measurement



4. Depth measurement



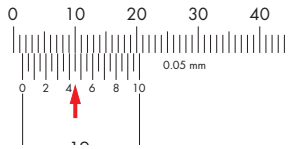
Types of Vernier scales

The Vernier scale is attached to the caliper's slider, and each graduation of the scale is 0.05 mm smaller than one main scale division of 1 mm. This means that as the calliper jaws are adjusted by 0.05 mm the subsequent Vernier scale line aligns with a main scale line and so indicates the number of 0.05 mm units to be counted (although for the sake of simplicity the scale is numbered in fractions of a mm).

Alternatively, one can choose a Vernier graduation 0.05 mm shorter than two graduations of the main scale, to obtain a long Vernier scale. The scale is thus easier to read, while the principle of measurement, and the graduation, remain unchanged.

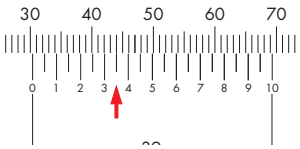
Standard Vernier scale

Graduation 0.05 mm



Long Vernier scale

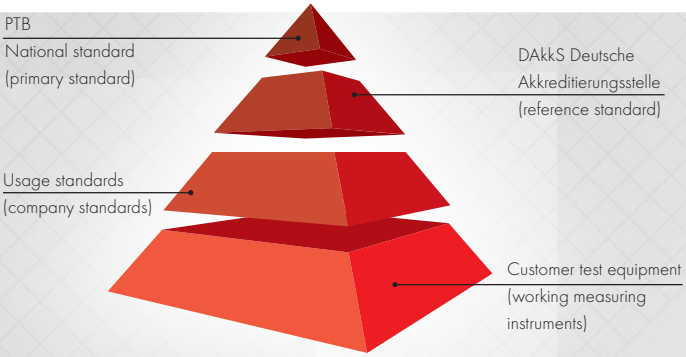
Graduation 0.05 mm



Test equipment monitoring service

ISO 9000 ff

- DAkkS calibration laboratory according to DIN EN ISO/IEC 17025:2005
- Advice on setting up monitoring and management processes for your test equipment
- Short-term calibration of both new test equipment and test equipment which is already in use
- Modular software for monitoring and managing test equipment with target data generation
- Full service: management and calibration of your entire fleet of test equipment with data transfer
- Calibrated test equipment available from stock in the short term
- As calibrations are considered to be services, the calibration prices are to be understood as strictly net and are to be added to the tool's respective net sales price.

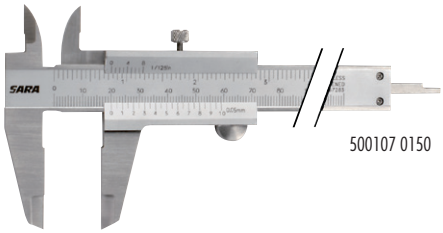


We also offer factory calibration – further information can be found in the service section of the catalog.

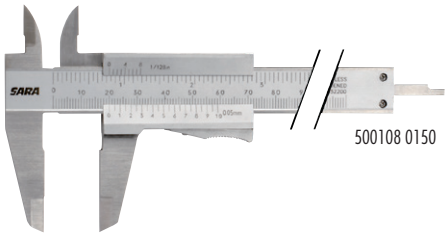
SARA® Sliding callipers

ISO 13385-1 | INOX

- Reading parts matt chrome-plated
- Raised guideways
- Vernier scale 0.05 mm extended to 39 mm



500107 0150



500108 0150

Locking screw on top

Max. length measuring range mm	Jaw length mm	Vernier	Vernier in inches	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	0.05 mm	1/128 inch	500107 0150	29,90	072008 D001	16,–

5108

Thumb lock

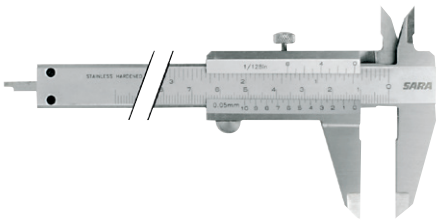
Max. length measuring range mm	Jaw length mm	Vernier	Vernier in inches	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	0.05 mm	1/128 inch	500108 0150	30,90	072008 D001	16,–

5108

SARA® Sliding calliper for left-handed users

ISO 13385-1 | INOX

- Reading parts matt chrome-plated
- Raised guideways
- Vernier scale 0.05 mm extended to 39 mm



Max. length measuring range mm	Jaw length mm	Vernier	Vernier in inches	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	0.05 mm	1/128 inch	500905 0150	66,–	072008 D001	16,–

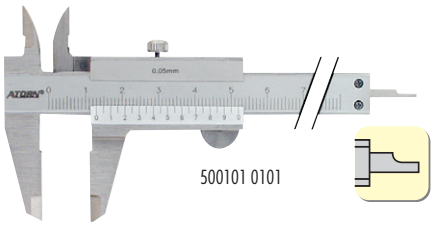
5108

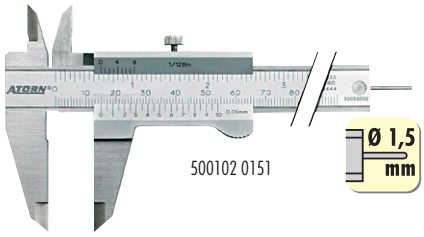
ATORN Vernier callipers

ISO 13385-1 | INOX

- Reading parts matt chrome-plated
- Raised guide edges
- Overlapping measuring areas
- Vernier scale 0.05 mm extended to 39 mm
- Thread table on the back

Metr.-ISO			
Nenn major ext. extr. Ømm	Stg pitch pas paso Ømm	Kern miror int nucleo Ømm	Bohr drill meche broca Ømm
3	0.5	2.46	2.5
4	0.7	3.24	3.3
5	0.8	4.13	4.2
6	1	4.92	5
8	1.25	6.65	6.8
10	1.5	8.38	8.5
12	1.75	10.11	10.2
16	2	13.84	14
20	2.5	17.29	17.5
Whitworth			
Øin	Gg/in	Ømm	Ømm
1/4	20	4.72	5.0
5/16	18	6.13	6.4
3/8	16	7.49	7.7
1/2	12	9.99	10.25
5/8	11	12.92	13.25
3/4	10	15.8	16.25
7/8	9	18.61	19
1	8	21.34	21.75



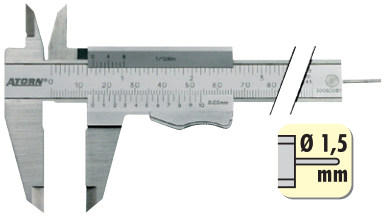


Locking screw on top

- 500101 0100 Vernier scale 0.05 mm to 19 mm

Max. length measuring range mm	Jaw length mm	Vernier	Vernier in inches	Depth bar	Depth gauge rod thickness mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
100	30	0.05 mm	-	Flat	-	500101 0101	30,–	072008 D001	16,–
150	40	0.05 mm	1/128 inch	Round	1.5	500102 0151	33,80	072008 D001	16,–
150	40	0.05 mm	1/128 inch	Flat	-	500102 1150	33,80	072008 D001	16,–

5190



Torque adjustment

- Vernier scale 0.05 mm extended to 39 mm

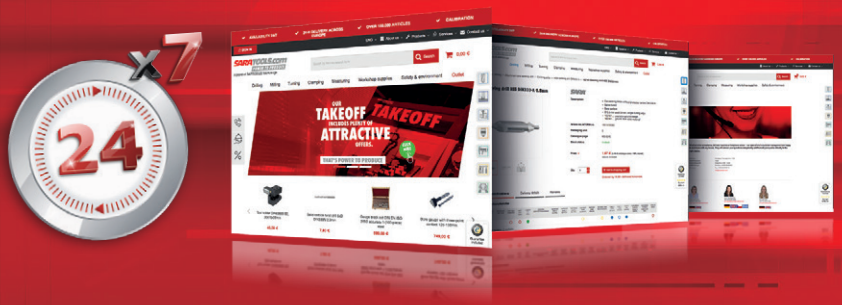
Max. length measuring range mm	Jaw length mm	Vernier	Vernier in inches	Depth bar	Depth gauge rod thickness mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	0.05 mm	1/128 inch	Round	1.5	500104 0151	34,–	072008 D001	16,–

5190

Over 200,000 tools available online!

Advantages:

- convenient, clear and fast
- order by 19:30 for next-day delivery
- order measuring instruments including calibration
- available in real time
- in 8 languages



Register online now!

www.saratools.com

Mitutoyo Sliding callipers

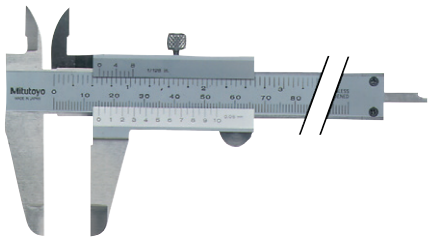
ISO 13385-1 | INOX

- Reading parts matt chrome-plated
- Raised guide edges
- Vernier scale 0.05 mm extended to 39 mm

Locking screw on top

Max. length measuring range mm	Jaw length mm	Vernier	Vernier in inches	Depth bar	Depth gauge rod thickness mm	art.no.	€	DAkkS calibration art.no.	€
150	40	0.05 mm	-	Flat	-	500201 0151	40,–	072008 D001	16,–
150	40	0.05 mm	-	Round	1.9	500201 0152	61,–	072008 D001	16,–
150	40	0.05 mm	1/128 inch	Flat	-	500201 0150	41,–	072008 D001	16,–
200	50	0.05 mm	1/128 inch	Flat	-	500201 0200	97,–	072008 D001	16,–
300	64	0.05 mm	1/128 inch	Flat	-	500201 0300	231,–	072008 D002	21,–
150	40	0.02 mm	1/1000 inch	Flat	-	500203 0150	74,–	072008 D001	16,–
200	50	0.02 mm	1/1000 inch	Flat	-	500203 0200	105,–	072008 D001	16,–
300	64	0.02 mm	1/1000 inch	Flat	-	500203 0300	257,–	072008 D002	21,–
150	40	0.02 mm	-	Flat	-	500204 0150	48,–	072008 D001	16,–
200	50	0.02 mm	-	Flat	-	500204 0200	78,–	072008 D001	16,–

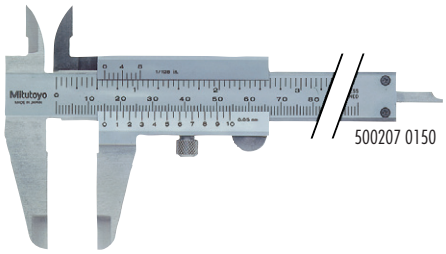
5102



Locking screw on bottom

Max. length measuring range mm	Jaw length mm	Vernier in inches	art.no.	€	DAkkS calibration art.no.	€
150	40	1/128 inch	500207 0150	68,–	072008 D001	16,–

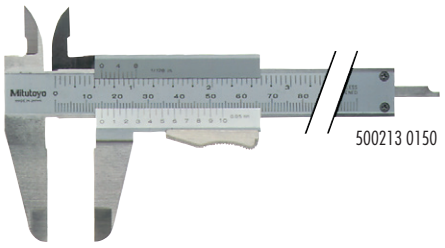
5102



Thumb lock

Max. length measuring range mm	Jaw length mm	Vernier	Vernier in inches	Depth bar	art.no.	€	DAkkS calibration art.no.	€
150	40	0.05 mm	-	Flat	500213 0151	55,–	072008 D001	16,–
150	40	0.05 mm	1/128 inch	Flat	500213 0150	49,–	072008 D001	16,–
200	50	0.05 mm	1/128 inch	Flat	500213 0200	114,–	072008 D001	16,–
300	64	0.05 mm	1/128 inch	Flat	500213 0300	253,–	072008 D002	21,–

5102

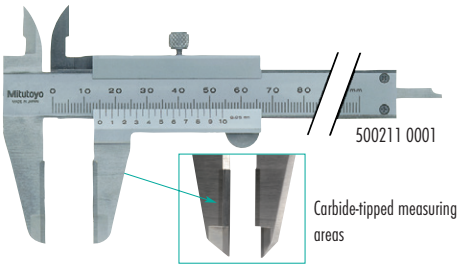


Carbide measuring faces ideal for measuring abrasive materials

Top locking screw and carbide-tipped measuring areas

Max. length measuring range mm	Jaw length mm	Vernier	Description	Depth bar	art.no.	€	DAkkS calibration art.no.	€
150	40	0.05 mm	Carbide-tipped outside measuring areas	Flat	500211 0001	151,–	072008 D001	16,–
200	50	0.05 mm	Carbide-tipped outside measuring areas	Flat	500211 0002	193,–	072008 D001	16,–
300	64	0.05 mm	Carbide-tipped outside measuring areas	Flat	500211 0003	416,–	072008 D002	21,–
150	40	0.05 mm	Carbide-tipped inside and outside measuring areas	Flat	500211 0004	237,–	072008 D001	16,–

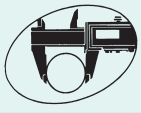
5102



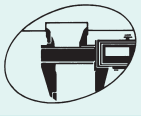
Mitutoyo Caliper, "QUADRI" version

The MITUTOYO "QUADRI" caliper can be used for four different measuring applications:

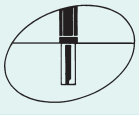
1. External measurements



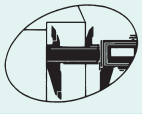
2. Internal measurements

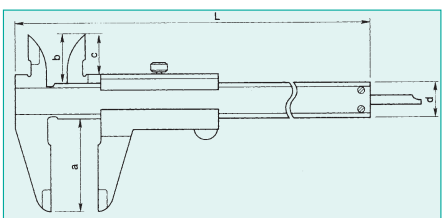


3. Depth measurements



4. Pitch (height) measurements or marking-out work

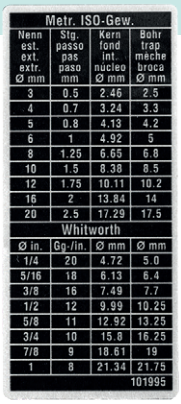




Measurement range	L	a	b	c	d
0-150	231	40	21.0	16.5	16
0-200	288	50	24.5	20.0	16
0-300	403	64	27.5	22.0	20

Thread table

- Self-adhesive film, 23 x 51 mm
- With details of the core hole diameter and respective drill bit for the most common metric threads from Ø 3 to 20 and Whitworth threads from Ø 1/4 to 1 inch



Designation	art.no.	€
Thread table 23 x 51 mm	500540 0001	9,–

5102

Case for pocket sliding calliper

- For 150 mm sliding calliper with Vernier readings



Designation	art.no.	€
Vernier calliper wallet	500541 0150	6,30

5108

SARA® Test and adjustment gauge for Vernier calliper

- for quick testing and adjustment of measuring jaws, cross-tips and depth markers
- hardened, ground and lapped
- the depth marker is tested through the centre hole

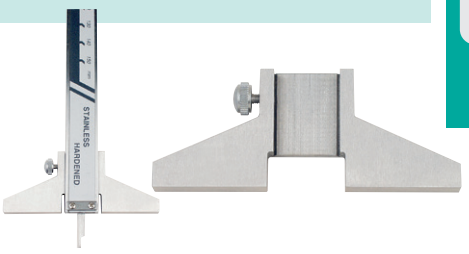


External Ø mm	Internal diameter mm	Height mm	art.no.	€
30 ± 0.002	10 ± 0.002	10 ± 0.010	540201 3010	155,50

5135

SARA® Depth gauge bridge

- For retrofitting sliding callipers with a measuring range from 150 mm to 200 mm

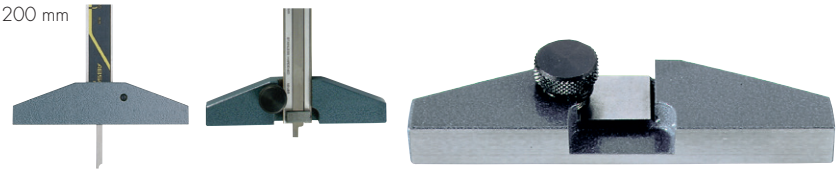


Bridge length x bridge width mm	art.no.	€	**Factory calibration** art.no.	€
74 x 6.5	500501 7565	39,70	073103 W143	14,–

5108

Mitutoyo Depth gauge bridge

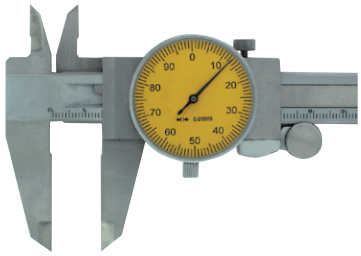
- Sizes 1075 / 1100 for sliding callipers up to a measuring range of 200 mm
- Size 1250 for sliding callipers with a measuring range of 300 mm



Bridge length x bridge width mm	a mm	b mm	c mm	d mm	e mm	art.no.	€	**Factory calibration** art.no.	€
75x12	25	75	24.5	9	16	500501 1075	62,–	073103 W143	14,–
100x12	25	100	24.5	9	16	500501 1100	70,–	073103 W143	14,–
125x14	30	125	28.5	11.5	20	500501 1250	77,–	073103 W143	14,–

5102

SARA® Dial callipers

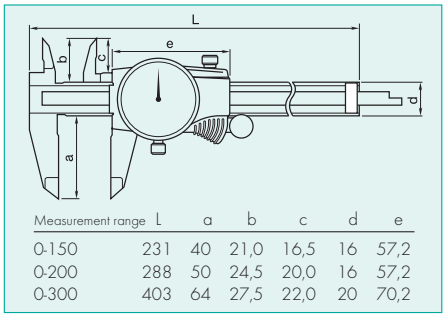


- Matt chrome-plated scale
- Locking screw on top
- Fine adjustment via thumbwheel
- One pointer rotation represents 1 mm
- Dial clamp, simple zeroing
- Dirt-resistant rack

Max. length measuring range mm	Jaw length mm	Scale value mm	art.no.	€	DAkkS calibration art.no.	€
150	40	0.01	500110 0151	78,–	072008 D001	16,–

5108

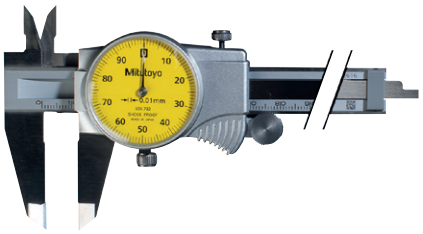
Mitutoyo Dial callipers



Measurement range	L	a	b	c	d	e
0-150	231	40	21,0	16,5	16	57,2
0-200	288	50	24,5	20,0	16	57,2
0-300	403	64	27,5	22,0	20	70,2

- Matt chrome-plated scale
- Impact-resistant dial indicator
- Jewel bearing
- Yellow dial face
- Locking screw on top
- Fine adjustment via thumbwheel, rapid adjustment possible with one hand
- Impact-resistant rack

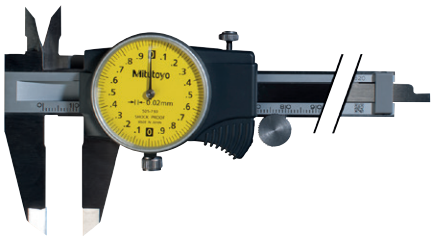
Scale division 0.01 mm



Max. length measuring range mm	Jaw length mm	Error limit mm	Depth bar	art.no.	€	DAkkS calibration art.no.	€
150	40	0.03	Flat	500410 0150	161,–	072008 D001	16,–
200	50	0.03	Flat	500410 0200	274,–	072008 D001	16,–

5102

Scale division 0.02 mm

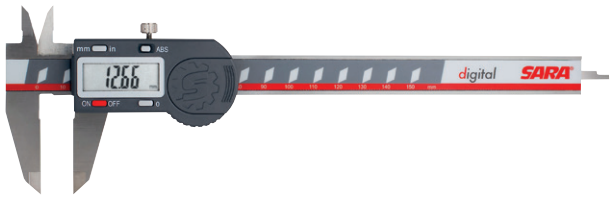


Max. length measuring range mm	Jaw length mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
150	43	0.03	500440 0150	140,–	072008 D001	16,–
200	50	0.03	500440 0200	254,–	072008 D001	16,–
300	63	0.04	500440 0300	381,–	072008 D002	21,–

5102

SARA® Digital sliding calliper

ISO 13385-1 | INOX | 0,01 mm | inch / mm



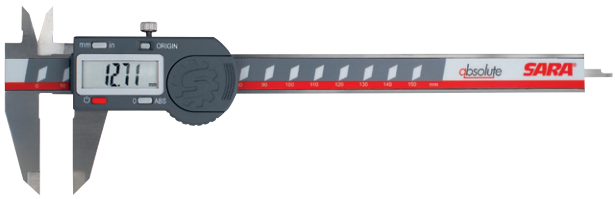
- Locking screw on top
- High-contrast, easily readable LCD display
- External, internal, depth and step measurements
- Thread table on the back
- Functions: ON/OFF, ZERO, mm/inch
- Supplied with CR2032 battery, no. 548079 6032

Max. length measuring range mm	Jaw length mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
100	30	0.03	500702 0100	49,–	072008 D001	16,–

5108

SARA® *Absolute* digital sliding calliper

ISO 13385-1 | INOX | 0,01 mm | inch / mm



- With absolute scale, zeroing not required
- Locking screw on top
- External, internal, depth and step measurements
- High-contrast, easily readable LCD display
- Thread table on the back
- Functions: ON/OFF, ZERO, mm/inch
- Supplied with CR2032 battery, no. 548079 6032

Max. length measuring range mm	Jaw length mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	0.03	500702 1150	89,90	072008 D001	16,–

5108

SARA® Digital sliding calliper for left-handed users

ISO 13385-1 | INOX | 0,01 mm | inch / mm



- Large high-contrast digital display
- Locking screw on top
- Precision-lapped measuring faces
- **Functions:** ON/OFF, ZERO, mm/inch
- Supplied with SR44 battery, no. 500534 0001

Max. length measuring range mm	Jaw length mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	0.03	500700 1150	117,–	072008 D001	16,–

5108

ATORN Digital sliding calliper

ISO 13385-1 | INOX | 0,01 mm | inch mm | KEEP-TRONIC | RS232C | Digi-matic | USB

Data output multiCOM

- **KEEPTRONIC** electronics store the 0-point, operating keys lock to prevent accidental alteration of the 0-point, battery life approx. 3 years
- Data output **multiCOM** can be used as USB, Digimatic or RS232
- **Functions:** ON/OFF, user-defined zeroing (RESET), mm/inch, PRESET user-defined values (for version with data output)
- Supplied with battery CR 2032, No. 548079 6032
- **Special accessories:** Data cable Types P-RS 232 / P-Digimatic / P-USB, No. 512521....



500506 4150

Max. length measuring range mm	Jaw length mm	Depth bar	Depth gauge rod thickness mm	Digit height mm	Preset function	Without data output art.no.	€	With data output art.no.	€	DAkkS calibration art.no.	€
150	40	Round	1.6	11	No	500506 4150	118,–			072008 D001	16,–
150	40	Flat	-	11	No	500506 4151	118,–			072008 D001	16,–
150	40	Round	1.6	8.5	Yes			500506 3150	134,–	072008 D001	16,–
150	40	Flat	-	8.5	Yes			500506 3151	134,–	072008 D001	16,–
300	64	Without	-	8.5	Yes			500506 2300	272,–	072008 D002	21,–
						5194		5194			

ATORN IP67 digital sliding calliper

IP67 | ISO 13385-1 | INOX | 0,01 mm | inch mm | KEEP-TRONIC

- **KEEPTRONIC** electronics store the 0-point, operating keys lock to prevent accidental alteration of the 0-point, battery life approx. 3 years
- Digit height 10mm
- Inductive, waterproof FPS measuring system (Fluid Protected Measuring System)
- **Functions:** ON/OFF, user-defined zeroing, mm/inch
- Supplied with CR 2032 battery, No. 548079 6032



500525 2150

Max. length measuring range mm	Jaw length mm	Depth bar	Depth gauge rod thickness mm	Digit height mm	art.no.	€	DAkkS calibration art.no.	€
150	40	Round	1.6	11	500525 2150	166,–	072008 D001	16,–
150	40	Flat	-	11	500525 2151	166,–	072008 D001	16,–
					5194			

Protection classes as per DIN EN 60529

INFO

Identifier 1:

Protection against foreign objects and dust	Foreign objects > 50.0 mm	**IP 1.**
	Foreign objects > 12,0 mm	**IP 2.**
	Foreign objects > 2.5 mm	**IP 3.**
	foreign objects > 1.0 mm	**IP 4.**
	Protection against dust	**IP 5.**
	Dust-tight	**IP 6.**

+

Identifier 2:

Protection against water	Vertically dripping water	**IP .1**
	Water dripping at an angle	**IP .2**
	Spray water	**IP .3**
	Splash water	**IP .4**
	Water jets	**IP .5**
	High-intensity water jets	**IP .6**
	Brief submersion	**IP .7**
	Sustained submersion (depth in m)	**IP .8**

Example: IP67

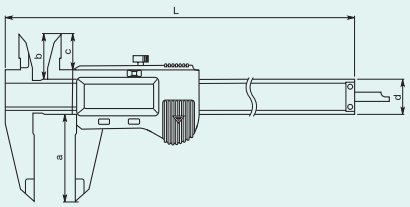
Dust-tight = IP 6.
Brief submersion = IP .7
Protection class DIN 40050: = IP 67

Mitutoyo Digital sliding calliper ABSOLUTE! AOS!

ISO 13385-1 | INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

- Particularly suitable for use in rough work conditions due to the electromagnetic inductive **AOS** measuring process (**A**dvanced **O**nsite **S**ensor), which is not sensitive to dirt or moisture on the scale
- **"ABSOLUTE" scale** for one-time zeroing
- **Digit height 9 mm (11 mm for MB 300 mm)**
- Battery life approx. 18,000 hours
- **Functions:** ON/OFF, zero point at battery change (ORIGIN), user-defined zeroing (ZERO/ABS), battery check
- Supplied with SR44 battery (No. 500534 0001) and factory certificate
- **Special accessories:** Digimatic cable Type C, No. 563100 0021 (1 m), No. 563100 0022 (2 m), USB cable Type C-USB, No. 563110 0003



Measurement range	L	a	b	c	d
100	180	40	21,0	16,5	16
150	231	40	21,0	16,5	16
200	288	50	24,5	20,0	16
300	404	64	27,5	21,8	20

Without thumbwheel

Max. length measuring range mm	Jaw length mm	Depth bar	Depth gauge rod thickness mm	Data output	art.no.	€	DAkkS calibration art.no.	€
100	40	Round	1.9	No	500560 2100	253,–	072008 D001	16,–
100	40	Round	1.9	Yes	500560 3100	267,–	072008 D001	16,–
150	40	Round	1.9	No	500560 2150	139,–	072008 D001	16,–
150	40	Round	1.9	Yes	500560 3150	203,–	072008 D001	16,–
150	40	Flat	-	No	500560 0150	139,–	072008 D001	16,–
150	40	Flat	-	Yes	500560 1150	177,–	072008 D001	16,–
200	50	Flat	-	No	500560 0200	222,–	072008 D001	16,–
200	50	Flat	-	Yes	500560 1200	249,–	072008 D001	16,–
300	64	Flat	-	Yes	500560 1300	349,–	072008 D002	21,–

5102



With thumbwheel

Max. length measuring range mm	Jaw length mm	Depth bar	Depth gauge rod thickness mm	Data output	art.no.	€	DAkkS calibration art.no.	€
100	40	Round	1.9	Yes	500562 3100	290,–	072008 D001	16,–
150	40	Round	1.9	Yes	500562 3150	206,–	072008 D001	16,–
150	40	Flat	-	Yes	500562 1150	202,–	072008 D001	16,–
200	50	Flat	-	Yes	500562 1200	286,–	072008 D001	16,–
300	64	Flat	-	Yes	500562 1300	396,–	072008 D002	21,–

5102

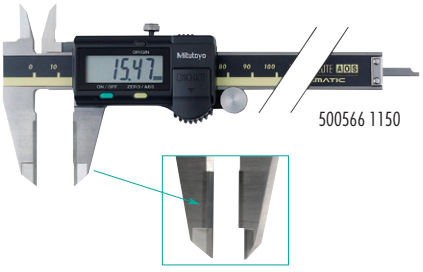


Carbide measuring faces ideal for measuring abrasive materials

With carbide measuring faces for external measurements

Max. length measuring range mm	Jaw length mm	Depth bar	Data output	Thumb roller	art.no.	€	DAkkS calibration art.no.	€
150	40	Flat	Yes	Yes	500566 1150	352,–	072008 D001	16,–
150	40	Flat	Yes	No	500566 0150	312,–	072008 D001	16,–
200	50	Flat	Yes	Yes	500566 1200	406,–	072008 D001	16,–

5102



500566 1150

Carbide-tipped measuring areas

With carbide measuring faces for external and internal measurements, no thumbwheel

Max. length measuring range mm	Jaw length mm	Depth bar	Data output	art.no.	€	DAkkS calibration art.no.	€
150	40	Flat	Yes	500564 0150	599,–	072008 D001	16,–
200	50	Flat	Yes	500564 0200	667,–	072008 D001	16,–

5102

Mitutoyo IP67 digital sliding calliper

IP67 | ISO 13385-1 | INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

TÜVRheinland ZERTIFIZIERT — Sicherheit Staub- und wassergeschützt — www.tuv.com ID 2011207400

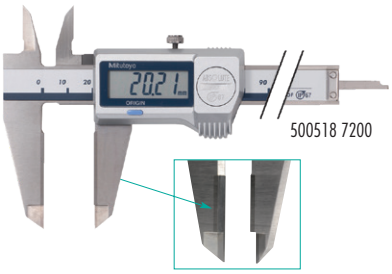
- **ABSOLUTE scale**
- Inductive functional principle
- Switches off automatically after 20 minutes of inactivity
- New, high-contrast display
- Digit height 9 mm (11 mm for MB 300 mm)
- Battery life approx. 5 years
- Battery change possible without a screwdriver
- **Functions:** ZERO/ORIGIN, automatic ON/OFF, battery check
- Supplied with SR 44 battery, No. 500534 0001
- **Special accessories:** Digimatic cable Type A, No. 563100 0001 (1 m), No. 563100 0002 (2 m), USB cable Type A-USB, No. 563110 0001



Max. length measuring range mm	Jaw length mm	Depth bar	Depth gauge rod thickness mm	Data output	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	Flat	-	No	500514 7150	209,–	072008 D001	16,–
200	50	Flat	-	No	500514 7200	288,–	072008 D001	16,–
150	40	Round	Ø 1.9	No	500515 7150	210,–	072008 D001	16,–
150	40	Flat	-	Yes	500516 7150	264,–	072008 D001	16,–
200	50	Flat	-	Yes	500516 7200	335,–	072008 D001	16,–
300	64	Flat	-	Yes	500516 7300	440,–	072008 D002	21,–

5102

Carbide measuring faces ideal for measuring abrasive materials



500518 7200

Carbide-tipped measuring areas

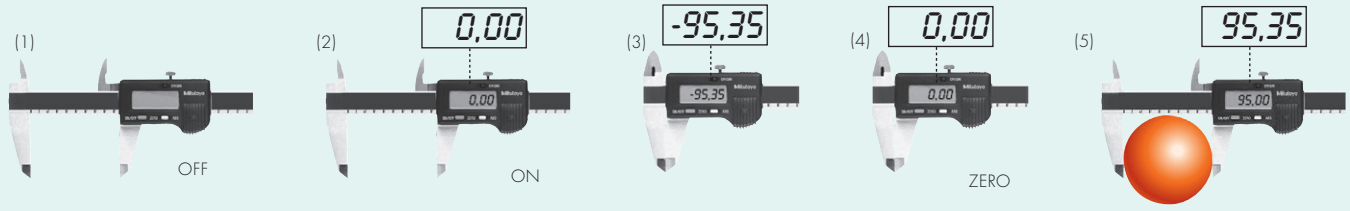
With carbide measuring faces for external and internal measurements

Max. length measuring range mm	Jaw length mm	Depth bar	Data output	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	Flat	Yes	500518 7150	523,–	072008 D001	16,–
200	50	Flat	Yes	500518 7200	583,–	072008 D001	16,–

5102

Conventional measurement method

INFO



Absolute measurement method

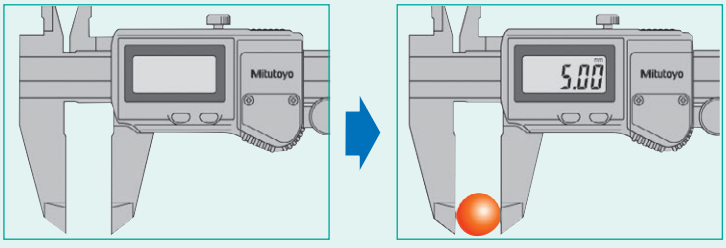
INFO

ABSOLUTE®

Absolutely certain, absolutely ingenious:
the Absolute System

All Mitutoyo measuring instruments with this logo have the ingenious „Absolute System". Their integrated absolute scale requires the zero position to be set only once, and this zero point will be used from then on for all future measurements. This ensures maximum measurement precision even at maximum traversing speeds.

Absolutely certain!
Absolutely uncomplicated!

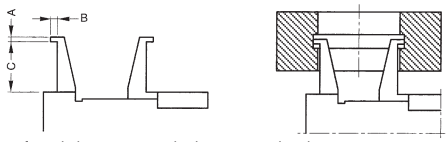


Power OFF **Power ON**

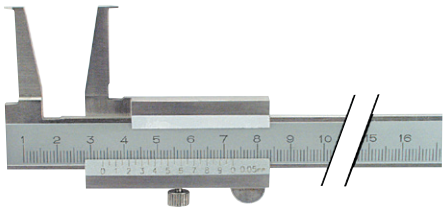
SARA® Groove calliper

INOX

- For measuring the diameter of internal grooves
- Reading parts matt chrome-plated
- Error margin 0.1 mm



A Measuring faces thickness B Groove depth max. C Jaw length



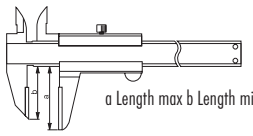
Measure-ment range	Vernier	Measuring surface thickness mm	Groove depth max. mm	Jaw length mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
10-160 mm	0.05 mm	1.5	3.5	25	500805 0160	191,50	072008 D001	16,–

5108

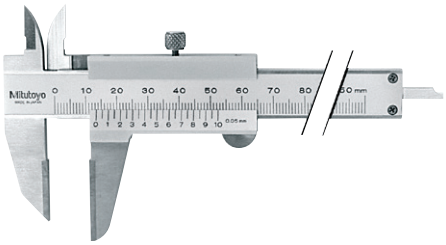
Mitutoyo Special-purpose sliding callipers



- Reading parts matt chrome-plated
- Raised guideways
- Vernier scale 0.05 mm extended to 39 mm



a Length max b Length min



Scribing calliper with carbide measuring faces and depth gauge

Max. length measuring range mm	Max. length mm	Min. length mm	Depth bar	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	33	Flach	0.05	500903 0001	179,–	072008 D001	16,–
200	50	43	Flach	0.05	500903 0002	216,–	072008 D001	16,–
300	64	54	Flach	0.08	500903 0003	450,–	072008 D002	21,–

5102

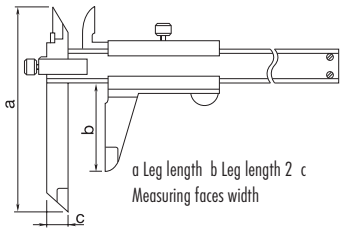
Mitutoyo Digital special-purpose sliding calliper IP67

IP67 | INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

TÜVRheinland ZERTIFIZIERT — Sicherheit Staub- und wassergeschützt — www.tuv.com ID 2011207400

- **ABSOLUTE scale**
- Inductive functional principle
- Switches off automatically after 20 minutes of inactivity
- New, high-contrast display
- Digit height 9 mm
- Battery life approx. 5 years
- Battery change possible without a screwdriver
- **Functions:** ZERO/ORIGIN, automatic ON/OFF, battery check
- Supplied with SR44 battery, No. 500534 0001
- **Special accessories**: Digimatic cable type A No. 563100 0001 (1 m), No. 563100 0002 (2 m), USB cable type A-USB No. 563110 0001



a Leg length b Leg length 2 c Measuring faces width

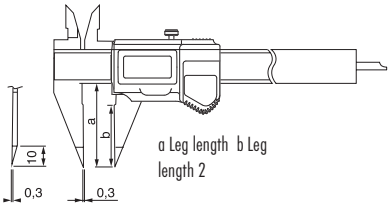


With adjustable measuring jaws and depth bar

- 500730 0003 with digit height 10.2 mm, screwed battery cover and 5000-hour battery life

Max. length measuring range mm	Edge length mm	Limb length 2 mm	Measuring surface width mm	Error limit mm	Depth bar	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	95	40	10	0.03	Flat	500730 0150	675,–	072008 D001	16,–
200	95	50	10	0.03	Flat	500730 0200	752,–	072008 D001	16,–
300	135	64	15	0.04	Flat	500730 0300	898,–	072008 D002	21,–

5102



a Leg length b Leg length 2





Pointed sliding calliper with depth bar

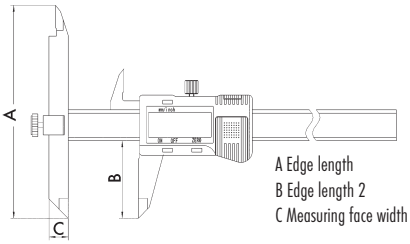
Max. length measuring range mm	Edge length mm	Limb length 2 mm	Error limit mm	Depth bar	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	30	0.03	Flat	500731 0150	529,–	072008 D001	16,–

5102

SARA® Digital special-purpose sliding calliper

INOX | 0,01 mm | inch / mm

- Locking screw on top
- Measuring jaws for different special applications
- **Functions:** ON/OFF, ZERO, mm/inch
- Supplied with CR2032 battery, No. 548079 6032



A Edge length
B Edge length 2
C Measuring face width



With adjustable measuring jaw

Max. length measuring range mm	Edge length mm	Limb length 2 mm	Measuring surface width mm	Digit increment in inches in	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	110	40	10	0.0005	500701 2000	225,–	072008 D001	16,–

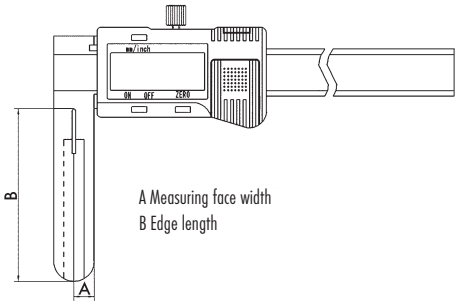
5108



Pointed sliding calliper

Max. length measuring range mm	Edge length mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	500701 2010	210,–	072008 D001	16,–

5108



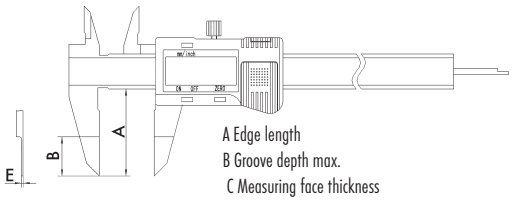
A Measuring face width
B Edge length



With long, slender measuring jaws for internal measurements

Measurement range	Edge length mm	Measuring surface width mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
10-150 mm	60	7	500701 2030	299,–	072008 D001	16,–

5108



A Edge length
B Groove depth max.
C Measuring face thickness

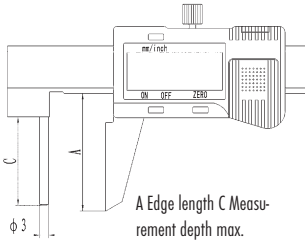


Shaft key groove gauge

- With flat measuring faces

Max. length measuring range mm	Edge length mm	Groove depth max. mm	Measuring surface thickness mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	18	0.75	500701 2040	210,–	072008 D001	16,–

5108



A Edge length C Measurement depth max.



Wall thickness sliding calliper

Max. length measuring range mm	Edge length mm	Measuring depth max. mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	40	30	500701 2020	166,–	072008 D001	16,–

5108

ATORN Digital universal pocket sliding gauge set IP67

IP67 | INOX | 0,01 mm | inch mm | KEEP-TRONIC | RS232C | Digi-matic | USB

- Measuring jaws with M2.5 mm threads for attaching special-purpose dial gauge contact points
- For internal and external measurements
- Jaw width 5 mm
- **KEEPTRONIC** electronics store the zero point, operating keys lock to prevent accidental alteration of the zero point. Battery life approx. 3 years
- Inductive, waterproof FPS measuring system (Fluid Protected Measuring System)
- **multiCOM** data output, can be used as USB, Digimatic or RS-232
- **Functions:** ON/OFF, user-defined zeroing (RESET), mm/inch
- Supplied with 2x Ø 5 mm ball measuring inserts and Ø 4.8 mm flat surface, 50 mm setting piece, CR2032 battery, no. 548079 6032
- **Optional accessories:** Data cables, type P-RS 232 / P-Digimatic / P-USB, no.

Data output multiCOM

Similar to illustration





Max. length measuring range mm	Jaw length mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
200	40	0.05	500627 0150	599,–	072008 D001	16,–

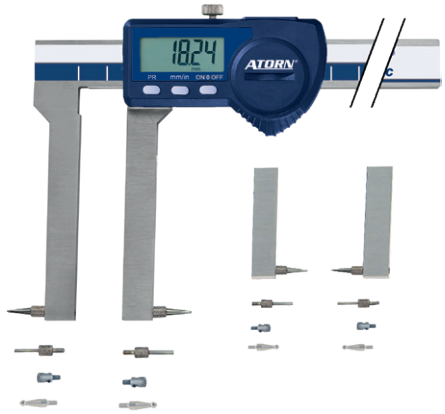
5194

ATORN Digital universal workshop calliper set IP65

IP65 | Werks-norm | INOX | 0,01 mm | inch mm | KEEP-TRONIC | RS232C | Digi-matic | USB

- Measuring jaws with M 2.5 mm threads for attaching dial gauge special probe tips
- For internal and external measurements
- Side width: 300 mm = 12 mm, 500 mm = 16 mm
- **KEEPTRONIC** electronics store the 0-position, operating keys lock to prevent accidental alteration of the 0-position, battery life approx. 3 years
- LCD with 8.5 mm high digits for measurement range of 300 mm; 12 mm high for measurement range of 500 mm
- **multiCOM** data output, can be used as USB, Digimatic or RS232
- **Functions:** mm/inch, ON/OFF / 0 / HOLD for power on/off / user-defined zeroing / hold value, measurement value preset
- Supplied in a wooden case **with 2 of each measuring insert:** pointed tip, steel, No. 5170301017; flat tip/HM, Ø 4.8 mm, No. 5170301025; ball tip, steel, Ø 3 mm No. 5170301020; cylindrical tip, flat, steel, length 11 mm, No. 5170301011
- **Special accessories**: Data cables, type P-RS 232 / P-Digimatic / P-USB, No. 512521....

Data output multiCOM



Measuring inserts for external measurement, adjustable - similar to illustration

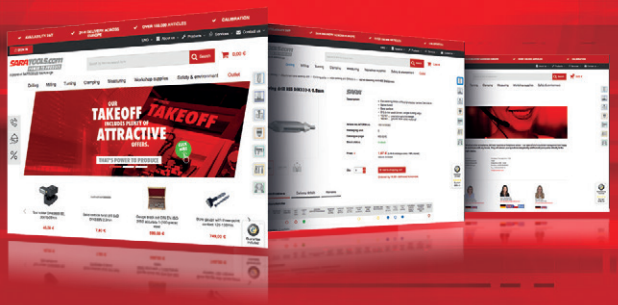
Max. length measuring range mm	Jaw length mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
300	90	0.06	500627 0301	1.060,–	072008 D002	21,–
500	100	0.06	500627 0501	1.340,–	072008 D003	42,–

5194

Over 200,000 tools available online!

Advantages:
- convenient, clear and fast
- order by 19:30 for next-day delivery
- order measuring instruments including calibration
- available in real time
- in 8 languages

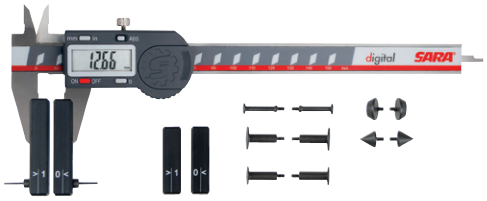
x7 24

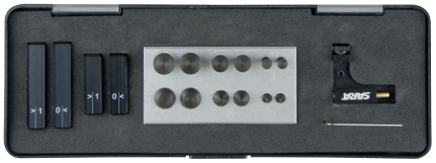


Register online now!

www.saratools.com

SARA® Universal accessory set for digital sliding callipers





- Accessory set suitable for all digital pocket callipers with a measuring jaw thickness of max. 4.5 mm
- Supplied with:
  1 pair of measuring holders in each size, short and long
  1 pair of disc probes in each size, Ø 12.5 / 10 / 6 mm
  1 pair of 60° tapered probes in each size, Ø 12 / 9 mm
  1 pair of cylindrical probes in each size, Ø 1.5 x 9 mm
  1 spring system for constant measuring force
  1 hex key

Designation	art.no.	€
Universal accessory set for digital Vernier callipers up to jaw thickness 3.5 mm	500190 0008	242,–
Universal accessory set for digital Vernier callipers up to jaw thickness 4.5 mm	500190 0009	269,–

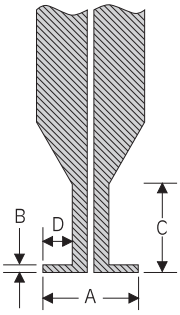
5108

SARA® Groove measuring attachments



Shown with vernier calliper

- For measuring external and internal groove diameters, O-ring recesses and undercuts
- Attachments are fixed to the sliding calliper measuring jaws in pairs using clamping screws
- Hard chrome-plated
- Suitable for all sliding callipers with max. measuring jaw thickness of 3.5 mm
- Set of 5 pairs of attachments
  1 pair for external recesses
  4 pairs for internal recesses of various diameters
- Supplied without sliding calliper



Mode of measuring	B mm	A mm	D mm	C mm
external	0,65	-	9,5	-
internal	0,4	5,0	1,3	10
internal	0,4	7,5	1,75	16
internal	0,65	15,0	5,0	25
internal	1,0	18,0	6,5	32

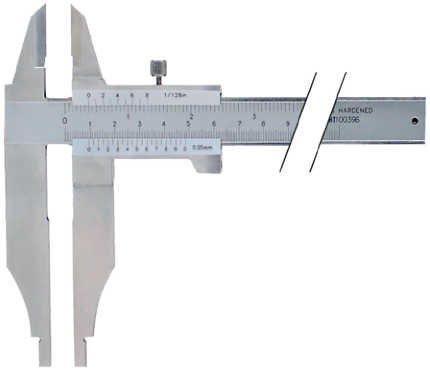


Designation	art.no.	€
Groove measuring attachments set	500190 0005	249,–

5108

SARA® Workshop sliding calliper

ISO 13385-1 | INOX



- With bevelled blade tips
- Offset jaw ends for internal measurements

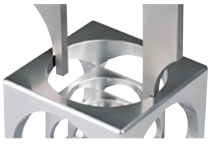
Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Vernier	Vernier in inches	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
300	90	10	0.05 mm	1/128 inch	500612 0300	161,–	072008 D002	21,–
500	150	20	0.05 mm	1/128 inch	500612 0500	445,–	072008 D003	42,–
800	150	20	0.05 mm	1/128 inch	500612 0800	689,–	072008 D005	53,–

5108

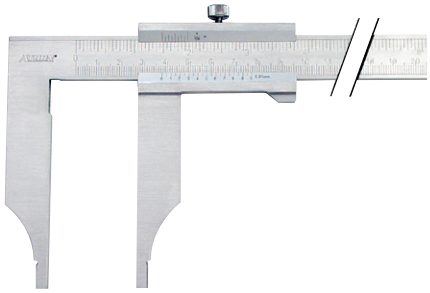
ATORN Workshop sliding calliper

ISO 13385-1 | INOX

- For external and internal measurements
- Factory standard error margins
- High-precision laser scale
- Measuring faces ultra-fine ground and lapped
- Measuring jaw ends offset for internal measurements
- Locking screw on top



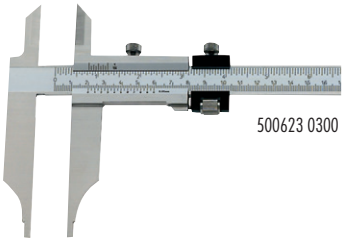
Rounded measuring areas for internal measurement



Without blade tips

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Vernier	Vernier in inches	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
300	90	10	0.05 mm	1/128 inch	0.05	500619 0301	254,–	072008 D002	21,–
500	150	20	0.05 mm	-	0.07	500619 0501	730,–	072008 D003	42,–
800	150	20	0.05 mm	-	0.10	500619 0801	880,–	072008 D005	53,–

5190



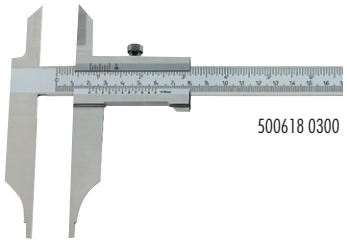
500623 0300

With fine adjustment

- Bevelled blade tips

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Vernier	Vernier in inches mm	Error limit mm	Fine adjustment	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
300	90	10	0.05 mm	1/128 inch	0.05	Yes	500623 0300	324,–	072008 D002	21,–
500	150	20	0.05 mm	-	0.07	Yes	500623 0500	940,–	072008 D003	42,–
800	150	20	0.05 mm	-	0.10	Yes	500623 0800	1.199,–	072008 D005	53,–
1000	150	20	0.05 mm	-	0.12	Yes	500623 1000	1.460,–	072008 D005	53,–
1500	200	30	0.05 mm	-	0.18	Yes	500623 1500	2.780,–	072008 D006	148,–

5190



500618 0300

Without fine adjustment

- Bevelled blade tips

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Vernier	Vernier in inches	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
300	90	10	0.05 mm	1/128 inch	0.05	500618 0300	278,–	072008 D002	21,–
500	150	20	0.05 mm	-	0.07	500618 0500	799,–	072008 D003	42,–
800	150	20	0.05 mm	-	0.10	500618 0800	1.080,–	072008 D005	53,–
1000	150	20	0.05 mm	-	0.12	500618 1000	1.260,–	072008 D005	53,–

5190

Wooden case for calliper

Suitable for	art.no.	€
Measurement range 300 mm	500624 0300	20,60
Measurement range 500 mm	500624 0500	56,50
Measurement range 800 mm	500624 0800	78,30
Measurement range 1500 mm	500624 1500	194,50

5186



Mitutoyo Workshop sliding calliper

ISO 13385-1 | INOX

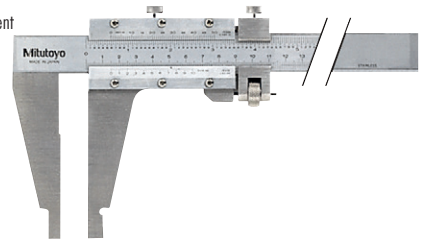
- Reading parts matt chrome-plated
- Measuring jaw ends offset for internal measurements
- Direct measurement readings due to offset metric scales for external and internal measurements, no need to add on the measuring jaw thickness



Rounded measuring areas for internal measurement

With fine adjustment

- Vernier scale 0.02 mm
- ...0300 with rounded Vernier scale for parallax-free readings



Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
300	75	10	0.04	500603 0300	425,–	072008 D002	21,–
450	100	20	0.05	500603 0450	675,–	072008 D003	42,–
600	100	20	0.05	500603 0600	768,–	072008 D003	42,–
1000	140	20	0.07	500603 1000	1.412,–	072008 D005	53,–

5102

Mitutoyo Digital sliding calliper for large measurement ranges

INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

- Robust design
- **ABSOLUTE scale**
- With cross points
- Capacitive measuring system with dirt wipers in the slider
- Battery life approx. 20,000 hours
- **Functions:** On/off, ORIGIN, ZERO/ABS, battery check
- Supplied with SR44 battery, no. 500534 0001
- **Optional accessories:** Digimatic cable type C, no. 563100 0021 (1 m), no. 563100 0022 (2 m), USB cable type C-USB, no. 563110 0003



500703 0450

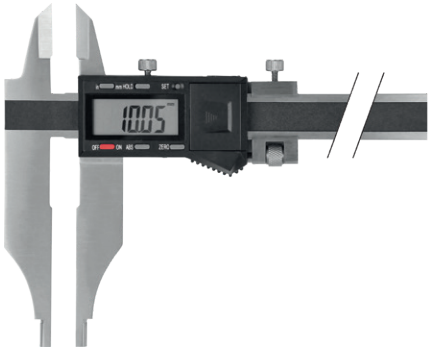
Max. length measuring range mm	Jaw length mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
450	90	0.05	500703 0450	1.046,–	072008 D003	42,–
600	90	0.05	500703 0600	1.140,–	072008 D003	42,–
1000	130	0.07	500703 1000	1.971,–	072008 D005	53,–

5102

SARA® Digital workshop calliper

INOX | 0,01 mm | inch / mm

- With blade tips
- With fine adjustment
- Offset jaw ends for internal measurements
- Bevelled blade tips
- Supplied with CR2032 battery, No. 548079 6032



Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
300	90	10	0.03	500628 0300	260,–	072008 D002	21,–
500	150	20	0.05	500628 0500	495,–	072008 D003	42,–
800	150	20	0.06	500628 0800	739,–	072008 D005	53,–
1000	150	20	0.06	500528 1000	999,–	072008 D005	53,–

5108

HELIOS·PREISSER Digital workshop calliper IP65

IP65 | Werks-norm | INOX | 0,01 mm | inch mm | RS232C | Digi-matic | USB

- **QuickLock** electronics store the zero point, operating keys lock to prevent accidental alteration of the zero point
- Data output can be used as USB, Digimatic or RS-232
- Digit height 12.5 mm (measurement range 300 mm = 10 mm)
- **Functions:** ON/OFF, user-defined zeroing (RESET), mm/inch, PRESET for pre-setting internal measurement values
- Supplied with CR 2032 battery, No. 548079 6032
- **Optional accessories:** data cables, type P-RS 232 / P-Digimatic / P-USB, no. 512521....



Similar to illustration

With blade tips

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	art.no.	€	DAkkS calibration art.no.	€
300	90	10	500531 0300	506,–	072008 D002	21,–
500	125	20	500531 0500	966,–	072008 D003	42,–
800	150	20	500531 0800	1.299,–	072008 D005	53,–
1000	150	20	500531 1000	1.599,–	072008 D005	53,–

5186



Similar to illustration

Without blade tips

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	art.no.	€	DAkkS calibration art.no.	€
300	90	10	500533 0300	466,–	072008 D002	21,–
500	125	20	500533 0500	859,–	072008 D003	42,–
800	150	20	500533 0800	1.190,–	072008 D005	53,–
1000	150	20	500533 1000	1.479,–	072008 D005	53,–

5186

Mitutoyo Digital workshop calliper IP67

IP67 | ISO 13385-1 | INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

TÜVRheinland ZERTIFIZIERT — Sicherheit Staub- und wassergeschützt — www.tuv.com ID 2011207400

- **ABSOLUTE scale**
- Inductive functional principle
- Switches off automatically after 20 minutes of inactivity
- New, high-contrast display
- Digit height 9 mm (measurement range 300 mm = 10.2 mm)
- Battery life approx. 5 years (300 mm = 5000 hours)
- Battery can be changed without a screwdriver for measurement range 200 mm, Battery cover screwed for 300 mm
- **Functions:** ZERO/ORIGIN, automatic ON/OFF, battery check
- Supplied with SR44 battery, No. 500534 0001
- **Special accessories**: Digimatic cable type A No. 563100 0001 (1 m), No. 563100 0002 (2 m), USB cable type A-USB No. 563110 0001





With blade tips

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
200	60	10	0.03	500708 0201	465,–	072008 D001	16,–
300	90	10	0.04	500708 0310	614,–	072008 D002	21,–

5102

Without blade tips

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
200	50	10	0.03	500706 0201	426,–	072008 D001	16,–
300	64	10	0.04	500706 0310	567,–	072008 D002	21,–

5102

ATORN Digital workshop calliper

ISO 13385-1 | INOX | 0,01 mm | inch / mm | KEEP-TRONIC | RS232C | Digi-matic | USB

- **KEEPTRONIC** electronics store the zero point, operating keys lock to prevent accidental alteration of the zero point. Battery life approx. 3 years
- Data output **multiCOM** Can be used as USB, Digimatic or RS-232
- Digit height 12 mm (measurement range 300 mm = 10 mm)
- **Functions:** ON/OFF, user-defined zeroing (RESET), mm/inch, PRESET for pre-setting internal measurement values
- Supplied with CR 2032 battery, No. 548079 6032
- **Optional accessories:** data cables, type P-RS 232 / P-Digimatic / P-USB, no. 512521....

Data output multiCOM



Similar to illustration

With blade tips, no fine adjustment

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Weight kg	art.no.	€	DAkkS calibration art.no.	€
300	90	10	1.20	500521 0301	650,–	072008 D002	21,–
500	125	20	2.50	500521 0501	940,–	072008 D003	42,–
800	150	20	4.50	500521 0801	1.599,–	072008 D005	53,–
1000	150	20	4.75	500521 1001	1.840,–	072008 D005	53,–

5194



Similar to illustration

With blade tips and fine adjustment

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Weight kg	art.no.	€	DAkkS calibration art.no.	€
300	90	10	1.20	500523 0301	710,–	072008 D002	21,–
500	125	20	2.50	500523 0501	1.099,–	072008 D003	42,–
800	150	20	4.50	500523 0801	1.699,–	072008 D005	53,–
1000	150	20	4.75	500523 1001	1.940,–	072008 D005	53,–

5194



Similar to illustration

Without blade tips, with fine adjustment

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Weight kg	art.no.	€	DAkkS calibration art.no.	€
300	90	10	1.20	500526 0301	690,–	072008 D002	21,–
500	125	20	2.50	500526 0501	950,–	072008 D003	42,–
800	150	20	4.50	500526 0801	1.599,–	072008 D005	53,–
1000	150	20	4.75	500526 1001	1.840,–	072008 D005	53,–

5194

Wooden case for calliper

Suitable for	art.no.	€
Measurement range 300 mm	500624 0300	20,60
Measurement range 500 mm	500624 0500	56,50
Measurement range 800 mm	500624 0800	78,30

5186



Mitutoyo Digital workshop calliper

ISO 13385-1 | INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB

- ABSOLUTE scale
- Measuring jaw ends offset for internal measurements
- Capacitive measuring system with dirt wipers in the slider
- Battery life approx. 20,000 hours
- **Functions:** ON/OFF, ORIGIN, ZERO/ABS, battery check
- Supplied with SR44 battery, no. 500534 0001
- **Optional accessories:** Digimatic cable type C, no. 563100 0021 (1 m), no. 563100 0002 (2 m), USB cable type C-USB, no. 563110 0003


Rounded measuring areas for internal measurement

ABSOLUTE®



500707 0501

With blade tips

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
500	150	20	0.06	500707 0501	989,–	072008 D003	42,–
750	150	20	0.06	500707 0751	1.354,–	072008 D004	46,–
1000	150	20	0.07	500707 1001	1.642,–	072008 D005	53,–

5102



500705 0451

Without blade tips

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
450	100	20	0.05	500705 0451	781,–	072008 D003	42,–
600	100	20	0.05	500705 0601	890,–	072008 D003	42,–
1000	140	20	0.07	500705 1001	1.506,–	072008 D005	53,–

5102

SARA® Lightweight digital workshop calliper

Werks-norm | 0,01 mm | inch / mm



- Stainless steel measuring jaws, hardened and finely ground
- Both measuring jaws are adjustable
- Internal double-prismatic guide for optimal guide properties and slider movement
- Aluminium rail with oxide coating
- Measuring force limits for constant measuring force
- Functions: On/off, mm/inch, user-defined zeroing, pre-set
- Special measuring beaks e.g. with threaded holes to accommodate special-purpose contact point on request
- Supplied with battery CR 2032 no. 548079 6032

Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Error limit mm	Weight kg	Digit height mm	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
300	90	10	0.04	0.50	10	500632 0301	320,–			072008 D002	21,–
500	90	10	0.05	0.60	10	500632 0501	535,–			072008 D003	42,–
800	90	10	0.06	0.73	10	500632 0801	719,–			072008 D005	53,–
1000	90	10	0.06	1.70	10	500632 1001	1.069,–			072008 D005	53,–
1500	150	20	0.10	2.00	20	500633 1501	2.019,–			072008 D006	148,–
2000	150	20	0.13	2.40	20	500633 2001	2.295,–			072008 D006	148,–
3000	150	20	0.25	3.40	20	500633 3001	3.729,–	072008 W901	278,–		

5108

Mitutoyo Lightweight digital workshop calliper

IP66 | ISO 13385-1 | 0,01 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

TÜVRheinland® ZERTIFIZIERT — Sicherheit Staub- und wassergeschützt — www.tuv.com ID 0000022582



- Lightweight carbon design, up to 50 % lighter than conventional workshop callipers
- Inductive measuring system housed in the measuring bar for added protection
- Easy to read thanks to 10 mm high digits
- **ABSOLUTE scale**
- Drive slide for constant measuring force
- Adjustable fixed measuring jaw
- Battery life approx. 5,000 hours
- **Functions:**
  OFFSET for switching between internal and external measurements
  PRESET/ORIGIN for pre-setting/zero point
  ZERO/ABS/HOLD
- Supplied with SR44 battery, no. 500534 0001
- **Optional accessories:** Digimatic cable type A, no. 563100 0001 (1 m), no. 563100 0002 (2 m); USB cable type A-USB, no. 563110 0001
- Version with long measuring jaws (200 mm) available on request



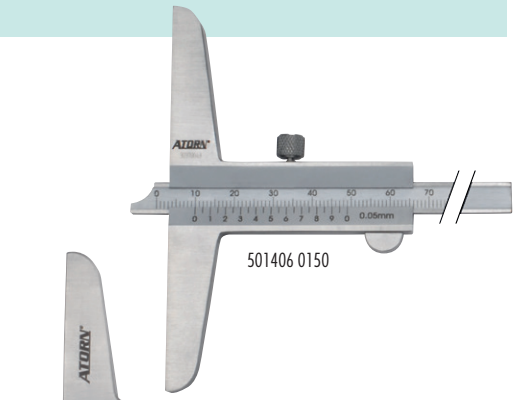
Max. length measuring range mm	Jaw length mm	Inner measurement scales mm	Error limit mm	Weight kg	art.no.	€	DAkkS calibration art.no.	€
450	100	20	0.05	0.715	500712 0450	1.187,–	072008 D003	42,–
600	100	20	0.05	0.790	500712 0600	1.342,–	072008 D003	42,–
1000	150	20	0.06	1.760	500712 1000	1.959,–	072008 D005	53,–
1500	150	20	0.10	2.160	500712 1500	2.491,–	072008 D006	148,–
2000	150	20	0.13	2.560	500712 2000	3.183,–	072008 D006	148,–

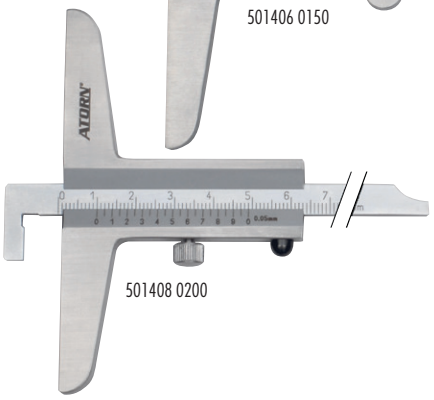
5102

ATORN Sliding depth gauges

ISO 13385-2 | INOX

- **With and without hook**
- Open slider machined from solid material
- Scale end with step
- **501408.... Rail can be repositioned, engraved on both sides**
- Vernier: 0.05 mm extended to 39 mm





Max. length measuring range mm	Bridge length x bridge width	Rail cross-section L x W	Without hook art.no.	€	With hook art.no.	€	DAkkS calibration art.no.	€
150	100 x 8 mm	8 x 3 mm	501406 0150	136,–	501408 0150	176,–	072008 D001	16,–
200	100 x 8 mm	8 x 3 mm	501406 0200	140,–	501408 0200	190,–	072008 D001	16,–
300	150 x 12 mm	12 x 4 mm	501406 0300	190,–	501408 0300	218,–	072008 D002	21,–
500	150 x 12 mm	12 x 4 mm	501406 0500	262,–	501408 0500	322,–	072008 D003	42,–
500	250 x 20 mm	20 x 5 mm	501406 0550	395,–			072008 D003	42,–

5195 5195

Wooden case for calliper



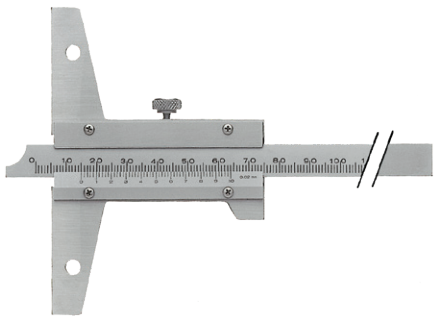
Suitable for	art.no.	€
Measurement range150 and 200 mm	500624 0200	11,95
Measurement range 300 mm	500624 0300	20,60
Measurement range 500 mm	500624 0500	56,50

5186

Mitutoyo Sliding depth gauges

ISO 13385-2 | INOX

- Reading parts matt chrome-plated
- Slider can be re-adjusted in the guide
- Precision-lapped measuring faces
- Measuring bridge for measurement ranges up to 300 mm, with bores for attaching larger additional bridges (no. 501701....)



Without fine adjustment

- Vernier scale 0.05 mm extended to 39 mm

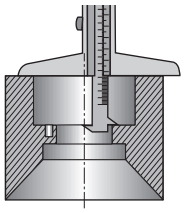
Max. length measuring range mm	Bridge length x bridge width mm	Additional base possible	art.no.	€	DAkkS calibration art.no.	€
150	100x6.5	Yes	501501 0150	158,–	072008 D001	16,–
200	100x6.5	Yes	501501 0200	173,–	072008 D001	16,–
300	100x6.5	Yes	501501 0300	211,–	072008 D002	21,–
600	250x10	No	501501 0600	847,–	072008 D003	42,–
1000	250x10	No	501501 1000	914,–	072008 D005	53,–

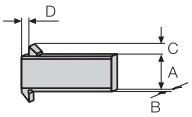
5102

SARA® Digital sliding depth gauge with offset double hook

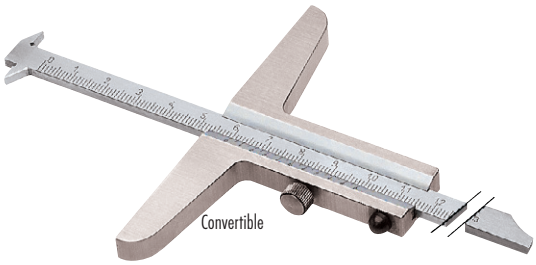
ISO 13385-2 | INOX

- **Convertible measuring bar**
- Scales on both sides
- Precision-ground measuring faces
- Vernier scale and reading parts matt chrome-plated
- Error margin in accordance with DIN 862
- Vernier scale 0.05 mm





A Rail cross-section length
B Rail cross-section width
C Hook thickness
D Hook spacing



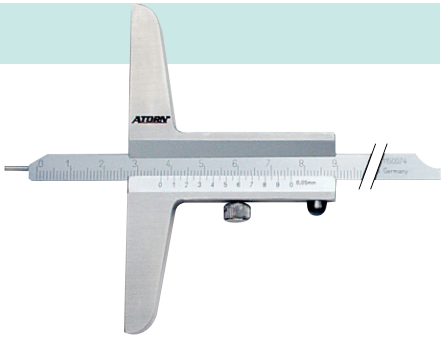
Max. length measuring range mm	Base length mm	Rail cross-section length mm	Rail cross-section width mm	Hook thickness mm	Distance between hooks mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
200	100	8	3	6	4	501442 0200	148,–	072008 D001	16,–
300	100	8	3	6	4	501442 0300	192,–	072008 D002	21,–

5108

ATORN Sliding depth gauge with steel pin

ISO 13385-2 | INOX

- For measuring small bores
- Steel pin Ø 1.5 mm
- High-precision laser scale
- Reading parts matt chrome-plated
- Convertible measuring bar, scales on both sides (except 501441 0080)
- Vernier scale 0.05 mm



Max. length measuring range mm	Bridge length x bridge width	Rail cross-section L x W	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	100 x 8 mm	8 x 3 mm	501441 0150	184,–	072008 D001	16,–
200	100 x 8 mm	8 x 3 mm	501441 0200	186,–	072008 D001	16,–
300	150 x 12 mm	12 x 4 mm	501441 0300	244,–	072008 D002	21,–

5195

SARA® Digital sliding depth gauge

Werks-norm | INOX | 0,01 mm | inch mm

- Locking screw on top
- **Functions:** ON/OFF, ZERO, inch/mm
- Supplied with SR44 battery, no. 500534 0001



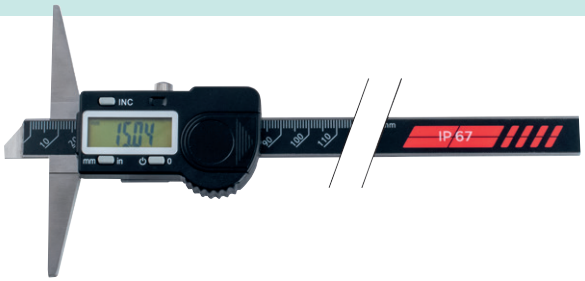
Max. length measuring range mm	Base length mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	100	501440 0150	198,–	072008 D001	16,–
300	100	501440 0300	255,–	072008 D002	21,–

5108

SARA® IP67 digital sliding depth gauge

IP67 | Werks-norm | INOX | 0,01 mm | inch mm

- Protection type IP67
- Locking screw on top
- **Functions:** ON / OFF, ZERO, inch / mm
- Supplied with battery CR 2032 no. 548079 6032



Max. length measuring range mm	Base length mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
150	100	501440 1150	269,–	072008 D001	16,–
300	100	501440 1300	399,–	072008 D002	21,–

5108

Mitutoyo *ABSOLUTE! digital sliding depth gauge AOS!*

ISO 13385-2 | INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB



501602 0150

- Particularly suitable for use in rough work conditions due to the electromagnetic inductive **AOS** measuring process (**A**dvanced **O**nsite **S**ensor), which is not sensitive to dirt or moisture on the scale
- ***ABSOLUTE*** scale for one-time zeroing
- **High-contrast LCD with 9 mm high digits**
- Battery life approx. 18,000 hours
- **Functions:** ON/OFF, zero point at battery change (ORIGIN), user-defined zeroing (ZERO/ABS), battery check
- Supplied with SR44 battery, No. 500534 0001
- **Special accessories**: Digimatic cable type C No. 563100 0021 (1 m), No. 563100 0022 (2 m), USB cable type C USB No. 563110 0003

Max. length measuring range mm	Bridge length x bridge width mm	Additional base possible	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
100	100x6	Yes	0.03	501602 0150	419,–	072008 D001	16,–
200	100x6	Yes	0.03	501602 0200	505,–	072008 D001	16,–

5102

Mitutoyo Digital sliding depth gauge

ISO 13385-2 | INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB



- **ABSOLUTE scale**
- Capacitive measuring system with dirt wiper in the slider
- LCD display with 9 mm high digits
- Battery life: 20,000 hrs.
- Up to size 0300: Measuring bridge with bores for attaching larger additional bridges
- **Functions:** ON/OFF, zero point at battery change (ORIGIN), (ZERO/ABS), battery check
- Supplied with SR44 battery, no. 500534 0001
- **Optional accessories:** Digimatic cable type C, no. 563100 0021 (1 m), no. 563100 0022 (2 m), USB cable type C-USB, no. 563110 0003

Max. length measuring range mm	Bridge length x bridge width mm	Additional base possible	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
300	100x6	Yes	0.04	501601 0301	515,–	072008 D002	21,–
450	250x10	No	0.05	501601 0450	1.032,–	072008 D003	42,–
600	250x10	No	0.05	501601 0600	1.095,–	072008 D003	42,–
750	250x10	No	0.06	501601 0750	1.182,–	072008 D004	46,–
1000	250x10	No	0.07	501601 1000	1.302,–	072008 D005	53,–

5102

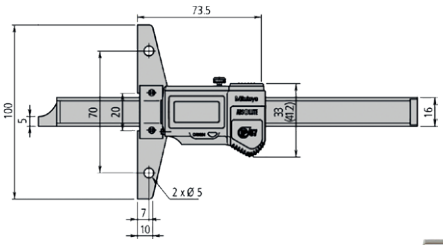
Mitutoyo IP67 digital sliding depth gauge

IP67 | ISO 13385-2 | INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

TÜVRheinland® ZERTIFIZIERT — Sicherheit Staub- und wassergeschützt — www.tuv.com ID 2011207400

- **ABSOLUTE scale**
- Inductive functional principle
- Switches off automatically after 20 minutes of inactivity
- New, high-contrast display
- Digit height 9 mm
- Battery life approx. 5 years
- Battery change possible without a screwdriver
- **Functions:** ZERO/ORIGIN, automatic ON/OFF, battery check
- Supplied with SR44 battery, No. 500534 0001
- **Special accessories**: Digimatic cable type A No. 563100 0001 (1 m), No. 563100 0002 (2 m), USB cable type A-USB No. 563110 0001



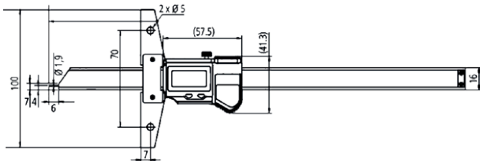


Standard version

- 5016050300 battery service life 5000 hours, display 10.2 mm, screwed battery cover

Max. length measuring range mm	Bridge length x bridge width mm	Additional base possible	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
150	100x6	Yes	0.03	501605 0151	474,–	072008 D001	16,–
200	100x6	Yes	0.03	501605 0201	551,–	072008 D001	16,–
300	100x6	Yes	0.04	501605 0301	615,–	072008 D002	21,–

5102





With steel measuring pin, Ø 1.9 mm

Max. length measuring range mm	Bridge length x bridge width mm	Additional base possible	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
150	100x6	Yes	0.03	501607 0151	553,–	072008 D001	16,–
200	100x6	Yes	0.03	501607 0201	623,–	072008 D001	16,–

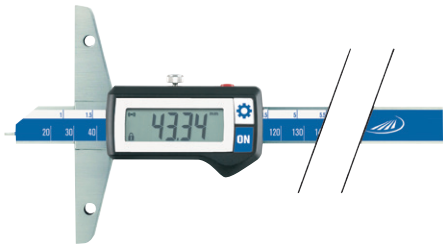
5102

HELIOS·PREISSER Digital sliding depth gauge IP67 with steel measuring pin, wireless

IP67 | ISO 13385-2 | INOX | 0,01 mm | inch mm | integrated radio

integrated radio

- Pin gauge Ø 1.5 mm
- inductive measurement system
- Digit height 11 mm
- compatible with the radio system **ATORN-Integrated-Wireless**
  The optional receiver ***i-Stick*** 567512 0001 is required to use the remote system
- **Function:** On/Off, mm/inch, PRESET (user-defined values), button lock, integrated radio transmitter



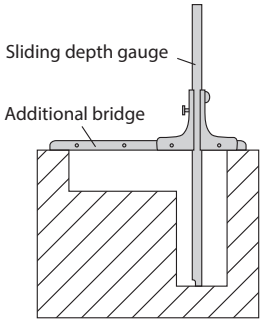
Max. length measuring range mm	Base length mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
150	100	0.03	501715 0150	507,–	072008 D001	16,–

5186

Mitutoyo Additional bridges for sliding depth gauges

- Screwing additional bridges onto the rear side of a standard measuring bridge allows the support length to be extended by 320 mm.
- Asymmetric assembly possible
- Should be adjusted on a measuring plate.
- Suitable for MITUTOYO sliding depth gauges up to a bridge length of 100 mm
- Supplied with fastening screws





L mm	art.no.	€	Factory calibration art.no.	€
180	501701 0180	72,–	073103 W143	14,–
260	501701 0260	96,–	073103 W144	28,–
320	501701 0320	111,–	073103 W144	28,–

5102

SARA® Digital small sliding depth gauge

0,01 mm | inch / mm

- Compact, handy depth gauge for measurements such as blind bores, tyre profiles or brake lining thicknesses
- Effortless to read thanks to a large display
- Supplied with CR 2032 battery, No. 548079 6032



Max. length measuring range mm	Base length mm	Depth gauge rod thickness mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
25	50	1.5	501604 0025	78,50	072008 D001	16,–

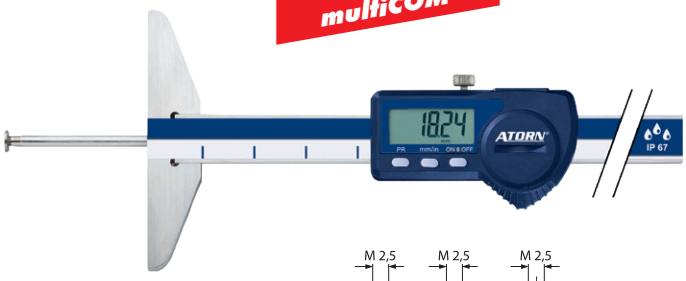
5108

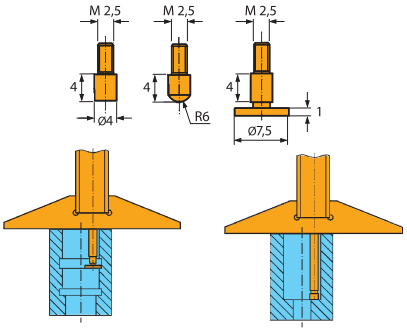
ATORN IP67 digital sliding depth gauge with measuring inserts

IP67 | ISO 13385-2 | INOX | 0,01 mm | inch / mm | KEEP-TRONIC | RS232C | Digi-matic | USB

- Particularly suitable for measuring recesses in bore holes With replaceable M2.5 inserts
- **KEEPTRONIC** electronics store the zero point, operating keys lock to prevent accidental alteration of the zero point. Battery life approx. 3 years
- Inductive, waterproof FPS measuring system (Fluid Protected Measuring System)
- **multiCOM**data output, can be used as USB, Digimatic or RS-232
- Functions: mm/inch, ON/OFF/0/PRESET for pre-setting measurement values
- Supplied with 3 measuring inserts
  1x measuring disc, Ø 7.5 x 1 mm
  1x carbide insert, Ø 4 mm, flat
  1x carbide insert, R 6 mm
  CR2032 battery (no. 548079 6032) included
- **Optional accessories:** Data cables, type P-RS 232 C / P-Digimatic / P-USB, no. 512521....

Data output multiCOM





Max. length measuring range mm	Bridge length x bridge width	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
100	85 x 8.5 mm	501500 0101	680,–	072008 D001	16,–

5196

SARA® Lightweight digital sliding depth gauge with measuring inserts

Werks-norm | 0,01 mm

- Particularly suitable for measuring recesses and shoulders in bore holes
- With replaceable measuring inserts, M2.5 mm
- Internal double V-guide for optimum guide properties and slider movement
- Aluminium rail with oxide coating
- Supplied with 150 / 350 mm measuring bridges, 550 / 750 / 950 mm measuring bridges available on request
- Supplied with ball / disc measuring inserts, 150 / 350 mm measuring bridges and SR44 battery, no. 500534 0001



501498 0200

501498 0200

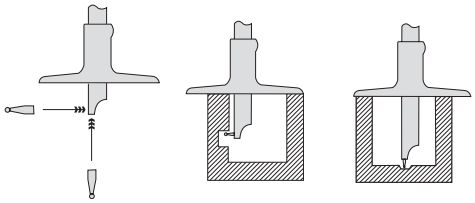
Max. length measuring range mm	Base length mm	Depth gauge rod thickness mm	Error limit mm	Measuring surface diameter mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
100	150/350	4	0.03	10	501498 0100	450,–	072008 D001	16,–
200	150/350	4	0.03	10	501498 0200	489,–	072008 D001	16,–
300	150/350	4	0.04	10	501498 0300	650,–	072008 D002	21,–
500	150/350	6	0.05	20	501498 0500	815,–	072008 D003	42,–
800	150/350	6	0.06	20	501498 0800	1.030,–	072008 D005	53,–
950	150/350	6	0.06	20	501498 0950	1.449,–	072008 D005	53,–

5108

SARA® Lightweight digital universal depth gauge

Werks-norm | 0,01 mm

- Flexible depth gauges for a variety of measurement tasks
- Replaceable measuring inserts (M 2.5) can also be screwed in at a 90° offset angle
- With 3 replaceable measuring bridges, 150 / 300 / 450 mm, hard-anodised aluminium
- Easy-to-change measuring bridges
- Internal double V-guide for optimum guide properties and slider movement
- Supplied with standard measuring head with ball measuring insert, 3 measuring bridges and SR44 battery, No. 500534 0001





501475 0300

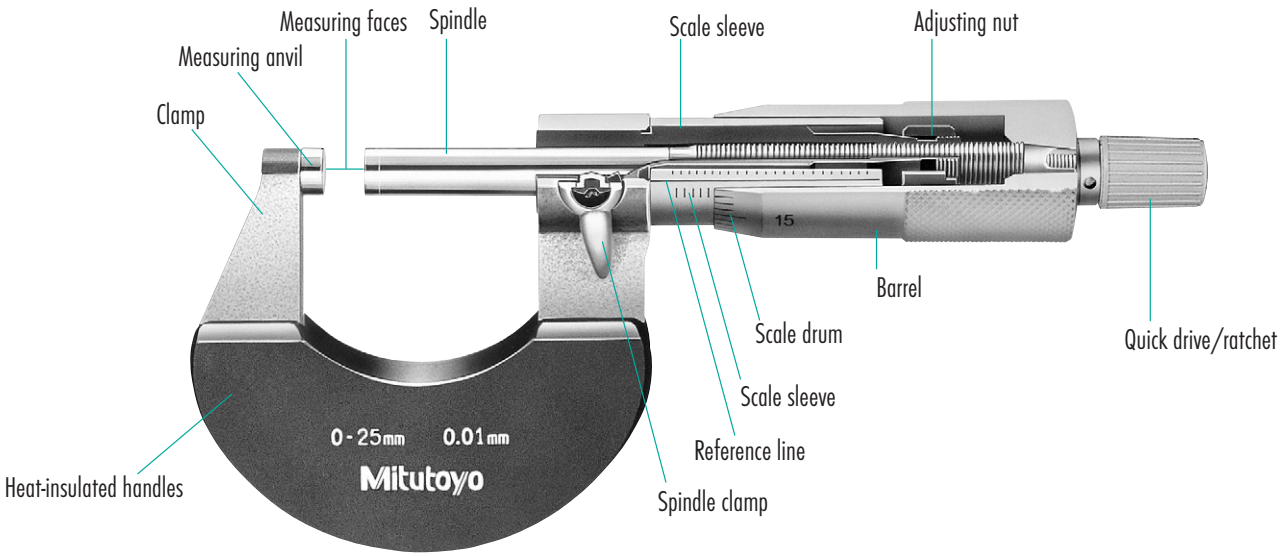


501475 0300

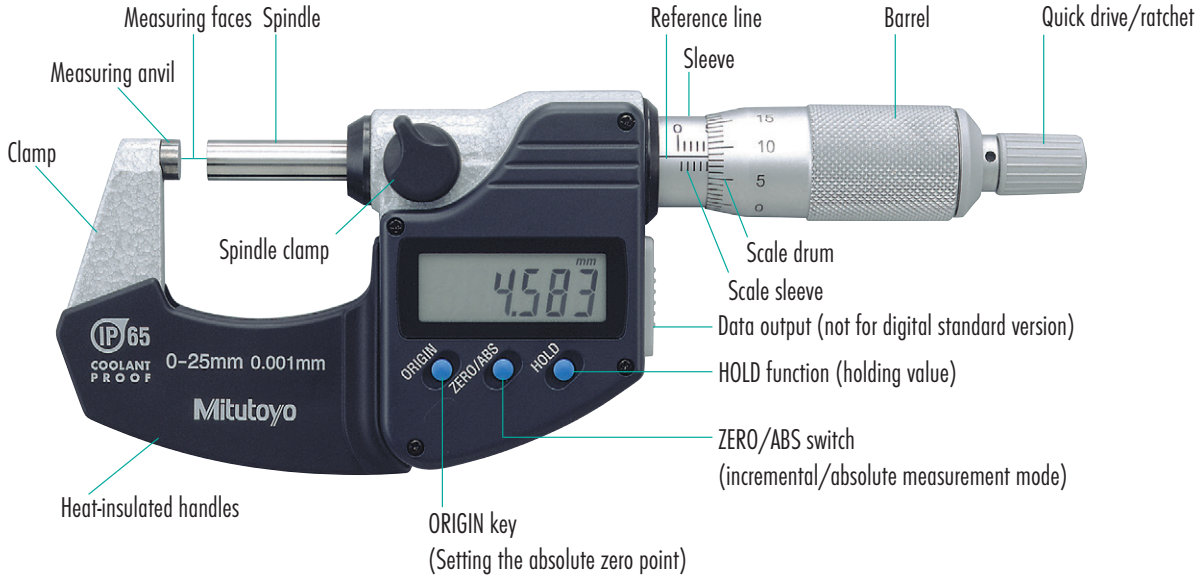
Max. length measuring range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
300	0.04	501475 0300	440,–	072008 D002	21,–
500	0.05	501475 0500	599,–	072008 D003	42,–
800	0.06	501475 0800	749,–	072008 D005	53,–

5108

Analog outside micrometer

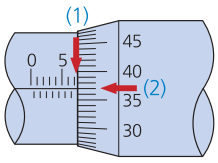


Digimatic outside micrometer



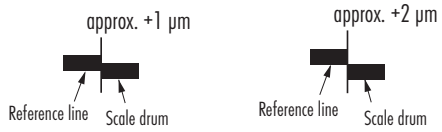
Reading off the scale

Outside micrometer with scale division 0.01 mm



(1) Reading off the scale sleeve 7.00 mm
(2) Reading off the scale drum + 0.37 mm
Total reading 7.37 mm

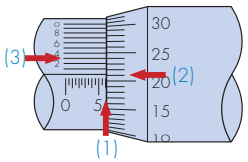
Note: 0.37 mm (2) is read on the position at which the reference line of the sleeve is aligned with the scale divisions of the drum.



The graduation of the drum can be read directly at intervals of 0.01 mm, as listed above. However, it can also be estimated at intervals of 0.001 mm, if the lines lie closely above each other, as the thickness of the lines is one-fifth of the distance between the said lines.

Outside micrometer with Vernier scale (scale division of 0.001 mm)

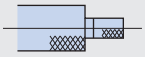
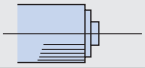
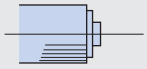
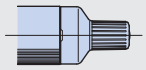
The Vernier scale lying above the reference line of the sleeve allows a direct reading in values to 0.001 mm.



(1) Reading off the scale sleeve 6.000 mm
(2) Reading off the scale drum 0.210 mm
(3) Read off the markings of the Vernier scale and the graduation lines of the drum + 0.003 mm
Total reading 6.213 mm

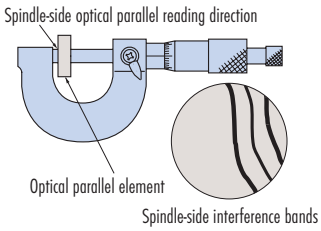
Note: 0.21 mm (2) is read off at the position at which the reference line lies between two graduation marks (21 and 22 in this case). The 0.003 mm reading (3) is taken at the position at which one of the Vernier graduation marks is in line with one of the drum graduations.

Measuring force limitation

	Audible	Single-handed operation	Note!
Ratchet stop 	yes	unsuitable	audible clicking causes micro-vibrations
Friction thimble (F type) 	no	suitable	noiseless and vibration-free operation due to friction clutch
Ratchet barrel (T type) 	yes	suitable	the constant measuring force is achieved through the acoustic feedback of the ratchet function.
Ratchet barrel 	yes	suitable	The constant measuring force is achieved through the acoustic feedback of the ratchet function.

The parallelism check of the measuring faces

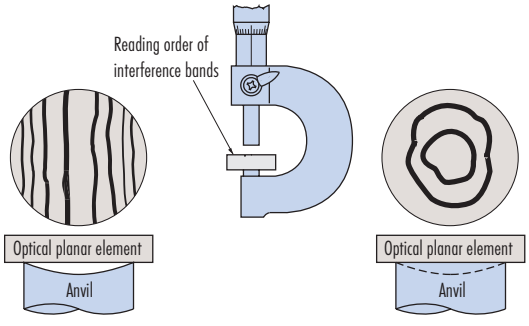
The parallelism can be checked with a plane-parallel test glass held between the measuring faces. First, the test tube is attached to the measuring face of the anvil. The test tube is then clamped by closing the spindle with normal measuring force and the number of red interference rings or stripes that are visible under white light on the measuring face of the spindle are counted. Each interference ring/stripe is equivalent to a half-wavelength difference (0.32 µm for red stripes). In the above picture a parallelism of approximately 1µm is achieved, from 0.32 µm x 3 = 0.96 µm.





Flatness check of the measuring faces

The flatness can be estimated by holding an optical flat against the measuring face. A visible number of red interference rings or stripes can then be counted on the measuring face under white light. Each interference ring/stripe represents a half-wavelength difference in height (0.32 µm).



The measuring face is curved by about 1.3 µm. (0.32 µm x 4 paired red stripes.)

The measuring face is deeply concave (or convex) by about 0.6 µm. (0.32 µm x 2 continuous stripes)

SARA® Outside micrometer

DIN 863/1 | INOX | 0,5 mm | 0,01 mm

- Precision design with ratchet
- Frame with hand protection
- Spindle fixed by means of a locking lever
- Reading parts matt chrome-plated
- Scale barrel Ø: 17 mm
- Spindle Ø: 6.35 mm
- Calibration includes setting gauge
- Supplied with adjustment key, versions over 25 mm include setting gauge



502505 0025

Individual

Measurement range	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	502505 0025	26,50	070160 D001	21,–
25-50 mm	502505 0050	35,20	073103 D047	47,–
50-75 mm	502505 0075	47,30	073103 D052	53,–
75-100 mm	502505 0100	57,–	073103 D052	53,–
100-125 mm	502505 0125	96,50	073103 D048	62,–
125-150 mm	502505 0150	119,–	073103 D049	56,–

5116


502506 0075
502506 0150

Sets

Measurement range	Contents	art.no.	€	DAkkS calibration art.no.	€
0-75 mm	3 outside micrometers / 2 setting gauges	502506 0075	122,–	073103 D034	119,–
0-100 mm	4 outside micrometers / 3 setting gauges	502506 0100	162,50	073103 D041	178,–
0-150 mm	6 outside micrometers / 5 setting gauges	502506 0150	379,–	073103 D045	178,–

5116

ATORN Outside micrometer

DIN 863/1 | INOX | 0,5 mm | 0,01 mm

- Precision design with advanced friction coupling (ratchet stop)
- Steel clamp
- Spindle fixed by means of a locking lever
- Reading parts matt chrome-plated
- Spindle Ø: 6.5 mm
- Calibration includes setting gauge
- Versions over 25 mm supplied with setting gauge





Individual

Measurement range	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	502510 0025	51,–	070160 D001	21,–
25-50 mm	502510 0050	77,–	073103 D047	47,–
50-75 mm	502510 0075	92,–	073103 D052	53,–
75-100 mm	502510 0100	104,–	073103 D052	53,–

5191

Set

Measurement range	Contents	art.no.	€	DAkkS calibration art.no.	€
0-100 mm	4 outside micrometers / 3 setting gauges	502511 0100	299,–	073103 D041	178,–

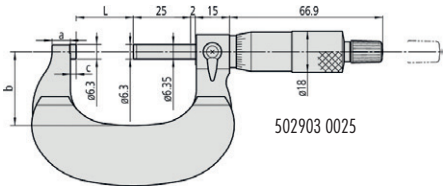
5191

Mitutoyo Outside micrometer

DIN 863/1 | 0,5 mm | 0,01 mm

With factory certificate for measurement ranges up to 50 mm!

- Sturdy, with ratchet
- Steel frame with hand protection
- Spindle fixed by means of a locking lever
- Reading parts matt chrome-plated
- Spindle Ø: 6.35 mm
- Measuring force: 5 - 10 N
- Calibration includes setting gauges
- Supplied with adjustment key; versions with measurement range over 25 mm also include setting gauge; versions up to 50 mm include factory certificate



502903 0025



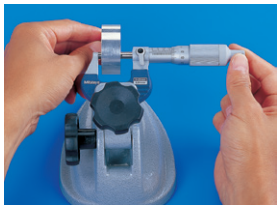
502903 0025

Individual

- Scale barrel Ø 17 mm

Measurement range	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	502903 0025	77,–	070160 D001	21,–
25-50 mm	502903 0050	101,–	073103 D047	47,–
50-75 mm	502903 1075	132,–	073103 D052	53,–
75-100 mm	502903 0110	152,–	073103 D052	53,–

5102





Individual, with ratchet barrel

- A new and exceptionally smooth-running ratchet mechanism provides a constant measuring force that enables quick and safe one-handed operation due to the ratchet design of both the measuring barrel and quick adjustment
- Scale barrel Ø 19 mm

Measurement range	Vernier	Error limit mm	Measuring spindle increments mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.01 mm	0.003	0.5	502908 0025	83,–	070160 D001	21,–
0-25 mm	0.001 mm	0.003	0.5	502908 1025	101,–	070160 D001	21,–
25-50 mm	0.01 mm	0.003	0.5	502908 0050	113,–	073103 D047	47,–
25-50 mm	0.001 mm	0.003	0.5	502908 1050	165,–	073103 D047	47,–

5102



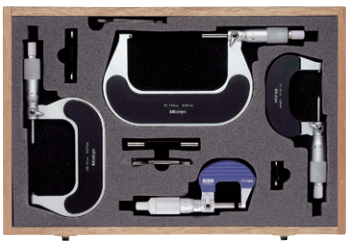
502908 1025

Set

- 1 each of 5029080025 (with ratchet barrel), 5029030050, 5029031075 and 5029030110

Measurement range	Vernier	Contents	art.no.	€	DAkkS calibration art.no.	€
0 - 100 mm	0.01 mm	4 outside micrometer / 3 setting gauges	502921 1100	433,–	073103 D041	178,–

5102



Mitutoyo Outside micrometer designed for workshop use

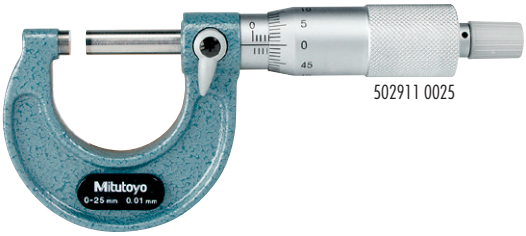
DIN 863/1 | 0,5 mm | 0,01 mm

With factory certificate for measurement ranges up to 50 mm!

- Lightweight workshop version with ratchet
- Painted steel frame (with bores to reduce weight for larger measurement ranges)
- Spindle fixed by means of a locking lever
- Reading parts matt chrome-plated
- Scale barrel Ø up to 300 mm = 18 mm, above 300 mm = 21 mm
- Spindle Ø up to 300 mm = 6.35 mm, above 300 mm = 8 mm
- Calibration includes setting gauges
- Supplied with adjustment key, versions with measurement ranges over 25 mm include setting gauge and versions up to 50 mm include factory certificate



502911 0175



502911 0025

Individual

Measurement range	Error limit mm	Measuring force N	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.002	5-10	502911 0025	62,–			070160 D001	21,–
25-50 mm	0.002	5-10	502911 0050	88,–			073103 D047	47,–
50-75 mm	0.002	5-10	502911 0075	115,–			073103 D052	53,–
75-100 mm	0.003	5-10	502911 0100	123,–			073103 D052	53,–
100-125 mm	0.003	5-15	502911 0125	194,–			073103 D049	56,–
125-150 mm	0.003	5-15	502911 0150	216,–			073103 D049	56,–
150-175 mm	0.004	5-15	502911 0175	240,–			073103 D049	56,–
175-200 mm	0.004	5-15	502911 0200	262,–			073103 D049	56,–
200-225 mm	0.004	5-15	502911 0225	285,–			073103 D049	56,–
225-250 mm	0.005	5-15	502911 0250	316,–			073103 D050	66,–
250-275 mm	0.005	5-15	502911 0275	332,–			073103 D050	66,–
275-300 mm	0.005	5-15	502911 0300	355,–			073103 D050	66,–
300-325 mm	0.006	5-15	502911 0325	500,–			073103 D060	81,–
325-350 mm	0.006	5-15	502911 0350	542,–			073103 D154	97,–
350-375 mm	0.006	5-15	502911 0375	578,–			073103 D154	97,–
375-400 mm	0.007	5-15	502911 0400	626,–			073103 D154	97,–
400-425 mm	0.007	5-15	502911 0425	664,–			073103 D154	97,–
425-450 mm	0.007	5-15	502911 0450	710,–			073103 D354	97,–
450-475 mm	0.008	5-15	502911 0475	759,–			073103 D354	97,–
475-500 mm	0.008	5-15	502911 0500	819,–			073103 D354	97,–
500-525 mm	0.008	5-15	502911 0525	910,–			073103 D354	97,–
525-550 mm	0.008	5-15	502911 0550	944,–	073103 W256	234,–		
550-575 mm	0.009	5-15	502911 0575	999,–	073103 W256	234,–		
575-600 mm	0.009	5-15	502911 0600	1.039,–	073103 W256	234,–		

5102



502923 0150

Sets

Measurement range	Contents	art.no.	€	DAkkS calibration art.no.	€
0-75 mm	3 outside micrometers and 2 setting gauges	502923 0075	302,–	073103 D034	119,–
0-150 mm	6 outside micrometers and 5 setting gauges	502923 0150	624,–	073103 D045	178,–
0-300 mm	12 outside micrometers and 11 setting gauges	502923 0300	2.425,–	073103 D030	658,–
150-300 mm	6 outside micrometers and 6 setting gauges	502923 1300	1.566,–	073103 D046	384,–

5102

SARA® Outside micrometer, robust design

INOX | 1 mm | 0,01 mm

- Large scale barrel with 100th divisions, Ø 28 mm
- With ratchet stop
- Spindle Ø 8 mm
- Spindle fixed by means of a locking lever
- Steel frame with hand protection
- Reading parts matt chrome-plated
- Measuring force 5 - 10 N
- Calibration includes setting gauges
- Supplied with adjustment key, versions over 25 mm include setting gauge



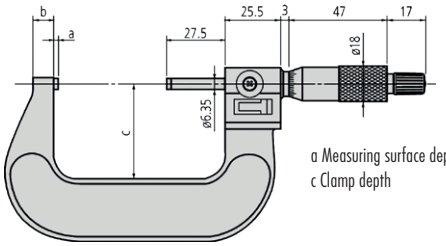
Measurement range	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	503504 0025	113,–	070160 D001	21,–
25-50 mm	503504 0050	147,–	073103 D047	47,–
50-75 mm	503504 0075	168,–	073103 D052	53,–
75-100 mm	503504 0100	187,50	073103 D052	53,–

5116

Mitutoyo Outside micrometer with counting mechanism

DIN 863/1 | 0,5 mm

- Painted steel frame with hand protection
- Spindle fixed by means of a locking screw
- Scale barrel and scale sleeve matt chrome-plated
- Scale barrel Ø 18 mm
- Spindle Ø 6.35 mm
- Calibration includes setting gauge
- Supplied with adjustment key, versions with measurement ranges over 25 mm include setting gauge



a Measuring surface depth
c Clamp depth

Measurement range	Measuring surface depth	Bracket depth	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	2.5	26	0.003	503101 0025	171,–	070160 D001	21,–
25-50 mm	2	32	0.003	503101 0050	256,–	073103 D047	47,–
50-75 mm	2	45	0.003	503101 0075	315,–	073103 D052	53,–
75-100 mm	2	57	0.004	503101 0100	345,–	073103 D052	53,–

5102



SARA® Digital outside micrometer

DIN 863/1 | INOX | 0,5 mm | 0,001 mm | inch mm

- robust with ratchet
- painted steel frame with hand guard
- spindle fixed by means of a locking lever
- spindle Ø 6.5mm
- calibration including setting gauges
- Supplied with CR2032 battery No. 548079 6032, adjustment key, over 25mm with setting gauge



Measurement range	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	503490 0025	94,–	070160 D001	21,–
25-50 mm	503490 0050	127,50	073103 D047	47,–
50-75 mm	503490 0075	155,50	073103 D052	53,–
75-100 mm	503490 0100	182,50	073103 D052	53,–

5116

SARA® Digital outside micrometer IP65

IP65 | DIN 863/1 | INOX | 0,5 mm | 0,001 mm | inch mm

- robust with ratchet
- painted steel frame with hand guard
- spindle fixed by means of a locking lever
- spindle Ø 6.5mm
- calibration including setting gauges
- Supplied with CR2032 battery No. 548079 6032, adjustment key, over 25mm with setting gauge



Measurement range	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	503491 0025	147,50	070160 D001	21,–
25-50 mm	503491 0050	173,50	073103 D047	47,–
50-75 mm	503491 0075	196,–	073103 D052	53,–
75-100 mm	503491 0100	216,–	073103 D052	53,–

5116

HELIOS·PREISSER Digital outside micrometer IP65 wireless

IP65 | DIN 863/1 | 0,5 mm | 0,001 mm | inch mm

- Robust frame, painted with thermal protection
- Readings via 10 mm-high digits
- Compatible with **ATORN-Integrated-Wireless**
  The optional receiver ***i-Stick*** 567512 0001 is required to use the remote system
- Advanced friction coupling
- Spindle Ø 6.5 mm
- **Function:** On/Off, mm/inch, ORIGIN (store starting value), Hold, TOL (tolerance input), key lock, integrated radio transmitter
- Supplied with CR2032 battery and setting gauge over 25mm measurement range

integrated radio



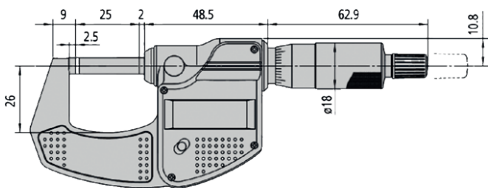
Measurement range	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.002	503380 0025	304,–	070160 D001	21,–
25-50 mm	0.002	503380 0050	375,–	073103 D047	47,–
50-75 mm	0.003	503380 0075	458,–	073103 D052	53,–
75-100 mm	0.003	503380 0100	512,–	073103 D052	53,–

5186

Mitutoyo Digital outside micrometer

DIN 863/1 | 0,5 mm | 0,001 mm

- Robust special cast iron frame, painted, with hand protection
- Scale barrel and scale sleeve matt chrome-plated
- Readings via large LCD display with 7.5 mm high digits
- Automatic switch-off after 20 minutes
- Front cover made from oil-resistant plastic
- Scale barrel Ø 18 mm
- Spindle Ø 6.35 mm
- **Functions:** Zero point at battery change (ORIGIN), battery check
- Supplied in a case with factory certificate, adjustment key and SR44 battery, no. 500534 0001





Measurement range	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.003	503320 2025	196,–	070160 D001	21,–

5102

Mitutoyo Digital outside micrometer IP65

IP65 | DIN 863/1 | 0,5 mm | 0,001 mm | Digi-matic | USB

Staub- und Wasserdicht IP65
TÜVRheinland ZERTIFIZIERT
www.tuv.com ID 4011207400

- Precision design with ratchet
- Shock-proof design
- Robust frame made from special cast iron, painted, with hand protection
- Spindle fixed by means of a lever button
- Matt chrome-plated scale sleeve and scale barrel
- Readings via large LCD display with 7.5 mm high digits
- Automatic switch-off if left idle
- "Function Lock" for saving original values up to a measurement range of 100 mm
- Scale barrel Ø 18 mm
- Spindle Ø 6.35 mm
- Calibration includes setting gauge
- Accuracy exceeds DIN 863 requirements
- **Functions:** Initial value (ORIGIN), zeroing/absolute (ZERO/ABS), hold value (HOLD), automatic switch-off, battery check
- Supplied with adjustment key and SR44 battery, no. 500534 0001; versions with measurement ranges over 25 mm include setting gauge and versions up to 50 mm include factory certificate
- **Optional accessories:** Digimatic cable type B, no. 563100 0011 (1 m), no. 563100 0012 (2 m); USB cable type B-USB, no. 563110 0002

With factory certificate for measurement ranges up to 50 mm!

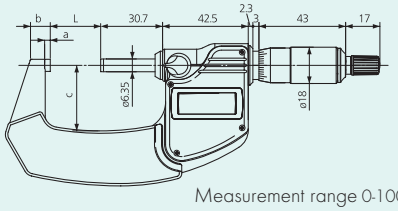


503316 0025

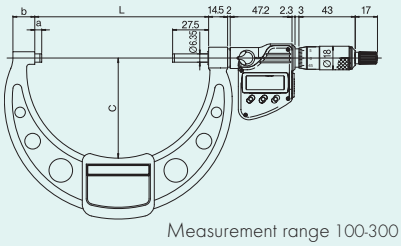
Individual, without data output

Measurement range	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.002	503316 0025	252,–	070160 D001	21,–
25-50 mm	0.002	503316 0050	353,–	073103 D047	47,–
50-75 mm	0.002	503316 0075	425,–	073103 D052	53,–
75-100 mm	0.003	503316 0100	484,–	073103 D052	53,–

5102



Measurement range 0-100



Measurement range 100-300

Measurement range	L	a	b	c
0-25	-	2,8	9,0	25,0
25-50	25,0	2,8	9,8	32,0
50-75	50,0	2,8	12,6	47,0
75-100	75,0	2,8	14,0	60,0
100-125	132,8	5,3	16,7	76,5
125-150	158,2	5,7	18,8	91,0
150-175	183,6	6,1	19,1	103,1
175-200	208,8	6,3	18,2	115,3
200-225	234,2	6,7	16,8	126,8
225-250	258,0	5,5	18,0	139,8
250-275	284,0	6,5	18,0	152,3
275-300	309,0	6,5	18,0	166,0

Individual, with data output

Measurement range	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.002	503307 0025	325,–	070160 D001	21,–
25-50 mm	0.002	503307 0050	385,–	073103 D047	47,–
50-75 mm	0.002	503307 0075	505,–	073103 D052	53,–
75-100 mm	0.003	503307 0100	546,–	073103 D052	53,–
100-125 mm	0.003	503302 0125	741,–	073103 D048	62,–
125-150 mm	0.003	503302 0150	763,–	073103 D049	56,–
150-175 mm	0.004	503302 0175	782,–	073103 D049	56,–
175-200 mm	0.004	503302 0200	788,–	073103 D049	56,–
200-225 mm	0.004	503302 0225	796,–	073103 D050	66,–
225-250 mm	0.005	503302 0250	809,–	073103 D050	66,–
250-275 mm	0.005	503302 0275	822,–	073103 D050	66,–
275-300 mm	0.005	503302 0300	875,–	073103 D050	66,–

5102

Staub- und Wasserdicht IP65
TÜVRheinland ZERTIFIZIERT
www.tuv.com ID 4011207400

Set

- **Digital outside micrometers with data output**
- Supplied in a case with adjustment key, battery and necessary setting gauges

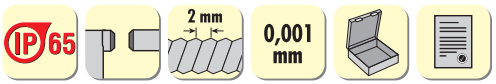
Measurement range	Contents	art.no.	€	DAkkS calibration art.no.	€
0-75 mm	3 outside micrometers, 2 setting gauges	503314 0075	1.290,–	073103 D034	119,–
0-100 mm	4 outside micrometers, 3 setting gauges	503314 0100	1.865,–	073103 D041	178,–

5102

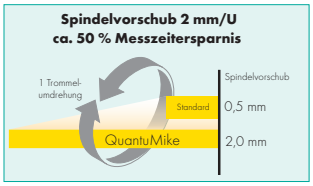


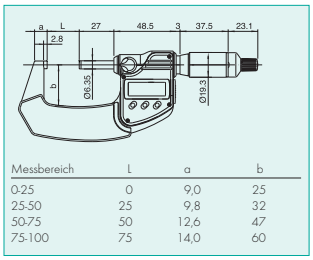
503314 0100

Mitutoyo Digital outside micrometer *QuantuMike*



- Outside micrometer with **2 mm spindle pitch**
- The ratchet mechanism and slim design ensure easy operation with one hand or using a stand
- Bidirectional communication e.g. for configuration on PC (Digimatic S1 interface)
- LCD display with 7.5 mm digits
- Equipped with warning function for approach speed and calibration plan
- GO/±NG evaluation by fixing the upper and lower tolerances
- **Function lock** to protect original values
- Automatic switch-off after 20 minutes without use
- Accuracy in accordance with EN ISO 3611 J_{MPE} ± 1 µm (Model 0-25, 25-50 mm)
- Calibration including setting gauge
- **Function:** initial value (ORIGIN), hold value/data transmission (HOLD/DATA), ON/OFF
- Supplied with CR 2032 battery no. 548079 6032, 0-25 and 25-50 mm with factory certificate, adjusting spanner, over 25 mm with setting gauge
- **Special accessories:** Digimatic cable Type I no. 563100 0081 (1 m), no. 563100 0082 (2 m)





Messbereich	L	a	b
0-25	0	9,0	25
25-50	25	9,8	32
50-75	50	12,6	47
75-100	75	14,0	60

Measurement range	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.001	503301 2025	392,–	070160 D001	21,–
25-50 mm	0.001	503301 2050	483,–	073103 D047	47,–
50-75 mm	0.002	503301 2075	573,–	073103 D052	53,–
75-100 mm	0.002	503301 2100	647,–	073103 D052	53,–

5102

Tolerance value







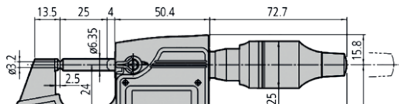


Mitutoyo Digital high-precision outside micrometer



ABSOLUTE®

- High-precision outside micrometer for testing workpieces with particularly tight tolerances, e.g. ground parts
- Reinforced structure with particularly stable clamp
- Special heat-insulated recessed handles to prevent thermal expansion resulting from hand warmth
- Measuring barrel with ratchet design, measuring force 7-9 N
- **ABSOLUTE rotary encoder**
- Digimatic2 version
- Measuring areas Ø 3.2 mm
- Weight 400 g
- Supplied with additional heat-insulated recessed handle, screwdriver, adjustment key and battery CR2032 No. 548079 6032
- **Special accessories:** Digimatic cable Type B No. 563100 0011 (1 m), No. 563100 0012 (2 m), USB cable Type B-USB No. 563110 0002







Additional thermal protection for freehand measurements



Measurement range	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.0006	503317 2025	2.067,–	070160 D001	21,–

5102

Mitutoyo Digital outside micrometers *QuickMike*

IP65 | 0,5 mm | 0,001 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

30 mm measurement range with 3 rotations!

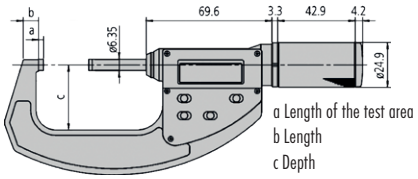
- For rapid, highly accurate measurement of different diameters and precise measurements on sensitive surfaces
- Steel frame, with ratchet barrel
- Spindle feed 10 mm/rev, non-rotating spindle
- LCD display with 10 mm high digits
- Unrestricted traverse speed
- Battery life 5 years
- Scale barrel Ø: 25 mm, spindle Ø: 6.35 mm
- Calibration including setting gauge
- **Function:** Initial value (ORIGIN), ZERO/ABS, hold value (HOLD), ON/OFF, battery check
- Supplied with SR44 battery, No. 500534 0001; versions over 25 mm include setting gauge
- **Special accessories:** Digimatic cable Type B No. 563100 0011 (1 m), No. 563100 0012 (2 m), USB cable Type B-USB No. 563110 0002



Standard version

Measurement range	Error limit mm	L mm	Length of the test face mm	Depth mm	art.no.	€	DAkkS calibration art.no.	€
0-30 mm	0.002	7.0	2.0	25	503315 2030	605,–	070160 D002	23,–
25-55 mm	0.002	8.5	2.8	36	503315 2055	697,–	073103 D047	47,–
50-80 mm	0.003	10.3	2.8	47	503315 2080	747,–	073103 D052	53,–
75-105 mm	0.003	10.7	2.8	60	503315 2105	774,–	073103 D049	56,–

5102



a Length of the test area
b Length
c Depth

A Cutting edge thickness
B Cutting edge length



Blade-type measuring areas

Measurement range	Error limit mm	Blade length mm	Blade width mm	art.no.	€	DAkkS calibration art.no.	€
0-30 mm	0.003	6.5	0.75	503617 2007	1.048,–	070160 D002	23,–

5102

SARA® Special-purpose outside micrometers

DIN 863/3 | 0,5 mm | 0,01 mm

- Precision design with ratchet
- Frame with hand protection
- Reading parts matt chrome-plated
- Scale barrel Ø: 17 mm
- Spindle Ø: 6.5 mm
- Calibration includes setting gauge
- Supplied with adjustment key, versions over 25 mm include setting gauge

With Ø 20 mm disc measuring faces

- For tooth width measurement

Measurement range	Measuring surface diameter mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	20	503524 0025	228,–	070160 D001	21,–
25-50 mm	20	503524 0050	260,–	073103 D047	47,–
50-75 mm	20	503524 0075	295,–	073103 D052	53,–
75-100 mm	20	503524 0100	346,–	073103 D052	53,–

5116



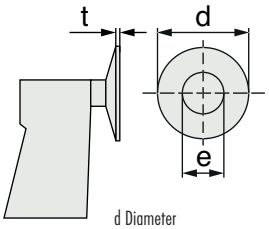
Mitutoyo Special-purpose outside micrometers

DIN 863/3





- Sturdy, with ratchet
- Painted steel clamp
- Reading parts matt chrome-plated
- Scale barrel Ø 18 mm, spindle Ø 6.35 mm
- Supplied with a case, including adjustment key and setting gauge
- Calibration incl. setting gauge



d Diameter
e Diameter 2
t Measuring faces thickness

Type D7, with Ø 20 x 0.7 mm disc measuring faces

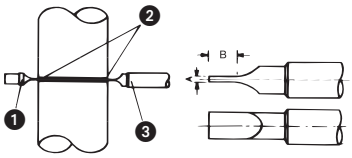
- For tooth width measurement, module 0.5 to 6

Measurement range	Error limit mm	D mm	d4 mm	Measuring surface thickness mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.004	20	8	0.7	503511 0025	280,–	070160 D001	21,–
25-50 mm	0.004	20	8	0.7	503511 0050	313,–	073103 D047	47,–
50-75 mm	0.006	20	8	0.7	503511 0075	345,–	073103 D052	53,–
75-100 mm	0.006	20	8	0.7	503511 0100	400,–	073103 D052	53,–
100-125 mm	0.007	30	12	1.0	503511 0125	422,–	073103 D048	62,–
125-150 mm	0.007	30	12	1.0	503511 0150	446,–	073103 D049	56,–
150-175 mm	0.007	30	12	1.0	503511 0175	478,–	073103 D049	56,–
175-200 mm	0.008	30	12	1.0	503511 0200	517,–	073103 D049	56,–

5102



503511 0025



1 Anvil
2 Measuring area strength 0.75 / 0.4 mm
3 Spindle

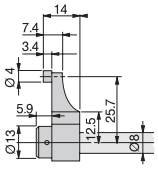
Form D4, with blade-type measuring areas

- For measuring narrow slots and recesses
- 503517 1101 and 503517 1102 carbide-tipped measuring areas

Measurement range	Error limit mm	Thickness of cutting edge mm	Measuring surface depth	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.003	0.75	6.5	503517 1001	316,–	070160 D001	21,–
25-50 mm	0.003	0.75	6.5	503517 1002	382,–	073103 D047	47,–
50-75 mm	0.003	0.75	6.5	503517 1003	408,–	073103 D052	53,–
75-100 mm	0.004	0.75	6.5	503517 1004	444,–	073103 D052	53,–
100-125 mm	0.004	0.75	6.5	503517 1005	472,–	073103 D048	62,–
125-150 mm	0.004	0.75	6.5	503517 1006	500,–	073103 D049	56,–
150-175 mm	0.005	0.75	6.5	503517 1009	538,–	073103 D049	56,–
175-200 mm	0.005	0.75	6.5	503517 1008	588,–	073103 D049	56,–
0-25 mm	0.003	0.4	4.0	503517 1111	342,–	070160 D001	21,–
25-50 mm	0.003	0.4	4.0	503517 1112	364,–	073103 D047	47,–

5102





With measuring jaws

- For measuring in areas that are difficult to access, such as flanges, recesses or bores

Measurement range	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.005	503535 0025	406,–	070160 D001	21,–
25-50 mm	0.006	503535 0050	431,–	073103 D047	47,–
50-75 mm	0.007	503535 0075	515,–	073103 D052	53,–
75-100 mm	0.008	503535 0100	539,–	073103 D052	53,–

5102



Mitutoyo Special-purpose digital outside micrometers IP65

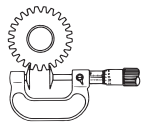
IP65 | DIN 863/3 | 0,5 mm | 0,001 mm | Digi-matic | USB

TÜVRheinland ZERTIFIZIERT — Staub- und Wasserdicht IP65 — www.tuv.com ID 4011207400

- Steel clamp, with ratchet and lock lever
- LCD display with 7.5 mm high digits
- Scale barrel Ø: 18 mm
- Spindle Ø: 6.35 mm
- **Functions:** Initial value (ORIGIN), zeroing/absolute (ZERO/ABS), hold value (HOLD)
- Supplied in a case with adjustment key and SR44 battery (no. 500534 0001); versions over 25 mm include setting gauge
- **Optional accessories:** Digimatic cable type B, no. 563100 0011 (1 m), no. 563100 0012 (2 m), USB cable type B-USB, no. 563110 0002

Type D7

- For tooth width measurement, module 0.5 to 6
- Disc measuring faces Ø 20 x 0.7 mm
- Calibration includes setting gauge



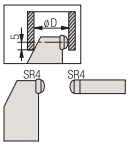


Measurement range	Error limit mm	Measuring surface diameter mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.004	20	503611 0025	877,–	070160 D001	21,–
25-50 mm	0.004	20	503611 1050	977,–	073103 D047	47,–
50-75 mm	0.006	20	503611 1075	1.020,–	073103 D052	53,–
75-100 mm	0.006	20	503611 1100	1.058,–	073103 D052	53,–

5102

Type D1, curved measuring faces, R4

- e.g. for measuring wall thicknesses



D Internal diameter



Measurement range	Error limit mm	Internal diameter	Measuring force N	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.002	15	5-10	503609 0005	700,–	070160 D001	21,–

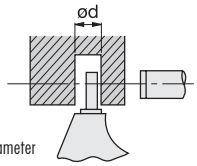
5102



503609 0009



503609 0012



d Internal diameter

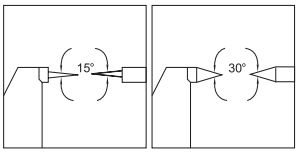


Similar to type D12 with steel pin

- For measuring wall thickness

Measurement range	Error limit mm	Measuring force N	Internal diameter	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.003	3-8	2.0 mm	503609 0009	686,–	070160 D001	21,–
0-25 mm	0.003	3-8	8.2 mm	503609 0012	686,–	070160 D001	21,–

5102







Measuring faces as 15° or 30° tips

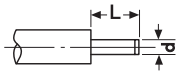
Measurement range	Error limit mm	15° art.no.	€	30° art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.002	503603 0025	789,–	503605 0025	793,–	071210 D001	28,–

5102 5102





Type D3, offset measuring faces



- For measuring grooves, spline shafts, recesses and fittings

Measurement range	Error limit mm	L mm	D mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.002	5	2	503601 0005	818,–	070160 D001	21,–

5102

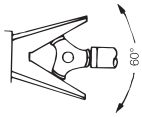
Mitutoyo Special-purpose digital outside micrometers

DIN 863/3 | 0,5 mm | 0,001 mm | Digi-matic | USB

- Sturdy, with ratchet
- Painted steel frame with hand protection
- Spindle fixed by means of a lever button
- Readings via large LCD display with 7.5 mm high digits
- Scale barrel Ø: 18 mm
- Spindle Ø: 6.35 mm
- Calibration includes setting gauge
- **Functions:** Pre-set (PRESET), zeroing/absolute (ZERO/ABS), hold value (HOLD), automatic switch-off, battery check
- Supplied with adjustment key, SR44 battery (no. 500534 0001) and setting gauge
- **Optional accessories:** Digimatic cable type B, no. 563100 0011 (1 m), no. 563100 0012 (2 m); USB cable type B-USB, no. 563110 0002



Type D10-3 for measuring three-fluted machining tools



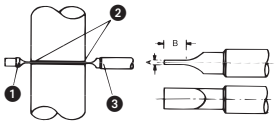
- Precision-lapped measuring face and V-block
- Spindle pitch 0.75 mm

Measurement range	Error limit mm	Angle °	art.no.	€	DAkkS calibration art.no.	€
1-15 mm	0.004	60	503607 0011	1.040,–	070160 D200	78,–
10-25 mm	0.004	60	503607 0012	1.086,–	070160 D200	78,–
25-40 mm	0.005	60	503607 0013	1.114,–	070160 D201	104,–

5102



Type D4 for measuring narrow grooves and recesses



1 Anvil
2 Measuring area strength 0.75 / 0.4 mm
3 Spindle

- Blade-type measuring faces, non-rotating spindle
- Spindle pitch 0.5 mm

Measurement range	Measuring surface depth	Thickness of cutting edge mm	Error limit mm	Hardened measuring areas art.no.	€	DAkkS calibration art.no.	€
0-25 mm	6.5	0.75	0.003	503617 0001	1.186,–	070160 D001	21,–
25-50 mm	6.5	0.75	0.003	503617 0002	1.245,–	073103 D047	47,–
50-75 mm	6.5	0.75	0.003	503617 0003	1.295,–	073103 D052	53,–
75-100 mm	6.5	0.75	0.004	503617 1004	1.350,–	073103 D052	53,–
0-25 mm	3.0	0.4	0.003	503617 0005	1.236,–	070160 D001	21,–
25-50 mm	3.0	0.4	0.003	503617 1006	1.292,–	073103 D047	47,–

5102





SARA® Outside micrometer with replaceable anvil



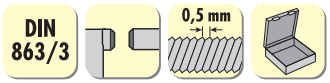
- The replaceable measuring anvils permit a variable measurement range. Adjustments are performed using the setting gauge provided.
- Painted steel frame with bores to reduce weight
- Spindle clamp fixed with locking lever
- Reading parts matt chrome-plated
- Measuring faces: Carbide-tipped spindle
- Inserts: special steel, hardened
- Calibration including setting gauges
- Supplied with adjustment key, replaceable inserts and setting gauges



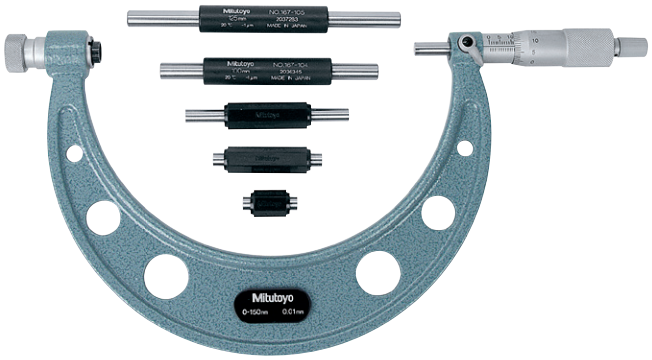
Measurement range	Contents	art.no.	€	DAkkS calibration art.no.	€
0-100 mm	1 outside micrometer, 4 inserts and 3 setting gauges	502935 0100	350,–	073103 D003	201,–
0-150 mm	1 outside micrometer, 6 inserts and 5 setting gauges	502935 0150	455,–	073103 D004	324,–
100-200 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502935 0200	470,–	073103 D005	332,–
200-300 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502935 0300	509,–	073103 D007	332,–

5116

Mitutoyo Outside micrometer with replaceable anvil

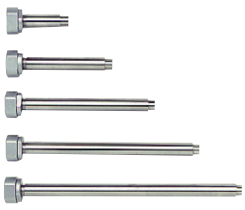


- **Form D16**
- The replaceable measuring anvils permit a variable measurement range. Adjustments are performed using the setting gauge provided.
- Painted steel frame with bores to reduce weight
- Spindle fixed by means of a locking lever
- Reading parts matt chrome-plated
- Scale barrel Ø: up to 300 mm = 18 mm, above 300 mm = 21 mm
- Spindle Ø up to 300 mm = 6.35 mm, above 300 mm = 8 mm
- Error margin: up to 500 mm = DIN, from 500 mm = ± (4 + L/75) µm
- Measuring faces: Carbide-tipped spindle
- Inserts: special steel, hardened
- Calibration including setting gauges
- Supplied with adjustment key, replaceable inserts and setting gauges



Measurement range	Contents	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
0-100 mm	1 outside micrometer, 4 inserts and 3 setting gauges	502931 0100	499,–			073103 D003	201,–
0-150 mm	1 outside micrometer, 6 inserts and 5 setting gauges	502931 0150	733,–			073103 D004	324,–
100-200 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502931 0200	676,–			073103 D005	332,–
150-300 mm	1 outside micrometer, 6 inserts and 6 setting gauges	502931 0300	930,–			073103 D006	450,–
200-300 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502931 0301	700,–			073103 D007	332,–
300-400 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502931 0400	909,–			073103 D008	375,–
400-500 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502931 0500	1.000,–			073103 D009	431,–
500-600 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502931 0600	1.425,–	073103 W010	1.074,–		
600-700 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502931 0700	1.557,–	073103 W010	1.074,–		
700-800 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502931 0800	1.683,–	073103 W010	1.074,–		
800-900 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502931 0900	2.070,–	073103 W010	1.074,–		
900-1000 mm	1 outside micrometer, 4 inserts and 4 setting gauges	502931 1000	2.225,–	073103 W010	1.074,–		

5102



Mitutoyo Digital outside micrometer with replaceable anvil

IP65 | DIN 863/3 | 0,5 mm | 0,001 mm | Digi-matic | USB

Staub- und Wasserdicht IP65
TÜVRheinland ZERTIFIZIERT
www.tuv.com ID 4011207400

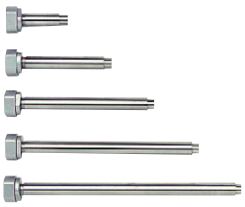
- **Type D16**
- Replaceable measuring anvils permit a variable measurement range. Adjustments are performed using the setting gauge provided.
- Painted steel frame with bores to reduce weight
- Spindle fixed by means of a lever button
- Readings via large LCD display with 7.5 mm high digits
- **With IP65 protection rating (size 0150 and 0300)**
- Scale barrel Ø: up to 300 mm = 18 mm, above 300 mm = 21 mm
- Spindle Ø up to 300 mm = 6.35 mm, above 300 mm = 8 mm
- Error margin: up to 500 mm = DIN
- Measuring faces: Carbide-tipped spindle, inserts made from hardened special steel
- **Functions:** Pre-set (PRESET), zeroing/absolute (ZERO/ABS), hold value (HOLD), automatic switch-off, battery check
- Calibration includes setting gauges
- Supplied with adjustment key, SR44 battery (no. 500534 0001), replaceable inserts and setting gauges
- **Optional accessories:**
  - for size 0150 and 0300: Digimatic cable type B, no. 563100 0011 (1 m), no. 563100 0012 (2 m), USB cable type B-USB, no. 563110 0002
  - for size 0401 and 0501: Digimatic cable type C, no. 563100 0021 (1 m), no. 563100 0022 (2 m), USB cable type C-USB, no. 563110 0003



503321 0150



5033210401 and 5033210501



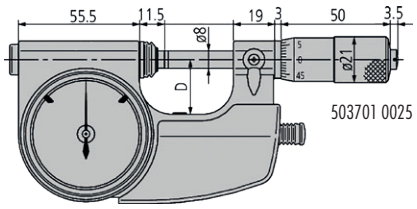
Measurement range	Designation	art.no.	€	DAkkS calibration art.no.	€
0-150 mm	1 outside micrometer, 6 anvils and 5 setting gauges	503321 0150	1.124,–	073103 D004	324,–
150-300 mm	1 outside micrometer, 6 anvils and 6 setting gauges	503321 0300	1.395,–	073103 D006	450,–
300-400 mm	1 outside micrometer, 4 anvils and 4 setting gauges	503321 0401	1.425,–	073103 D008	375,–
400-500 mm	1 outside micrometer, 4 anvils and 4 setting gauges	503321 0501	1.479,–	073103 D009	431,–

5102

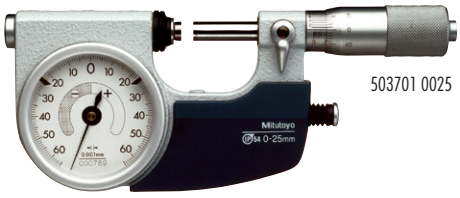
Mitutoyo Indicating calliper micrometer

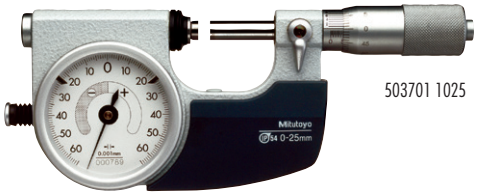
IP54 | DIN 863/3 | 0,5 mm

- **Type D13**
- For series testing
- Large easy-to-read scale
- Measuring faces carbide-tipped, ground and finely lapped
- Screw for carrying out zeroing adjustments
- Adjustable tolerance marks for go and no-go measurements
- Conveniently located return motion lever on the right or left side
- Matt chrome-plated scale barrel and scale sleeve, Ø 21 mm
- Measuring spindle Ø 8 mm
- Display range ± 0.06 mm
- Error margin for micrometer: 0.002 mm
- Error margin for display: 0.001 mm
- Planarity 0.3 µm
- Measuring force 5 - 10 N
- Calibration includes setting gauge
- Supplied with adjustment key, versions over 25 mm include setting gauge



503701 0025


503701 0025


503701 1025

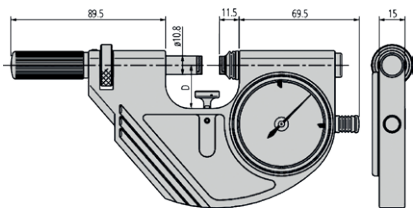
Measurement range	Operating type	Alignment tolerance	Depth mm	Weight kg	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
0-25 mm	Control button right	0.6 µm	25	0.520	503701 0025	893,–	070170 D001	36,–
0-25 mm	Control button left	0.6 µm	25	0.520	503701 1025	877,–	070170 D001	36,–
25-50 mm	Control button left	0.6 µm	38	0.670	503701 0050	986,–	073103 D012	71,–
50-75 mm	Control button left	1 µm	50	0.820	503701 0075	1.198,–	073103 D012	71,–
75-100 mm	Control button left	1 µm	63	0.970	503701 0100	1.275,–	073103 D012	71,–

5102

Mitutoyo Passameter

IP54

- For series testing
- With built-in indicating calliper
- Conveniently located return motion lever
- Workpiece support
- Measuring faces Ø 10.8 mm
- Planarity 0.3 µm
- Measuring force 5 - 10 N
- Large easy-to-read scale
- Adjustable tolerance marks for go and no-go measurements
- Display range ± 0.06 mm
- Error margin for indicating calliper: 0.001 mm



503705 0025


503705 0025

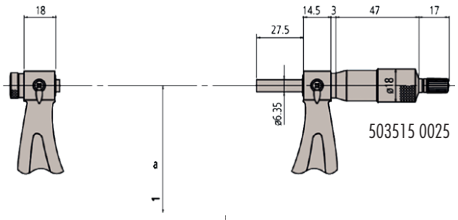
Measurement range	Alignment tolerance	Depth mm	Weight kg	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
0-25 mm	0.6 µm	25	0.740	503705 0025	745,–	070170 D001	36,–
25-50 mm	0.6 µm	35	0.840	503705 0050	836,–	070170 D002	42,–
50-75 mm	1 µm	47.5	0.950	503705 0075	918,–	070170 D002	42,–
75-100 mm	1 µm	60	1.080	503705 0100	1.018,–	070170 D002	42,–

5102

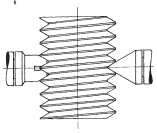
Mitutoyo Special-purpose outside micrometers for testing external threads

55° 60° IP65 DIN 863/3 0,5 mm 0,001 mm Digi-matic USB

- **Type D18**, with locating bores for optional thread inserts
- For measuring pitch diameters on external threads
- Painted steel frame with hand protection, spindle fixed by means of a locking lever
- Scale barrel Ø: 18 mm
- Spindle Ø: 6.35 mm
- Calibration includes setting gauge
- Measuring inserts not included



503515 0025





503515 0025

Analogue

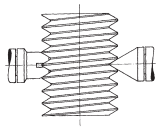
- Reading parts matt chrome-plated
- 0.01 mm readings
- Supplied with adjustment key, versions over 25 mm include 60° setting gauge

Measurement range	Depth mm	art.no.	€	DAkkS calibration art.no.	€	Factory calibration art.no.	€
0-25 mm	25	503515 0025	386,–	071260 D001	28,–		
25-50 mm	32	503515 0050	462,–			073103 W057	32,–
50-75 mm	45	503515 0075	515,–			073103 W057	32,–
75-100 mm	65	503515 0100	544,–			073103 W057	32,–
100-125 mm	79	503515 0125	562,–			073103 W056	43,–
125-150 mm	93	503515 0150	680,–			073103 W056	43,–
150-175 mm	105	503515 0175	745,–			073103 W056	43,–
175-200 mm	120	503515 0200	797,–			073103 W056	43,–

5102

Digital

- LCD display with 7.5 mm high digits
- 0.001 mm readings
- Automatic switch-off, battery check
- Supplied with SR44 battery (no. 500534 0001) and adjustment key, versions over 25 mm include 60° setting gauge
- **Optional accessories:** Digimatic cable type B, no. 563100 0011 (1 m), no. 563100 0012 (2 m); USB cable type B-USB, no. 563110 0002





Measurement range	Depth mm	art.no.	€	DAkkS calibration art.no.	€	Factory calibration art.no.	€
0-25 mm	25	503615 1025	901,–	071260 D001	28,–		
25-50 mm	32	503615 1050	1.106,–			073103 W057	32,–
50-75 mm	45	503615 1075	1.133,–			073103 W057	32,–
75-100 mm	63.5	503615 1100	1.193,–			073103 W057	32,–

5102

Individual measuring inserts, 60°, for metric and UNF threads

- Hardened, with precision-finished V-block, taper and clamping shank





Designation	Min./max. pitch	art.no.	€	DAkkS calibration art.no.	€
Thread measuring insert 60° metric / UNF	0.4-0.5 mm / 64-48 Gang UNF	504009 0001	80,–	075662 D001	40,–
Thread measuring insert 60° metric / UNF	0.6-0.9 mm / 44-28 Gang UNF	504009 0002	80,–	075662 D001	40,–
Thread measuring insert 60° metric / UNF	1.0-1.75 mmn / 24-14 Gang UNF	504009 0003	80,–	075662 D001	40,–
Thread measuring insert 60° metric / UNF	2.0-3.0 mm / 13-9 Gang UNF	504009 0004	80,–	075662 D001	40,–
Thread measuring insert 60° metric / UNF	3.5-5.0 mm / 8-5 Gang UNF	504009 0005	80,–	075662 D001	40,–
Thread measuring insert 60° metric / UNF	5.5-7.0 mm /4.5-3.5 Gang UNF	504009 0006	80,–	075662 D001	40,–

5102

Individual measuring inserts, 55°, for Whitworth threads





Designation	Min./max. pitch	art.no.	€	DAkkS calibration art.no.	€
Thread measuring insert 55° Whitworth	60-48 thread/inch	504011 0001	80,–	075662 D001	40,–
Thread measuring insert 55° Whitworth	48-40 thread/inch	504011 0002	80,–	075662 D001	40,–
Thread measuring insert 55° Whitworth	40-32 thread/inch	504011 0003	80,–	075662 D001	40,–
Thread measuring insert 55° Whitworth	32-24 thread/inch	504011 0004	80,–	075662 D001	40,–
Thread measuring insert 55° Whitworth	24-18 thread/inch	504011 0005	80,–	075662 D001	40,–
Thread measuring insert 55° Whitworth	18-14 thread/inch	504011 0006	80,–	075662 D001	40,–
Thread measuring insert 55° Whitworth	14-10 thread/inch	504011 0007	80,–	075662 D001	40,–
Thread measuring insert 55° Whitworth	10-7 thread/inch	504011 0008	80,–	075662 D001	40,–
Thread measuring insert 55° Whitworth	7-4.5 thread/inch	504011 0009	80,–	075662 D001	40,–
Thread measuring insert 55° Whitworth	4.5-3.5 thread/inch	504011 0010	80,–	075662 D001	40,–

5102

Measuring insert sets, 55° and 60°

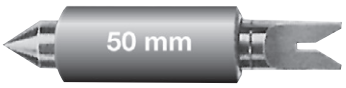
- 504009.... 60° thread angle
- 504011.... 55° thread angle

Contents	art.no.	€	DAkkS calibration art.no.	€
Thread measuring inserts 60° 5040090001 to 5040090006	504009 0020	427,–	075662 D006	220,–
Thread measuring inserts 55° 5040110001 to 5040110010	504011 0011	695,–	075662 D007	364,–
	5102			

Setting gauges, 55° and 60°

- Hardened and precision-finished
- With hand protection
- 504005.... 55° thread angle
- 504007.... 60° thread angle

Nominal dimension mm	55° art.no.	€	60° art.no.	€	Factory calibration art.no.	€
25	504005 0025	71,–	504007 0025	71,–	073103 W126	60,–
50	504005 0050	77,–	504007 0050	77,–	073103 W126	60,–
75	504005 0075	92,–	504007 0075	92,–	073103 W126	60,–
100	504005 0100	105,–	504007 0100	105,–	073103 W126	60,–
125	504005 0125	118,–	504007 0125	118,–	073103 W127	60,–
	5102		5102			



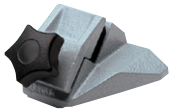
504007 0050

Mitutoyo Holder for outside micrometers

- 5040010001: Cast iron design with large standing surface for holding outside micrometers with measurement ranges up to 100 mm; ideal reading position can be set by means of a swivel-mounted clamping jaw
- 5040010002: Cast-iron design especially for holding digital outside micrometers with measurement ranges up to 50 mm, clamping range 4 to 12 mm



504001 0001



504001 0002

Suitable for	art.no.	€
For outside micrometers up to 100 mm	504001 0001	73,–
For digital outside micrometers up to 50 mm	504001 0002	60,–
	5102	

SARA® Holder for outside micrometers

- Cast iron design
- With a large standing surface for holding outside micrometers with measurement ranges up to 100 mm
- Ideal reading position can be adjusted by means of a swivel-mounted clamping jaw



Designation	art.no.	€
For outside micrometers up to 300 mm	504002 0001	41,30
	5116	

Over 200,000 tools available online!
Register online now!
www.saratools.com

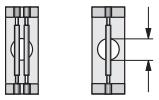


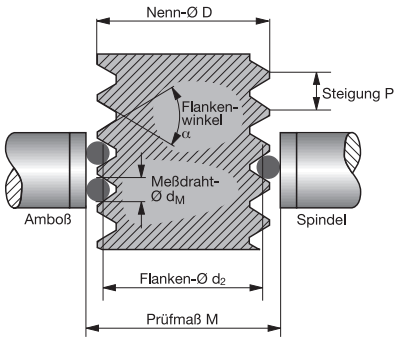
Mitutoyo Thread measuring wires

- For mounting on micrometers
- For determining the pitch diameter of outside threads based on the three-wire method
- hardened, precision-lapped
- Error margin 0.001mm
- with locating bore Ø 6.35mm
- other versions available on request
- Free software for check gauge calculation is available on our homepage



Check gauge M for metric thread DIN 13 Sheet 1
M3 = 3.113mm / M10 = 10.414mm / M22 = 23.163mm
M4 = 4.305mm / M12 = 12.650mm / M24 = 25.606mm
M5 = 5.153mm / M14 = 15.021mm / M27 = 28.605mm
M6 = 6.346mm / M16 = 17.021mm / M30 = 30.848mm
M8 = 8.282mm / M20 = 21.163mm / M33 = 33.848mm





Thread	Min./max. pitch	Whitworth TPI	UNC, UNF TPI	Wire Ø mm	Holding fixture Ø 6.35 mm art.no.	€	DAkkS calibration art.no.	€
M3	0.50 mm	-	56	0.290	504019 0290	205,–	075032 D009	50,–
M4-M5	0.70-0.80 mm	-	32	0.455	504019 0455	205,–	075032 D009	50,–
M6-M7	1.00 mm	26.24	24	0.620	504019 0620	205,–	075032 D009	50,–
M8-M9	1.25 mm	22.20.19	20	0.725	504019 0725	205,–	075032 D009	50,–
M10-M11	1.50 mm	18.16	18, 16	0.895	504019 0895	205,–	075032 D009	50,–
M12	1.75 mm	14	14, 13	1.100	504019 1100	205,–	075032 D009	50,–
M14-M16	2.00 mm	12.11	12, 11	1.350	504019 1350	205,–	075032 D009	50,–
M20-M22	2.50 mm	10.9	10, 9	1.650	504019 1650	205,–	075032 D009	50,–
M24-M33	3.00-3.50 mm	8.7	8, 7	2.050	504019 2050	205,–	075032 D009	50,–

5103

Mitutoyo Setting gauges for outside micrometers

- For testing and adjusting outside micrometers
- Hardened
- With hand protection
- Finely lapped measuring faces
- With actual dimension details
- Error margin: ± (1 + L/50) µm
- Planarity: 0.3 µm
- Setting gauges up to 2,000 mm available on request

Nominal dimension mm	art.no.	€	DAkkS calibration art.no.	€
25	504003 0025	35,–	075033 D001	22,–
50	504003 0050	38,–	075033 D001	22,–
75	504003 0075	39,–	075033 D002	22,–
100	504003 0100	40,–	075033 D002	22,–
125	504003 0125	43,–	075033 D003	34,–
150	504003 0150	45,–	075033 D003	34,–
175	504003 0175	47,–	075033 D003	34,–
200	504003 0200	52,–	075033 D003	34,–
225	504003 0225	60,–	075033 D004	34,–
250	504003 0250	64,–	075033 D004	34,–
275	504003 0275	72,–	075033 D004	34,–
300	504003 0300	77,–	075033 D004	34,–
325	504003 0325	84,–	075033 D005	50,–
350	504003 0350	96,–	075033 D005	50,–
375	504003 0375	105,–	075033 D005	50,–
400	504003 0400	118,–	075033 D005	50,–
425	504003 0425	124,–	075033 D006	50,–
450	504003 0450	136,–	075033 D006	50,–
475	504003 0475	154,–	075033 D006	50,–
500	504003 0500	164,–	075033 D006	50,–

5102



Mitutoyo Adjustable gap gauge

- Quick and reliable measurement of outside diameters up to 300 mm
- Check gauge adjusted with the aid of a corresponding gauge block
- Sturdy cast iron frame with Ø 8 mm collet for attaching a dial indicator
- Finely lapped carbide measuring faces
- Frame with insulation protection
- Lower measuring surface can be adjusted by 25 mm and is fixed by a locking ring
- Adjustable depth stop
- Measuring force 15 ± 3 N
- Measuring face parallelism: 0.005 mm
- Calibration plus testing costs for the indicating measuring instrument
- Supplied without dial indicator in moulded packaging



Application example with digital dial indicator and holder

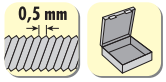


529001 0025

Measurement range	L mm	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
0-25 mm	277	529001 0025	587,–			074008 D001	62,–
25-50 mm	302	529001 0050	602,–			074008 D001	62,–
50-75 mm	328	529001 0075	623,–			074008 D001	62,–
75-100 mm	353	529001 0100	636,–			074008 D001	62,–
100-125 mm	379	529001 0125	673,–			074008 D002	79,–
125-150 mm	404	529001 0150	703,–			074008 D002	79,–
150-175 mm	429	529001 0175	741,–			074008 D002	79,–
175-200 mm	455	529001 0200	768,–			074008 D002	79,–
200-225 mm	480	529001 0225	802,–	074008 W901	96,–		
225-250 mm	506	529001 0250	835,–	074008 W901	96,–		
250-275 mm	531	529001 0275	877,–	074008 W901	96,–		
275-300 mm	536	529001 0300	907,–	074008 W901	96,–		

5102

Mitutoyo Depth micrometer



- With ratchet
- Bridge made from hardened and lapped tool steel
- Reading parts matt chrome-plated
- Spindle travel 25 mm, spindle Ø 4 mm
- Scale barrel Ø 18 mm
- Hardened and precision-machined inserts
- 504503 / 504505.... with replaceable measuring inserts
- Calibration includes inserts
- Supplied with adjustment key

Measuring bridge 63.5 x 16 mm

Measurement range	Design	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
0-25 mm		504501 0025	181,–			074009 D001	32,–
0-50 mm		504503 0050	211,–	073103 W107	60,–		
0-75 mm		504503 0075	224,–	073103 W108	80,–		
0-100 mm		504503 0100	278,–	073103 W104	100,–		
0-150 mm		504503 0150	384,–	073103 W105	210,–		
0-300 mm		504503 0300	579,–	073103 W106	1.014,–		

5102



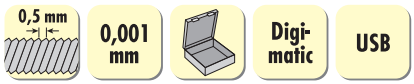
504501 0025

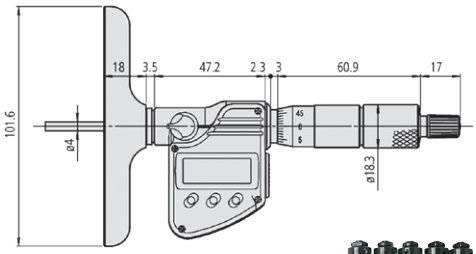
Measuring bridge 101.6 x 16 mm

Measurement range	Bridge length x bridge width mm	Design	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
0-25 mm	101.6x16		504501 1025	225,–			074009 D001	32,–
0-50 mm	101.6x16		504505 0050	247,–	073103 W107	60,–		
0-75 mm	101.6x16		504505 0075	263,–	073103 W108	80,–		
0-100 mm	101.6x16		504505 0100	305,–	073103 W104	100,–		
0-150 mm	101.6x16		504505 0150	398,–	073103 W105	210,–		
0-300 mm	101.6x16		504505 0300	607,–	073103 W106	1.014,–		

5102

Mitutoyo Digital depth micrometer





- With ratchet
- Bridge made of tool steel, hardened and lapped
- Extremely easy to read thanks to 6.6 mm high LCD digits
- **With replaceable measuring inserts**
- Spindle travel 25 mm, spindle Ø 4 mm
- Scale barrel Ø 18 mm
- **Functions:** Pre-set (PRESET), zeroing/absolute (ZERO/ABS), hold value (HOLD), automatic switch-off and battery check
- Dimension A = measurement range
- Calibration includes inserts
- Supplied with adjustment key, battery SR 44 No. 500534 0001 and replaceable measuring inserts
- **Special accessories:** Digimatic cable Type B No. 563100 0011 (1 m), No. 563100 0012 (2 m), USB cable Type B-USB No. 563110 0002



Measurement range	Bridge length x bridge width mm	Design	art.no.	€	Factory calibration art.no.	Factory calibration €
0-150 mm	101.6x16	6 measuring inserts	504601 1150	967,–	073103 W105	210,–
0-300 mm	101.6x16	12 measuring inserts	504601 1300	1.235,–	073103 W106	1.014,–

5102

Mitutoyo Depth gauge with dial indicator readings



- **With replaceable extensions**
- Bridge made from hardened and lapped tool steel
- Anticlockwise dial indicator
- Measurement depth adjusted by changing the dial indicator extensions
- Diameter of extension: 5 mm
- Dial indicator accuracy: fe = 12 µm
- Calibration includes measuring bridge
- Supplied with extensions



Max. length measuring range mm	Bridge length x bridge width mm	art.no.	€	Factory calibration art.no.	Factory calibration €
0-200 mm	63.5x16	504801 0200	249,–	073103 W024	28,–
0-200 mm	101.6x16	504801 1200	263,–	073103 W024	28,–

5102





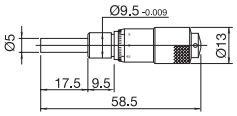
MITUTOYO
Measuring equipment catalogue
635 pages
Art.no. 019900 0086

Overview of all free manufacturers' catalogues on page 20/21

Mitutoyo Built-in micrometers

0,5 mm | 0,01 mm

- For integration into fixtures and machinery, allowing moving parts to be precisely positioned
- Spindle fully hardened and ground
- Reading parts matt chrome-plated
- Straight clamping shank

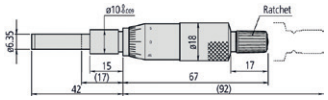


Small version
- Measuring areas, hardened (> 60 HRC)

Measurement range	Error limit mm	Clamp in shank diameter mm	art.no.	€	DAkkS calibration art.no.	€
0-13 mm	0.002	9.5	500111 0022	65,–	071230 D001	48,–

5102


5001110022



Standard version
- With rotating spindle
- Carbide-tipped measuring areas

Measurement range	Error limit mm	Clamp in shank diameter mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	0.002	10	505120 0004	75,–	071230 D001	48,–

5102


505120 0004

Mitutoyo Digital built-in micrometer

0,5 mm | 0,001 mm | Digi-matic | USB

- Specially for use with coordinate measuring tables on measuring microscopes and measuring projectors
- Display component can be rotated through 330°
- Extremely easy to read with 7.5 mm high digits
- Automatic switch-off after 20 minutes
- Display and control buttons made from oil-resistant materials
- Straight clamping shank, Ø 18 mm
- Ø 49 mm adjustment barrel with crank for quick adjustment
- Spindle hardened and ground
- **Functions:** ON/ZERO/ABS, reverse counting direction, PRESET
- Supplied in moulded packaging with two SR44 batteries, no. 500534 0001
- **Optional accessories:** Digimatic cable type C, no. 563100 0021 (1 m), no. 563100 0022 (2 m), USB cable type C-USB, no. 563110 0003



Max. length measuring range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
50	0.003	505404 0001	982,–	071230 D002	56,–

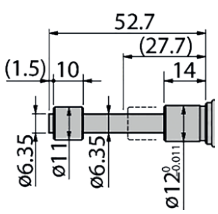
5102

Mitutoyo Digital built-in micrometer IP65

IP65 | 0,5 mm | 0,001 mm | Digi-matic | USB

Staub- und Wasserdicht IP65
TÜVRheinland ZERTIFIZIERT
www.tuv.com ID 4011207400

- Base body made from special cast iron, painted
- Spindle fixed by means of a clamping screw
- Extremely easy to read with 6.6 mm high digits
- Activates automatically when spindle moves
- Straight clamping shank, Ø 12 mm
- Spindle Ø 6.35 mm
- **Functions:** Pre-set (PRESET), zeroing/absolute (ZERO/ABS), hold value (HOLD)
  automatic switch-off, battery check
- Supplied in moulded packaging with adjustment key and SR44 battery, no. 500534 0001
- **Optional accessories:** Digimatic cable type B, no. 563100 0011 (1 m), no. 563100 0012 (2 m), USB cable type B-USB, no. 563110 0002






505402 0006

Max. length measuring range mm	Error limit mm	Design	art.no.	€	DAkkS calibration art.no.	€
0-25	0.002	Non-rotating measurement surface	505402 0005	573,–	071230 D001	48,–
0-25	0.002	Carbide-tipped	505402 0006	532,–	071230 D001	48,–

5102

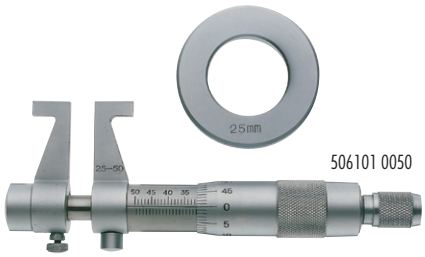
Inside micrometer with measuring jaws

Werks-norm | 0,5 mm

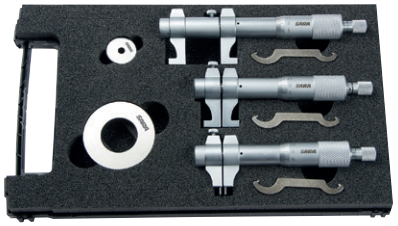
- Workshop version with matt chrome-plating
- With ratchet
- Carbide-tipped measuring faces, precision machined
- Spindle fixed via a clamping screw
- Reading parts matt chrome-plated
- Scale barrel Ø: 17 mm
- Calibration includes ring gauges, reduced testing
- Supplied with adjustment key and ring gauge for measurement ranges 5 - 30 and 25 - 50 mm



506101 0030 with pin gauges



506101 0050



Individual

Measurement range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
5-30	0.010	506101 0030	225,–	073103 D078	67,50
25-50	0.012	506101 0050	243,–	073103 D019	67,50
50-75	0.014	506101 0075	282,–	072004 D001	62,–
75-100	0.016	506101 0100	329,–	072004 D001	62,–

5116

Set

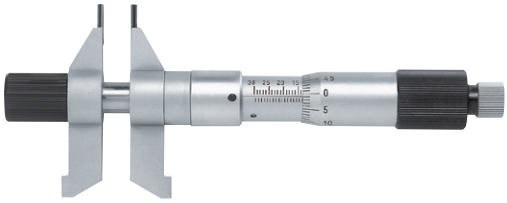
Measurement range mm	Contents	art.no.	€	DAkkS calibration art.no.	€
5-75	3x inside micrometers, 2x ring gauges: 5 and 25 mm	506103 0075	679,–	073103 D002	171,–

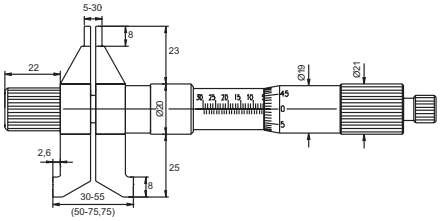
5116

ATORN Inside micrometer with double jaws

Werks-norm | 0,5 mm

- Hardened and ground measuring spindle with ball bearing
- With robust, cylindrical **carbide measuring jaws**
- Two separate, individually adjustable inner scale sleeves for easy, direct readings and adjustment
- Measuring barrel Ø 21 mm
- Precision: 2 µm
- Constant measuring pressure due to advanced friction coupling





Measurement range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
5-55	0.0025	506101 0555	1.129,–	073103 D079	82,–

5181

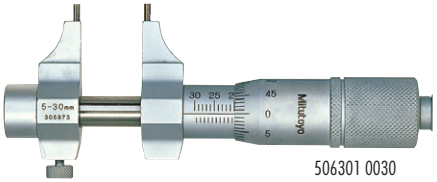
Mitutoyo Inside micrometer with measuring jaws

Werks-norm | 0,5 mm

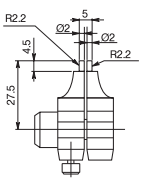
- Precision design, matt chrome-plated
- With ratchet
- Carbide-tipped measuring faces, precision machined
- Reading parts matt chrome-plated
- Scale barrel Ø: 17 mm
- Supplied with adjustment key



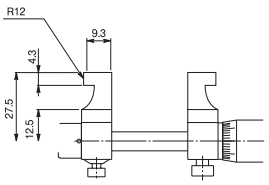
From 506301 0050 with pin gauges



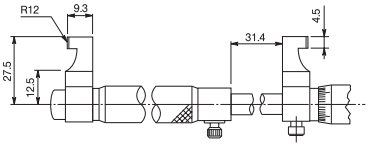
506301 0030



Measurement range 5-30 mm



Measurement range 25-50 mm



Measurement range > 50 mm

Measurement range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
5-30	0.005	506301 0030	311,–	072004 D001	62,–
25-50	0.006	506301 0050	353,–	072004 D001	62,–
50-75	0.007	506301 0075	367,–	072004 D001	62,–
75-100	0.008	506301 0100	421,–	072004 D001	62,–
100-125	0.009	506301 0125	565,–	072004 D002	69,–
125-150	0.009	506301 0150	635,–	072004 D002	69,–

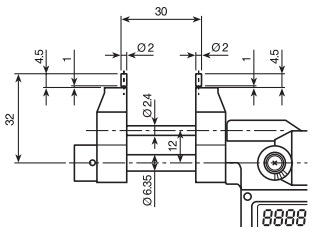
5102

Mitutoyo Digital inside micrometer with jaws

Werks-norm | 0,5 mm | 0,001 mm | Digi-matic | USB



- Precision design with ratchet
- Spindle fixed via a clamping screw
- Carbide-tipped measuring faces, precision machined
- Extremely easy to read via LCD display with 6.6 mm high digits
- Activates automatically when spindle moves
- Scale barrel Ø: 18 mm
- **Functions:** Pre-set (PRESET), zeroing/absolute (ZERO/ABS), hold value (HOLD) Automatic switch-off, battery check
- Supplied with adjustment key and SR44 battery, no. 500534 0001
- **Optional accessories:** Digimatic cable type B, no. 563100 0011 (1 m), no. 563100 0012 (2 m); USB cable type B-USB, no. 563110 0002

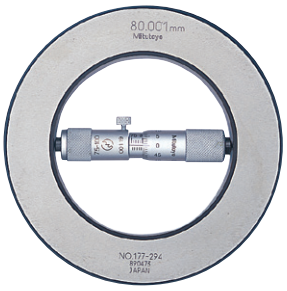


Measurement range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
5-30	0.005	506402 0030	943,–	072004 D001	62,–

5102

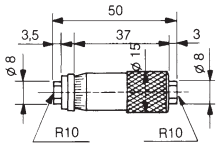
Mitutoyo Inside micrometer, fixed version

DIN 863/4 | 0,5 mm | 0,01 mm

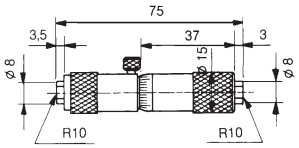


- Lightweight design featuring tubular construction
- Reading parts matt chrome-plated
- Rounded measuring faces carbide-tipped and lapped
- For measurement ranges from 75 mm, spindle is fixed by means of a clamping screw
- Measurement ranges above 100 mm include hand protection
- Scale barrel Ø: up to 100 mm = 15 mm, above 100 mm = 18 mm
- Supplied with adjustment key

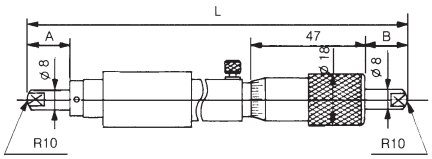




Size 0075



Size 0100



L Length Length of test area A/B

Single units

Measurement range mm	L mm	Length of the test face mm	art.no.	€	DAkkS calibration art.no.	€
50-75	50	3.5 / 3.0	506501 0075	165,–	072003 D001	36,–
75-100	75	3.5 / 3.0	506501 0100	172,–	072003 D001	36,–
100-125	100	5.0 / 3.0	506501 0125	179,–	072003 D001	36,–
125-150	125	5.0 / 3.0	506501 0150	183,–	072003 D001	36,–
150-175	150	18.0 / 15.0	506501 0175	189,–	072003 D001	36,–
175-200	175	18.0 / 15.0	506501 0200	203,–	072003 D001	36,–
200-225	200	18.0 / 15.0	506501 0225	213,–	072003 D002	64,–
225-250	225	18.0 / 15.0	506501 0250	221,–	072003 D002	64,–
250-275	250	18.0 / 15.0	506501 0275	230,–	072003 D002	64,–
275-300	275	18.0 / 15.0	506501 0300	248,–	072003 D002	64,–

5102

Mitutoyo Inside micrometer set



- Modular design
- Screwing on the graduated extensions makes it possible to measure all dimensions within the specified ranges
- Calibration includes extensions
- Supplied with adjustment key



506701 0300

Hardened measuring faces

- Extensions with ground internal rod serving as the material measure
- Micrometer measurement range 13 mm
- Micrometer fixed by means of clamping screws
- Reading parts chrome-plated
- Scale barrel Ø: 15 mm
- Tubular Ø of extensions: 12.5 mm
- Error margin: (3+V+L/50) µm, L in mm, V = number of extensions

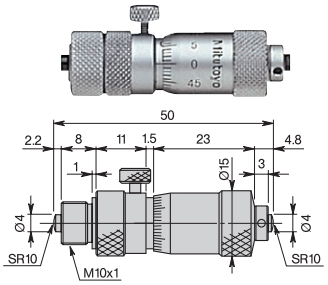
Measurement range mm	Extensions mm	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
50-150	13, 25, 50	506701 0150	285,–			073103 D016	144,–
50-300	13, 25, 50, 50.100	506701 0300	405,–			073103 D017	216,–
50-500	13, 25, 50, 50, 100, 200	506701 0500	568,–			073103 D018	252,–
50-1000	13, 25, 50, 50, 100, 200, 200, 300	506701 1000	750,–	073103 W117	308,–		
50-1500	13, 25, 50, 50, 100, 200, 200, 200, 300, 300	506701 1500	982,–	073103 W118	406,–		

5102

Carbide-tipped measuring faces

Measurement range mm	Extensions mm	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
50-150	13, 25, 50	506701 0151	367,–			073103 D016	144,–
50-300	13, 25, 50, 50, 100	506701 0301	519,–			073103 D017	216,–
50-500	13, 25, 50, 50, 100, 200	506701 0501	712,–			073103 D018	252,–
50-1000	13, 25, 50, 50, 100, 200, 200, 300	506701 1001	888,–	073103 W117	308,–		
50-1500	13, 25, 50, 50, 100, 200, 200, 200, 300, 300	506701 1501	1.132,–	073103 W118	406,–		

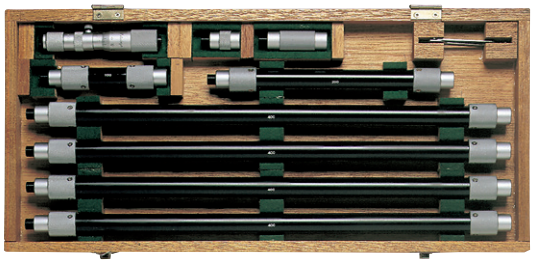
5102



Spare micrometer heads for micrometer sets, 506701....

Measurement range mm	Design	art.no.	€	DAkkS calibration art.no.	€
0-13	Hardened measuring surfaces	506701 0001	185,–	072003 D001	36,–
0-13	Carbide-tipped measuring surfaces	506701 0002	232,–	072003 D001	36,–

5102



Carbide-tipped measuring faces

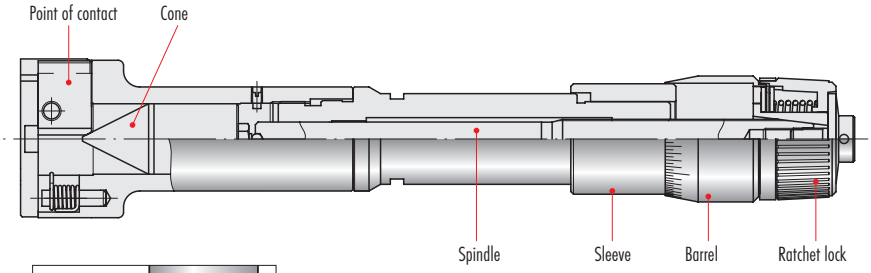
- Tubular extensions can be used individually as material measures
- Micrometer measurement range 25 mm
- Micrometer fixed by means of clamping screws
- Reading parts chrome-plated
- Scale barrel Ø: 18 mm
- Tubular Ø of extensions: 17 mm
- Error margin: (3+V+L/50) µm, L in mm, V = number of extensions

Measurement range mm	Extensions mm	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
100-500	25, 50, 100, 200	506703 0500	783,–			073103 D015	180,–
100-900	25, 50, 100, 200, 400	506703 0900	937,–	073103 W116	218,–		
100-1300	25, 50, 100, 200, 400, 400	506703 1300	1.124,–	073103 W113	286,–		
100-1700	25, 50, 100, 200, 400, 400, 400	506703 1700	1.317,–	073103 W114	354,–		
100-2100	25, 50, 100, 200, 400, 400, 400, 400	506703 2100	1.463,–	073103 W115	422,–		

5102

Inside micrometers

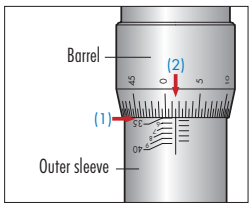
INFO



Reading off the scale

Scale division 0.005 mm

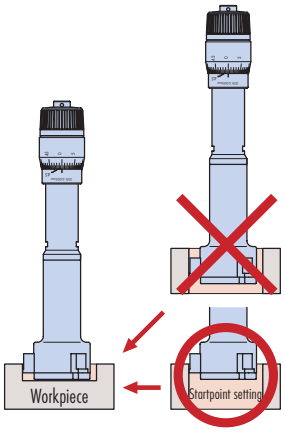
(1) external sleeve	35.000 mm
(2) barrel	0.015 mm
Reading	35.015 mm



Changing the measured values through a different measuring position

When using the Holtest Series, the measurement values when measuring with fully adjacent measuring faces and when measuring just with the points of the measuring face vary, due to the mechanical properties of the micrometer. Before measuring, set the reference value under the same conditions.

If only the points of the measuring faces are used for the measurement, then adjust the reference value correspondingly. The set-up must be as careful as the measurement!



Alignment error

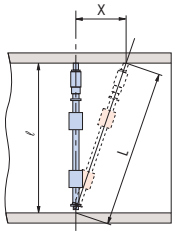


Fig. 1
ℓ: The inner diameter to be measured
L: Length measured with axial offset X
X: Offset in axial direction
Δ: ℓ Error in measurement
Δℓ: L-ℓ=√ℓ2+X2-ℓ

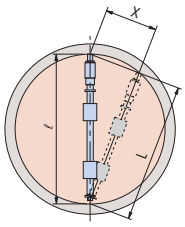
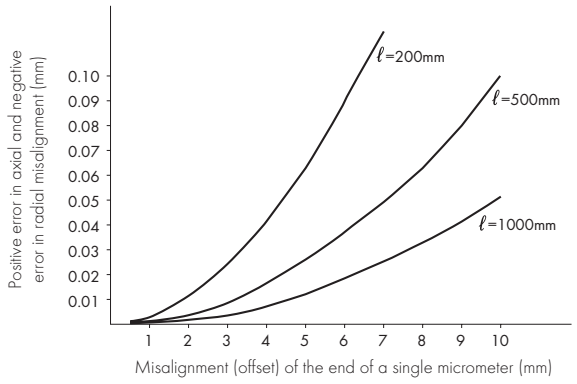


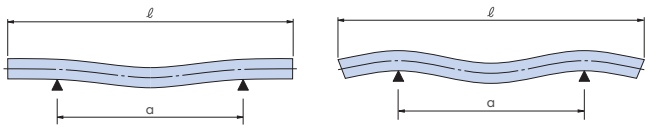
Fig. 2
ℓ: The inner diameter to be measured
L: Length measured with radial offset X
X: Offset in radial direction
Δℓ: Error in measurement
Δℓ: L-ℓ=√ℓ2-X2-ℓ

When carrying out a measurement with the inside micrometer in an axial or radial direction, attention must be paid to the correct orientation of the inside micrometer. Misalignment during the measurement leads to the offset X (Figure 1 and Figure 2), and thus to an incorrect measurement. An axial offset X suggests a larger and a radial offset X a smaller than expected measurement.



Airy points and Bessel points

When a normal or an inside micrometer is positioned horizontally, supported at two points, it undergoes some bowing under load due to its own weight; the shape of this deformation depends on the distance between the support points. As the following figure shows, there are two distances between the supporting positions, which control this deformation in useful ways.



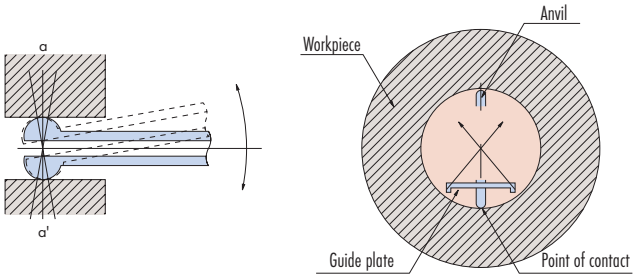
The ends of a standard (or inside) micrometer can be positioned precisely horizontally by spacing the two support positions symmetrically (see above figure).These points are referred to as 'Airy points' and are often used to ensure that the ends of a length-measuring instrument are parallel to each other, allowing the length to be determined accurately. The change in length of a standard (or inside) micrometer due to bowing under load can be reduced to a minimum by spacing the two positions of the supports symmetrically (see above figure). These points are called Bessel points and may be useful when using long inside micrometers.

Measurement errors due to temperature fluctuations of the inside micrometer

The heat transfer from the operator to the inside micrometer should be minimised to avoid significant measurement errors due to the temperature difference between the workpiece and the bore gauge. If the bore gauge is held directly in the hand, gloves should be worn or it should be gripped via a heat insulator (if available).

Inside measuring instruments

Mitutoyo internal measuring instruments for small holes have contact elements with a large curvature, allowing these to be easily positioned when measuring the diameter of the actual hole (in the direction a-a). The true diameter is the minimum value displayed on the dial indicator, while the internal measuring instrument is moved back and forth as shown by the arrow.



The spring-loaded centring bridge on a Mitutoyo two-point inside measuring device allows an automatic radial alignment, thus requiring only an axial rocking movement to find the minimum reading (true diameter).

SARA® Inside micrometers with three-point contacts

DIN 863/4 | 0,5 mm

- For measuring through-holes and blind holes
- Large measurement depths due to extension
- Reading and operating parts matt chrome-plated
- Measuring spindle fully hardened and ground
- Ratchet coupling for repeatable measuring force
- Self-centring measuring head with three laterally extending measuring probes
- Carbide-tipped from a measurement range of 12 mm
- Clearance a for 6 – 12 mm = 1.4 mm, 12 – 100 mm = 0.5 mm
- Scale division up to size 0012 = 0.001 mm, from size 0016 = 0.005 mm
- Calibration including ring gauges, reduced testing
- Supplied in a sturdy transport case including ring gauge and extension



Ring gauge standard accessories



507703 0040

507703 0088



Individual

Error limit µm	Adjusting ring diameter mm	Measuring depth mm	Measuring depth max. mm	art.no.	€	DAkkS calibration art.no.	€
4	6	55	155	507703 0008	350,–	073103 D062	36,–
4	8	55	155	507703 0010	350,–	073103 D062	36,–
4	10	55	155	507703 0012	350,–	073103 D062	36,–
4	16	81	231	507703 0016	322,–	073103 D062	36,–
4	16	81	231	507703 0020	322,–	073103 D062	36,–
4	25	91	241	507703 0025	355,–	073103 D062	36,–
4	25	91	241	507703 0030	355,–	073103 D062	36,–
4	40	101	251	507703 0040	395,–	073103 D062	36,–
5	40	101	251	507703 0050	430,–	073103 D062	36,–
5	62	101	251	507703 0063	475,–	073103 D061	80,–
5	62	115	265	507703 0075	490,–	073103 D061	80,–
5	87	115	265	507703 0088	505,–	073103 D061	80,–
5	87	115	265	507703 0100	550,–	073103 D061	80,–

5120

Sets

- Scale division for size 0012 = 0.001 mm, from size 0020 = 0.005 mm

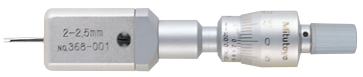
Measurement range mm	Contents mm	Adjusting ring diameter mm	Extensions mm	art.no.	€	DAkkS calibration art.no.	€
6 - 12	6-8 | 8-10 | 10-12	8 | 10	100	507704 0012	920,–	073103 D036	202,50
12 - 20	12-16 | 16-20	16	150	507704 0020	570,–	073103 D031	103,50
20 - 50	20-25 | 25-30 | 30-40 | 40-50	25 | 40	2 x 150	507704 0050	1.315,–	073103 D043	207,–
50 - 100	50-63 | 62-75 | 75-88 | 87-100	62 | 87	150	507704 0100	1.920,–	073103 D044	232,–

5120

Mitutoyo Internal precision instruments *MINI-HOLTEST*

Werks-norm | 0,5 mm

- For fast, direct bore measurements from ∅ 2 mm
- Scale barrel and scale sleeve matt chrome-plated
- Carbide-tipped measuring faces
- Measuring force 5 - 10 N
- Error margin 2 µm



Measurement range 2-2.5 mm



507505 0003

Measurement range mm	Contents	art.no.	€	Factory calibration art.no.	€
2-3	2 micrometers, 1 ring setting 2.5 mm	507505 0003	2.392,–	072003 W020	87,–
3-6	3 micrometers, 2 ring setting 4 and 5 mm	507505 0006	2.871,–	072003 W021	134,–

5102

Mitutoyo *HOLTEST* inside micrometer with three-point contact

DIN 863/4 | 0,5 mm

- With ratchet
- Reading parts matt chrome-plated
- Measuring faces offset 120°
- **Type A** 508102/508106: Measuring faces and taper made from hardened steel, contact point: Carbide
- **Type B** 508104/508108: Measuring faces: up to size 0012, titanium-coated carbide; from size 0016, titanium-coated measuring pins made from hardened steel. Contact point and taper: Carbide
- Scale barrel Ø: up to 12 mm measurement range = 17 mm, above 12 mm measurement range = 23 mm
- Readings: up to 12 mm measurement range = 0.001 mm, above 12 mm measuring range = 0.005 mm
- Supplied in a case with screwdriver and key for extension assembly
- **Accessories**: Ring gauges no. 540135...., extensions no. 508701....



508104 0062

508102 0050

Individual

Measurement range mm	Error limit mm	Measuring depth mm	Type A art.no.	€	Type B art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
6-8	0.004	59			508104 0008	413,–			072002 D001	28,–
8-10	0.004	59			508104 0010	413,–			072002 D001	28,–
10-12	0.004	59			508104 0012	413,–			072002 D001	28,–
12-16	0.004	80	508102 0016	399,–	508104 0016	501,–			072002 D001	28,–
16-20	0.004	80	508102 0020	403,–	508104 0020	521,–			072002 D001	28,–
20-25	0.004	90	508102 0025	406,–	508104 0025	521,–			072002 D001	28,–
25-30	0.004	90	508102 0030	443,–	508104 0030	528,–			072002 D002	36,–
30-40	0.004	98	508102 0040	497,–	508104 0040	585,–			072002 D002	36,–
40-50	0.004	98	508102 0050	501,–	508104 0050	602,–			072002 D002	36,–
50-63	0.005	105	508102 0062	562,–	508104 0062	653,–			072002 D002	36,–
62-75	0.005	105	508102 0075	562,–	508104 0075	653,–			072002 D002	36,–
75-87	0.005	105	508102 0087	585,–	508104 0087	676,–			072002 D002	36,–
87-100	0.005	105	508102 0100	622,–	508104 0100	690,–			072002 D002	36,–
100-125	0.006	158	508102 0125	964,–	508104 0125	1.031,–			072002 D003	43,–
125-150	0.006	158	508102 0150	1.031,–	508104 0150	1.096,–			072002 D003	43,–
150-175	0.007	158	508102 0175	1.133,–	508104 0175	1.197,–			072002 D003	43,–
175-200	0.007	158	508102 0200	1.156,–	508104 0200	1.234,–			072002 D003	43,–
200-225	0.008	158	508102 0225	1.156,–	508104 0225	1.234,–			072002 D003	43,–
225-250	0.008	158	508102 0250	1.156,–	508104 0250	1.234,–			072002 D003	43,–
250-275	0.009	158	508102 0275	1.234,–	508104 0275	1.322,–	073103 W124	56,–		
275-300	0.009	158	508102 0300	1.417,–	508104 0300	1.508,–	073103 W124	56,–		
			5102		5102					



508108 0012

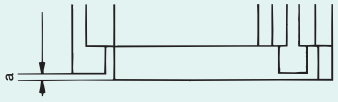
Sets

- With ring gauges, extension, key and wrench, with factory certificate for the three-point inside micrometers, in a wooden box
- Calibration including ring gauges, reduced testing

Measurement range mm	Contents	Type A art.no.	€	Type B art.no.	€	DAkkS calibration art.no.	€
6-12	3 micrometers 6-8 / 8-10 / 10-12 mm, 2 ring setting Ø 8 / 10 mm, 1 extension 100 mm			508108 0012	1.270,–	073103 D035	171,–
12-20	2 micrometers 12-16 / 16-20 mm, 1 ring setting Ø 16 mm, 1 extension 100 mm	508106 0020	898,–	508108 0020	965,–	073103 D031	103,50
20-50	4 micrometers 20-25 / 25-30 / 30-40 / 40-50 mm, 2 ring setting Ø 25 / 40 mm, 1 extension 150 mm	508106 0050	1.809,–	508108 0050	2.128,–	073103 D043	207,–
50-100	4 micrometers 50-62 / 62-75 / 75-87 / 87-100 mm, 2 ring setting Ø 62 / 87 mm, 1 extension 150 mm	508106 0100	2.587,–	508108 0100	2.858,–	073103 D044	232,–
100-200	4 micrometers 100-125 / 125-150 / 150-175 / 175-200 mm, 2 ring setting Ø 125 / 175 mm, 1 extension 150 mm	508106 0200	5.025,–	508108 0200	6.164,–	073103 D042	296,–
		5102		5102			

Note regarding Mitutoyo digital inside micrometers with three-point contacts

The hole diameter can be measured almost all the way to the base of the hole.



The following distances from the base of the hole cannot be measured:

Measuring range mm	Clearance a mm	
	508102....	508104....
6 - 12	-	2.0
12 - 20	2.6	0.3
20 - 100	3.4	0.3
100 - 300	19.6	12.4

Three-point internal fine gauge XT

DIN 863/4 | 0,5 mm

- Matt chrome-plated reading parts
- Measuring spindle hardened and ground
- Carbide measuring surfaces (< 12.5mm with hardened steel measuring surfaces)
- Sturdy ratchet
- Supplied with UKAS calibration certificate



Measurement range mm	Error limit mm	Vernier	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
6-8	0.004	0.002 mm	507601 0008	381,–			072002 D001	28,–
8-10	0.004	0.002 mm	507601 0010	365,–			072002 D001	28,–
10-12.5	0.004	0.002 mm	507601 0012	370,–			072002 D001	28,–
12.5-16	0.004	0.002 mm	507601 0016	399,–			072002 D001	28,–
16-20	0.004	0.002 mm	507601 0020	435,–			072002 D001	28,–
20-25	0.004	0.005 mm	507601 0025	440,–			072002 D001	28,–
25-35	0.004	0.005 mm	507601 0036	536,–			072002 D002	36,–
35-50	0.004	0.005 mm	507601 0050	546,–			072002 D002	36,–
50-65	0.005	0.005 mm	507601 0065	650,–			072002 D002	36,–
65-80	0.005	0.005 mm	507601 0080	650,–			072002 D002	36,–
80-100	0.005	0.005 mm	507601 0100	820,–			072002 D002	36,–
100-125	0.006	0.005 mm	507601 0125	870,–			072002 D003	43,–
125-150	0.006	0.005 mm	507601 0150	992,–			072002 D003	43,–
150-175	0.007	0.005 mm	507601 0175	1.187,–			072002 D003	43,–
175-200	0.007	0.005 mm	507601 0200	1.384,–			072002 D003	43,–
200-225	0.008	0.005 mm	507601 0225	1.615,–			072002 D003	43,–
225-250	0.008	0.005 mm	507601 0250	1.652,–			072002 D003	43,–
250-275	0.009	0.005 mm	507601 0275	1.718,–	072002 W901	56,–		
275-300	0.009	0.005 mm	507601 0300	1.779,–	072002 W901	56,–		

5119

Sets

- Supplied with setting rings



Measurement range mm	Error limit mm	Adjusting ring diameter mm	Vernier	art.no.	€	DAkkS calibration art.no.	€
6-10	0.004	8 mm	0.002 mm	507610 1010	705,–	073103 D031	103,50
10-20	0.004	12.5 / 20 mm	0.002 mm	507610 1020	1.197,–	073103 D035	171,–
20-50	0.004	20/35 mm	0.005 mm	507610 1050	1.580,–	073103 D035	171,–
50-100	0.005	65 / 80 mm	0.005 mm	507610 1100	2.144,–	073103 D043	207,–
100-150	0.006	125 mm	0.005 mm	507610 1150	1.792,–	073103 D044	232,–
150-200	0.007	175 mm	0.005 mm	507610 1200	2.285,–	073103 D044	232,–

5119

ATORN Inside micrometer with three-point contact

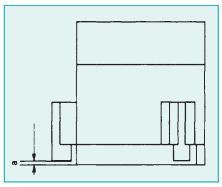
DIN 863/4 | 0,5 mm

- For measuring through-holes, blind bores (from Ø 12 mm, dimension a = 0 mm) and short centring shoulders
- Self-centring design
- Carbide-tipped measuring faces from Ø 12 mm
- Measuring heads from Ø 40 mm with lightweight anodised aluminium construction
- Measuring spindle hardened and ground
- Matt chrome-plated reading parts with an anti-glare finish
- Quick drive with integrated coupling



Measurement range mm	Error limit mm	Vernier	Measuring depth mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
6 - 8	4	0.001 mm	58	507801 0008	465,–	072002 D001	28,–
8 - 10	4	0.001 mm	58	507801 0010	465,–	072002 D001	28,–
10 - 12	4	0.001 mm	58	507801 0012	465,–	072002 D001	28,–
12 - 16	4	0.001 mm	64	507801 0016	465,–	072002 D001	28,–
16 - 20	4	0.001 mm	64	507801 0020	490,–	072002 D001	28,–
20 - 25	4	0.005 mm	68	507801 0025	520,–	072002 D001	28,–
25 - 30	4	0.005 mm	68	507801 0030	535,–	072002 D002	36,–
30 - 40	4	0.005 mm	76	507801 0040	585,–	072002 D002	36,–
40 - 50	4	0.005 mm	76	507801 0050	585,–	072002 D002	36,–
50 - 60	5	0.005 mm	79	507801 0060	709,–	072002 D002	36,–
60 - 70	5	0.005 mm	79	507801 0070	715,–	072002 D002	36,–
70 - 85	5	0.005 mm	97	507801 0085	749,–	072002 D002	36,–
85 - 100	5	0.005 mm	97	507801 0100	769,–	072002 D002	36,–
100 - 125	6	0.005 mm	132	507801 0125	1.049,–	072002 D003	43,–
125 - 150	6	0.005 mm	132	507801 0150	1.229,–	072002 D003	43,–
150 - 175	7	0.005 mm	132	507801 0175	1.350,–	072002 D003	43,–
175 - 200	7	0.005 mm	132	507801 0200	1.395,–	072002 D003	43,–

5176



From Ø 12-16 mm measurements to borehole bottom possible



Sets

Measurement range mm	Error limit mm	Contents mm	Adjusting ring diameter	Vernier	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
6 - 12	0.004	6-8 | 8-10 | 10-12	10 mm | 8 mm	0.001 mm	507802 0012	1.375,–	073103 D035	171,–
12 - 20	0.004	12-16 | 16-20	16 mm	0.001 mm	507802 0020	1.065,–	073103 D031	103,50
20 - 50	0.004	20-25 | 25-30 | 30-40 | 40-50	40 mm | 25 mm	0.005 mm	507802 0050	2.359,–	073103 D035	171,–
50 - 100	0.005	50-60 | 60-70 | 70-85 | 85-100	85 mm | 60 mm	0.005 mm	507802 0100	2.769,–	073103 D044	232,–

5176

Mitutoyo ATORN Extensions

- For extending the measurement depth
- Assembled by screwing in between the measuring head and display component
- 508701.... suitable for inside micrometers with three-point contacts **HOLTEST** and **BORE-MATIC**
  507803.... suitable for **ATORN** inside micrometers with three-point contacts
- **Caution:** After fitting or removing the extension, the inside micrometer with three-point contact must be checked and re-adjusted if necessary.



508701....

Mitutoyo

Designation	art.no.	€
Extension 100mm, measurement range 6-12mm	508701 0001	124,–
Extension 150mm, measurement range 20-50mm	508701 0003	135,–
Extension 150mm, measurement range 50-300mm	508701 0004	234,–
Extension 150mm, measurement range 12-20mm	508701 0002	124,–

5102

ATORN



Designation	art.no.	€
Extension 100mm, measurement range 6-12mm	507803 0012	115,–
Extension 150mm, measurement range 12-20mm	507803 0020	127,–
Extension 150mm, measurement range 20-50mm	507803 0030	135,–
Extension 150mm, measurement range 50-300mm	507803 0200	166,–

5176

SARA® digital inside micrometers with three-point contacts

IP65 | DIN 863/4 | 0,5 mm | 0,001 mm | Digi-matic | USB

- For measuring through-holes and blind holes
- Large measurement depths thanks to extension
- With ratchet
- Protection type IP65
- Easy to read LCD display
- Automatic switch-on when the spindle moves
- Measuring spindle fully hardened and ground
- Ratchet coupling for repeatable measuring force
- Self-centring measuring head with three laterally extending measuring probes
- Clearance a for 6 - 12 mm = 1.4 mm, 12 - 100 mm = 0.5 mm
- Supplied with ring setting extensions and battery SR 44 no. 500534 0001



Single

Measurement range mm	Error limit mm	Measuring depth mm	Measuring depth max. mm	art.no.	€	DAkkS calibration art.no.	€
6-8	0.004	55	155	507708 0008	760,–	073103 D062	36,–
8-10	0.004	55	155	507708 0010	760,–	073103 D062	36,–
10-12	0.004	55	155	507708 0012	760,–	073103 D062	36,–
12-16	0.004	70	155	507708 0016	750,–	073103 D062	36,–
16-20	0.004	70	220	507708 0020	750,–	073103 D062	36,–
20-25	0.004	100	220	507708 0025	780,–	073103 D062	36,–
25-30	0.004	100	250	507708 0030	780,–	073103 D062	36,–
30-40	0.004	100	250	507708 0040	875,–	073103 D062	36,–
40-50	0.005	100	250	507708 0050	875,–	073103 D062	36,–
50-63	0.005	120	270	507708 0063	935,–	073103 D061	80,–
62-75	0.005	120	270	507708 0075	989,–	073103 D061	80,–
75-88	0.005	120	270	507708 0088	1.059,–	073103 D061	80,–
87-100	0.005	120	270	507708 0100	1.059,–	073103 D061	80,–

5120



Sets

Measurement range mm	Contents	Adjusting ring diameter mm	Extensions mm	art.no.	€	DAkkS calibration art.no.	€
6-12	6-8 | 8-10 | 10-12	8 | 10	100	507708 1000	2.029,–	073103 D044	232,–
12-20	12-16 | 16-20	16	150	507708 1100	1.389,–	073103 D043	207,–
20-50	20-25 | 25-30 | 30-40 | 40-50	25 | 40	2 x 150	507708 1200	2.779,–	073103 D031	103,50
50-100	50-63 | 62-75 | 75-88 | 87-100	62 | 87	150	507708 1300	3.279,–	073103 D036	202,50

5120

Digital three-point internal fine gauges XTD

IP67 | DIN 863/4 | 0,5 mm | 0,001 mm | inch mm

- Carbide measuring faces (for < 12.5 mm, hardened steel measuring faces)
- Large LCD display
- With Bluetooth function and SylvacBT Smart app for wireless data transmission
- Heavy-duty ratchet
- Functions: On/Off, mm/inch conversion, zero setting at any position, preset function ±, max./min. value memory
- Supplied with UKAS calibration certificate

individually

Measurement range mm	Error limit mm	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
6-8	0.004	507603 0008	1.204,–			072002 D001	28,–
8-10	0.004	507603 0010	1.204,–			072002 D001	28,–
10-12.5	0.004	507603 0012	1.216,–			072002 D001	28,–
12.5-16	0.004	507603 0016	1.230,–			072002 D001	28,–
16-20	0.004	507603 0020	1.218,–			072002 D001	28,–
20-25	0.004	507603 0025	1.466,–			072002 D001	28,–
25-35	0.004	507603 0035	1.677,–			072002 D002	36,–
35-50	0.004	507603 0050	1.744,–			072002 D002	36,–
50-65	0.005	507603 0065	1.925,–			072002 D002	36,–
65-80	0.005	507603 0080	1.925,–			072002 D002	36,–
80-100	0.005	507603 0100	2.009,–			072002 D002	36,–
100-125	0.006	507603 0125	2.056,–			072002 D003	43,–
125-150	0.006	507603 0150	2.122,–			072002 D003	43,–
150-175	0.007	507603 0175	2.441,–			072002 D003	43,–
175-200	0.007	507603 0200	2.604,–			072002 D003	43,–
200-225	0.008	507603 0225	2.913,–			072002 D003	43,–
225-250	0.008	507603 0250	3.251,–			072002 D003	43,–
250-275	0.009	507603 0275	3.310,–	072002 W901	56,–		
275-300	0.009	507603 0300	3.657,–	072002 W901	56,–		

5119



Sets

- Delivery with setting ring and UKAS calibration certificate

Measurement range mm	Error limit mm	Adjusting ring diameter mm	art.no.	€	DAkkS calibration art.no.	€
6-10	0.004	8 mm	507610 3010	1.735,–	073103 D031	103,50
10-20	0.004	12.5 / 20 mm	507610 3020	2.083,–	073103 D035	171,–
20-50	0.004	20 / 35 mm	507610 3050	2.842,–	073103 D036	202,50
50-100	0.005	65 / 80 mm	507610 3100	3.012,–	073103 D044	232,–
100-200	0.006 / 0.007	125 / 175 mm	507610 3201	5.621,–	073103 D042	296,–

5119



507610 3050





MITUTOYO
Measuring equipment catalogue
635 pages
Art.no. 019900 0086

Overview of all free manufacturers' catalogues on page 20/21

Mitutoyo Digital inside micrometers with three-point contacts *HOLTEST*

IP65 | DIN 863/4 | 0,5 mm | 0,001 mm | Digi-matic | USB

Staub- und Wasserdicht IP65
TÜVRheinland ZERTIFIZIERT
www.tuv.com ID 0000021605

- With ratchet
- Readings via LCD display with 7.5 mm high digits
- Casing particularly resistant to oils and chemicals
- Activates automatically when spindle moves
- Measuring faces: up to size 0012, titanium-coated carbide; from size 0016, titanium-coated measuring pins made from hardened steel. Contact point and taper: Carbide
- **Functions:** Pre-set for two values (PRESET), zeroing/absolute (ZERO/ABS), hold value (HOLD), automatic switch-off, battery check
- Supplied in a case with SR44 battery (no. 500534 0001), key and factory certificate
- **Optional accessories:** Digimatic cable type B, no. 563100 0011 (1 m), no. 563100 0012 (2 m), USB cable type B-USB, no. 563110 0002; ring gauges, no. 540135....; extensions, no. 508701....



Individual

Measurement range mm	Error limit mm	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
6-8	0.004	508312 0008	1.314,–			072002 D001	28,–
8-10	0.004	508312 0010	1.314,–			072002 D001	28,–
10-12	0.004	508312 0012	1.314,–			072002 D001	28,–
12-16	0.004	508312 0016	1.478,–			072002 D001	28,–
16-20	0.004	508312 0020	1.478,–			072002 D001	28,–
20-25	0.004	508312 0025	1.515,–			072002 D001	28,–
25-30	0.004	508312 0030	1.515,–			072002 D002	36,–
30-40	0.004	508312 0040	1.515,–			072002 D002	36,–
40-50	0.004	508312 0050	1.518,–			072002 D002	36,–
50-63	0.005	508312 0063	1.662,–			072002 D002	36,–
62-75	0.005	508312 0075	1.672,–			072002 D002	36,–
75-88	0.005	508312 0088	1.692,–			072002 D002	36,–
87-100	0.005	508312 0100	1.712,–			072002 D002	36,–
100-125	0.006	508312 0125	2.225,–			072002 D003	43,–
125-150	0.006	508312 0150	2.329,–			072002 D003	43,–
150-175	0.007	508312 0175	2.436,–			072002 D003	43,–
175-200	0.007	508312 0200	2.567,–			072002 D003	43,–
200-225	0.008	508312 0225	2.721,–			072002 D003	43,–
225-250	0.008	508312 0250	2.784,–			072002 D003	43,–
250-275	0.009	508312 0275	2.871,–	073103 W124	56,–		
275-300	0.009	508312 0300	3.022,–	073103 W124	56,–		

5102

Sets

- With ring gauges, batteries and wrench in wooden box with factory certificate for the three-point inside micrometers
- Calibration including ring gauges, reduced testing

Measurement range mm	Contents	art.no.	€	DAkkS calibration art.no.	€
6-12	3 measuring screws 6-8 / 8-10 / 10-12 mm, 2 adjusting rings Ø 8/ 10 mm	508314 0012	3.717,–	073103 D035	171,–
12-25	3 measuring screws 12-16 / 16-20 / 20-25 mm, 2 adjusting rings Ø 16 / 20 mm	508314 0025	3.938,–	073103 D035	171,–
25-50	3 measuring screws 25-30 / 30-40 / 40-50 mm, 2 adjusting rings Ø 30 / 40 mm	508314 0050	4.568,–	073103 D035	171,–
50-75	2 measuring screws 50-63 / 63-75 mm, 1 adjusting ring Ø 62 mm	508314 0075	3.339,–	073103 D001	118,–
75-100	2 measuring screws 75-88 / 87-100 mm, 1 adjusting ring Ø 87 mm	508314 0100	3.591,–	073103 D001	118,–



5102

Sets with replaceable measuring heads

- With ring gauges, extension, batteries and wrench
- In wooden box with factory certificate for the three-point measuring heads
- Calibration including ring gauges, reduced testing

Measurement range mm	Contents	art.no.	€	DAkkS calibration art.no.	€
6-12	1 micrometer, 3 measuring heads 6-8 / 8-10 / 10-12 mm, 2 adjusting rings Ø 8 / 10 mm, 1 extension 100 mm	508316 0012	2.275,–	073103 D035	171,–
12-20	1 micrometer, 3 measuring heads 12-16 / 16-20 mm, 1 adjusting ring Ø 16 mm, 1 extension 150 mm	508316 0020	1.868,–	073103 D031	103,50
20-50	1 micrometer, 4 measuring heads 20-25 / 25-30 / 30-40 / 40-50 mm, 2 adjusting rings Ø 25 / 40 mm, 1 extension 150 mm	508316 0050	3.245,–	073103 D043	207,–
50-100	1 micrometer, 4 measuring heads 50-63 / 62-75 / 75-88 / 87-100 mm, 2 adjusting rings Ø 62 / 87 mm, 1 extension 150 mm	508316 0100	4.505,–	073103 D044	232,–
100-200	1 micrometer, 4 measuring heads 100-125 / 125-150 / 150-175 / 175-200 mm, 2 adjusting rings Ø 125 / 175 mm, 1 extension 150 mm	508316 0200	6.489,–	073103 D042	296,–



5102

Digital three-point internal quick gauges XTH

- Carbide measuring faces (for < 12.5 mm, hardened steel measuring faces)
- Pistol grip
- Large LCD display
- With Bluetooth function and SylvacBT Smart app for wireless data transmission
- Constant measuring force, spring-loaded
- Functions: On/Off, mm/inch conversion, zero setting at any position, preset function ±, max./min. value memory
- Supplied with UKAS calibration certificate

individually

Measurement range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
6-8	0.004	507605 0008	1.514,–	072002 D001	28,–
8-10	0.004	507605 0010	1.482,–	072002 D001	28,–
10-12.5	0.004	507605 0012	1.462,–	072002 D001	28,–
12.5-16	0.004	507605 0016	1.481,–	072002 D001	28,–
16-20	0.004	507605 0020	1.554,–	072002 D001	28,–
20-25	0.004	507605 0025	1.659,–	072002 D001	28,–
25-35	0.004	507605 0035	1.792,–	072002 D002	36,–
35-50	0.004	507605 0050	1.832,–	072002 D002	36,–
50-65	0.005	507605 0065	1.874,–	072002 D002	36,–
65-80	0.005	507605 0080	1.874,–	072002 D002	36,–
80-100	0.005	507605 0100	1.977,–	072002 D002	36,–

5119



- Delivery with setting ring and UKAS calibration certificate

Measurement range mm	Error limit mm	Adjusting ring diameter mm	art.no.	€	DAkkS calibration art.no.	€
6-10	0.004	8 mm	507610 5010	1.797,–	073103 D031	103,50
10-20	0.004	12.5 / 20 mm	507610 5020	2.109,–	073103 D035	171,–
20-50	0.004	20 / 35 mm	507610 5050	2.650,–	073103 D035	171,–
50-100	0.005	65 / 80 mm	507610 5100	3.059,–	073103 D044	232,–
100-200	0.006 / 0.007	125 / 175 mm	507610 5201	5.795,–	073103 D042	296,–

5119



507610 5050

Mitutoyo Inside micrometers with three-point contacts *BOREMATIC*

0,001 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®



- For fast and precise series measurements
- Base body with operating handle for quick adjustment
- Extremely easy to read with 11 mm high digits
- Display component can be rotated through 330°
- Allows two pre-set values to be input
- Measuring faces: up to size 0012, titanium-coated carbide; from size 0016, titanium-coated measuring pins made from hardened steel. Contact point and taper: Carbide
- Error margin: Measuring range 6 - 20 mm, Ø = 0.005 mm; measuring range 20 - 125 mm Ø = 0.006 mm
- **Functions:** MODE to switch between tolerance, factor and pre-set modes
  SET to confirm input
  DATA/ON/OFF
  Battery check
- Supplied with SR44 battery (no. 500534 0001), key and factory certificate
- **Optional accessories:** Digimatic cable type F, no. 563100 0051 (1 m), no. 563100 0052 (2 m); USB cable type F-USB, no. 563110 0006; ring gauge, no. 540135....; extensions, no. 508701....

Individual

Measurement range mm	Error limit mm	Measuring depth mm	art.no.	€	DAkkS calibration art.no.	€
6-8	0.005	83	508507 0008	1.506,–	072002 D001	28,–
8-10	0.005	83	508507 0010	1.476,–	072002 D001	28,–
10-12	0.005	83	508507 0012	1.506,–	072002 D001	28,–
12-16	0.055	52.6	508507 0016	1.566,–	072002 D001	28,–
16-20	0.005	52.6	508507 0020	1.566,–	072002 D001	28,–
20-25	0.006	58.2	508507 0025	1.626,–	072002 D001	28,–
25-30	0.006	58.2	508507 0030	1.626,–	072002 D002	36,–
30-40	0.006	67.3	508507 0040	1.780,–	072002 D002	36,–
40-50	0.006	67.3	508507 0050	1.780,–	072002 D002	36,–
50-63	0.006	74.8	508507 0063	1.801,–	072002 D002	36,–
62-75	0.006	74.8	508507 0075	1.833,–	072002 D002	36,–
75-88	0.006	74.8	508507 0088	1.920,–	072002 D002	36,–
87-100	0.006	74.8	508507 0100	1.924,–	072002 D002	36,–
100-113	0.006	74.8	508507 0113	2.008,–	072002 D003	43,–
112-125	0.006	74.8	508507 0125	2.040,–	072002 D003	43,–

5102





508508 0012



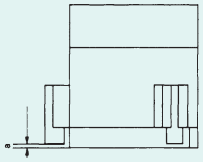
Sets with replaceable measuring heads

- With adapters, measuring inserts and ring gauges, in wooden box, including battery and wrench, with factory certificate for the Borematic measuring heads
- Calibration including ring gauges, reduced testing

Measurement range mm	Contents	art.no.	€	DAkkS calibration art.no.	€
6-12	1 basic unit, 3 measuring head 6-8 / 8-10 / 10-12 mm, 2 ring setting Ø 8 / 10 mm	508508 0012	2.194,–	073103 D035	171,–
12-25	1 basic unit, 3 measuring head 12-16 / 16-20 / 20-25 mm, 2 ring setting Ø 16 / 20 mm	508508 0025	2.389,–	073103 D035	171,–
25-50	1 basic unit, 3 measuring head 25-30 / 30-40 / 40-50 mm, 2 ring setting Ø 30 / 40 mm	508508 0050	2.851,–	073103 D035	171,–
50-100	1 basic unit, 4 measuring head 50-63 / 62-75 / 75-88 / 87-100 mm, 2 ring setting Ø 62 / 87 mm	508508 0100	4.713,–	073103 D044	232,–

5102

The hole diameter can be measured almost all the way to the base of the hole.



The following distances from the base of the hole cannot be measured:

Measuring range mm	Clearance a mm
6 - 12	2.0
12 - 125	0.3

Adapter

- A suitable adapter for the measurement range of the replaceable measuring head must be selected

Suitable for	art.no.	€
Measurement range 6-12 mm	508506 0012	167,–
Measurement range 12-20 mm	508506 0020	51,20
Measurement range 20-50 mm	508506 0050	31,–

5102



Replaceable measuring heads for ***BOREMATIC***

- For extending the measurement range of standard measuring instruments
- Can only be used in combination with a suitable adapter (508506....)

Measurement range mm	art.no.	€
6-8	508504 0008	352,–
8-10	508504 0010	352,–
10-12	508504 0012	352,–
12-16	508504 0016	314,–
16-20	508504 0020	314,–
20-25	508504 0025	341,–
25-30	508504 0030	341,–
30-40	508504 0040	368,–
40-50	508504 0050	368,–
50-63	508504 0063	420,–
62-75	508504 0051	436,–
75-88	508504 0088	448,–
87-100	508504 0100	488,–

5102



508504 0025

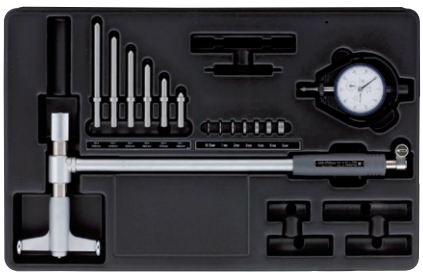
508504 0050

Mitutoyo Internal precision instrument

Werks-norm | 0,001 mm

- Comparative measurement with reference to a pre-set reference dimension
- Set by means of outside micrometers, ring gauges or adjustable reference gauges with gauge blocks.
- With analogue dial indicator, can be replaced with a digital dial indicator (optional accessory)
- With movable stylus, carbide-tipped, measuring span 1.6 mm
- Replaceable carbide-tipped measuring bolts, sizes 0010 and 0018 hardened
- **Size 0150** with additional 50 mm extension for Ø range 100 - 150 mm
- Accuracy without an indicating measuring instrument
- Calibration includes dial indicator
- Supplied with base unit, set of measuring inserts with shims, analogue dial indicator with plastic protector

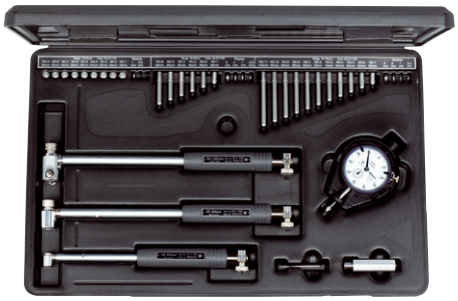




526502 0160

Measurement range mm	Scale value mm	Error limit mm	Contents	Measuring depth mm	art.no.	€	Factory calibration art.no.	€	DAkkS calibration art.no.	€
6-10	0.01	0.005	9 measuring pins	47	526502 0010	537,–			073103 D077	89,50
10-18	0.01	0.005	9 measuring pins	100	526502 0018	518,–			073103 D277	82,–
18-35	0.01	0.002	9 measuring pins	100	526502 0035	315,–			073103 D077	89,50
35-60	0.01	0.002	6 measuring pins	150	526502 0060	321,–			073103 D077	89,50
50-150	0.01	0.002	11 measuring pins	150	526502 0150	334,–			073103 D074	94,50
100-160	0.01	0.002	13 measuring pins	150	526502 0160	526,–			073103 D074	94,50
160-250	0.01	0.002	6 measuring pins	250	526502 0250	650,–			073103 D075	99,50
250-400	0.01	0.002	5 measuring pins	250	526502 0400	774,–	073103 W076	65,50		
6-10	0.001	0.005	9 measuring pins	47	526504 0010	601,–			073103 D077	89,50
10-18	0.001	0.005	9 measuring pins	100	526504 0018	599,–			073103 D277	82,–
18-35	0.001	0.002	9 measuring pins	100	526504 0035	382,–			073103 D277	82,–
35-60	0.001	0.002	6 measuring pins	150	526504 0060	389,–			073103 D077	89,50
50-150	0.001	0.002	11 measuring pins	150	526504 1150	401,–			073103 D074	94,50
100-160	0.001	0.002	13 measuring pins	150	526504 0160	604,–			073103 D074	94,50
160-250	0.001	0.002	6 measuring pins	250	526504 0250	729,–			073103 D075	99,50
250-400	0.001	0.002	5 measuring pins	250	526504 0400	858,–	073103 W076	65,50		

5102



Sets with analogue dial indicator

- 3 base units with measurement ranges of 18 - 35 mm, 35 - 60 mm and 50 - 150 mm, all measuring bolts with shims

Measurement range mm	Scale value mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
18-150	0.01	0.002	526553 0150	615,–	073103 D037	167,–
18-150	0.001	0.002	526555 0150	668,–	073103 D037	167,–

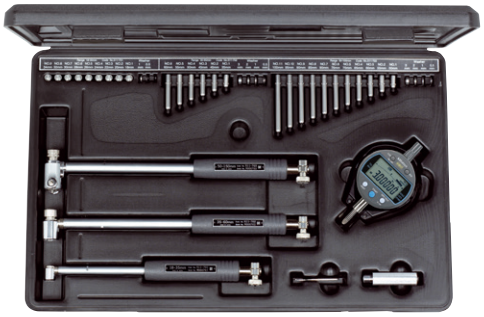
5102

Set with digital dial indicator

- 3 base units with measurement ranges of 18 - 35 mm, 35 - 60 mm and 50 - 150 mm, all measuring bolts with shims, SR44 battery no. 500534 0001
- **Dial indicator functions:**
  Display component can be rotated through 330°
  ON/OFF
  START for initiating reversal point search
  TOL for inputting tolerance values
  PRESET user-defined values in the display
  DATA/HOLD data transfer key if signal cable is connected, otherwise hold key for locking the display
  MENU for accessing and changing the three stored target values
- **Optional accessories:** Digimatic cable type F, no. 563100 0051 (1 m), no. 563100 0052 (2 m); USB cable type F-USB, no. 563110 0006

USB Digi-matic





Measurement range mm	Digit increment mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
18-150	0.001	0.002	526554 0150	1.178,–	073103 D038	167,–

5102



Extensions for larger measurement depths

Designation	Measurement range mm	art.no.	€
125 mm	18-35	527520 0001	242,–
250 mm	18-35	527520 0002	270,–
500 mm	18-35	527520 0003	419,–
125 mm	35-160	527520 1001	264,–
250 mm	35-160	527520 1002	289,–

5102

Designation	Measurement range mm	art.no.	€
500 mm	35-160	527520 1003	518,–
750 mm	35-160	527520 1004	688,–
1000 mm	35-160	527520 1005	953,–
125 mm	160-400	527520 2001	270,–
250 mm	160-400	527520 2002	278,–

5102

Designation	Measurement range mm	art.no.	€
500 mm	160-400	527520 2003	654,–
750 mm	160-400	527520 2004	856,–
1000 mm	160-400	527520 2005	1.124,–

5102

Schwenk Adjustment device *ESU*

- For exact adjustment of all internal precision instruments by means of the corresponding gauge block to the desired target dimension
- Can be used both horizontally and vertically
- Measuring jaws made from solid carbide, gauge block grade
- With lock lever for quickly securing the gauge block combination
- * = without taking into account gauge block quality





Designation	Error limit mm	art.no.	€
Setting tool for internal precision instruments 18-290mm	0.002*	528010 0290	1.154,50
Setting tool for internal precision instruments 4.5-160mm	0.002*	528010 0160	1.171,60

5126

Schwenk Bore gauge OD

- Robust and easy-to-use two-point comparative measuring instrument
- For series inspections of Ø 3.1 to 110mm bores
- High-precision measuring sleeve ensures optimum centring inside the bore
- Repeat precision 1µm
- Measuring span 0.2mm (Ø 3.1 to 6.0 = 0.15mm)
- Measuring force 1 - 2N
- Carbide measuring probes, other materials available on request
- Suitable for measuring with indicating callipers, dial indicators or electric probes
- Connecting thread holder/gauge M11 x 0.75
- * = nominal dimension range up to Ø 4mm H = 26mm, from Ø 4.01 up to 6mm H = 10mm
- **The following is required for a complete bore gauge OD: Bore gauge (526557.../526558...) + holder (526559...) + indicating measuring instrument + suitable ring gauge**
- Greater diameter, indicating measuring instrument and suitable ring gauges available on request
- Supplied without indicating measuring instrument and ring gauges



Standard bore gauge OD

- **Caution:** Please specify the nominal dimension and tolerance of the bore when placing your order! Examples: No. 526557 0006 / 4 +0.02 / -0.01, No. 526557 0020 / 18H7

Nominal dimension mm	Height mm	Max. height	art.no.	€	DAkkS calibration art.no.	€
3.1-6.0	1.5	26/10* mm	526557 0006	364,40	075011 D001	42,–
6.1-12.0	2.5	15 mm	526557 0012	261,90	075011 D001	42,–
12.1-20.0	2.5	15 mm	526557 0020	265,80	075011 D001	42,–
20.1-30.0	3.5	20 mm	526557 0030	317,70	075011 D001	42,–
30.1-40.0	3.5	20 mm	526557 0040	411,60	075011 D001	42,–
40.1-60.0	3.5	28 mm	526557 0060	479,30	075011 D001	42,–
60.1-80.0	4.0	33 mm	526557 0080	517,90	075011 D001	42,–
80.1-100.0	4.0	33 mm	526557 0100	555,30	075011 D001	42,–
100.1-110.0	4.0	33 mm	526557 0110	597,–	075011 D001	42,–

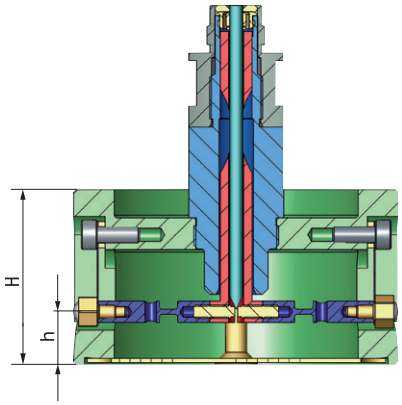
5126

Bore gauge OD For blind holes

- **Caution:** Please specify the nominal dimension and tolerance of the bore when placing your order! Examples: No. 526558 0006 / 4 +0.02 / -0.01, No. 526558 0020 / 18H7

Nominal dimension mm	Height mm	Max. height	art.no.	€	DAkkS calibration art.no.	€
3.1-6.0	1.0	26/10* mm	526558 0006	495,30	075011 D001	42,–
6.1-12.0	1.0	15 mm	526558 0012	397,40	075011 D001	42,–
12.1-20.0	1.0	15 mm	526558 0020	402,10	075011 D001	42,–
20.1-30.0	1.2	20 mm	526558 0030	453,90	075011 D001	42,–
30.1-40.0	1.2	20 mm	526558 0040	611,10	075011 D001	42,–
40.1-60.0	1.2	28 mm	526558 0060	742,40	075011 D001	42,–
60.1-80.0	1.2	33 mm	526558 0080	758,10	075011 D001	42,–
80.1-100.0	1.2	33 mm	526558 0100	818,10	075011 D001	42,–
100.1-110.0	1.2	33 mm	526558 0110	864,70	075011 D001	42,–

5126



H Height max h Height

OD Device holder

- M11 x 0.75 connection thread suitable for all OD bore gauges
- Size 0004 and 0005 reinforced with Ø 18 mm tubing, recommended for OD bore gauges > 60 mm
- Size 0006 with retractor, recommended for blind hole bore gauges

L mm	Pipe diameter	art.no.	€
50	12 mm	526559 0001	78,30
105	12 mm	526559 0002	159,30
235	12 mm	526559 0003	183,80
145	18 mm	526559 0004	196,–
235	18 mm	526559 0005	221,90
70	12 mm	526559 0006	256,90

5126



OD bore gauges, special design and accessories

You require

- **Bore gauges for through-holes**
- **Bore gauges in special forms**
- **Measuring probe jewelled or hard-chrome plated for surfaces sensitive to scratching**
- **Depth stoppers**
- **Angle pieces**
- **Measurement depth extensions**

Solutions not provided in our catalogue are also available on request. Please contact us, our technicians will be glad to advise you.

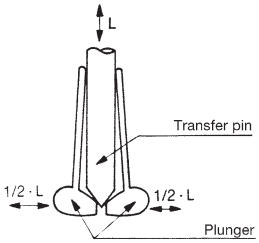


Mitutoyo Internal precision instrument

Werks-norm



- For tasks such as measuring extremely small bores (from Ø 0.95 mm)
- Comparative measurement with reference to a pre-set reference dimension
- With dial indicator and expansion measuring heads
- Measuring heads from Ø 0.95 to 7.0 mm with a hard chrome-plated finish, and Ø 7.0 to 18 mm made from hardened gauge steel similar to measuring needles
- Dial indicator can be replaced with a digital dial indicator including a data output (optional accessory)
- * = Measurement depth: Measurement range 1.5 - 2.25 mm = 17.5 mm, measurement range 2.25 - 4.00 mm = 22.5 mm
- Calibration includes dial indicator
- Supplied in a case with base unit, set of measuring heads, measuring needle, analogue dial indicator including plastic protector, and assembly key



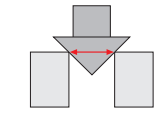


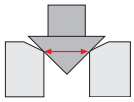
Measurement range mm	Contents	Measuring depth mm	art.no.	€
3.70 - 7.30	Internal precision instrument, dial gauge 0.001mm, 7 measuring heads	32	526001 0003	1.975,–
7.00 - 10.00	Internal precision instrument, dial gauge 0.001mm, 6 measuring heads	56	526001 0004	462,–
10.00 - 18.00	Internal precision instrument, dial gauge 0.001mm, 8 measuring heads	62	526001 0005	500,–

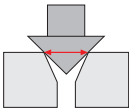
5102

Schwenk IFM chamfer *IFM*

- For determining the largest diameter of internal chamfers or tapers
- Direct readings (no conversion) from the special dial indicator
- 90° measuring taper


Boreholes with sharp edges


Internal taper > 90°


Internal taper < 90°


suitable for 512017....



Designation	Scale value mm	art.no.	€
Bevel gauge IFM 90° 0.5-20mm	0.01	512019 1020	468,40
Bevel gauge IFM 90° 20-40mm	0.01	512019 1040	672,80

5126

ATORN Universal measuring instrument UNICHECK

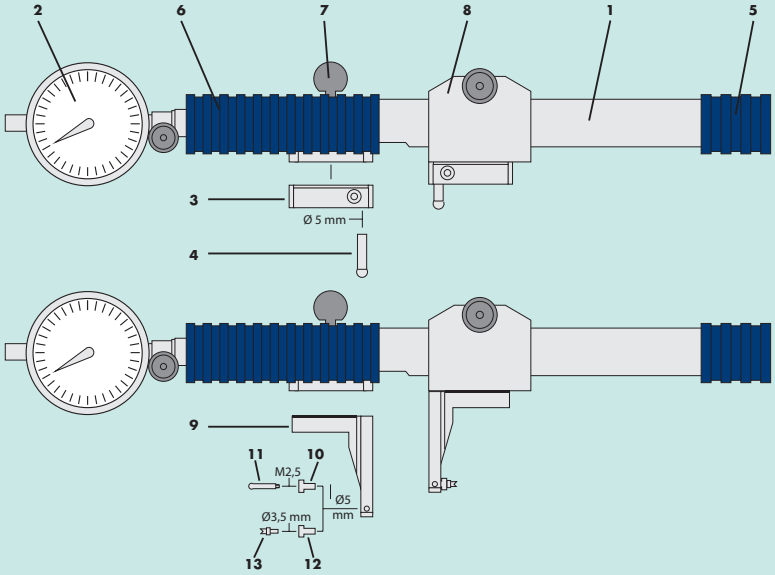
INFO

The comparative measuring instrument UNICHECK, for external and internal measurements, is a versatile precision measuring instrument for efficient use in production and measuring rooms.
The wide range of measuring probes and measuring inserts gives the UNICHECK enormous versatility in the most diverse measurement tasks. The UNICHECK is used to both test workpieces and adjust machines.
Internal and external dimensions on shafts and parallel surfaces, recesses, grooves, dovetail guides and toothing are all tested. Internal and external threads can also be measured.
The measuring direction required for external or internal measuring can be quickly and easily adjusted at a touch.

Dial indicator, precision dial or electronic displacement transducer with a clamping shank Ø 8 h6 can be used to display measured values, where necessary and required.



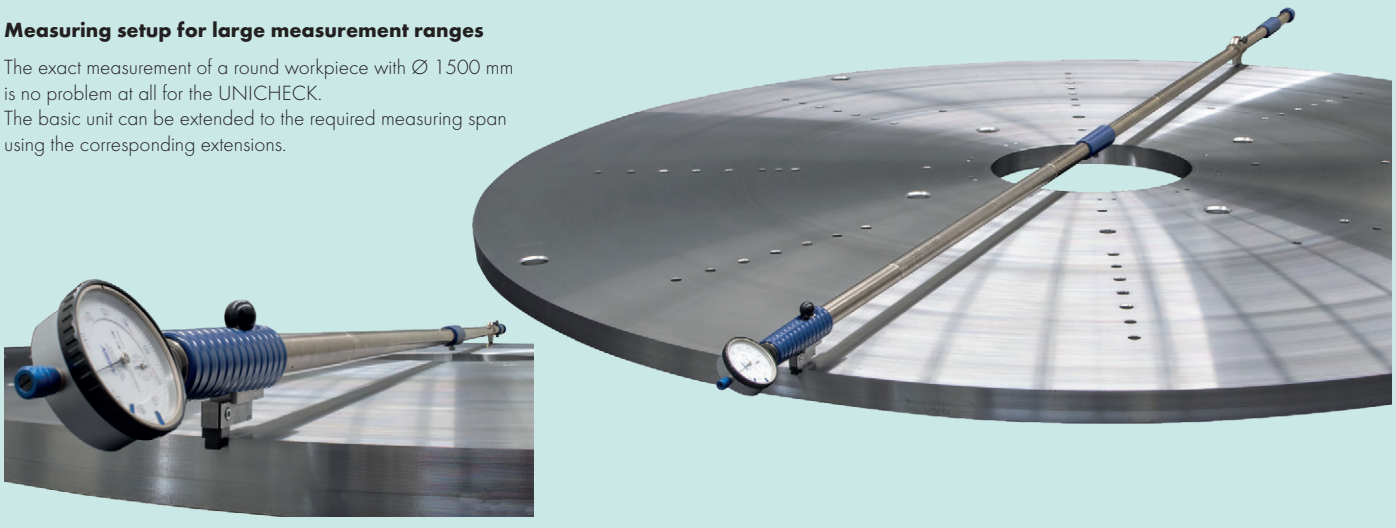
Device setup

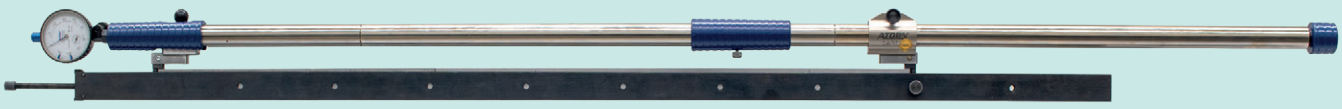


1. Basic unit
2. Display unit (dial indicator, precision dial or electronic displacement transducer)
3. Measuring probe mount, locating bore Ø 5 mm
4. Measuring probe shank Ø 5 mm
5. Protective cap
6. Heat protection handle
7. Control lever
8. Slider with mount for fixed probe
9. Measuring arm for horizontal measurements, locating bore Ø 5 mm
10. Adapter Ø 5 mm, with connecting thread M2.5
11. Special-purpose contact point M2.5
12. Adapter Ø 5 mm, with locating bore Ø 3.5 mm
13. Thread measuring insert, shank Ø 3.5 mm

Measuring setup for large measurement ranges

The exact measurement of a round workpiece with Ø 1500 mm is no problem at all for the UNICHECK.
The basic unit can be extended to the required measuring span using the corresponding extensions.





The zero setting can be performed using a gauge block combination and a gauge block holder.

ATORN Universal measuring instrument *UNICHECK*

- For solving a wide variety of measuring tasks such as external and internal measurements, external and internal gears
- Adjustments are made using a setting device, masterpiece, gauge combination, gauge ring or micrometer
- Strong tube construction
- Adjustable fixed measuring leg
- Movable measuring leg for internal and external measurement, measuring direction can be changed, measuring range 12 mm
- Measuring force outside / inside 5 N
- Universally applicable by attaching a wide variety of measuring arms and probe tips (optional accessory)
- Measurement range can be extended up to 2000 mm through extensions (optional accessories)
- Display optionally through analogue or digital dial gauge (optional accessory)
- Supplied in wooden case (without probe holders, probe and dial gauge)





Sample set configuration

Min./max. external length measuring range	Min./max internal length measuring range	Measuring force N	art.no.	€
0 - 200 mm	25 - 255 mm	5	500807 1001	2.559,–

5180

ATORN Accessories for universal measuring instrument *UNICHECK*



Extensions

- Extension 400mm (500808 1401), consisting of 2x200mm



500808 1201



500808 1101

Designation	L mm	art.no.	€
Extension	100	500808 1101	392,–
Extension	200	500808 1201	418,–
Extension	400	500808 1401	660,–

5180

Measuring probe ball Ø 6 mm (pair)



Designation	L mm	Clamp in shank diameter mm	art.no.	€
Measuring probe ball Ø 6 mm, short	23	5	500808 1005	182,–
Measuring probe ball Ø 6 mm, long	53	5	500808 1006	182,–

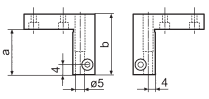
5180

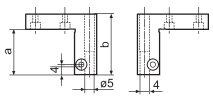
Measuring probe ball Ø 6 mm, cranked (pair)



Designation	Projection mm	art.no.	€
Measuring inserts, offset with ball Ø 6 mm	11	500808 2002	294,–

5180



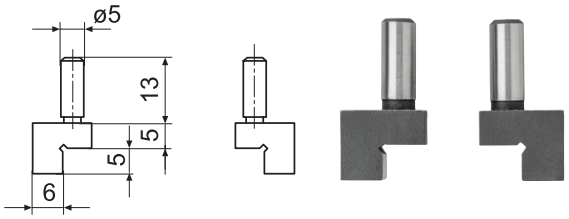


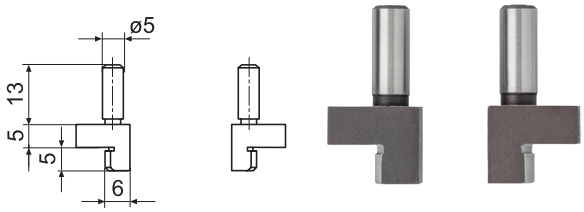
Probe holders for vertical use (pair)



Suitable for	Adapter diameter mm	art.no.	€
External measurements	5	500808 1021	368,–
Internal measurements	5	500808 1022	368,–

5180





Shoulder measurement inserts (pair)

Designation	Clamp in shank diameter mm	art.no.	€
Shoulder measuring inserts external	5	500808 1025	448,–
Shoulder measuring inserts internal	5	500808 1026	448,–

5180

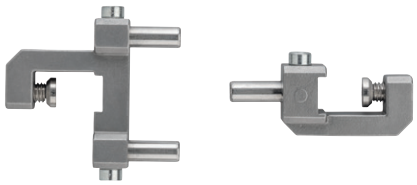
Measuring arms (pair) for external and internal measurements



L mm	Adapter diameter mm	art.no.	€
35	3.5	500808 1050	408,–
70	3.5	500808 1051	486,–

5180

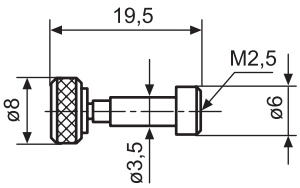
Depth stops (pair)



Designation	art.no.	€
Depth stops	500808 1052	382,–

5180

Adapter M2.5 (pair) for attaching dial gauge special probe tips with connecting thread M2.5 x 0.45



Designation	Clamp in shank diameter mm	art.no.	€
Adapter for special probe tips with M2.5 connection thread	5	500808 1055	43,60

5180

Cylindrical probe (pair)



Designation	L mm	Clamp in shank diameter mm	art.no.	€
Measuring inserts cylindrical	52	5	500808 2001	182,–

5180

Disc probe (pair)

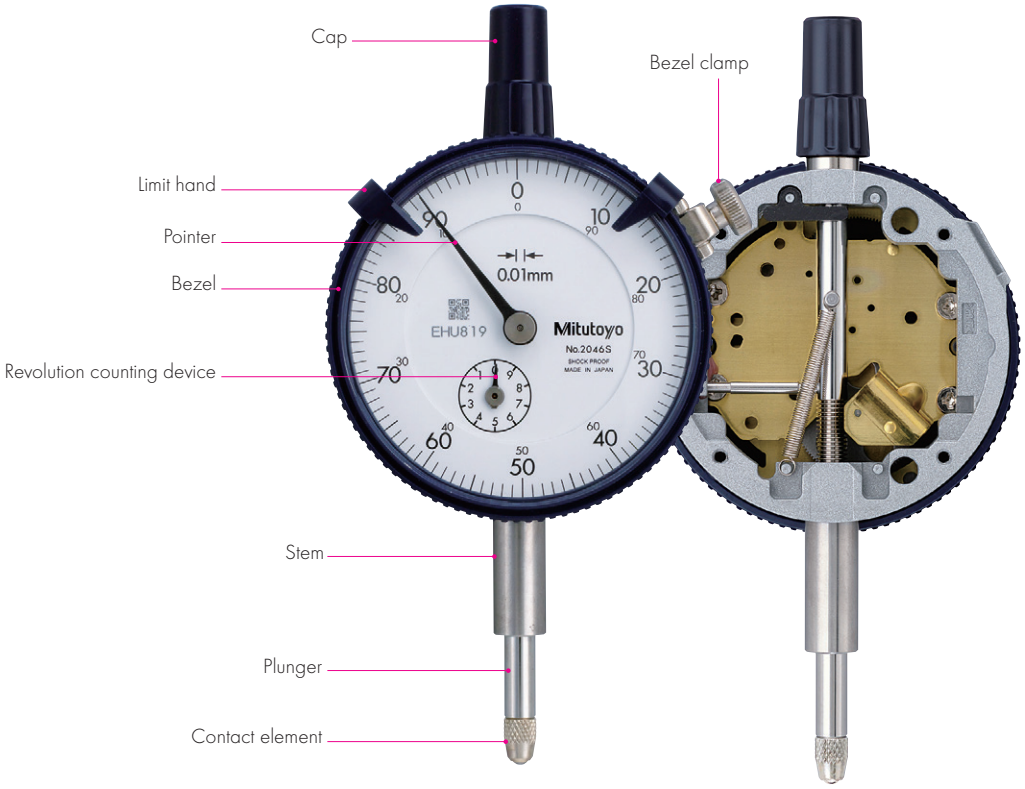


Designation	Clamp in shank diameter mm	art.no.	€
Disc probe	5	500808 1010	182,–

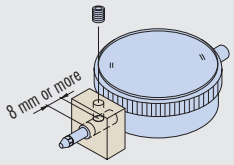
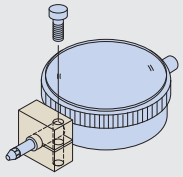
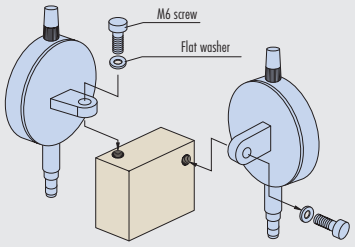
5180

Dial indicators

INFO

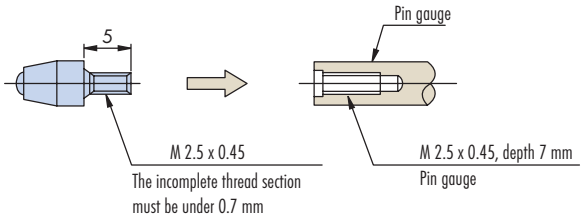


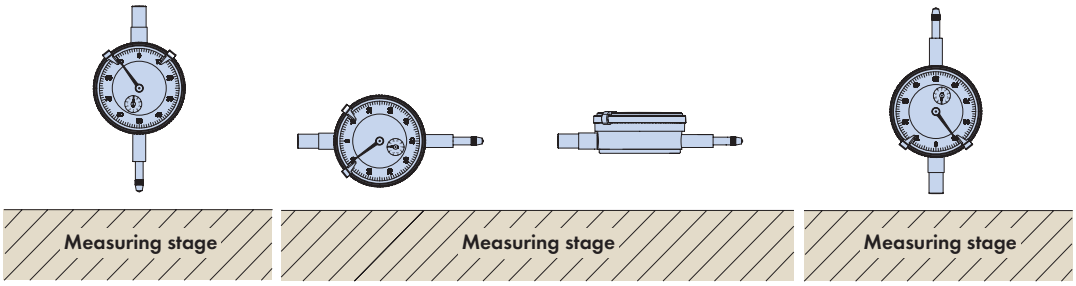
Assembly

Stem Assembly	Method	Clamp the stem with a clamping screw 	Clamping the stem by split-clamp fastening 
	Note	• Mounting hole tolerance: Ø8G7 (+0.005 to 0.02) • Clamping screw M4 to M6 • Clamping position: 8 mm or more from the lower side of the stem • Maximum torque: 150N-cm when clamping with a single M5 screw • Note that excessive clamping torque may adversely affect the spindle movement.	• Mounting hole tolerance: Ø8G7 (+0.005 to 0.02)
Fixing with a mounting lug	Method		
	Note	• Depending on the application, the mounting lugs can be changed in orientation by 90 degrees. (Setting of lug on delivery: horizontal) • The mounting lugs of the models of series 1 (No. 1911, 1913-10&1003) cannot, however, be adjusted horizontally. • To prevent cosine-effect error, ensure that the measuring spindle is positioned at right angles to the surface to be measured (with the spindle itself in line with the measuring direction).	

Contact element

- Standardised screw thread M 2.5 x 0.45 (length: 5 mm).
- When producing a contact point, the incomplete thread section at the root of the screw must be less than 0.7 mm.





Contact point down (normal position)

Plunger horizontal (measuring direction lateral)

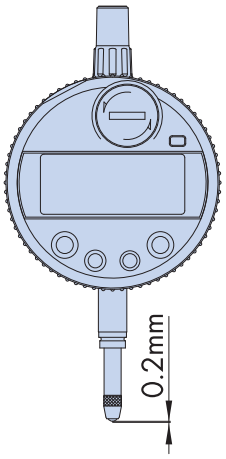
Contact point up (contrary to standard-measurement direction)

Effect of alignment on the measuring force

- In measurements with a horizontal or upwards measuring direction, the measuring force is low compared to the standard measuring direction (downwards). In these cases, the repeatability must be verified.

Setting the zero point on a digital dial indicator

The range of 0.2 mm at the end of the spindle stroke is not specified. Make sure that the spindle is raised by at least 0.2 mm when setting the zero point.



Caring for the spindle

- The spindle must not be lubricated. Otherwise dust may stick to it and cause errors.
- If the spindle is stiff, wipe it with a dry cloth or a cloth soaked in alcohol. If this leads to no improvement, consult Mitutoyo for repairs.
- Before you perform a measurement or calibration, ensure that the spindle can easily move up and down, and check the zero point for stability.

SARA® Dial indicator

DIN 878 | 0,01 mm

- Matt chrome-plated metal housing
- Rotatable outer ring for zeroing
- Two adjustable inner tolerance marks
- Probe tip thread: M2.5
- Clamping shank Ø: 8 mm
- Optional ring clamp, self-locking or with clamping screw
- Supplied in moulded packaging



Max. length measuring range mm	External Ø mm	Model	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
10	58	Without ring clamping	510101 1002	28,20	073009 D003	25,–
10	58	With ring clamping	510101 1005	28,20	073009 D003	25,–

5121

ATORN Dial indicators with ceramic probe balls, shock-resistant

DIN 878 | 0,01 mm

- Measuring force max. 1.3 N
- Non-magnetic and non-conductive measuring insert
- Dimensions in accordance with DIN EN ISO 463 Issue 6/2006
- Metal housing
- With shock protection
- Rotatable metal outer ring for zeroing
- Two adjustable inner tolerance marks
- Probe tip thread: M2.5
- Clamping shank Ø: 8 mm
- Supplied in a case



Standard version

Max. length measuring range mm	External Ø mm	Measurement travel of one pointer revolution mm	Model	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
10	58	1	Revolution counting device round	511006 0010	54,–	073009 D003	25,–
10	58	1	Revolution counting device concentric	511006 1010	80,–	073009 D003	25,–
25	58	1	Revolution counting device concentric	511006 1025	132,–	073009 D004	28,–25,–

5192

Compact dial indicator

- 511007 1005 without shock proofing



Measurement range mm	External Ø mm	Measurement travel of one pointer revolution mm	Model	Measuring force N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
5	40	0.5	Revolution counting device round	1.0	511007 0005	68,–	073009 D002	25,–25,–
10	40	1,0	Revolution counting device concentric	1.0	511007 1005	102,–	073009 D003	25,–

5192

Käfer Dial indicator, oil and water-tight, shock-proof

IP67 | DIN 878 | 0,01 mm

- Dimensions in accordance with DIN EN ISO 463 Issue 6/2006 (except L2 = 39.5 mm)
- **Oil and water-tight / IP67 protection rating**
- **With shock proofing**
- Outer ring can be rotated through 360°
- Two adjustable tolerance marks
- Probe tip thread M2.5
- Clamping shank Ø 8 mm



Standard version

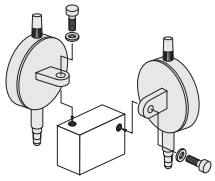
Max. length measuring range mm	Housing outer diameter	Measurement travel of one pointer revolution mm	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
10	61.5 mm	1	1.6	511008 0010	131,05	073009 D003	25,–

5102

Mitutoyo Dial indicators

IP63 IP64 Werks-norm 0,001 mm

- **Reading 0.01 mm or 0.001 mm**
- Housing made of oil-resistant plastic
- Completely without through-holes for improved dirt protection
- Back cover: flat or with mounting lug
- Rotating external ring for zero setting
- Surface-hardened watch glass, new coating reduces reflections and scratches, dirt can be removed easily
- Damped end point
- Robust spindle Ø 4.8 mm
- New clamping shank for easy clamping across the entire length
- Probe tip thread M2.5
- Clamping shank Ø 8 mm
- Supplied in moulded packaging
- Special accessories tolerance mark clips for dial indicators up to housing Ø 40 mm no. 517010 0010, case Ø 57 mm no. 517010 0011



Application example, rear side attachment eye



Compact dial indicator up to external ring Ø 40 mm, resolution 0.01 mm

Max. length measuring range mm	Design	Error limit mm	Measurement travel of one pointer revolution mm	Measuring force max. N	Shock-proof	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
5	without fastening eyelet	0.014	1	1.4	No	511001 2005	80,–	073009 D002	25,–25,–
5	Rear fastening eyelet	0.014	1	1.4	No	511001 2006	79,–	073009 D002	25,–25,–

5102



Compact dial indicator up to external ring Ø 40 mm, resolution 0.001 mm

- Jewel bearing

Max. length measuring range mm	Design	Error limit mm	Measurement travel of one pointer revolution mm	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
1	without fastening eyelet	0.006	0.2	1.5	511001 2050	211,–	073009 D001	25,–25,–
1	Rear fastening eyelet	0.006	0.2	1.5	511001 2051	216,–	073009 D001	25,–25,–

5102



Standard dial indicators external ring Ø 57 mm, 0.01 mm

Max. length measuring range mm	Design	Error limit mm	Measurement travel of one pointer revolution mm	Shock-proof	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
10	without fastening eyelet	0.015	1	No	1.4	511010 2101	50,–	073009 D003	25,–
10	Rear fastening eyelet	0.015	1	No	1.4	511010 2102	51,–	073009 D003	25,–
10	without fastening eyelet	0.017	1	Yes	1.4	511010 2103	81,–	073009 D003	25,–
20	without fastening eyelet	0.020	1	Yes	2	511010 2152	114,–	073009 D004	25,–
30	without fastening eyelet	0.025	1	Yes	2.5	511010 2172	145,–	073009 D005	28,–

5102



Fine dial indicators external ring Ø 57 mm, 0.001 mm

- Jewel bearing
- Shock-resistant

Max. length measuring range mm	Measurement travel of one pointer revolution mm	Error limit mm	Shock-proof	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
1	0.2	0.005	Yes	1.5	511010 2501	110,–	073009 D001	25,–25,–
1	0.01	0.005	Yes	1.5	511010 2505	142,–	073009 D001	25,–25,–
2	0.02	0.007	Yes	1.5	511010 2701	141,–	073009 D001	25,–25,–

5102



Dial gauges with IP protection

Max. length measuring range mm	Scale value mm	Error limit mm	Housing outer diameter	Measuring force max. N	Measurement travel of one pointer revolution mm	Shock-proof	Protection type	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
1	0.001	0.005	57 mm	2	0.1	Yes	IP 64	511015 1501	173,–	073009 D001	25,–25,–
5	0.01	0.012	40 mm	2	1	No	IP 63	511015 1301	140,–	073009 D002	25,–25,–
10	0.01	0.013	57 mm	2.5	1	No	IP 64	511015 0503	146,–	073009 D003	25,–

5102



Dial gauge with rear spindle

Max. length measuring range mm	Division mm	Housing outer diameter	Error limit mm	Measurement travel of one pointer revolution mm	Measuring force max. N	Shock-proof	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
5	0.01	39	0.018	1	1.4	No	511501 1001	151,–	073009 D002	25,–25,–

5102

Mitutoyo Safety dial indicators

IP64 IP52 Werks-norm

- With one pointer rotation to avoid measurement errors, a second scale does not need to be considered for the pointer rotations
- Housing made of oil-resistant plastic
- Completely without through-holes for improved dirt protection
- Rotating external ring for zero setting
- Surface-hardened watch glass, new coating reduces reflections and scratches, dirt can be removed easily
- Rotating external ring for zero setting
- Shock-resistant
- Probe tip thread M2.5
- Clamping shank Ø 8 mm
- Supplied in moulded packaging



Safety dial indicators Ø57mm, 0.001mm

Max. length measuring range mm	Error limit mm	Protection type	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
± 0.04	0.003	-	1.4	511502 1001	163,–	073009 D001	25,–25,–
± 0.04	0.003	IP 64	1.4	511502 1003	182,–	073009 D001	25,–25,–

5102

Safety dial indicators Ø57mm, 0.01mm

Max. length measuring range mm	Error limit mm	Protection type	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
± 0.25	0.007	IP 52	1.4	511502 1019	88,–	073009 D001	25,–25,–
± 0.50	0.007	IP 52	1.4	511502 1020	75,–	073009 D001	25,–25,–

5102

Mitutoyo Dial indicator with wide measurement range

Werks-norm

- Dial indicators with housing Ø 78 mm and Ø 92 mm
- Housing made of oil-resistant plastic
- Completely without through-holes for improved dirt protection
- Back cover: flat or with mounting lug
- Rotating external ring for zero setting
- Surface-hardened watch glass, new coating reduces reflections and scratches, dirt can be removed easily
- Damped end point
- Robust spindle Ø 4.8 mm
- New clamping shank for easy clamping across the entire length
- Probe tip thread M2.5
- Clamping shank Ø 8 mm
- Supplied in moulded packaging
- Special accessories tolerance mark clips no. 517010 0011



Dial indicator with external ring Ø 78 mm

Max. length measuring range mm	Error limit mm	Shock-proof	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
20	0.020	No	2	511025 0540	211,–	073009 D004	28,–28,–
30	0.025	Yes	2.5	511025 0550	233,–	073009 D005	28,–
50	0.030	Yes	3	511025 0560	245,–	073009 D006	36,–
80	0.045	Yes	3	511025 0570	337,–	073009 D007	59,–
100	0.050	Yes	3.2	511025 0580	498,–	073009 D007	59,–

5102

ATORN Indicating callipers

0,001 mm

- Compact design
- Measuring pins hardened and precision guided
- Measuring mechanism with ruby bearing, shock-proof
- With adjustment button for fine adjustment across the entire measurement range
- With protective sleeve to prevent accidental changes to the fine adjustment
- Red adjustable tolerance marks
- Free lift 3.0 mm
- Probe tip thread M2.5
- Clamping shank ∅ 8 mm
- Supplied in moulded packaging



Max. length measuring range mm	Scale value mm	With free stroke	Measuring force N	Protection type	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
± 0.05	0.001	Yes	1	-	513107 0001	230,–	071240 D001	26,–
± 0.05	0.001	Yes	1	IP 53	513107 0010	232,–	071240 D001	26,–

5192

SARA Digital dial indicator

Werks-norm | 0,01 mm | inch / mm

- Extremely easy to read with large LCD display
- Outer ring ∅ 58 mm
- Clamping shank ∅ 8 mm
- Probe tip thread M2.5
- **Functions:** mm/inch, ON/OFF, ZERO
- Supplied with CR 2032 battery, No. 548079 6032



Max. length measuring range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
12.5	0.03	512015 1201	132,50	073009 D004	28,–28,–

5121

HELIOS·PREISSER Digital dial indicator wireless

inch / mm

- Excellent legibility thanks to 11 mm-high digits
- Aluminium housing
- 280° rotating display field
- Clamping shank ∅ 8 mm
- Outer ring ∅ 60 mm
- Compatible with the radio system **ATORN-Integrated-Wireless**
  The optional radio receiver ***i-Stick*** 567512 0001 is required to use the radio system
- Data output via cable such as RS232, USB or Digimatic
- **Functions**: On/Off, mm/inch, TOL (tolerance value input), PRESET (user-defined values), factor input, key lock, integrated radio transmitter
- Supplied with battery CR 2450 no. 548079 6450

integrated radio



Max. length measuring range mm	Error limit mm	Measuring force N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
12.5	0.004	0.6-0.9	512045 1201	460,–	073009 D004	28,–28,–

5186

ATORN Digital dial indicator *KEEPTRONIC*

IP52 | Werks-norm | 0,001 mm | 0,01 mm | inch / mm | KEEP-TRONIC | RS232C | Digi-matic | USB

Data output multiCOM

- **KEEPTRONIC**electronics store the zero point, operating keys lock to prevent accidental alteration of the zero point. Battery life approx. 3 years
- Data output **multiCOM** Can be used as USB, Digimatic or RS-232
- High-contrast LCD display with 12 mm high digits
- Casing Ø: 60 mm
- Clamping shank Ø 8 mm
- Contact point thread M2.5
- **Functions:** On/off/zeroing, toggle mm/inch and reverse measuring direction, pre-set user-defined values in the display
- Supplied with CR2032 battery, no. 548079 6032
- Optional accessories: Data cables, type P-RS 232 C / P-Digimatic / P-USB, no. 512521....



Measurement range mm	Digit increment mm	Error limit µm	Min./max. measure-ment force	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
12.5	0.01	20	0.5-1 N	512042 1210	186,–	073009 D004	28,–28,–
12.5	0.001	5	0.5-1 N	512042 1201	352,–	073009 D004	28,–28,–

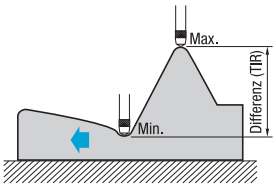
5181

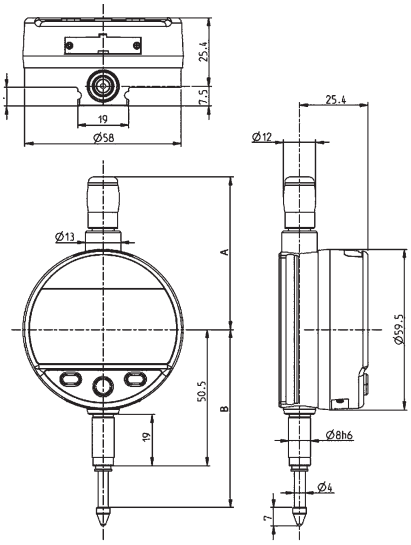
ATORN Digital dial indicator for run-out measurements

IP51 | Werks-norm | 0,001 mm | 0,01 mm | inch / mm | ABSO-LUTE | RS232C | USB

- Inductive measuring system
- Aluminium casing with plastic front plate, Ø 60 mm, coolant-proof
- Easily readable LCD display with 11 mm high digits
- Front plate can be rotated through 270°
- Energy save mode and automatic reactivation
- Coloured LEDs for tolerance evaluation
- Max. / min. / max-min for run-out measurements
- 0.001 mm version, can be switched to 0.01 mm
- PROXIMITY data output
- Clamping shank Ø 8 mm
- Contact point thread M2.5
- **Functions:**
  mm/inch toggle option
  Preset (user-defined values)
  Reverse counting direction
  Switch between ref. 1 and ref. 2 (ABS/INC)
  Hold
- Supplied with CR2032 battery, no. 548079 6032
- **Optional accessories:** Data cable: PROXIMITY-USB, no. 500700 9966 or PROXIMITY-RS, no. 500700 9965







Measurement range mm	Digit increment mm	Error limit µm	Min./max. measure-ment force	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
12.5	0.01	10	0.65-0.9 N	512064 0125	470,–	073009 D004	28,–28,–
25	0.01	10	0.65-1.15 N	512064 0025	529,–	073009 D004	28,–28,–
50	0.01	20	1.4-2.9 N	512064 0050	1.180,–	073009 D006	36,–
100	0.01	20	1.8-3.8 N	512064 0100	1.380,–	073009 D007	59,–
12.5	0.001	3	0.65-0.9 N	512063 0125	555,–	073009 D004	28,–28,–
25	0.001	4	0.65-1.15 N	512063 0025	780,–	073009 D004	28,–28,–
50	0.001	5	1.4-2.9 N	512063 0050	1.360,–	073009 D006	36,–
100	0.001	6	1.8-3.8 N	512063 0100	1.540,–	073009 D007	59,–

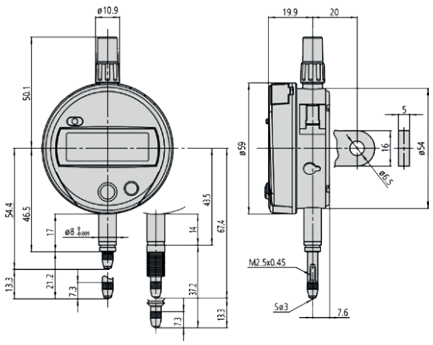
5181

Mitutoyo Digital ABSOLUTE dial indicator *IDS*

ABSOLUTE®

ABSO-LUTE | Digi-matic | USB

- Effortless to read thanks to large 9 mm LCD digits
- Die-cast aluminium casing
- **ABSOLUTE** scale
- Carbide contact point with M2.5 thread
- Clamping shank Ø 8 mm
- Unrestricted travel speed
- Operating time: 0,01 mm - 20.000 hours, 0,001 mm - 18.000 hours
- **Functions:** On/off, zeroing (ORIGIN), reverse measuring direction (+/-)
- **Optional accessories:** Digimatic cable type F, no. 563100 0051 (1 m), no. 563100 0052 (2 m); USB cable type F-USB, no. 563110 0006





Standard version

- Battery life: 20,000 hrs.
- Supplied in moulded packaging with SR44 battery, no. 500534 0001

Max. length measuring range mm	Error limit mm	Measuring force N	Digit increment mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
12.7	0.02	1.5	0.01	512029 1201	193,–	073009 D004	28,–28,–
12.7	0.003	1.5	0.001	512029 1210	368,–	073009 D004	28,–28,–

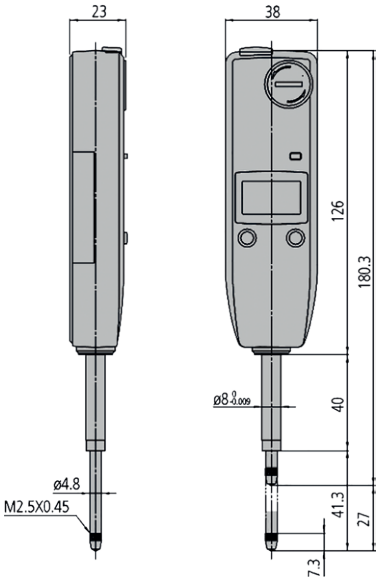
5102

Mitutoyo Digital ABSOLUTE dial indicator *IDU*

ABSOLUTE®

Werks-norm | 0,01 mm | ABSO-LUTE | Digi-matic | USB

- **ABSOLUTE scale**
- Casing size: 38 x 126 x 23 mm
- Clamping shank Ø 8 mm
- Contact point: Carbide with M2.5 thread
- Battery life approx. 20,000 hours
- **Functions:** On/off, zero point (ORIGIN), reverse counting direction (+/-)
- Supplied in moulded packaging with SR44 battery (no. 500534 0001) and lifting lever
- **Optional accessories:** Digimatic cable type F, no. 563100 0051 (1 m), no. 563100 0052 (2 m); USB cable type F-USB, no. 563110 0006





Max. length measuring range mm	Error limit mm	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
25	0.020	1.8	512030 0101	262,–	073009 D004	28,–28,–

5102

Mitutoyo Digital ABSOLUTE dial gauge *IDC*

Werks-norm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

- Bidirectional communication e.g. for parameterisation via PC (Digimatic S1 interface) possible
- **ABSOLUTE scale**
- Very good reading due to a large digital/analogue display with 11 mm digit height
- Display 330° rotatable
- Models with digital digit step from 0.5 µm to 0.001 mm and 0.01 mm
- Simple calculation possibilities and max / min value storage for impact tolerances
- Warning function for calibration time
- Input of upper and lower tolerance for a GO/±NG assessment
- Function lock protects the dial gauge against unauthorised use
- Programmable key assignment
- Delivery in shaped packaging including battery CR2032 No. 548079 6032
- **Special accessories:** Digimatic cable type H No. 563100 0071 (1 m), No. 563100 0072 (2 m), USB cable type H 563110 0021



Standard version, outer ring diameter 59 mm, resolution 0.0005 mm and 0.01 mm

Max. length measuring range mm	Error limit mm	Measuring force max. N	Digit increment mm	art.no.	€	DAkkS calibration art.no.	€
12.7	0.020	0.9	0.01	512018 6011	343,–	073009 D004	28,–
25.4	0.020	1.8	0.01	512018 6125	464,–	073009 D004	28,–
50.8	0.040	2.3	0.01	512018 6150	724,–	073009 D006	36,–
12.7	0.003	1.5	0.0005	515018 6101	460,–	073009 D004	28,–
25.4	0.003	1.8	0.0005	512018 6025	585,–	073009 D004	28,–
50.8	0.005	2.3	0.0005	512018 6050	874,–	073009 D006	36,–

5102

with low measuring force

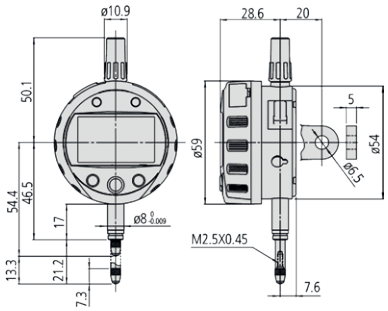
Max. length measuring range mm	Error limit mm	Measuring force max. N	Digit increment mm	art.no.	€	DAkkS calibration art.no.	€
12.7	0.020	0.2 - 0.5	0.01	512018 6112	406,–	073009 D004	28,–28,–
12.7	0.003	0.4 - 0.7	0.0005	512018 6102	557,–	073009 D004	28,–28,–

5102

Mitutoyo *IDC* digital ABSOLUTE dial indicator for run-out measurements

Werks-norm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®



- Dial indicator for run-out measurement; allows max., min. and difference values (TIR) to be retrieved
- ABSOLUTE scale
- Combined digital and analogue display
- Display component can be rotated through 330° for better readability
- Programmable Ax factor (x = spindle
- Adjustable resolution 0.01 mm / 0.001 mm
- 3 memory slots for pre-set and tolerance values
- Configurable via PC (special interface optional)
- Contact point M2.5,
- Clamping shank Ø 8 mm
- **Functions:** ON/OFF, MENU for switching between max. / min. / TIR modes, PRESET/SET for pre-setting values / inputting tolerances, START/ZERO/ABS for user-defined zeroing / incremental mode, view selection in tolerance mode, +/- to reverse measuring direction
- Supplied in moulded packaging with CR 2032 battery no. 548079 6032
- **Optional accessories:** Digimatic cable type F, no. 563100 0051 (1 m), no. 563100 0052 (2 m); USB cable type F-USB, no. 563110 0006



Measurement range mm	Error limit mm	Housing outer diameter	art.no.	€	DAkkS calibration art.no.	€
12.7	0.003	60.5	512026 1211	527,–	073009 D005	28,–

5102

Mitutoyo Digital ABSOLUTE dial gauge *IDF*

Werks-norm | ABSO-LUTE | | | Digi-matic | USB

- Bidirectional communication e.g. for parameterisation via PC (Digimatic S1 interface) possible
- Very good readability due to a large digital / analogue display with 11 mm digit height
- Red / Green LCD backlight for visual GO / ±NG tolerance evaluation
- MAX / MIN / RANGE (runout value) function with a frequency of 500 scans/s
- Warning function for calibration time
- High accuracy and digit increment of 0.5 µm
- External power supply via AC adapter
- Function lock protects the dial gauge against unauthorised use
- Programmable key assignment
- Supplied in moulded packaging including battery CR2032 no. 548079 6032
- **Special accessories:** Digimatic cable type H No. 563100 0071 (1 m), No. 563100 0072 (2 m), USB cable type H 563110 0021



512022 1025



512022 1050



Display outside tolerance

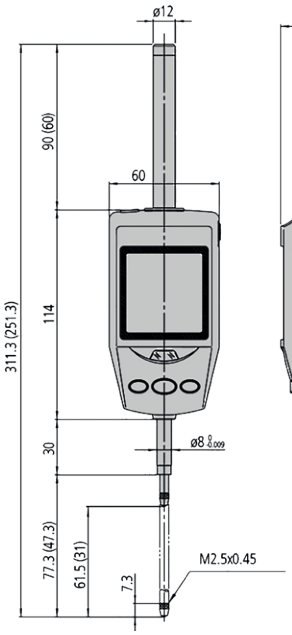
Measurement range mm	Digit increment mm	External Ø mm	Error limit mm	Measuring force N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
12.7	0.0005	59	0.0025	1.5	512022 1012	843,–	073009 D005	28,–
25.4	0.0005	59	0.0025	1.8	512022 1025	966,–	073009 D004	28,–28,–
50.8	0.0005	59	0.004	2.3	512022 1050	1.046,–	073009 D006	36,–
50.8	0.0005	59	0.003	2.3	512022 1051	1.115,–	073009 D006	36,–

5102

Mitutoyo Digital dial indicator *IDH*

Werks-norm | | | Digi-matic | USB

- **Can be remote controlled**
- **Power supply via mains adapter**
- Photoelectric backlit glass scale
- Max. travel speed 1,000 mm/sec.
- Backlit LCD display
- Combined digital and analogue display
- Max., min. or difference values (TIR) can be selected for run-out measurements
- Optional remote control available
- Combined Digimatic / RS-232 C interface data output, can be used in both directions
- Clamping shank Ø 8 mm
- **Functions:** ON/OFF, MODE for switching from normal mode to tolerance evaluation, resolution for digital and analogue display, setup menu, MAX, MIN and TIR, toggle between 0.001 mm and 0.01 mm, (+/-) sign selection, SET/ZERO for confirming inputs and the display zero point, DATA/fn for data transfer and keypad lock
- Supplied in moulded packaging with mains adapter and factory certificate
- **Optional accessories:** Digimatic cable type D, no. 563100 0031 (1 m), no. 563100 0032 (2 m), USB cable type D-USB, no. 563110 0004





Dial indicator

Digit increment mm	Error limit mm	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
0.001 / 0.0005	0.002	2.0	512035 0030	969,–	073009 D005	28,–
0.001 / 0.0005	0.003	2.5	512035 0060	1.199,–	073009 D007	59,–

5102



Display within tolerance



Display outside tolerance

Accessories

Designation	art.no.	€
Remote control	512036 0003	101,–
Signal cable, RS-232 C, 1 m	512036 0001	224,–

5102


512036 0003

Mitutoyo Digital ABSOLUTE dial indicators *IDN / IDB*

IP66 | Werks-norm | 0,01 mm | ABSO-LUTE | Digi-matic | USB

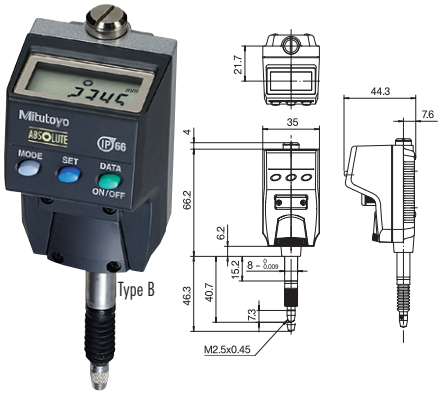
ABSOLUTE®

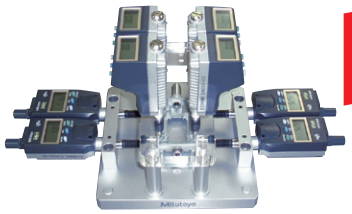
TÜVRheinland ZERTIFIZIERT — Sicherheit Staub- und wassergeschützt — www.tuv.com ID 0000007162

- Small and slim digital dial indicators for installation in fixtures with limited space
- **ABSOLUTE scale**
- Battery life approx. 7,000 hours
- Unrestricted travel speed
- Easy to read thanks to large display
- Type B readings from above, Type N readings from the front
- **IP66 protection rating**, oil-resistant casing
- Small casing dimensions, w = 35 mm / h = 60 mm
- **Display can be flipped 180° depending on installation position**
- Dial indicators with 0.001 mm resolution, can be switched to 0.01 mm
- Can be controlled remotely via special cable (optional accessory)
- **Functions:** On/off/DATA for transmitting measurement values, SET for confirming inputs, MODE for selecting tolerances, zeroing, counting direction, display switching
- Supplied in moulded packaging with SR44 battery, no. 500534 0001
- **Optional accessories:** Digimatic cable type G, no. 563100 0061 (1 m), no. 563100 0062 (2 m); USB cable type G-USB, no. 563110 0007



Display can be rotated through 180°





Slim design! Perfect for use in fixtures





Max. length measuring range mm	Digit increment mm	Type	Error limit mm	Measuring force max. N	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
5.0	0.01	IDB	0.03	2.0	512031 0005	328,–	073009 D002	28,–
5.0	0.001/0.01	IDB	0.004/0.02	2.0	512031 0105	429,–	073009 D002	28,–
12.7	0.01	IDN	0.03	2.5	512031 0012	292,–	073009 D004	28,–28,–
12.7	0.001/0.01	IDN	0.004/0.02	2.5	512031 0112	401,–	073009 D004	28,–28,–

5102

Accessories

Designation	art.no.	€
Cover plate with lug	512032 0003	25,–
Control cable, 1 m (external zero / PRESET)	512032 0001	197,–
Control cable 2m (external Zero / PRESET)	512032 0002	224,–

5102



Mitutoyo *IDC* digital ABSOLUTE dial indicator with calculation function

IP42 | Werks-norm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

- **ABSOLUTE scale**
- Suitable for use with chamfer gauges or measuring bridges for determining diameters
- Freely programmable calculation formula Ax + B + Cx-1
- Combined digital/analogue display
- Resolution can be selected in 12 steps, 0.0002 mm to 1 mm
- Display part can be rotated through 330° for better reading
- 3 memory slots for pre-set and tolerance values
- Configurable via PC (special interface optional)
- Clamping shank Ø 8 mm
- Probe tip thread M2.5
- **Functions:** Zeroing (ORIGIN), input tolerance values (TOL), input user-defined values (PRESET), confirm set formula, data transfer (DATA), hold value (HOLD), input calculation function (MODE), on/off
- Supplied in moulded packaging with battery CR 2032 No. 548079 6032
- **Special accessories:** Digimatic cable type F, No. 563100 0051 (1 m), No. 563100 0052 (2 m), USB cable type F-USB, no. 563110 0006



Suitable for 512019



Max. length measuring range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
12.7	0.003	512017 1201	648,–	073009 D004	28,–28,–

5102

Mitutoyo Dial indicator accessories

Coloured tolerance markings

- Transparent
- For dial indicators with outer ring Ø 57 mm (size 55.6 mm)
- Pack of 10

Colour	art.no.	€
Red	517010 0001	18,–
Green	517010 0002	18,–

5102



517010 0002



517010 0001

Green tolerance clips

- Suitable for analogue dial indicators

Designation	art.no.	€
Tolerance clips for analogue dial indicators Ø 57 - 92 mm housing	517010 0011	0,80
Tolerance clips for analogue dial indicators up to Ø 40 mm housing	517010 0010	0,50

5105



Cover plate

- With magnet
- Suitable for analogue dial indicators (no. 511010.... / 511015....) and IDC / IDF digital dial indicators

Designation	art.no.	€
Magnetic cover plate for series 2 / ID-C / ID-F	517015 0020	62,–

5102


517015 0020

Lifting knob

Designation	art.no.	€
Lifting button for digital dial indicators with measurement range 12.7 mm	512037 0004	39,–
Lifting button for IDC dial indicators with measurement range 25.4 mm	512037 0001	83,–
Lifting button for IDC dial indicators with measurement range 50.8 mm	512037 0003	83,–

5102



512025 0206

Lifting lever and wire release

- Lifting levers and wire releases are screwed onto or into the respective dial indicator and are used to lift the measuring bolt when changing workpieces
- Wire releases have approx. 12 mm of travel (for IDS, IDC, IDF, IDU), 30 mm for IDH dial indicators

Designation	art.no.	€
Lifting level for operating plunger for analogue dial indicators, 511010.... (10 mm), 511015....	512025 0149	12,–
Lifting level for operating plunger for analogue dial indicators, 511001...., 511002....	512025 0206	14,40
Lifting level for operating plunger for dial indicators type (12.7 mm)	512025 0101	8,–
Wire remover for dial indicators type IDS, IDC, IDF IDH, IDU	512505 0001	44,90

5102


512025 0101


512505 0001

Measuring bridge

- For depth measurements
- Made from hardened and lapped tool steel
- **Holding fixture for dial indicators with shank diameter 8 mm**
- Matt chrome-plated
- Supplied in a wooden case with recess for Ø 58 mm dial indicator

Bridge length x bridge width mm	art.no.	€	**Factory calibration** art.no.	€
101.5x17	504902 0002	102,50	073103 W143	14,–
63x17	504902 0001	94,50	073103 W143	14,–

5121


504902 0001


504902 0002

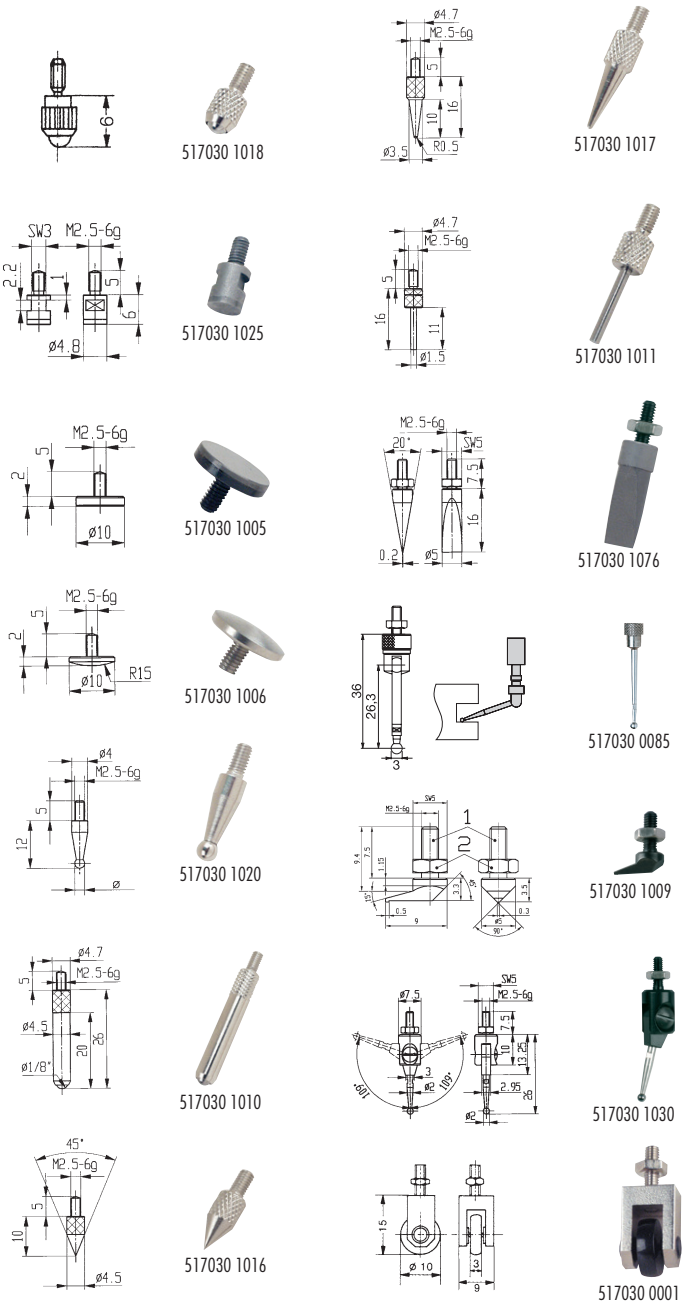
Mitutoyo Accessories for dial indicators and indicating callipers

- Contact points in alternative designs or with ruby/sapphire tips available on request
- Connection thread M2.5 x 0.45 mm

Special-purpose contact points

Designation	Material	D mm	L mm	art.no.	€
Ball contact point	Carbide	3.0	6	517030 1029	6,25
Ball contact point	Rubin	3.0	6	517030 1060	11,95
Flat contact point	Steel	4.8		517030 1002	5,60
Flat contact point	Carbide	4.8		517030 1025	36,20
Flat contact point	Steel	10		517030 1005	6,30
Flat contact point	Steel	20		517030 1007	24,90
Flat contact point	Steel	30		517030 1012	24,90
Flat contact point	Carbide	10		517030 1027	62,30
Spherical contact point R15	Steel			517030 1006	8,10
Ball contact point	Steel	1.0	12	517030 1051	9,60
Ball contact point	Steel	2.0	12	517030 1052	9,60
Ball contact point	Steel	4.0	12	517030 1054	9,60
Ball contact point	Steel	5.0	12	517030 1055	9,60
Ball contact point	Steel	6.0	12	517030 1056	9,60
Ball contact point	Carbide	1.0	12	517030 1081	30,30
Ball contact point	Carbide	2.0	12	517030 1082	30,30
Ball contact point	Carbide	3.0	12	517030 1080	30,30
Ball contact point	Carbide	5.0	12	517030 1085	30,30
Ball contact point	Carbide	6.0	12	517030 1086	30,30
Ball contact point	Steel	3.0		517030 1010	4,70
Ball contact point	Carbide	3.0	26	517030 1040	16,20
Ball contact point 45°	Steel	-	10	517030 1016	7,70
Point contact point	Steel	-	16	517030 1017	7,25
Cylinder contact point	Steel	1.5		517030 1008	13,90
Cylinder contact point	Carbide	1.5	11	517030 1070	36,90
Cutting edge contact point	Carbide	5.0	16	517030 1076	81,50
Contact point castor	Steel	-	10	517030 0001	74,–
Contact point, side point	Steel			517030 1009	59,90
Swivelling contact point with ball	Steel	2.0	26	517030 1030	87,50
Swivelling contact point with ball	Steel	3	34.8	517030 0085	35,–

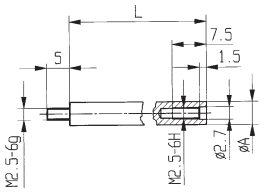
5102



Replaceable extensions

- Connection thread M2.5 x 0.45 mm
- Probe bolt diameter 5 mm





L mm	art.no.	€
10	517035 0010	7,–
15	517035 0015	8,80
20	517035 0020	8,80
30	517035 0030	8,80
40	517035 0040	8,80
50	517035 0050	8,80

5102

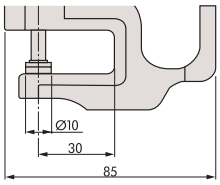
L mm	art.no.	€
60	517035 0060	8,80
70	517035 0070	8,80
80	517035 0080	8,80
90	517035 0090	8,80
100	517035 0100	8,80

5102

Mitutoyo Quick-acting thickness gauge

0,01 mm

- With analogue dial gauge
- Easy zero-point adjustment
- Ceramic measuring faces
- Special accessories: tolerance marking clips no. 517010 0011



Planarity: 5 µm



Measurement range	Scale value mm	Error limit mm	Projection mm	art.no.	€	DAkkS calibration art.no.	€
0-10	0.01	0.015	30	520101 1005	127,–	071220 D001	62,–

5102

Kroeplin Längenmesstechnik Analogue fast display callipers IP65

IP65 Werks-norm

- 1 fixed and 1 moving probe arm
- Measurement result can be read directly and easily from the clearly laid out dial indicator
- with tolerance markers



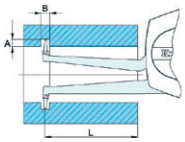
520051 0004

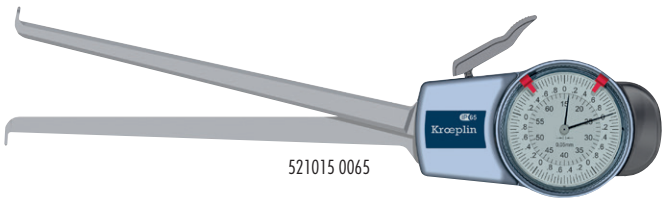
External fast display callipers

- For quickly measuring walls, metal sheets, foils etc.

Measure-ment range	Measuring depth mm	Measuring surface depth	Error limit mm	Measuring probe mm	Scale value mm	art.no.	€	DAkkS calibration art.no.	€
0-20 mm	85	24.6 mm	0.03	Carbide ball 1.5	0.01	520051 0004	447,70	072007 D001	30,–
0-50 mm	167	30 mm	0.05	Carbide ball 3.0	0.05	521014 0030	515,20	072007 D001	30,–

5123





521015 0065

Internal fast display calliper

- For quickly measuring internal grooves, recesses and bores

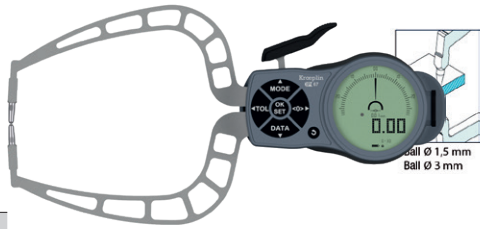
Measurement range	Measuring depth mm	Groove depth max. mm	Min. groove width	Error limit mm	Scale value mm	Measuring probe mm	art.no.	€	DAkkS calibration art.no.	€
2.5-12.5 mm	12	0.7	0.4	0.015	0.005	Cutting edge R0.1	520065 0001	447,70	072006 D001	30,–
5-15 mm	35	2.3	0.8	0.015	0.005	Carbide ball 0.6	520065 0002	447,70	072006 D001	30,–
10-30 mm	85	5.2	1.2	0.03	0.01	Carbide ball, 1.0	520065 0003	447,70	072006 D001	30,–
20-40 mm	85	7.0	1.2	0.03	0.01	Carbide ball, 1.0	520065 0004	447,70	072006 D001	30,–
30-50 mm	85	7.0	1.2	0.03	0.01	Carbide ball, 1.0	520065 0005	447,70	072006 D001	30,–
40-60 mm	85	8.3	1.2	0.03	0.01	Carbide ball, 1.0	520065 0006	447,70	072006 D001	30,–
50-70 mm	85	8.3	1.2	0.03	0.01	Carbide ball, 1.0	520065 0007	447,70	072006 D001	30,–
60-80 mm	85	8.3	1.2	0.03	0.01	Carbide ball, 1.0	520065 0008	447,70	072006 D001	30,–
70-90 mm	85	8.3	1.2	0.03	0.01	Carbide ball, 1.0	520065 0009	447,70	072006 D001	30,–
80-100 mm	85	8.3	1.2	0.03	0.01	Carbide ball, 1.0	520065 0010	447,70	072006 D001	30,–
15-65 mm	188	5.5	2.0	0.05	0.05	Carbide ball 1.5	521015 0065	515,20	072006 D001	30,–
40-90 mm	192	8.3	2.5	0.05	0.05	Carbide ball, 2.0	521015 0090	515,20	072006 D001	30,–
70-120 mm	192	8.3	2.5	0.05	0.05	Carbide ball, 2.0	521015 0120	593,60	072006 D002	36,–

5123

Kroeplin Längenmesstechnik Digital fast display callipers IP67 with digital display

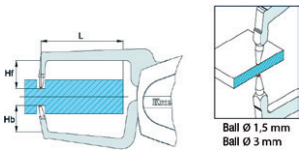
IP67 | Werks-norm | 0,01 mm | inch / mm | Digi-matic | USB

- Handy fast display callipers for internal and external measurements
- Adjustable increments: 0.001 / 0.002 / 0.005 / 0.01 / 0.02 / 0.05 mm
- Enhanced analogue/digital display with a display area of 250°
- Optional Bluetooth interface (up to 8 devices at once)
- Optional USB and DIGIMATIC interface
- Memory can store up to 100 measurement values
- **Functions**: Control lever, measurement program selection, start menu and functions, data transfer, ON/OFF, 0-PRESET
- Supplied with 2x AAA batteries, no. 548079 4003
- **Special accessories**: Digimatic interface adapter no. 524002 0005 plus Digimatic cable Type E, no. 563100 0041 (1 m), no. 563100 0042 (2 m), USB cable Type E-USB no. 563110 0005, Bluetooth interface adapter no. 524002 0015



External fast display calliper

- For quickly measuring walls, metal sheets, foils etc.



Measurement range	Measuring surface depth	Measuring depth mm	Digit increment mm	Measuring probe mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
0-10 mm	19.1 / 18.6 mm	35	0.005	Carbide ball 1.5	0.015	521019 0013	460,30	072007 D001	30,–
0-20 mm	24.6 mm	85	0.01	Carbide ball 1.5	0.015	521019 0012	460,30	072007 D001	30,–
0-30 mm	30 mm	115	0.01	Carbide ball 3.0	0.04	521014 0031	460,30	072007 D001	30,–
0-50 mm	30 mm	167	0.01	Carbide ball 3.0	0.05	521014 0040	636,60	072007 D001	30,–

5123

Internal fast display calliper

- For quickly measuring internal grooves, recesses and bores





Measurement range	Measuring depth mm	Groove depth max. mm	Min. groove width	Digit increment mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
2.5-12.5 mm	12	0.7	0.4	0.005	0.015	521012 0020	460,30	072006 D001	30,–
5-15 mm	35	2.3	0.8	0.005	0.015	521012 0021	460,30	072006 D001	30,–
10-30 mm	85	5.2	1.2	0.01	0.03	521012 0022	460,30	072006 D001	30,–
20-40 mm	85	7.0	1.2	0.01	0.03	521012 0023	460,30	072006 D001	30,–
30-50 mm	85	7.0	1.2	0.01	0.03	521012 0024	460,30	072006 D001	30,–
40-60 mm	85	8.3	1.2	0.01	0.03	521012 0025	460,30	072006 D001	30,–
50-70 mm	85	8.3	1.2	0.01	0.03	521012 0026	460,30	072006 D001	30,–
60-80 mm	85	8.3	1.2	0.01	0.03	521012 0027	460,30	072006 D001	30,–
70-90 mm	85	8.3	1.2	0.01	0.03	521012 0028	460,30	072006 D001	30,–
80-100 mm	85	8.3	1.2	0.01	0.03	521012 0029	460,30	072006 D001	30,–
13-43 mm	127	5.5	1.8	0.01	0.04	521016 0143	460,30	072006 D001	30,–
30-60 mm	132	6.5	2.0	0.01	0.04	521016 0160	460,30	072006 D001	30,–
15-65 mm	188	5.5	2.0	0.01	0.05	521016 0165	636,60	072006 D001	30,–
50-80 mm	132	8.5	2.3	0.01	0.04	521016 0180	460,30	072006 D001	30,–

5123

Kroeplin Längenmesstechnik Digital fast display callipers IP67

IP67 | Werks-norm | 0,001 mm | inch / mm | Digi-matic | USB

- Extra-small design, therefore very handy fast display calliper for indoor and outdoor measurements
- Adjustable increments: 0.001 / 0.002 / 0.005 / 0.01 mm
- Enhanced analogue display with a display area of 250°
- Li-ion battery with inductive charging, no battery replacement required
- Optional Bluetooth interface (up to 8 devices at once)
- Optional USB and Digimatic interface
- Memory can store up to 100 measurement values
- **Functions**: Control lever, measurement program selection, start menu and functions, data transfer, ON/OFF, 0-PRESET
- Supplied with charging cradle and Bluetooth dongle (Bluetooth interface adapter optional)
- **Special accessories**: Digimatic interface adapter No. 5240020006 plus Digimatic cable type E, No. 563100 0041 (1 m), No. 563100 0042 (2 m); USB cable type E-USB, No. 5631100005



Quick button including charging station

External fast display calliper

Measurement range	Measuring surface depth	Measuring depth mm	Measuring probe mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
0-15 mm	17 mm	45	Carbide ball 1.5 mm	0.010	521018 0001	515,20	072007 D001	30,–
0-15 mm	12 mm	45	Cutting edge R0.4 mm	0.015	521018 0002	515,20	072007 D001	30,–

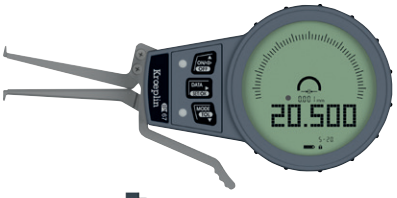
5123



Internal fast display calliper

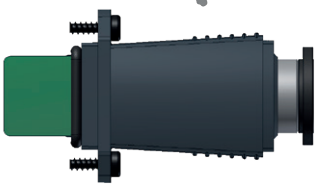
Measurement range	Measuring depth mm	Groove depth max. mm	Min. groove width	Error limit mm	Measuring probe mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
2.5-12.5 mm	12	0.7	0.6	0.01	Cutting edge R0.12	521018 0101	515,20	072006 D001	30,–
5-20 mm	44	2.2	0.8	0.01	Carbide ball 0.6	521018 0102	515,20	072006 D001	30,–
10-25 mm	46	4.0	1.5	0.01	Carbide ball, 1.0	521018 0103	515,20	072006 D001	30,–

5123



Description	art.no.	€
Interface adapter for Mitutoyo applications	524002 0006	122,50

5123



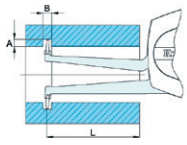
Designation	suitable for	art.no.	€
Interface adapter for Bluetooth applications	521012.... / 521014... / 521016... / 521017.... / 521019....	524002 0010	122,50

5123

Kroeplin Längenmesstechnik Digital internal fast display calliper with 3-point contact IP67

IP67 | Werks-norm | inch / mm | Digi-matic | USB

- 3-point contact improves centring for a faster process, reliable measurement and accurate results
- Adjustable increments: 0.001 / 0.002 / 0.005 / 0.01 / 0.02 / 0.05 mm
- Enhanced analogue/digital display with a display area of 250°
- Optional Bluetooth interface (up to 8 devices at once)
- Optional USB and DIGIMATIC interface
- Memory can store up to 100 measurement values
- **Functions**: Control lever, measurement program selection, start menu and functions, data transfer, ON/OFF, 0-PRESET
- Supplied with 2x AAA batteries, no. 548079 4003
- **Special accessories**: Digimatic interface adapter no. 524002 0005 plus Digimatic cable Type E, no. 563100 0041 (1 m), no. 563100 0042 (2 m), USB cable Type E-USB no. 563110 0005, Bluetooth interface adapter no. 524002 0015

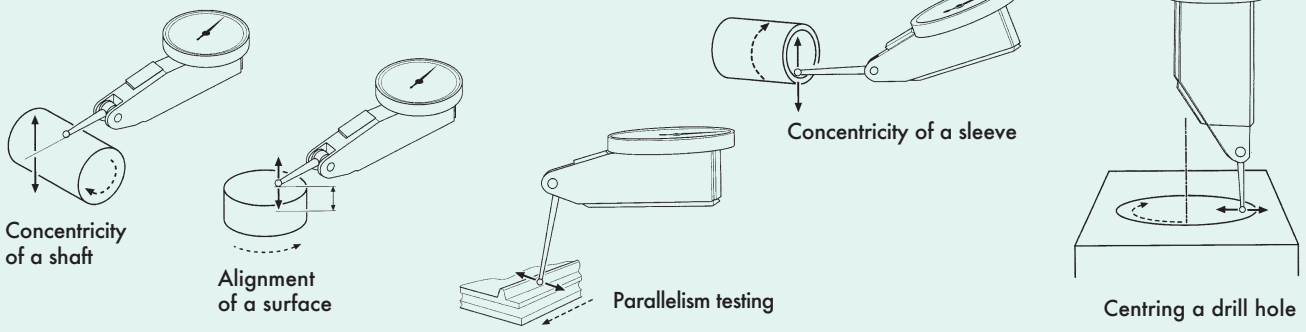




Measurement range	Measuring depth mm	Groove depth max. mm	Min. groove width	Error limit mm	Measuring probe mm	Digit increment mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
10-20 mm	75	3.5	1.6	0.02	Carbide ball, 1.0	0.005	521017 1020	553,30	072006 D001	30,–
15-30 mm	77	5.0	1.5	0.02	Carbide ball, 1.0	0.005	521017 1030	553,30	072006 D001	30,–
25-45 mm	85	7.0	1.6	0.02	Carbide ball, 1.0	0.005	521017 1045	553,30	072006 D001	30,–
40-60 mm	84	8.0	1.6	0.02	Carbide ball, 1.0	0.005	521017 1060	553,30	072006 D001	30,–
55-75 mm	84	8.0	1.6	0.02	Carbide ball, 1.0	0.005	521017 1075	553,30	072006 D001	30,–
70-90 mm	84	8.5	1.6	0.02	Carbide ball, 1.0	0.005	521017 1090	553,30	072006 D001	30,–
7-14 mm	34	2.2	0.8	0.01	Carbide ball 0.6	0.002	521017 1014	553,30	072006 D001	30,–
85-105 mm	84	9.0	1.6	0.02	Carbide ball, 1.0	0.005	521017 1105	553,30	072006 D002	36,–

5123

Lever dial indicator usage examples



SARA® Dial test indicator

DIN 2270

- Ideal for measuring deviations in shape and position, true running and axial run-out as well as alignment work
- Matt chrome-plated metal casing
- Casing and dovetail mounting V-blocks made in one piece for exceptionally rigid clamping
- Supplied with Ø 6 and 8 mm clamping shank



Scale value mm	Error limit µm	External Ø mm	Length of measuring sensor from centre of ball mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
0.01	10	29	14.3	525031 0029	81,90	071250 D001	28,–
0.01	10	40	14.3	525031 0040	84,50	071250 D001	28,–

5121

ATORN Dial test indicator

DIN 2270

- Dovetail attachment
- **Size 0040 with dial face seal and waterproof scale casing**
- **Size 0058 extremely easy to read thanks to 58 mm scale diameter**
- Supplied with Ø 8 mm clamping shank



Measurement range mm	Scale value mm	Error limit µm	External Ø mm	Length of measuring sensor from centre of ball mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
1.0	0.01	10	32	16.6	525051 1032	118,–	071250 D001	28,–
1.0	0.01	10	40	16.6	525051 1040	132,–	071250 D001	28,–
0.5	0.01	10	32	35.7	525051 0532	160,–	071250 D001	28,–
0.5	0.01	10	40	35.7	525051 0540	180,–	071250 D001	28,–
0.2	0.002	3	32	12.8	525051 0232	130,–	071250 D001	28,–
0.2	0.002	3	40	12.8	525051 0240	144,–	071250 D001	28,–
0.2	0.001	3	40	12.8	525051 0040	180,–	071250 D001	28,–
0.2	0.001	3	58	12.8	525051 0058	202,–	071250 D001	28,–

5192

Contact points for ATORN analogue dial test indicators

- Choice of carbide or ruby balls
- Ø 2 mm
- **Caution! Changing the standard contact point length will lead to incorrect measurements!**



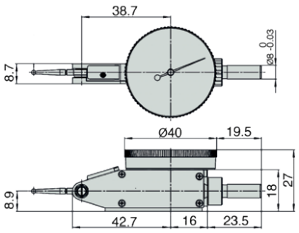
Length of measuring sensor from centre of ball mm	Material	art.no.	€
12.8	Carbide	525018 0001	15,40
12.8	Rubin	525018 0002	32,60
16.6	Carbide	525018 0003	17,40
16.6	Rubin	525018 0004	32,60
35.7	Carbide	525018 0005	26,20
35.7	Rubin	525018 0006	39,60

5192

Mitutoyo Dial test indicators

DIN 2270 DIN 2270

- Rotating outer ring for zero adjustment
- Precision jewel bearing for smooth contact point adjustment
- Standard probe tip printed on scale
- Dovetail attachment on three sides of the metal casing is possible by means of a Ø 8 mm clamping shank with clamping nut



Carbide measurement end

- Ø 2 mm

External Ø mm	Error limit mm	Length of measuring sensor from centre of ball mm	Scale value mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
40	0.003	11.2	0.001	525001 0101	193,–	071250 D001	28,–
40	0.003	15.2	0.002	525001 0103	142,–	071250 D001	28,–
40	0.006	15.2	0.002	525001 0104	194,–	071250 D001	28,–
40	0.010	33.9	0.01	525001 0107	177,–	071250 D001	28,–
29.2	0.008	17.4	0.01	525001 0108	173,–	071250 D001	28,–
40	0.008	17.4	0.01	525001 0109	109,–	071250 D001	28,–
40	0.010	41.0	0.01	525001 0110	178,–	071250 D001	28,–
40	0.008	18.7	0.01	525001 0111	181,–	071250 D002	32,–

5102



Measurement end with ruby ball

- Ø 2 mm
- Non-magnetic, non-conductive
- High wear-resistance

Measurement range mm	External Ø mm	Error limit mm	Length of measuring sensor from centre of ball mm	Scale value mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
0.8	40	0.008	17.4	0.01	525501 0111	135,–	071250 D001	28,–

5102



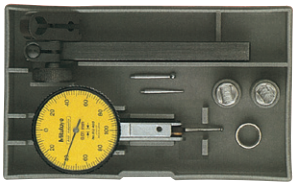


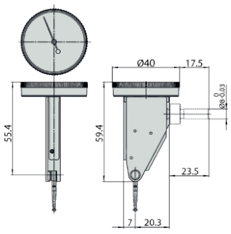
Set

- Dial test indicator,
  3x HM probe tips, Ø 1, 2 and 3 mm; 2x clamping shanks, Ø 4 and 8 mm; 1x clamping nut; 1x universal holder; 1x holding fixture, 9 x 9 x 100 mm

External Ø mm	Error limit mm	Length of measuring sensor from centre of ball mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
40	0.008	17.4	525010 0101	148,–	071250 D001	28,–

5102





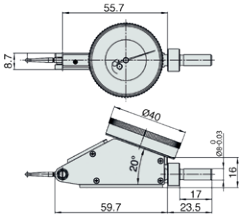


Lever dial indicator with offset dial plate configuration

- Vertical or parallel readings

External Ø mm	Error limit mm	Length of measuring sensor from centre of ball mm	Scale value mm	Design	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
40	0.008	17.4	0.01	Vertical dial	525020 0103	134,–	071250 D001	28,–
40	0.008	17.4	0.01	Parallel dial	525020 0104	152,–	071250 D001	28,–

5102

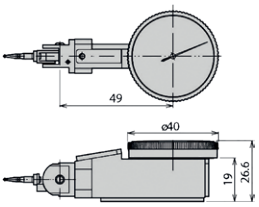




Lever dial indicator with angled dial plate

External Ø mm	Error limit mm	Length of measuring sensor from centre of ball mm	Scale value mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
40	0.005	15.2	0.002	525001 0113	208,–	071250 D001	28,–
40	0.010	17.4	0.01	525001 0112	184,–	071250 D002	32,–

5102





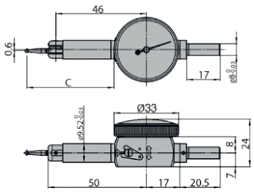
525020 0009



Universal version

- Contact point holding fixture can be rotated through 360°

External Ø mm	Error limit mm	Length of measuring sensor from centre of ball mm	art.no.	€	DAkkS calibration art.no.	€
40	0.008	24	525020 0009	536,–	071250 D001	28,–
			5102			



Miniature version

- With switching lever to change the measuring direction

External Ø mm	Error limit mm	Length of measuring sensor from centre of ball mm	Scale value mm	art.no.	€	DAkkS calibration art.no.	€
29.5	0.010	17.4	0.01	525501 0008	190,–	071250 D001	28,–
				5102			

Contact points

- Choice of carbide or ruby balls
- **Caution! Changing the standard contact point length will lead to incorrect measurements!**

L mm	Ball diameter mm	Carbide metal art.no.	€	Ruby art.no.	€
11.2	2	525920 0147	23,–	525925 0147	35,–
15.2	2	525920 0152	23,–	525925 0152	27,–
17.4	2	525920 0209	23,–	525925 0209	35,–
18.7	2	525920 0223	23,–		
33.9	2	525920 0368	21,–		
41.0	2	525920 0445	19,–	525925 0445	35,–
		5102		5102	

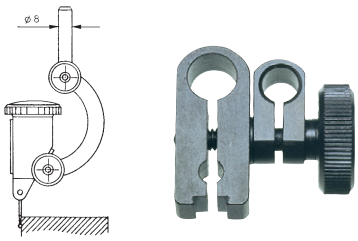


Ruby

Accessories

- **Universal holder with dovetail mount**, shank ∅ 8mm
- **Universal holder**
- **9 x 9 x 100 mm holding fixture** for attaching dial test indicators to height meters and marking-out instruments
- **Centring holder** for using a dial test indicator as an edge finder, or for aligning bores and shafts with the centre of the spindle





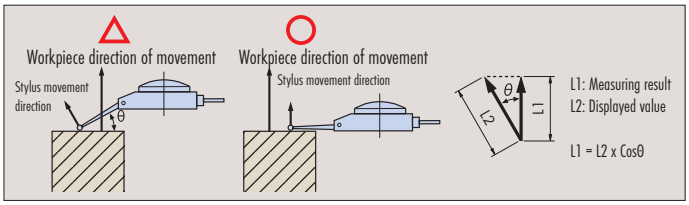
Designation	art.no.	€
Universal holder with dovetail holding fixture, shank Ø 8 mm	525050 0012	46,–
Universal holder	525050 0015	38,–
Holder 9 x 9 x 100 mm	525050 0025	27,–
Centring holder	525050 0021	201,–
	5102	

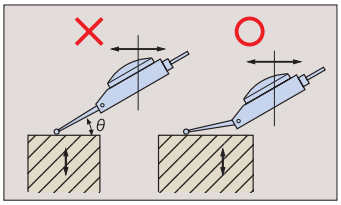
Lever dial indicators

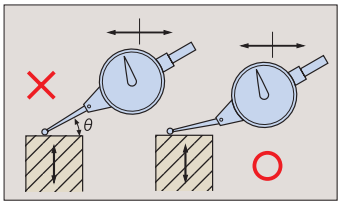
INFO

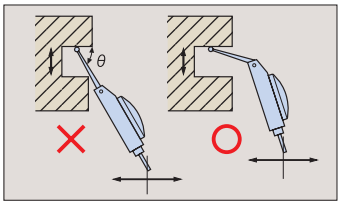
Angle error

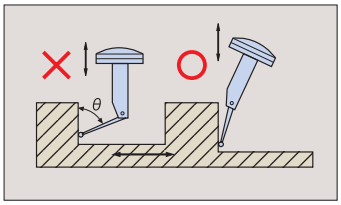
- Always minimise the angle between movement directions of the workpiece.
- The dial test indicator display value will differ from the true value if the workpiece and the direction of movement deviate by any angle. The measuring probe can be aligned through the pivot point of the measuring device such that the angle is minimised. θ If necessary, the display and thus the measured value can be corrected to the actual value of the angle θ by using the following table.
- Result of measurement = displayed value x correction factor











Correction for a non-zero angle

Angle	Correction value
10°	0.98
20°	0.94
30°	0.86
40°	0.76
50°	0.64
60°	0.50

Examples
If the dial test indicator at various values of the angle shows = 0.200 mm, the measurement results are as follows:
For = 10°, 0.200mm × 0.98 = 0.196mm
For = 10°, 0.200 mm × 0.94 = 0.188 mm
For = 30°, 0.200mm × 0.86 = 0.172mm

Note:
A special contact point of involute form can be used for automatic correction; this allows measurements without manual correction for any angle between 0°and 30°.

SARA® Height gauge and marking-out instrument

Werks-norm

- With large stand
- Matt-chromed scale
- Raised guide edges
- Slider with matt-chromed Vernier scale
- Scriber offset and carbide-tipped


530101 1310

Max. length measuring range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
300	0.04	530101 1310	146,–	071270 D001	40,–
500	0.06	530101 1510	239,–	071270 D002	58,–

5116

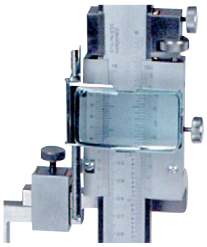
Accessories

Designation	art.no.	€
Scriber for measurement range 300 mm	532010 0040	34,50
Scriber for measurement range 500 mm	532010 0050	37,90

5116

SARA® Height meter and marking-out instrument

Werks-norm



- Sturdy design with large stand
- Matt chrome-plated, adjustable scale
- Raised guide edges
- Slider with matt chrome-plated Vernier scale
- Reading magnifier
- Fine adjustment and clamping mechanism
- Scriber offset and carbide-tipped
- Supplied in moulded packaging



Max. length measuring range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
300	0.04	530101 1300	198,–	071270 D001	40,–

5116

Accessories

Designation	art.no.	€
Spare scriber	532010 0030	34,50

5116

SARA® Digital height gauge and marking-out instrument

Werks-norm | 0,01 mm | inch / mm

- Sturdy design with large stand
- Easy to read thanks to high-contrast LCD
- Slider with fine adjustment and clamping mechanism
- Scriber offset and carbide-tipped
- **Functions:** ON/OFF, zero-setting, preset, hold, mm/inch
- Supplied with CR 2032 battery, No. 548079 6032


530500 0310

Max. length measuring range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
300	0.04	530500 0310	490,–	071270 D001	40,–
500	0.06	530500 0510	789,–	071270 D002	58,–

5116

Accessories

Designation	art.no.	€
Spare scriber	530010 0060	38,50

5116

Mitutoyo Digital height meter and marking-out instrument

Werks-norm | 0,01 mm | ABSO-LUTE | Digi-matic | USB

ABSOLUTE®



- Sturdy design with large stand
- **ABSOLUTE scale**
- LCD display 12 mm high digits
- Movement via hand wheel, any desired movement speed
- Fixing device
- Scriber offset and carbide-tipped
- Battery service life approx. 5 years
- **Functions**: ON/OFF, ORIGIN initial value, ZERO/ABS, DATA/HOLD
- Supplied with SR 44 battery, No. 500534 0001
- **Special-purpose accessories**: Digimatic cable type F, No. 563100 0051 (1 m), No. 563100 0052 (2 m), USB cable type F-USB, No. 563110 0006

Max. length measuring range mm	Digit increment mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
300	0.01	0.03	530502 0301	810,–	071270 D001	40,–
600	0.01	0.05	530502 0601	1.424,–	071270 D002	58,–

5102

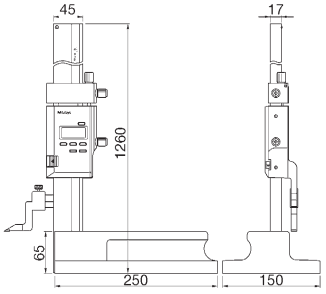
Mitutoyo Digital height meter and marking-out instrument

Werks-norm | 0,01 mm | Digi-matic | USB

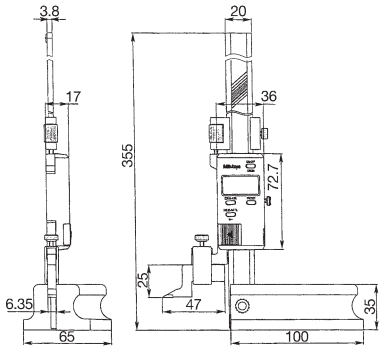
ABSOLUTE®



- Sturdy design with large stand
- Easy to read thanks to high-contrast LCD display with large digits
- Slider with fine adjustment and clamping mechanism
- Scriber offset and carbide-tipped
- **Functions:** ON/OFF, ZERO/ABS, DATA, HOLD, PRESET for pre-setting user-defined values, reverse counting direction (+/-), battery check
- Supplied with SR44 battery, no. 500534 0001
- **Optional accessories:** Digimatic cable type C, no. 563100 0021 (1 m), no. 563100 0022 (2 m), USB cable type C-USB, no. 563110 0003



530501 1002



530501 0202

Max. length measuring range mm	Error limit mm	Digit increment mm	art.no.	€	DAkkS calibration art.no.	€
200	0.04	0.01	530501 0202	782,–	071270 D001	40,–
1000	0.08	0.01	530501 1002	3.619,–	071270 D003	74,–

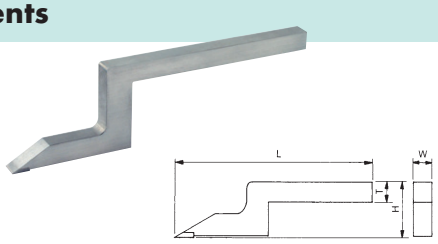
5102

Mitutoyo Accessories for height meters and marking-out instruments

Scribers

Designation	L mm	Height mm	C	art.no.	€
Scriber for 5305010202	47	25	6.35 x 12.7 mm	532010 0005	90,–
Scriber for 5305020300, 5305020600, 5305050302, 5305050602	80	32	9 x 9 mm	532010 0001	72,–
Scriber for 5305051002, 5305011002, 5305100302, 5305100602, 5305101002	150	42	9 x 9 mm	532010 0020	173,–

5102



Holder for scribers

Designation	Material	art.no.	€
Scriber holder for 5305020300, 5305020600, 5305050302, 5305050602, 5305051002	Steel	532011 0001	49,–
Scriber holder for 5305011002, 5305100302, 5305100602, 5305101002	Plastic	532011 0002	49,–

5102

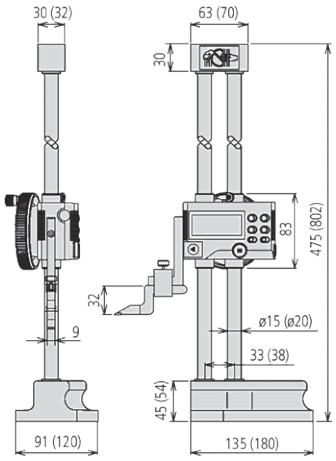


532011 0001 532011 0002

Mitutoyo Digital height meter and marking-out instrument with two columns

Werks-norm | 0,01 mm | Digi-matic | USB

- Sturdy design with large stand
- All key parts hardened
- Rear-mounted hand wheel for quick adjustment, angled by 10° to allow easier operation
- Easy to read thanks to high-contrast LCD
- Scriber offset and carbide-tipped
- **Readings: 0.005 mm, can be switched to 0.01 mm**
- With integrated fine adjustment
- Can store 2 reference values
- Battery life approx. 5,000 hours
- **Functions:** ON/OFF, ZERO/ABS, PRESET for storing 2 reference values, HOLD/DATA, reverse measuring direction (+/-)
- Supplied in moulded packaging with SR44 battery, no. 500534 0001
- **Optional accessories:** Digimatic cable type F, no. 563100 0051 (1 m), no. 563100 0052 (2 m); USB cable type F-USB, no. 563110 0006





Standard version

Max. length measuring range mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
30	0.03	530505 0302	1.091,–	071270 D001	40,–
600	0.06	530505 0602	1.498,–	071270 D002	58,–
1000	0.08	530505 1002	2.829,–	071270 D003	74,–

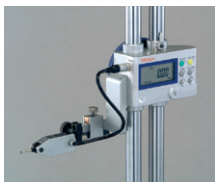
5102

With facility to connect electronic probes (accessories)

Max. length measuring range mm	Designation	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
300	Height meter	0.03	530510 0302	1.427,–	071270 D001	40,–
600	Height meter	0.05	530510 0602	1.858,–	071270 D002	58,–
1000	Height meter	0.06	530510 1002	3.161,–	071270 D003	74,–
Suitable for all sizes	Electronic sensor		530510 0101	625,–		

5102



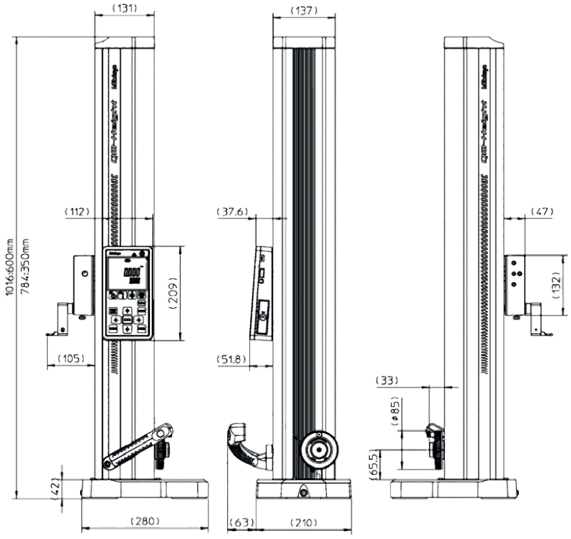


Mitutoyo Digital height meter *QM-Height*

ABSO-LUTE | Digi-matic | USB

ABSOLUTE®

- Measuring heights, steps, groove widths, inner and outer diameters and their distances
- Designed for workshop use
- Available with or without air cushion support
- High accuracy due to electromagnetic inductive measurement principle
- Large LCD display with large, easy-to-read digits
- Clearly laid out keypad with symbols for the individual measurement functions
- Multiple zero points programmable
- Optical and acoustic tolerance monitoring
- Choice of mains or (rechargeable) battery power supply
- Wide range of probes for various measurement tasks available as optional accessories



- **Technical data**
  Measuring span (stroke): 0 - 465 mm (350 mm) for QM-H350 and
  0 - 715 mm (600 mm) for QM-H600
  Resolution: 0.001 mm can be switched to 0.005 mm
  Display: LCD
  Error margin: ±(2.4+2.1L/600) µm L = measuring length in mm
  Repeatability surface: 1.8 µm (2 ó)
  Perpendicularity: 8 µm QM-H350/ 13 µm QM-H600
  Measurement system: electromagnetic inductive scale
  Measuring force: 1.5 +/- 0.5 N
  Weight: 22 kg QM-H350 and 27 kg QM-H600

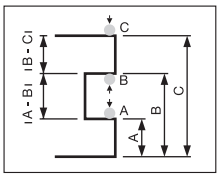


- Supplied with measuring probe with carbide ball Ø 5 mm, reference block, 4 batteries LR6 no. 548079 4006, protective cover, operating instructions.

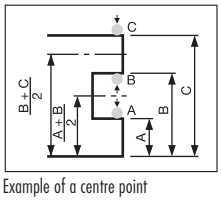
- **Special-purpose accessories:** Digimatic cable type D no. 563100 0031 (1 m), no. 563100 0032 (2 m)
  USB cable type D-USB no. 563110 0004

Description	Measurement range mm	art.no.	€	DAkkS calibration art.no.	€
QM-H 350 without air support	350	533005 0351	4.319,–	071280 D002	384,–
QM-H 350 with air support	350	533005 1351	4.772,–	071280 D002	384,–
QM-H 600 without air support	600	533005 0601	5.215,–	071280 D002	384,–
QM-H 600 with air support	600	533005 1601	5.646,–	071280 D002	384,–

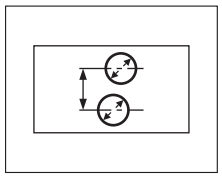
5105

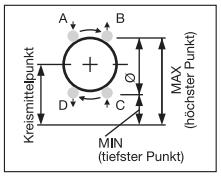


Measurement of distances



Example of a centre point measurement


Distance measurement from centre point to centre point



Measurement of circle, bore and shaft

Accessories

Designation	art.no.	€
Mains adapter	533010 0150	88,–

5102

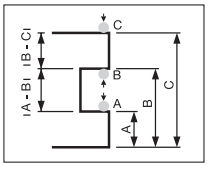


Mitutoyo Linear height meter *Linear Height LH 600F*

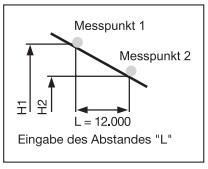
Werks-norm | inch / mm | RS232C | Digi-matic | USB



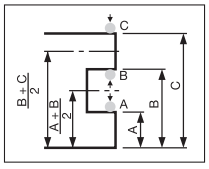
- Measurement of height, steps, groove widths, inner and outer diameters, their distances and two-dimensional measurements such as pitch-circle calculation
- Measurement of perpendicularity with an optional dial gauge
- Robust and high-precision height meter for workshops and measuring rooms
- Measuring accuracy (1.1 + 0.6 L/600) µm
  Repeatability - surface 0.4 µm/ bore 0.9 µm
- Metric / inch units selectable
- Resolution selectable from 0.0001 mm to 0.1 mm
- Pneumatic movement mechanism (floating/semi-floating)
- Direct interaction through the easy-to-read 8.4" LCD touchscreen
- One-button operation
- Independent settings for traverse and measuring speed for fast positioning (up to 40 mm/s) and intuitive probing
- Direct GO/NG feedback for each measurement
- Stand-alone operation thanks to rechargeable batteries (operating time 4 hours, second battery pack can be retrofitted) and independent compressed air supply (integrated compressor)
- 21 languages selectable
- **Measurement functions:**
  1D and 2D measurements
  Height measurement (upper/lower surface)
  Diameter (bore/shaft)
  Angle measurement
  2D: element calculation, distance calculation, pitch-circle calculation
  2D coordinate system setting
  Support for the polar coordinate system
  Perpendicularity, straightness, tilt and flatness detection
- **Probe use:**
  Setting option for probe type
  Measurement and storage of the probe ball diameter
  Changing the probe position
- **Statistical processing:**
  Basic statistical processing
  Histogram creation
- **Technical data:**
  Measurement range (stroke) 0-978 mm (600 mm) / 0-38" (24")
  Length measurement deviation (1.1 + 0.6 L/600) µm L = measuring length in mm
  Repeatability (2 s) surface 0.4 µm; bore: 0.9 µm,
  Perpendicularity 5 µm
  Straightness 4 µm
  Measuring force 1 N
- Digimatic input interface for optional dial gauge / RS-232C-, USB, Digimatic S1 interface
- Evaluations with an optional receipt printer or data transfer to the PC using a wireless connection, cable or USB stick
- Power supply AC mains adapter/rechargeable battery (Ni-MH) operating time approx. 4 hours
  Weight 26 kg
- **Supplied** in transport packaging including 1x Ø 5 mm ball probe, setting gauge, battery pack, power supply and operating instructions



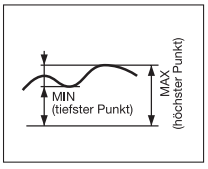
Measurement of distances



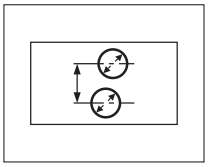
Example of an angle measurement

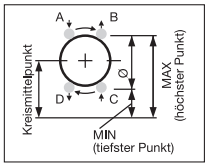


Example of a centre point measurement

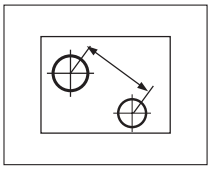


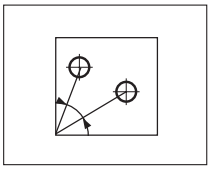
Determining the lowest and highest measurement point

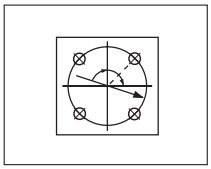

Distance measurement from centre point to centre point



Measurement of circle, bore and shaft


Centre point to centre point measurement


Angle calculation

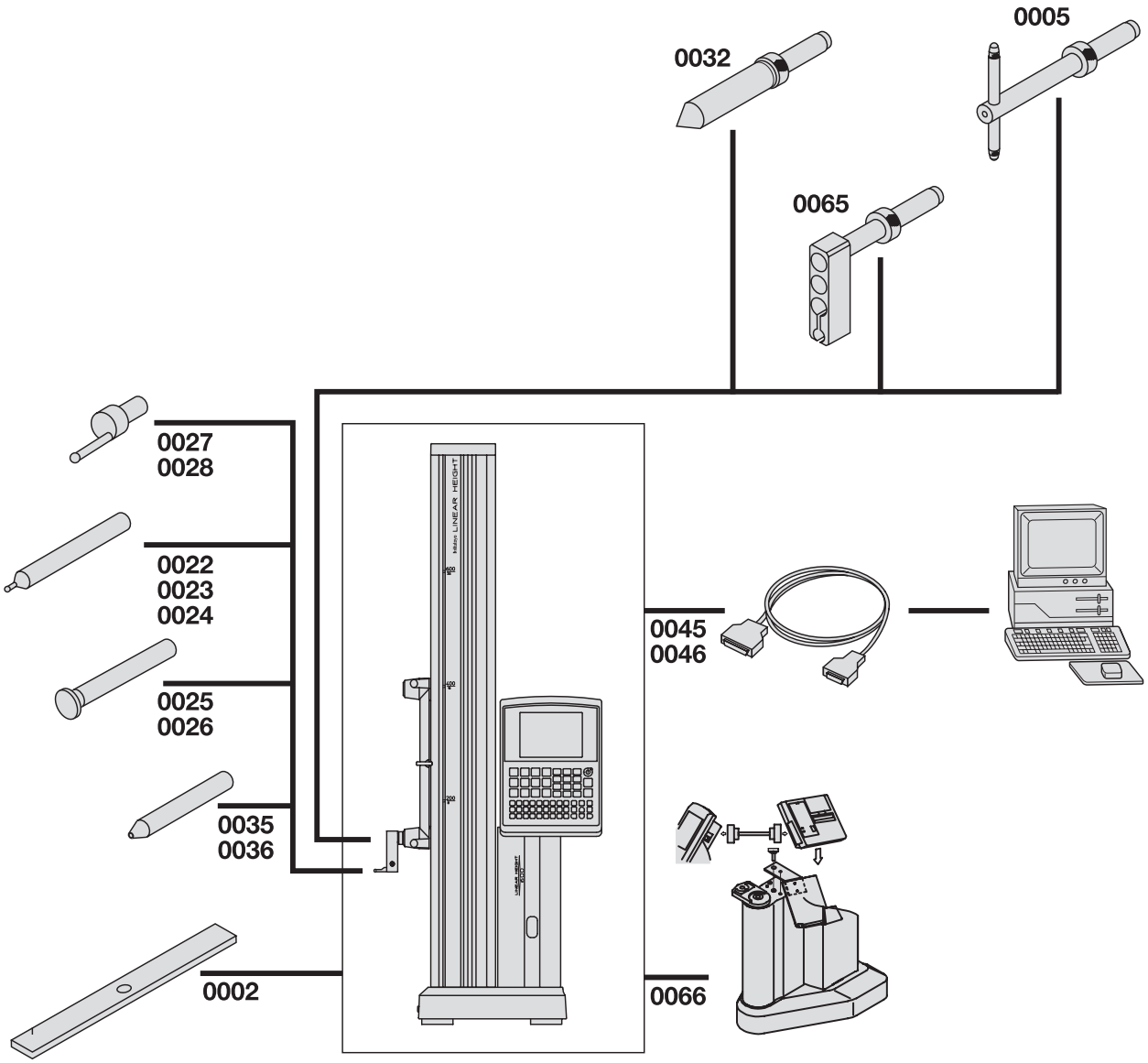

Pitch circle calculation

Type	Design	art.no.	€	DAkkS calibration art.no.	€
Linear height meter LH 600F	without handle	533002 0620	8.728,–	071280 D002	384,–
Linear height meter LH 600FG	with handle	533003 0620	9.188,–	071280 D002	384,–

5105

Mitutoyo Accessories for height meters

- For height meters "Linear Height 600E" and "QM-Height"

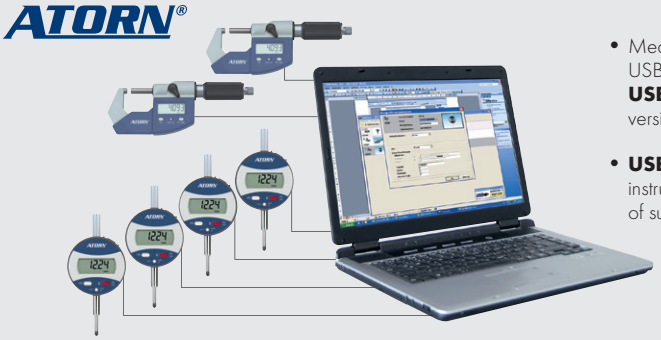


Designation	Suitable for	art.no.	€
Ball probe, Ø 2 mm	QM-Hight / LH 600	533010 0022	118,–
Ball probe, Ø 3 mm	QM-Hight / LH 600	533010 0023	124,–
Ball probe, Ø 4 mm	QM-Hight / LH 600	533010 0024	136,–
Ball probe, Ø 5 mm (standard probe)	QM-Hight / LH 600	533010 0029	150,–
Ball offset probe, Ø 4 mm	QM-Hight / LH 600	533010 0027	103,–
Ball offset probe, Ø 6 mm	QM-Hight / LH 600	533010 0028	115,–
Disc probe, Ø 14 mm	QM-Hight / LH 600	533010 0025	242,–
Disc probe, Ø 20 mm	QM-Hight / LH 600	533010 0026	302,–
Straight probe, Ø 10 mm	QM-Hight / LH 600	533010 0031	301,–
Tapered probe, Ø 20 mm	LH 600	533010 0032	166,–
Adapter for Renishaw probes with M2 thread	QM-Hight / LH 600	533010 0035	94,–
Adapter for Renishaw probes with M3 thread	QM-Hight / LH 600	533010 0036	59,–
Depth probe	QM-Hight / LH 600	533010 0005	208,–
Holder for Digimatic dial indicators	LH 600	533010 0065	144,–
Thermo graph paper (10 rolls)	LH 600	533010 0067	118,–
Signal cable RS-232C 5 m	LH 600	533010 0046	84,–

5106

The *multiCOM* System

- **The perfect interface between ATORN handheld measuring equipment and a PC**
- Three-fold compatibility: **RS 232 C** und **Digimatic** and **USB**
- For multiple measuring points, can be expanded to over 100 measuring instruments using low-cost USB hubs
- Data transfer can be triggered from the measuring instrument, via a USB foot switch or using the PC keyboard



- Measurement value transfer via USB data cable in conjunction with **USB-Com** software or the full version **USB-Com Professional**
- **USB-Com** for connecting **a** measuring instrument, include in the standard scope of supply of the USB data cable

ATORN Signal cable *multiCOM*

multiCOM

- **For connecting ATORN measuring instruments with a *multiCOM*** interface to a PC or laptop
- USB cable including USB-COM driver software for transferring measurement values e.g. to Microsoft Excel

Type	Cable length m	art.no.	€
P-Digimatic	2	512521 0002	85,–

5182


P-Digimatic

ATORN Signal cable

- Signal cables allow the displayed measurement values to be transferred ONLINE to mini processors, interfaces or directly to a computer.
- POWER-RS and POWER-USB for data transfer and power supply

Type	Cable length m	art.no.	€
Proximitiy-USB	2	500700 9966	143,–
Proximity-RS	2	500700 9965	143,–

5181

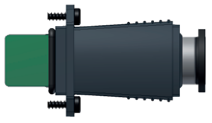


Kroeplin Längenmesstechnik Signal connector

- Interface adapter for attachment to fast display calliper no. 521012...., 521014...., 521016...., 521017.... and 521019....
- Suitable MITUTOYO signal cable type E no. 563100 0042, E-USB no. 563110 0005 and U-Wave type C no. 567504 0005

Description	suitable for	art.no.	€
Interface adapter	521012... / 521014... / 521017... / 521019...	524002 0005	67,30
Interface adapter for Mitutoyo applications	521018...	524002 0006	122,50

5123

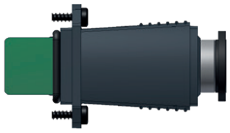

524002 0005

Kroeplin Längenmesstechnik Bluetooth interface adapter

- Bluetooth interface adapter for installation on probe arm dial indicators

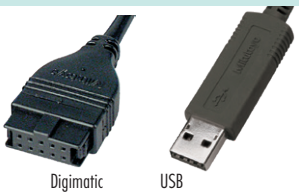
Designation	suitable for	art.no.	€
Interface adapter for Bluetooth applications	521012.... / 521014... / 521016... / 521017.... / 521019....	524002 0010	122,50
Interface adapter for Bluetooth applications	521018....	524002 0015	127,50

5123

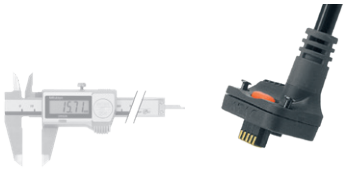


Mitutoyo Signal cable *Digimatic* and USB

- For connecting Mitutoyo „Digimatic" measuring instruments to a PC via corresponding interfaces or to Mitutoyo data processing devices



Digimatic USB



Signal cable Type A

- Signal cable for IP-protected vernier callipers with DATA button
- Suitable for IP67 vernier calliper, IP67 workshop vernier calliper, IP67 built-in vernier calliper, IP67 depth bars

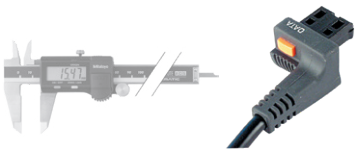
Cable length m	Digimatic art.no.	€	USB art.no.	€
1	563100 0001	105,–	563110 0001	146,–
2	563100 0002	113,–		
	5102		5102	



Signal cable Type B

- Signal cable for IP-protected micrometers with DATA button
- Suitable for outside micrometers with and without IP, QuantuMike, IP micrometer heads, Holtest

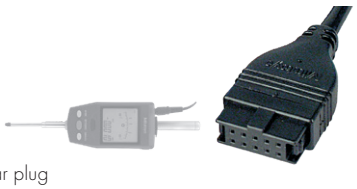
Cable length m	Digimatic art.no.	€	USB art.no.	€
1	563100 0011	111,–		
2	563100 0012	113,–	563110 0002	146,–
	5102		5102	



Signal cable Type C

- Signal cable with DATA key
- Suitable for AOS vernier calliper, vernier callipers, workshop vernier calliper, AOS built-in vernier calliper, built-in vernier callipers, micrometer heads, ID-S dial indicator

Cable length m	Digimatic art.no.	€	USB art.no.	€
1	563100 0021	51,–		
2	563100 0022	60,–	563110 0003	128,–
	5102		5102	



Signal cable Type D

- Signal cable with 10-pin rectangular plug
- Suitable for dial indicators ID-H / ID-F, surface roughness tester SJ, height meter QM-Height

Cable length m	Digimatic art.no.	€	USB art.no.	€
1	563100 0031	60,–		
2	563100 0032	76,–	563110 0004	128,–
	5102		5102	



Signal cable Type E

- Signal cable for 6-pin round plug
- Suitable for quick-micrometer

Cable length m	Digimatic art.no.	€	USB art.no.	€
1	563100 0041	63,–		
2	563100 0042	76,–	563110 0005	128,–
	5102		5102	



Signal cable Type F

- Signal cable, straight version
- Suitable for dial indicators ID-S / ID-U, Boremetic

Cable length m	Digimatic art.no.	€	USB art.no.	€
1	563100 0051	39,–		
2	563100 0052	47,–	563110 0006	128,–
	5102		5102	



Signal cable Type G

- Signal cable IP-protected
- Suitable for dial indicators ID-B / ID-N

Cable length m	Digimatic art.no.	€	USB art.no.	€
1	563100 0061	70,–		
2	563100 0062	80,–	563110 0007	128,–
	5102		5102	



Signal cable type H

- Bidirectional signal cable for data transfer from the meter to the PC / printer and programming of the meter from the PC
- Insertable for new ID / ID-F dial gauges

Cable length m	Digimatic art.no.	€	USB art.no.	€
1	563100 0071	83,–		
2	563100 0072	89,–	563110 0021	169,–
	5102		5102	

Advantage of the new Digimatic USB connectors:

Task	Required accessories	USB-ITPAK software	Data format
Read measurement values into any desired software that expects keyboard entry	One USB signal cable per measuring instrument	Software or special driver is not required	Measurement value as keyboard format (HID=Human Interface Device)
Measurement values in ordinary statistics software such as Mitutoyo MeasurLink	One USB signal cable and USB-ITPAK software per measuring instrument	For each cable (measuring instrument), generates a unique, fixed assigned COM port (VCP)	Mux-10 specification with fixed COM assignment
Read measurement values into any desired software that expects keyboard entry	One USB signal cable and USB-ITPAK software per measuring instrument, or an ordinary USB hub	Measuring instrument and foot switch are selected and assigned, stores a process as a sub-program	Transfer of a measurement value test in text format
Measurement values in Excel		Measuring instrument and foot switch are selected and assigned, assumes the entire organisation of an Excel table, meaning that transferred values are written to pre-defined target cells	Measurement log in Excel format with max. 31 characters

Mitutoyo Software *USB-ITPAK*

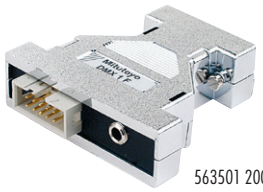


- **For managing multiple connected measuring equipment units and foot switches**
- For transferring measurement values in text format (when used as VCP)
- For easily creating logs in Excel
- Starts Excel automatically, offers the option to store accumulated measurement values in Excel
- Organises the Excel table in full with specified columns and rows, including the measurement task start and end
- Option to select the connected measuring instruments and foot switches
- Stores the individual parts of a measurement task as a repeatable program sequence
- Sequences can be repeated several times automatically
- Function keys F1 to F8 can be selected for assignment to data transfer, deletion or skipping
- Compatible with Windows 2000 / XP / Vista / Windows 7 / Windows 8 / Windows 10

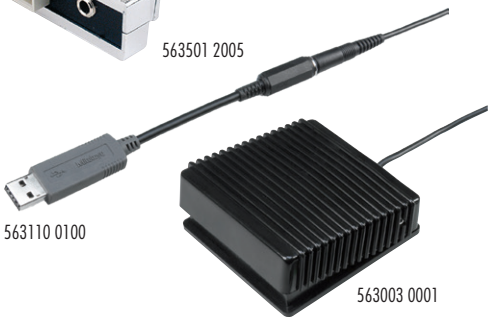
Designation	suitable for	art.no.	€
Software for data transfer	MITUTOYO measuring instruments with USB cables	563120 0001	298,–
		5102	

Mitutoyo Interface system *DMX 1*

- For transferring measurements to a PC from measuring equipment with a data output
- Managed by microcontroller
- 1 measuring instrument can be connected
- RS-232 interface to computer
- Foot switch connection
- **Interface parameters**:
  9600 Baud transmission rate
  8 data bits
  1 stop bit
  No parity



563501 2005



563110 0100

563003 0001

Model	Input	Outlet	art.no.	€
DMX 1	1x Mitutoyo	Direct, 9-pin	563501 2005	137,–
Accessories			5106	

Designation	art.no.	€
Foot switch	563003 0001	58,–
USB foot switch adapter	563110 0100	133,–
	5102	

Mitutoyo Digimatic USB interface

- For connecting a Mitutoyo Digimatic measuring instrument to a PC USB interface
- Depending on the model, interfaces are recognised by the PC as a keypad or serial interface
- Integrated foot switch socket



563501 0011



563501 0020



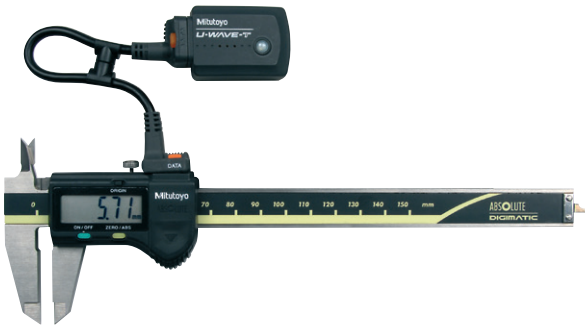
563501 0030



563501 0015

Model	Input	Data communication	art.no.	€
DMX 1 USB	1 x Mitutoyo	COM interface	563501 0011	147,–
DMX 2 USB	2 x Mitutoyo	Keyboard / COM interface	563501 0020	522,–
USB-Input Tool	1 x Mitutoyo	Keyboard	563501 0015	267,–
DMX 3 USB	3 x Mitutoyo	COM interface	563501 0030	634,–
			5102	

Mitutoyo Wireless data transmission *U-WAVE*



- Quick and reliable method of data transfer without cumbersome signal cables
- Transmits in the 2.4 GHz frequency band with a choice of 15 channels
- Up to 100 transmitters can be connected via one receiver
- Range 20 m
- Receiver is connected and powered via USB
- Slim transmitter design
- Battery life approx. 400,000 data transmissions
- Correct data transfer confirmed on the transmitter by LED and buzzer or LED only (IP67 transmitter model)
- **Transmitter can be used universally by exchanging the connection cable**

Receiver

- Supplied with USB connection cable, driver software and operating manual

Designation	art.no.	€
Receiver, 2.4 GHz	567502 0001	380,–

5102



Transmitter U-Wave FIT

- Specially adapted to casings of vernier callipers and/or outside micrometers and QuantuMike

Model	Protection type	Suitable for	art.no.	€
U-Wave-TC, IP67	IP 67	Vernier callipers with/without IP67 up to 300 mm	567503 0012	189,–
U-Wave-TC, Summer	-	Vernier callipers with/without IP67 up to 300 mm	567503 0013	189,–
U-Wave-TM, IP67	IP 67	Outside micrometers with/without IP65	567503 0014	189,–
U-Wave-TM, Summer	-	Outside micrometers with/without IP65	567503 0015	189,–

5102



Connection unit with transmitter outside micrometer

Connection unit for U-Wave FIT and U-Wave Bluetooth

- firm connection between U-Wave Fit and U-Wave Bluetooth transmitters and measurement devices

Designation	Suitable for	art.no.	€
Connection unit, standard	Vernier callipers AOS ABSOLUTE	567504 0011	109,–
Connection unit, standard	Digital ABSOLUTE dial gauge IDC/IDF	567504 0012	128,–
Connection unit, waterproof	Vernier callipers IP67 / outside micrometers IP65	567504 0010	114,–

5102



Vernier callipers transmitter with connection unit



Transmitter with device-mounted connection unit

Transmitter

- Digimatic2 compatible
- Supplied with battery CR2032 No. 548079 6032

Model	Protection type	art.no.	€
U-Wave-T, IP67	IP 67	567503 0010	189,–
U-Wave-T, Summer	-	567503 0011	189,–

5102



Connection cable

Type	Suitable for	art.no.	€
IPM	Vernier calliper IP 66 / 67, depth gauge IP 67, inside vernier calliper IP 67	567504 0001	110,–
IPB	Outside micrometer IP 65, depth micrometer, special micrometers, Holtest IP 65	567504 0002	110,–
B	Standard vernier calliper, standard slide gauge, standard inside vernier calliper	567504 0003	105,–
D	IDH / IDF dial indicators	567504 0004	98,–
C	Quick micrometer, micrometer head 505401....	567504 0005	98,–
A	IDC / IDS / IDU dial indicators, height measurement and marking-out instruments, Boremetic, goniometers	567504 0006	98,–
IPN	IDB / IDN dial indicators	567504 0007	105,–
H	Dial indicators IDC / IDF new version	567504 0008	131,–

5102



567504 0003

Mitutoyo Wireless data transmission *U-Wave Bluetooth*



- Fast and secure data transfer without additional receiver on the end device
- Compatible with smartphones, tablets and Windows
- Bluetooth standard V. 4.2
- Transmitter adapted to the casing of Vernier callipers and outside micrometers
- Range 10m
- 1-year battery life
- Correct data transfer is confirmed on the transmitter by LED and buzzer and/or by LED only (IP67 transmitter model
- **Attention!** For data transfer you require an app (ISO/Android) and/or software (Windows) on the end device. For IOS and Android devices, please download U-WAVEPAK-BM from your corresponding app store, for Windows applications download the software U-WAVE-BW from www.sartorius-werkzeuge.de

Transmitter U-Wave Bluetooth

required accessories

- 567504 0011 standard connection unit for MITUTOYO Vernier callipers AOS ABSOLUTE
- 567504 0010 waterproof connection unit for MITUTOYO Vernier callipers IP67 / outside micrometers IP65

Model	Protection type	Suitable for	art.no.	€
U-Wave-TCB, IP67	IP 67	Vernier callipers with/without IP67 up to 300 mm	567503 0120	197,–
U-Wave-TCB, Summer	-	Vernier callipers with/without IP67 up to 300 mm	567503 0121	197,–
U-Wave-TMB, IP67	IP 67	Outside micrometers with/without IP65	567503 0122	197,–
U-Wave-TMB, Summer	-	Outside micrometers with/without IP65	567503 0123	197,–

5102



567503 0122



567503 0120

ATORN Radio receiver *i-Stick*

- USB radio receiver for ATORN integrated wireless
- suitable for ATORN measuring instruments with integrated radio module and corresponding compatible devices
- Range 6m
- Manages up to 8 measuring devices
- up to 4 i-Sticks can be connected to one PC
- Frequency band 2400 MHz





Designation	art.no.	€
Radio receiver i-Stick	567512 0001	113,–

5186

Mitutoyo Mini processor *DP-1 VA*

- Statistics calculator, printer and data logger in one device
- Documentation of measured values and statistical values by integrated printer
- All Mitutoyo Digimatic measuring instruments can be connected
- Integrated thermal printer, quick and quiet
- Stored data is documented with date and time information
- Logger function (data storage) 1000 measured values with date and time.
- Battery and mains operation
- Foot switch connection socket
- RS-232C interface for data output

Printable data and calculations

- Measurement values (max. 9999)
- OK/NOK values
- Data volume. max./min. values
- X-bar mean value
- Standard deviation s
- Clamping width r
- Rejects in number and per cent
- Process capability index cp and cpk
- Histogram
- X-bar and r control chart
- Control limits
- Date and time
- Basic unit supplied with printer, power adapter and operating manual, in moulded packaging



563001 0011

Designation	art.no.	€
DP1-VA	563001 0011	563,–
Recording paper, 5 rolls	563003 0021	36,–
Signal cable RS-232C (1 metre) for DP-1 VA for connection to PC	563003 0023	400,–

5102

ATORN tool pre-setting devices are specially designed for workshop use. The robust construction and excellent protection against dirt ensure problem-free use. ATORN tool pre-setting devices are available as a table top device for the workbench (ImageController Basic) or as a stand-alone under table device (ImageController 1 and 2) for free placement, e.g. in the production hall.

With regard to operation, emphasis has been placed on quick and easy operation. Using measurement macros of the 20 most common tools as retrieved via a library, the measurement sequences are standardised to such an extent that every tool type is measured in the same way by every operator using the same procedure.

EZstart – Easier than ever before

EZstart makes tool measurement easier than ever before. Simply select the appropriate tool from the picture book and follow the measurement procedure. With EZstart, standard tools can be measured quickly and easily, independent of the operator. EZstart is included as standard from ImageController1.

EZstart – Process description

Just three steps are necessary for tool measurement:

1. Select the tool type from our EZstart picture book (Figure 1)
2. Rotate the spindle to display the maximum tool contour (Figure 2)
3. Print out the measurement result or transfer online to the machine (Figure 3)

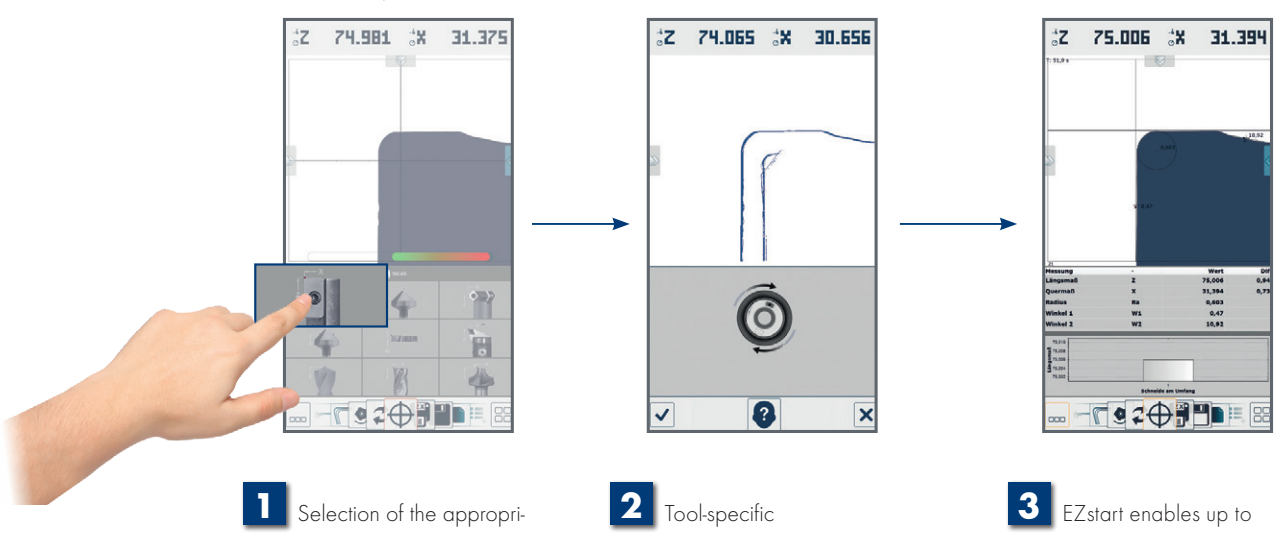
Measure, adjust and test tools



Tool library



Insert tools into the tool pre-setting device.



1 Selection of the appropriate tool type

2 Tool-specific measurement procedure is started. Operator must rotate the tool 365°.

3 EZstart enables up to 5 measurement results to be determined (Z, X, Radius, Angle 1, Angle 2)

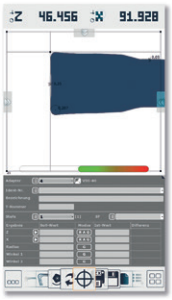
In most cases, the measurements take just 3 seconds.

ATORN Tool pre-setting devices 350/420/600 with ImageController

- Robust tool pre-setting devices for workshop use
- Quick measuring, setting and testing tools
- SK50 high accuracy spindle with integrated calibration edge
- Pneumatic spindle clamping unit
- Simple setup of different zero points (max. 99)
- Different measuring programs e.g. to carry out concentricity and axial run-out measurements on the tool cutting edge
- CCD camera with telecentric lens
- Dynamic crosshair for automatic measurements
- EZmax software function for calculating and measuring the tool contour
- Supplied ex works, excluding packaging

Base support and reduction with integrated calibration edge











520090 1350

ImageController 1

In addition to ImageController Basic:

- 13.3" TFT touchscreen monitor with 20x magnification
- Stable undertable with adapter tray
- Spindle brake and 4x90° spindle indexing
- Label printing system
- Illuminated cutting edge inspection
- Tool management, projector function
- Turning centre measurement (optional)
- Network-compatible (optional)
- Communication with machine tool (optional)

Type	Measurement range Z mm	Measurement range X mm	Weight kg	art.no.	€
ATORN 350 ImageConrtoller1	350	320	180	520090 1350	10.900,–
ATORN 420 ImageConrtoller1	420	420	274	520090 1420	11.700,–
ATORN 600x420 ImageConrtoller1	600	420	289	520090 1601	12.900,–
ATORN 600x570 ImageConrtoller1	600	570	289	520090 1657	14.400,–

5165







520090 2420

ImageController 2
- **Screen size 13.3“**
- Touchscreen display (magnification 20x)
- additional options for ImageController 1:
  - Creation of tooling sheets (optional)
  - Autofocus spindle (optional)

Type	Measurement range Z mm	Measurement range X mm	Weight kg	art.no.	€
ATORN 350 ImageController2	350	320	180	520090 2350	12.200,–
ATORN 420 ImageController2	420	420	274	520090 2420	13.000,–
ATORN 600x420 ImageController2	600	420	289	520090 2601	14.200,–
ATORN 600x570 ImageController2	600	570	289	520090 2657	15.700,–

5165



520090 2424

ImageController 2
- **Screen size 24“**
- Panel PC (magnification 38x)
- additional options for ImageController 1:
  - Creation of tooling sheets (optional)
  - Autofocus spindle (optional)

Type	Measurement range Z mm	Measurement range X mm	Weight kg	art.no.	€
ATORN 350 ImageController2-24	350	320	180	520090 2324	13.100,–
ATORN 420 ImageController2-24	420	420	274	520090 2424	13.900,–
ATORN 600x420 ImageController2-24	600	420	289	520090 2624	15.100,–
ATORN 600x570 ImageController2-24	600	570	289	520090 2524	16.600,–

5165

Accessories
- All adapters come with integrated calibration edge
- The barcode print software option allows the printing of QR Code labels
- Measured tool data can be read directly into the machine memory via the tool identification „zidcode“ and the associated scanner. Typos are a thing of the past
- Additional special accessories e.g. vacuum spindle, other adapters available on request

Designation	Suitable measuring instruments	art.no.	€
Adapter SK50 / HSK32 A/C/E/T-HSK40 B/D/F without tool clamping	IC Basic / 1 / 2	520092 0017	800,–
Adapter SK50 / HSK40 A/C/E/T-HSK50 B/D/F without tool clamping	IC Basic / 1 / 2	520092 0018	700,–
Adapter SK50 / HSK50 A/C/E/T-HSK63 B/D/F without tool clamping	IC Basic / 1 / 2	520092 0019	650,–
Adapter SK50 / HSK63 A/C/E/T-HSK80 B/D/F without tool clamping	IC Basic / 1 / 2	520092 0020	545,–
Adapter SK50 / SK40	IC Basic / 1 / 2	520092 0001	515,–
Adapter SK50 / VDI20	IC Basic / 1 / 2	520092 0031	1.035,–
Adapter SK50 / VDI30	IC Basic / 1 / 2	520092 0033	1.035,–
Adapter SK50 / VDI40	IC Basic / 1 / 2	520092 0034	1.035,–
Adapter SK50 / VDI50	IC Basic / 1 / 2	520092 0035	1.035,–
ATORN »zidCode« barcode printer	IC 1 / 2	520091 0110	270,–
Labels for TSC printer 25x75 mm / matt white / 950 pcs.	IC Basic / 1 / 2	520091 0012	50,–
Cleaning agent „BLUE-TACK“	IC Basic / 1 / 2	520091 1210	10,–
Cutting edge inspection	IC Basic	520091 0003	250,–
Spindle brakes	IC Basic	520091 0001	330,–
Spindle indexing 4x90°	IC Basic	520091 0002	290,–
Thermal printer incl. printing license	IC Basic	520091 0011	325,–
Tool insert SK50 suitable for storage shelf	IC 1 / 2	520092 0500	10,–
Tool identification >zidcode< removable scanner	IC 1 / 2	520091 0112	1.385,–

5165


520092 0035

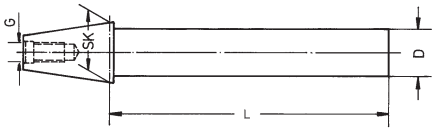

520092 0001



520091 0112

diebold Test mandrels

- **Stepped hollow bore**
- Forged, case-hardened (HRC 58+2)
- Precision-ground diameter and flat surface
- Taper tolerance AT3, radial run-out < 0.003 mm
- Supplied in wooden box for vertical storage with test certificate

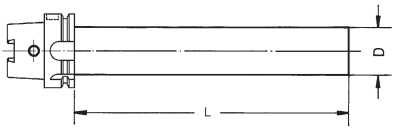




DIN ISO 7388-1 / DIN 69871 A

Shank	D mm	L mm	Thread	art.no.	€
SK30	32	204	M 12	436313 3032	434,–
SK40	40	320	M 16	436313 4040	414,–
SK50	40	320	M 24	436313 5040	517,–

4131





DIN 69893 type A (HSK-A)

- With 4 slots at the tapered end
- For measuring at 0°, 90°, 180° and 270°

Shank	D mm	L mm	art.no.	€
HSK 40	24	180	436319 4024	459,–
HSK 50	32	236	436319 5032	474,–
HSK 63	40	346	436319 6340	503,–
HSK 80	40	346	436319 8040	559,–
HSK 100	40	349	436319 1040	566,–

4131

Tool length pre-setting device

- For determining the length and pre-setting when using an optional depth gauge (see below)
- hardened
- Taper and collar ground and black-oxidised
- Height approx. 100mm
- Diameter: SK 40 = approx. 80mm, SK 50 = approx. 105mm
- Mounting slot for depth gauge 16 x 4.5mm
- **Advantage:** Tool lengths can be measured directly beside the machine.
- simple handling
- low space requirement
- Supplied in the box, without depth gauge



Designation	art.no.	€
Tool length pre-setting device, SK 40	531201 0040	269,–
Tool length pre-setting device, SK 50	531201 0050	319,–

5163

Mitutoyo *ABSOLUTE! digital sliding depth gauge AOS!*

ISO 13385-2 | INOX | 0,01 mm | ABSO-LUTE | Digi-matic | USB



- Particularly suitable for use in rough work conditions due to the electromagnetic inductive **AOS** measuring process (**A**dvanced **O**nsite **S**ensor), which is not sensitive to dirt or moisture on the scale
- ***ABSOLUTE*** scale for one-time zeroing
- **High-contrast LCD with 9 mm high digits**
- Battery life approx. 18,000 hours
- **Functions:** ON/OFF, zero point at battery change (ORIGIN), user-defined zeroing (ZERO/ABS), battery check
- Supplied with SR44 battery, No. 500534 0001
- **Special accessories**: Digimatic cable type C No. 563100 0021 (1 m), No. 563100 0022 (2 m), USB cable type C USB No. 563110 0003

Max. length measuring range mm	Bridge length x bridge width mm	Additional base possible	Error limit mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
100	100x6	Yes	0.03	501602 0150	419,–	072008 D001	16,–
200	100x6	Yes	0.03	501602 0200	505,–	072008 D001	16,–

5102

Gauge blocks

INFO

At operational level, gauge blocks are the most important tool for connecting to the metre unit of length. They embody a certain length with a very high level of accuracy, hence the term **material measure**.

Gauge blocks are offered in different tolerance classes (formerly known as **degrees of accuracy**), which differ as follows:

Tolerance class K used in our measuring laboratory for checking gauge blocks

Tolerance class 0 for all exact length measurements, for checking gauge blocks used in operation, for adjusting highly precise measuring instruments

Tolerance class 1 for checking gauges and adjusting measuring instruments

Tolerance class 2 as a working and setting gauge in production



Nominal dimension range in mm above	to	Tolerance class 0 Deviation from the nominal dimension in µm	Tolerance class 1 Deviation from the nominal dimension in µm	Tolerance class 2 Deviation from the nominal dimension in µm
-	10	0.12	0.20	0.45
10	25	0.14	0.30	0.60
25	50	0.20	0.40	0.80
50	75	0.25	0.50	1.00
75	100	0.30	0.60	1.20
100	150	0.40	0.80	1.60
150	200	0.50	1.00	2.00
200	250	0.60	1.20	2.40
250	300	0.70	1.40	2.80
300	400	0.90	1.80	3.60
400	500	1.10	2.20	4.40
500	600	1.30	2.60	5.00
600	700	1.50	3.00	6.00
700	800	1.70	3.40	6.50
800	900	1.90	3.80	7.50
900	1000	2.00	4.20	8.00



	Ceramic (ZrO_2)	Steel (Fe)
Vickers hardness (HV)	1350	800
Longitudinal expansion coefficient (10^{-6}/K)	9.3 +/- 0.5	10.8 +/- 0.5

Advantages of ceramic gauge blocks

Corrosion-resistant — **Ceramic gauge blocks cannot corrode and consequently require no corrosion protection treatment**

Non-magnetic — **No magnetic dirt, such as chips, will stick to ceramic**

Abrasion-resistant — **Mitutoyo ceramic gauge blocks have up to ten-times higher abrasion resistance than steel gauge blocks**

Dimensional accuracy — **Ceramic gauge blocks are wholly unaffected by time-related dimensional changes**

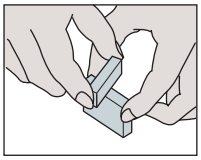
Expansion coefficient — **Similar to that of steel**

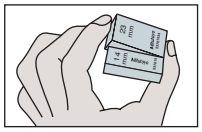


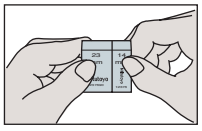
Perfect wringing of gauge blocks

- The wringing should always be performed in a clean place on a soft surface – if a gauge block falls from the hand, it will not be damaged.
- Wipe the preservation substance from the gauge blocks using a soft cloth and petroleum ether.
- Do not use alcohol or ordinary white gas for cleaning purposes for the cleaning; normal white gas for cleaning purposes contains too many impurities, while alcohol always contains aqueous components that can cause corrosion.
- Microfibre cloths are best suited for wiping off the gauge block.
- Check the cleaned gauge block for rust and cratches.
- Burrs on the measuring face are removed with a special Ceraston (ceramic deburring stone) for gauge blocks. Move the gauge block over the Ceraston using very light pressure.

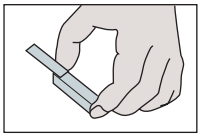
Wringing long gauge blocks

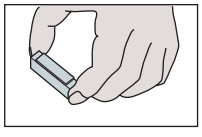

Cross the gauge blocks at about 90 ° to each other in the middle of the measuring faces.


Pressing lightly, rotate the gauge block. You will develop a sense of the wringing while sliding the blocks.

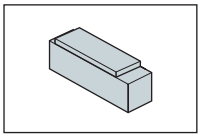

Align the measuring faces with each other.

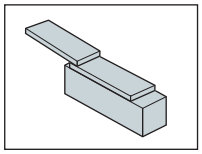
Wringing one thick and one thin gauge block

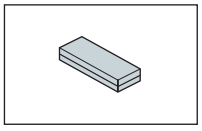

Overlap one side of a thin gauge block on one side of a thick gauge block.


While pressing the entire overlapped area, move the thinner gauge block to align the measuring faces with each other.

Wringing thin gauge blocks


To avoid bending the thin gauge, first wring the smaller gauge block onto the long gauge block.


Then slide the other thin gauge block onto the first thin gauge block.


Finally, remove the long gauge block from the stack.

SARA® Steel gauge block sets

DIN EN ISO 3650

- Made of carefully selected, high-quality, alloyed special steel, aged, hardened and hand-lapped
- Edges slightly blunted
- Each gauge block is engraved with an individual identification number
- Supplied in a wooden case with individually labelled compartments
- The works inspection certificate provided lists all the gauge blocks with the nominal dimensions and the deviation from the nominal dimensions. It documents traceability to national standards and the test conditions



535001 1087

32-piece set

Anzahl	Maß mm	Stufung mm
1	1,005	-
9	1,01-1,09	0,01
9	1,1-1,9	0,1
9	1-9	1,0
3	10-30	10
1	50	-

47-piece set

Anzahl	Maß mm	Stufung mm
1	1,005	-
21	1,00-1,20	0,01
8	1,3-2,0	0,1
8	3-10	1
9	20-100	10

87-piece set

Anzahl	Maß mm	Stufung mm
9	1,001-1,009	0,001
49	1,01-1,49	0,01
19	0,5-9,5	0,5
10	10-100	10

103-piece set

Anzahl	Maß mm	Stufung mm
1	1,005	-
49	1,01-1,49	0,01
49	0,5-24,5	0,5
4	25-100	25

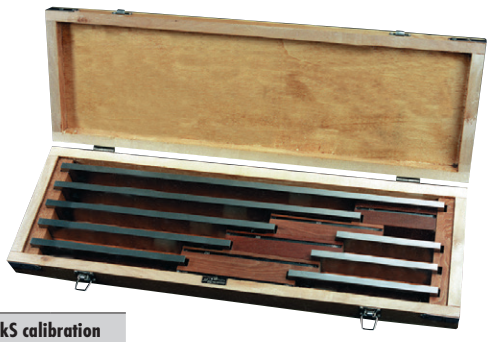
Tolerance class	Number of pieces pc.	art.no.	€	DAkkS calibration art.no.	€
0	32	535001 0032	569,–	075013 D032	452,–
1	32	535001 1032	380,–	075013 D032	452,–
2	32	535001 2032	237,–	075013 D032	452,–
0	47	535001 0047	889,–	075013 D047	662,–
1	47	535001 1047	539,–	075013 D047	662,–
2	47	535001 2047	335,–	075013 D047	662,–
0	87	535001 0087	1.299,–	075013 D087	1.222,–
1	87	535001 1087	839,–	075013 D087	1.222,–
2	87	535001 2087	509,–	075013 D087	1.222,–
0	103	535001 0103	1.699,–	075013 D103	1.446,–
1	103	535001 1103	999,–	075013 D103	1.446,–
2	103	535001 2103	599,–	075013 D103	1.446,–

5129

SARA® Steel gauge block set, long

DIN EN ISO 3650

- For adjusting larger measuring instruments
- With locating bores for gauge block connector, no. 5360060010
- Made from carefully selected, high-quality alloyed special steel
- Aged, hardened and hand-lapped
- Each gauge block is engraved with an individual identification number
- The works inspection certificate provided lists all the end gauges with the nominal dimensions and the deviation from the nominal dimensions. It documents traceability to national standards and the test conditions.
- Calibration: Test B = 5-point measurement, Test C = 1-point measurement



Tolerance class	Number of pieces pc.	Nominal dimension in assortment mm	art.no.	€	DAkkS calibration art.no.	€
1	8	125 | 150 | 175 | 200 | 250 | 300 | 400 | 500	535001 0008	1.999,–	075017 D005	509,–

5129

Gauge block connector

- Connects long gauge blocks to locating bores quickly and securely
- Dimensions 72 x 30 x 29 mm



Designation	art.no.	€
Gauge block connector	536006 0010	129,–

5129

Mitutoyo Steel gauge block sets

- Made of carefully selected, high-quality alloyed special steel
- Aged, hardened and hand-lapped
- Edges slightly blunted
- Each gauge block is engraved with an individual identification number
- Supplied in a wooden case with lettering on the individual compartments, incl. MITUTOYO test certificate confirming the centre deviation of each gauge block



32-piece set		
Anzahl	Maß mm	Stufung mm
1	1,005	-
9	1,01-1,09	0,01
9	1,1-1,9	0,1
9	1-9	1,0
3	10-30	10
1	50	-

47-piece set		
Anzahl	Maß mm	Stufung mm
1	1,005	-
21	1,00-1,20	0,01
8	1,3-2,0	0,1
8	3-10	1
9	20-100	10

87-piece set		
Anzahl	Maß mm	Stufung mm
9	1,001-1,009	0,001
49	1,01-1,49	0,01
19	0,5-9,5	0,5
10	10-100	10

103-piece set		
Anzahl	Maß mm	Stufung mm
1	1,005	-
49	1,01-1,49	0,01
49	0,5-24,5	0,5
4	25-100	25

Tolerance class	Number of pieces pc.	art.no.	€	DAkkS calibration art.no.	€
0	32	536001 0040	1.248,–	075013 D032	452,–
1	32	536001 0041	961,–	075013 D032	452,–
2	32	536001 0042	816,–	075013 D032	452,–
0	47	536001 0030	2.129,–	075013 D047	662,–
1	47	536001 0031	1.637,–	075013 D047	662,–
2	47	536001 0032	1.396,–	075013 D047	662,–
0	87	536001 0021	3.281,–	075013 D087	1.222,–
1	87	536001 0022	2.525,–	075013 D087	1.222,–
2	87	536001 0023	2.149,–	075013 D087	1.222,–
0	103	536001 0011	4.158,–	075013 D103	1.446,–
1	103	536001 0012	3.188,–	075013 D103	1.446,–
2	103	536001 0013	2.713,–	075013 D103	1.446,–

5102

Mitutoyo Ceramic gauge block sets

- Accuracies and possible uses as described under 536001....
- Made of zirconium/ceramic
- Each individual gauge block is engraved with an individual identification no.
- Supplied in a wooden case with individually labelled compartments
- For information on set composition and dimension steps, please see no. 536001...



32-piece set		
Anzahl	Maß mm	Stufung mm
1	1,005	-
9	1,01-1,09	0,01
9	1,1-1,9	0,1
9	1-9	1,0
3	10-30	10
1	50	-

47-piece set		
Anzahl	Maß mm	Stufung mm
1	1,005	-
21	1,00-1,20	0,01
8	1,3-2,0	0,1
8	3-10	1
9	20-100	10

87-piece set		
Anzahl	Maß mm	Stufung mm
9	1,001-1,009	0,001
49	1,01-1,49	0,01
19	0,5-9,5	0,5
10	10-100	10

103-piece set		
Anzahl	Maß mm	Stufung mm
1	1,005	-
49	1,01-1,49	0,01
49	0,5-24,5	0,5
4	25-100	25

Tolerance class	Number of pieces pc.	art.no.	€	DAkkS calibration art.no.	€
0	32	536020 0032	1.730,–	075013 D032	452,–
1	32	536020 1032	1.334,–	075013 D032	452,–
0	47	536020 0047	3.498,–	075013 D047	662,–
1	47	536020 1047	3.050,–	075013 D047	662,–
0	87	536020 0087	5.808,–	075013 D087	1.222,–
1	87	536020 1087	4.488,–	075013 D087	1.222,–
0	103	536020 0103	6.996,–	075013 D103	1.446,–
1	103	536020 1103	5.379,–	075013 D103	1.446,–

5102

Mitutoyo SARA® Individual gauge blocks, steel and ceramic

DIN EN ISO 3650



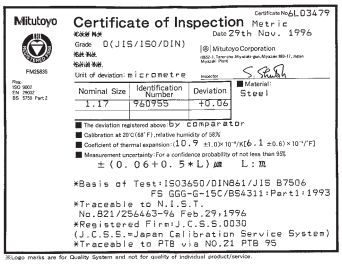
- Cross-section of steel and ceramic individual gauge blocks: from 0.1 to 10.1 mm: 30 x 9 mm, above 10.1 to 1000 mm: 35 x 9 mm
- Individual gauge blocks are available in the degrees of accuracy 0 and 1 (steel) or 0 (ceramic)
- **Each individual gauge block is engraved with an individual identification no.**
- **Every Mitutoyo gauge block is supplied with a free MITUTOYO test certificate documenting the centre deviation and degree of accuracy, as well as traceability to the PTB standard**
- Mitutoyo gauge blocks: Supplied individually in moulded packaging with a MITUTOYO test certificate

Short

Nominal dimension mm	Mitutoyo Steel, accuracy 0 art.no.	€	Mitutoyo Steel, accuracy 1 art.no.	€	SARA® Steel, accuracy 1 art.no.	€	SARA® Ceramics, accuracy 0 art.no.	€	DAkkS calibration art.no.	€
0.5	536050 0001	45,80	536052 0001	38,30	536053 0001	33,50	536056 0001	78,–	075017 D010	18,–
1.0	536050 0002	30,40	536052 0002	25,60	536053 0002	23,30	536056 0002	56,–	075017 D010	18,–
1.001	536050 0003	30,40	536052 0003	25,60	536053 0003	23,30	536056 0003	61,50	075017 D010	18,–
1.002	536050 0004	30,40	536052 0004	25,60	536053 0004	23,30	536056 0004	61,50	075017 D010	18,–
1.003	536050 0005	30,40	536052 0005	25,60	536053 0005	23,30	536056 0005	61,50	075017 D010	18,–
1.004	536050 0006	30,40	536052 0006	25,60	536053 0006	23,30	536056 0006	61,50	075017 D010	18,–
1.005	536050 0007	30,40	536052 0007	25,60	536053 0007	23,30	536056 0007	61,50	075017 D010	18,–
1.006	536050 0008	30,40	536052 0008	25,60	536053 0008	23,30	536056 0008	61,50	075017 D010	18,–
1.007	536050 0009	30,40	536052 0009	25,60	536053 0009	23,30	536056 0009	61,50	075017 D010	18,–
1.008	536050 0010	30,40	536052 0010	25,60	536053 0010	23,30	536056 0010	61,50	075017 D010	18,–
1.009	536050 0011	30,40	536052 0011	25,60	536053 0011	23,30	536056 0011	61,50	075017 D010	18,–
1.01	536050 0012	30,40	536052 0012	25,60	536053 0012	23,30	536056 0012	59,80	075017 D010	18,–
1.02	536050 0013	30,40	536052 0013	25,60	536053 0013	23,30	536056 0013	59,80	075017 D010	18,–
1.03	536050 0014	30,40	536052 0014	25,60	536053 0014	23,30	536056 0014	59,80	075017 D010	18,–
1.04	536050 0015	30,40	536052 0015	25,60	536053 0015	23,30	536056 0015	59,80	075017 D010	18,–
1.05	536050 0016	30,40	536052 0016	25,60	536053 0016	23,30	536056 0016	59,80	075017 D010	18,–
1.06	536050 0017	30,40	536052 0017	25,60	536053 0017	23,30	536056 0017	59,80	075017 D010	18,–
1.07	536050 0018	30,40	536052 0018	25,60	536053 0018	23,30	536056 0018	59,80	075017 D010	18,–
1.08	536050 0019	30,40	536052 0019	25,60	536053 0019	23,30	536056 0019	59,80	075017 D010	18,–
1.09	536050 0020	30,40	536052 0020	25,60	536053 0020	23,30	536056 0020	59,80	075017 D010	18,–
1.10	536050 0021	30,40	536052 0021	25,60	536053 0021	23,30	536056 0021	59,80	075017 D010	18,–
1.11	536050 0022	30,40	536052 0022	25,60	536053 0022	23,30	536056 0022	59,80	075017 D010	18,–
1.12	536050 0023	30,40	536052 0023	25,60	536053 0023	23,30	536056 0023	59,80	075017 D010	18,–
1.13	536050 0024	30,40	536052 0024	25,60	536053 0024	23,30	536056 0024	59,80	075017 D010	18,–
1.14	536050 0025	30,40	536052 0025	25,60	536053 0025	23,30	536056 0025	59,80	075017 D010	18,–
1.15	536050 0026	30,40	536052 0026	25,60	536053 0026	23,30	536056 0026	59,80	075017 D010	18,–
1.16	536050 0027	30,40	536052 0027	25,60	536053 0027	23,30	536056 0027	59,80	075017 D010	18,–
1.17	536050 0028	30,40	536052 0028	25,60	536053 0028	23,30	536056 0028	59,80	075017 D010	18,–
1.18	536050 0029	30,40	536052 0029	25,60	536053 0029	23,30	536056 0029	59,80	075017 D010	18,–
1.19	536050 0030	30,40	536052 0030	25,60	536053 0030	23,30	536056 0030	59,80	075017 D010	18,–
1.20	536050 0031	30,40	536052 0031	25,60	536053 0031	23,30	536056 0031	59,80	075017 D010	18,–
1.21	536050 0032	30,40	536052 0032	25,60	536053 0032	23,30	536056 0032	59,80	075017 D010	18,–
1.22	536050 0033	30,40	536052 0033	25,60	536053 0033	23,30	536056 0033	59,80	075017 D010	18,–
1.23	536050 0034	30,40	536052 0034	25,60	536053 0034	23,30	536056 0034	59,80	075017 D010	18,–
1.24	536050 0035	30,40	536052 0035	25,60	536053 0035	23,30	536056 0035	59,80	075017 D010	18,–
1.25	536050 0036	30,40	536052 0036	25,60	536053 0036	23,30	536056 0036	59,80	075017 D010	18,–
1.26	536050 0037	30,40	536052 0037	25,60	536053 0037	23,30	536056 0037	59,80	075017 D010	18,–
1.27	536050 0038	30,40	536052 0038	25,60	536053 0038	23,30	536056 0038	59,80	075017 D010	18,–
1.28	536050 0039	30,40	536052 0039	25,60	536053 0039	23,30	536056 0039	59,80	075017 D010	18,–
1.29	536050 0040	30,40	536052 0040	25,60	536053 0040	23,30	536056 0040	59,80	075017 D010	18,–
1.30	536050 0041	30,40	536052 0041	25,60	536053 0041	23,30	536056 0041	59,80	075017 D010	18,–
1.31	536050 0042	30,40	536052 0042	25,60	536053 0042	23,30	536056 0042	59,80	075017 D010	18,–
1.32	536050 0043	30,40	536052 0043	25,60	536053 0043	23,30	536056 0043	59,80	075017 D010	18,–
1.33	536050 0044	30,40	536052 0044	25,60	536053 0044	23,30	536056 0044	59,80	075017 D010	18,–
1.34	536050 0045	30,40	536052 0045	25,60	536053 0045	23,30	536056 0045	59,80	075017 D010	18,–
1.35	536050 0046	30,40	536052 0046	25,60	536053 0046	23,30	536056 0046	59,80	075017 D010	18,–
1.36	536050 0047	30,40	536052 0047	25,60	536053 0047	23,30	536056 0047	59,80	075017 D010	18,–
1.37	536050 0048	30,40	536052 0048	25,60	536053 0048	23,30	536056 0048	59,80	075017 D010	18,–
1.38	536050 0049	30,40	536052 0049	25,60	536053 0049	23,30	536056 0049	59,80	075017 D010	18,–
	5102		5102		5129		5129			



536050 0115



Nominal dimension mm	Mitutoyo Steel, accuracy 0 art.no.	€	Mitutoyo Steel, accuracy 1 art.no.	€	SARA® Steel, accuracy 1 art.no.	€	SARA® Ceramics, accuracy 0 art.no.	€	DAkkS calibration art.no.	€
1.39	536050 0050	30,40	536052 0050	25,60	536053 0050	23,30	536056 0050	59,80	075017 D010	18,–
1.40	536050 0051	30,40	536052 0051	25,60	536053 0051	23,30	536056 0051	59,80	075017 D010	18,–
1.41	536050 0052	30,40	536052 0052	25,60	536053 0052	23,30	536056 0052	59,80	075017 D010	18,–
1.42	536050 0053	30,40	536052 0053	25,60	536053 0053	23,30	536056 0053	59,80	075017 D010	18,–
1.43	536050 0054	30,40	536052 0054	25,60	536053 0054	23,30	536056 0054	59,80	075017 D010	18,–
1.44	536050 0055	30,40	536052 0055	25,60	536053 0055	23,30	536056 0055	59,80	075017 D010	18,–
1.45	536050 0056	30,40	536052 0056	25,60	536053 0056	23,30	536056 0056	59,80	075017 D010	18,–
1.46	536050 0057	30,40	536052 0057	25,60	536053 0057	23,30	536056 0057	59,80	075017 D010	18,–
1.47	536050 0058	30,40	536052 0058	25,60	536053 0058	23,30	536056 0058	59,80	075017 D010	18,–
1.48	536050 0059	30,40	536052 0059	25,60	536053 0059	23,30	536056 0059	59,80	075017 D010	18,–
1.49	536050 0060	30,40	536052 0060	25,60	536053 0060	23,30	536056 0060	59,80	075017 D010	18,–
1.5	536050 0061	30,60	536052 0061	25,30	536053 0061	23,30	536056 0061	59,80	075017 D010	18,–
1.6	536050 0062	30,60	536052 0062	25,30	536053 0062	23,30	536056 0062	59,80	075017 D010	18,–
1.7	536050 0063	30,60	536052 0063	25,30	536053 0063	23,30	536056 0063	59,80	075017 D010	18,–
1.8	536050 0064	30,60	536052 0064	25,30	536053 0064	23,30	536056 0064	59,80	075017 D010	18,–
1.9	536050 0065	30,60	536052 0065	25,30	536053 0065	23,30	536056 0065	59,80	075017 D010	18,–
2	536050 0066	30,60	536052 0066	25,30	536053 0066	23,30	536056 0066	59,80	075017 D010	18,–
2.5	536050 0067	32,80	536052 0067	27,10	536053 0067	23,30	536056 0067	59,80	075017 D010	18,–
3	536050 0068	32,80	536052 0068	27,10	536053 0068	23,30	536056 0068	59,80	075017 D010	18,–
3.5	536050 0069	33,30	536052 0069	27,70	536053 0069	23,30	536056 0069	59,80	075017 D010	18,–
4	536050 0070	33,30	536052 0070	27,70	536053 0070	23,30	536056 0070	59,80	075017 D010	18,–
4.5	536050 0071	33,30	536052 0071	27,70	536053 0071	23,30	536056 0071	59,80	075017 D010	18,–
5	536050 0072	33,30	536052 0072	27,70	536053 0072	23,30	536056 0072	59,80	075017 D010	18,–
5.5	536050 0073	39,70	536052 0073	33,50	536053 0073	23,30	536056 0073	65,–	075017 D010	18,–
6	536050 0074	40,70	536052 0074	34,10	536053 0074	23,30	536056 0074	65,–	075017 D010	18,–
6.5	536050 0075	40,70	536052 0075	34,10	536053 0075	23,30	536056 0075	65,–	075017 D010	18,–
7	536050 0076	40,70	536052 0076	34,10	536053 0076	23,30	536056 0076	65,–	075017 D010	18,–
7.5	536050 0077	41,50	536052 0077	34,60	536053 0077	23,30	536056 0077	65,–	075017 D010	18,–
8	536050 0078	41,50	536052 0078	34,60	536053 0078	23,30	536056 0078	65,–	075017 D010	18,–
8.5	536050 0079	41,50	536052 0079	34,60	536053 0079	23,30	536056 0079	65,–	075017 D010	18,–
9	536050 0080	42,40	536052 0080	35,20	536053 0080	23,30	536056 0080	65,–	075017 D010	18,–
9.5	536050 0081	42,40	536052 0081	35,20	536053 0081	23,30	536056 0081	65,–	075017 D010	18,–
10	536050 0082	42,40	536052 0082	35,20	536053 0082	25,80	536056 0082	84,50	075017 D010	18,–
10.5	536050 0083	42,90	536052 0083	35,90	536053 0083	32,60	536056 0083	84,50	075017 D010	18,–
11	536050 0084	49,60	536052 0084	41,50	536053 0084	32,60	536056 0084	84,50	075017 D010	18,–
11.5	536050 0085	50,60	536052 0085	42,30	536053 0085	32,60	536056 0085	84,50	075017 D010	18,–
12	536050 0086	50,60	536052 0086	42,30	536053 0086	32,60	536056 0086	84,50	075017 D010	18,–
12.5	536050 0087	51,20	536052 0087	42,80	536053 0087	32,60	536056 0087	84,50	075017 D010	18,–
13	536050 0088	51,20	536052 0088	42,80	536053 0088	32,60	536056 0088	84,50	075017 D010	18,–
13.5	536050 0089	51,20	536052 0089	42,80	536053 0089	32,60	536056 0089	84,50	075017 D010	18,–
14	536050 0090	51,60	536052 0090	43,40	536053 0090	32,60	536056 0090	84,50	075017 D010	18,–
14.5	536050 0091	51,60	536052 0091	43,40	536053 0091	32,60	536056 0091	84,50	075017 D010	18,–
15	536050 0092	51,60	536052 0092	43,40	536053 0092	32,60	536056 0092	84,50	075017 D010	18,–
15.5	536050 0093	52,50	536052 0093	43,90	536053 0093	32,60	536056 0093	111,50	075017 D010	18,–
16	536050 0094	54,10	536052 0094	45,20	536053 0094	32,60	536056 0094	111,50	075017 D010	18,–
16.5	536050 0095	54,90	536052 0095	45,60	536053 0095	32,60	536056 0095	111,50	075017 D010	18,–
17	536050 0096	54,90	536052 0096	45,60	536053 0096	32,60	536056 0096	111,50	075017 D010	18,–
17.5	536050 0097	55,20	536052 0097	46,40	536053 0097	32,60	536056 0097	111,50	075017 D010	18,–
18	536050 0098	55,20	536052 0098	46,40	536053 0098	32,60	536056 0098	111,50	075017 D010	18,–
18.5	536050 0099	55,20	536052 0099	46,40	536053 0099	32,60	536056 0099	111,50	075017 D010	18,–
19	536050 0100	55,90	536052 0100	46,80	536053 0100	32,60	536056 0100	111,50	075017 D010	18,–
19.5	536050 0101	55,90	536052 0101	46,80	536053 0101	32,60	536056 0101	111,50	075017 D010	18,–
20	536050 0102	55,90	536052 0102	46,80	536053 0102	32,60	536056 0102	111,50	075017 D010	18,–
20.5	536050 0103	56,80	536052 0103	47,20	536053 0103	32,60	536056 0103	151,50	075017 D010	18,–
21	536050 0104	58,90	536052 0104	49,–	536053 0104	32,60	536056 0104	151,50	075017 D010	18,–
21.5	536050 0105	58,90	536052 0105	49,–	536053 0105	32,60	536056 0105	151,50	075017 D010	18,–
22	536050 0106	59,40	536052 0106	49,50	536053 0106	32,60	536056 0106	151,50	075017 D010	18,–
22.5	536050 0107	59,40	536052 0107	49,50	536053 0107	32,60	536056 0107	151,50	075017 D010	18,–
23	536050 0108	59,40	536052 0108	49,50	536053 0108	32,60	536056 0108	151,50	075017 D010	18,–
23.5	536050 0109	59,40	536052 0109	49,50	536053 0109	32,60	536056 0109	151,50	075017 D010	18,–
24	536050 0110	59,40	536052 0110	49,50	536053 0110	32,60	536056 0110	151,50	075017 D010	18,–
24.5	536050 0111	60,40	536052 0111	50,30	536053 0111	32,60	536056 0111	151,50	075017 D010	18,–
25	536050 0112	60,40	536052 0112	50,30	536053 0112	32,60	536056 0112	151,50	075017 D010	18,–
30	536050 0113	68,20	536052 0113	57,20	536053 0113	32,60	536056 0113	186,50	075017 D010	18,–
	5102		5102		5129		5129			



Nominal dimension mm	Mitutoyo Steel, accuracy 0 art.no.	€	Mitutoyo Steel, accuracy 1 art.no.	€	SARA Steel, accuracy 1 art.no.	€	SARA Ceramics, accuracy 0 art.no.	€	DAkkS calibration art.no.	€
40	536050 0114	75,20	536052 0114	62,90	536053 0114	32,60	536056 0114	203,–	075017 D010	18,–
50	536050 0115	85,30	536052 0115	71,20	536053 0115	32,60	536056 0115	225,–	075017 D010	18,–
60	536050 0116	98,30	536052 0116	82,–	536053 0116	42,80	536056 0116	265,–	075017 D010	18,–
70	536050 0117	108,–	536052 0117	89,60	536053 0117	42,80	536056 0117	279,–	075017 D010	18,–
75	536050 0118	110,–	536052 0118	91,90	536053 0118	42,80	536056 0118	285,–	075017 D010	18,–
80	536050 0119	120,–	536052 0119	99,20	536053 0119	42,80	536056 0119	325,–	075017 D010	18,–
90	536050 0120	125,–	536052 0120	104,–	536053 0120	42,80	536056 0120	375,–	075017 D010	18,–
100	536050 0121	132,–	536052 0121	110,–	536053 0121	45,50	536056 0121	430,–	075017 D010	18,–
	5102		5102		5129		5129			

Long

SARA

Nominal dimension mm	Steel, accuracy 1 art.no.	€	DAkkS calibration art.no.	€	Factory calibration art.no.	€
41.3	536053 0413	63,70	075017 D011	24,–		
125	536053 0125	107,–	075017 D001	59,–		
131.4	536053 1314	173,50	075017 D001	59,–		
150	536053 0150	153,50	075017 D001	59,–		
175	536053 0175	179,–	075017 D001	59,–		
200	536053 0200	205,–	075017 D001	59,–		
243.5	536053 2435	309,–	075017 D002	64,–		
250	536053 0250	245,–	075017 D002	64,–		
281.2	536053 2812	329,–	075017 D002	64,–		
300	536053 0300	270,–	075017 D002	64,–		
400	536053 0400	325,–	075017 D003	79,–		
500	536053 0500	480,–	075017 D004	94,–		
600	536053 0600	979,–	075017 D006	264,–		
700	536053 0700	1.069,–	075017 D007	264,–		
800	536053 0800	1.239,–	075017 D008	264,–		
900	536053 0900	1.449,–	075017 D009	264,–		
1000	536053 1000	1.679,–			073103 W145	98,–
	5129					



Application example with gauge block connector

SARA Gauge block set for monitoring testing equipment

DIN EN ISO 3650

- Made from steel
- For monitoring test equipment
- **Tolerance class 1**

For testing outside micrometers of up to 100 mm

- Test equipment directive VDI/VDE/DGQ 2618, Part 10.1
- Steel gauge blocks for external measurements
- Supplied in a wooden case with individually labelled compartments

Min./max. length of application area	Nominal dimension in assortment mm	art.no.	€	DAkkS calibration art.no.	€
0-25 mm	5.1 | 10.3 | 15 | 20.2 | 25	535010 0005	169,–	075012 D005	84,–
0-100 mm	5.1 | 10.3 | 15 | 20.2 | 25 | 50 | 75 | 100	535010 0008	275,–	075012 D008	114,–
0-25 mm	2.5 | 5.1 | 7.7 | 10.3 | 12.9/15 | 17.6 | 20.2 | 22.8 | 25	535010 1010	249,–	075012 D010	134,–
	5129				



535010 1010

For testing sliding callipers of up to 300 mm

- Test equipment directive VDI/VDE/DGQ 2618, Part 9.1
- Steel gauge blocks for external measurements
- Ring gauges for internal measurements
- Supplied in a wooden case with individually labelled compartments

Min./max. length of application area	Nominal dimension in assortment mm	Adjusting ring diameter mm	art.no.	€	DAkkS calibration art.no.	€
0-200 mm	30.0 | 41.3 | 131.4	4 | 25	535011 0105	559,–	075018 D001	183,–
0-300 mm	41.3 | 131.4 | 243.5	4 | 25	535011 0205	689,–	075018 D002	188,–
	5129					



535011 0105

ATORN Precision test pin sets

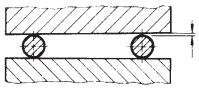
DIN 2269



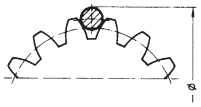
- For directly measuring bore tolerances, measuring distances between two bores, testing the eccentricity of bushes, testing angles and profiles
- Setting masters for length measurement devices, also for checking bore positions
- For parallelism tests, thread and toothing tests
- Gauge steel hardened to 58 - 62 HRC, single-aged, ground and lapped
- Ø tolerance:
Degree of accuracy 1 = ± 0.001 mm
Degree of accuracy 2 = ± 0.002 mm
- Total length: Ø 0.30 - 0.99 = 40 mm / Ø 1.00 - 20.0 = 70 mm
- From Ø 1.50 mm, marked with dimensions
- Wooden box with drilled and labelled inserts
- Other set configurations available on request



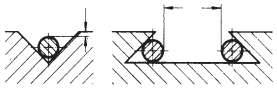
538005 0091



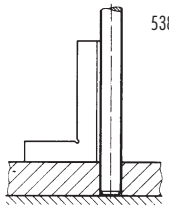
Are two levels parallel to one another?



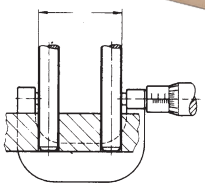
Gear, thread, rack measurement



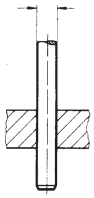
Angle and profile inspections



What is the position of the bore?



Monitoring the spacing tolerances of two bores



Direct measurement of bore tolerances

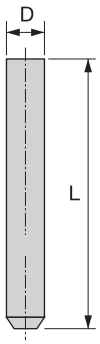
Number of pieces pc.	D mm	Nominal dimension of measuring pins mm	Accuracy 1 art.no.	Accuracy 1 €	Accuracy 2 art.no.	Accuracy 2 €	DAkkS calibration art.no.	DAkkS calibration €
41	1.00 - 5.00	1.00-5.00 mm, increasing by 0.1 mm	538001 0041	689,–	538005 0041	529,–	073103 D089	164,–
50	5.10 - 10.00	5.10-10.00 mm, increasing by 0.1 mm	538001 0050	1.029,–	538005 0050	799,–	073103 D090	204,–
81	1.00 - 5.00	1.00-5.00 mm, increasing by 0.05 mm	538001 1081	1.199,–	538005 1081	979,–	073103 D091	324,–
91	1.00 - 10.00	1.00-10.00 mm, increasing by 0.1 mm	538001 0091	1.479,–	538005 0091	1.119,–	073103 D092	364,–
100	1.00 - 2.00	1.00-2.00 mm, increasing by 0.01 mm	538001 0100	1.319,–	538005 0100	1.079,–	073103 D088	404,–
100	2.01 - 3.00	2.01-3.00 mm, increasing by 0.01 mm	538001 0201	1.309,–	538005 0201	1.079,–	073103 D087	404,–
100	3.01 - 4.00	3.01-4.00 mm, increasing by 0.01 mm	538001 0301	1.609,–	538005 0301	1.359,–	073103 D087	404,–
100	4.01 - 5.00	4.01-5.00 mm, increasing by 0.01 mm	538001 0401	1.609,–	538005 0401	1.359,–	073103 D087	404,–
100	5.01 - 6.00	5.01-6.00 mm, increasing by 0.01 mm	538001 0501	1.609,–	538005 0501	1.359,–	073103 D087	404,–
100	6.01 - 7.00	6.01-7.00 mm, increasing by 0.01 mm	538001 0601	1.979,–	538005 0601	1.589,–	073103 D087	404,–
100	7.01 - 8.00	7.01-8.00 mm, increasing by 0.01 mm	538001 0701	1.979,–	538005 0701	1.589,–	073103 D087	404,–
100	8.01 - 9.00	8.01-9.00 mm, increasing by 0.01 mm	538001 0801	1.979,–	538005 0801	1.589,–	073103 D087	404,–
100	9.01 - 10.00	9.01-10.00 mm, increasing by 0.01 mm	538001 0901	1.979,–	538005 0901	1.599,–	073103 D087	404,–
100	5.05 - 10.00	5.05-10.00 mm, increasing by 0.05 mm	538001 1100	1.869,–	538005 1100	1.479,–	073103 D087	404,–
			5130		5130			

Precision test pins, individual

ähnl. DIN 2269

- Description and use as outlined above
- From Ø 0.30 to 0.99 mm without bevel
- From Ø 1.00 to 20.00 mm with single bevel
- Stainless steel test pin or magnetic test pin available on request

Please specify nominal Ø dimension in mm to four digits
Examples:
- Test pin, Ø 0.53 mm, accuracy 1 = order no. 538020 0053
- Test pin, Ø 16.78 mm, accuracy 2 = order no. 538025 1678





Accuracy 1

Nominal dimension of measuring pins mm	Pitch mm	L mm	538020.... €	DAkkS calibration art.no.	DAkkS calibration €
0.30 - 0.49	0.01	40	35,20	074011 D001	12,–
0.50 - 0.99	0.01	40	18,50	074011 D001	12,–
1.00 - 2.99	0.01	70	15,80	074011 D001	12,–
3.00 - 5.99	0.01	70	19,80	074011 D002	9,–
6.00 - 9.99	0.01	70	26,20	074011 D002	9,–
10.00 - 11.99	0.01	70	35,20	074011 D002	9,–
12.00 - 13.99	0.01	70	42,70	074011 D003	11,–
14.00 - 15.99	0.01	70	56,20	074011 D003	11,–
16.00 - 18.99	0.01	70	71,10	074011 D003	11,–
19.00 - 20.00	0.01	70	83,50	074011 D003	11,–
			5131		

Accuracy 2

Nominal dimension of measuring pins mm	Pitch mm	L mm	538025.... €	DAkkS calibration art.no.	DAkkS calibration €
0.30 - 0.49	0.01	40	34,20	074011 D001	12,–
0.50 - 0.99	0.01	40	16,50	074011 D001	12,–
1.00 - 2.99	0.01	70	13,10	074011 D001	12,–
3.00 - 5.99	0.01	70	17,90	074011 D002	9,–
6.00 - 9.99	0.01	70	21,90	074011 D002	9,–
10.00 - 11.99	0.01	70	28,70	074011 D002	9,–
12.00 - 13.99	0.01	70	34,80	074011 D003	11,–
14.00 - 15.99	0.01	70	44,–	074011 D003	11,–
16.00 - 18.99	0.01	70	51,70	074011 D003	11,–
19.00 - 20.00	0.01	70	59,60	074011 D003	11,–
			5131		

Test pin holder

- Holding fixture for two test pins within a tolerance zone (e.g. go and no-go dimensions)
- Test pins easier to handle, particularly with small diameters



Suitable for min./max. diameter	L mm	art.no.	€
1.00 to 1.99	59	538050 0002	14,10
2.00 to 4.50	67	538050 0004	16,–
4.51 to 6.99	75	538050 0006	28,80
7.00 to 9.50	83	538050 0008	38,–
9.51 to 12.00	91	538050 0010	42,10

5131

SARA® Limit plug gauges

DIN 2245 | DIN EN ISO 1938-1



540101 0020

- Go/no-go bore testing
- Tolerances and deviations in accordance with DIN EN ISO 1938-1 and DIN 7164
- Go ends for limit plug gauges are supplied with additional wear allowances in accordance with DIN EN ISO 1938-1
- Test pieces ground and lapped
- Up to Ø 70 mm = go/no-go ends on a single handle; 2-part version above Ø 70 mm
- Material: 540101.... to 540115....: Go/no-go made from wear-resistant gauge steel, hardened and aged
  540120....: Go end hard chrome-plated, no-go end gauge steel
- Intermediate dimensions, other tolerance classes, numerical tolerances, carbide limit plug gauges or flat limit hole gauges are available on request!

Tolerance class H7

Nominal diameter mm	Steel H7 art.no.	€	Hard chrome, H7 art.no.	€	DAkkS calibration art.no.	€
2	540101 0002	31,10	540120 0002	137,50	075036 D001	24,–
3	540101 0003	28,50	540120 0003	119,–	075036 D001	24,–
4	540101 0004	25,70	540120 0004	107,–	075036 D001	24,–
5	540101 0005	22,10	540120 0005	100,50	075036 D001	24,–
6	540101 0006	22,10	540120 0006	100,50	075036 D001	24,–
7	540101 0007	22,20	540120 0007	103,50	075036 D001	24,–
8	540101 0008	22,60	540120 0008	107,–	075036 D001	24,–
9	540101 0009	23,80	540120 0009	111,50	075036 D001	24,–
10	540101 0010	24,50	540120 0010	115,50	075036 D001	24,–
11	540101 0011	25,60	540120 0011	119,–	075036 D002	28,–
12	540101 0012	26,–	540120 0012	122,50	075036 D002	28,–
13	540101 0013	26,70	540120 0013	127,–	075036 D002	28,–
14	540101 0014	27,60	540120 0014	130,–	075036 D002	28,–
15	540101 0015	28,10	540120 0015	133,50	075036 D002	28,–
16	540101 0016	29,30	540120 0016	137,50	075036 D002	28,–
17	540101 0017	30,30	540120 0017	140,50	075036 D002	28,–
18	540101 0018	31,–	540120 0018	144,50	075036 D002	28,–
19	540101 0019	32,50	540120 0019	149,50	075036 D002	28,–
20	540101 0020	32,50	540120 0020	149,50	075036 D002	28,–
21	540101 0021	33,10	540120 0021	156,–	075036 D002	28,–
22	540101 0022	33,80	540120 0022	160,50	075036 D002	28,–
23	540101 0023	34,60	540120 0023	164,50	075036 D002	28,–
24	540101 0024	35,50	540120 0024	167,–	075036 D002	28,–
25	540101 0025	36,30	540120 0025	171,–	075036 D002	28,–
26	540101 0026	37,–	540120 0026	173,50	075036 D002	28,–
27	540101 0027	38,–	540120 0027	177,50	075036 D002	28,–
28	540101 0028	38,70	540120 0028	183,–	075036 D002	28,–
30	540101 0030	41,30	540120 0030	187,50	075036 D002	28,–

5132 5132

Nominal diameter mm	Steel H7 art.no.	€	Hard chrome, H7 art.no.	€	DAkkS calibration art.no.	€
32	540101 0032	47,90	540120 0032	201,–	075036 D002	28,–
34	540101 0034	50,80	540120 0034	212,–	075036 D002	28,–
35	540101 0035	51,30	540120 0035	216,–	075036 D002	28,–
36	540101 0036	52,20	540120 0036	218,–	075036 D002	28,–
37	540101 0037	53,–	540120 0037	223,–	075036 D002	28,–
38	540101 0038	54,20	540120 0038	232,–	075036 D002	28,–
40	540101 0040	57,40	540120 0040	238,–	075036 D002	28,–
42	540101 0042	62,20	540120 0042	245,–	075036 D002	28,–
44	540101 0044	63,90	540120 0044	260,–	075036 D002	28,–
45	540101 0045	64,50	540120 0045	267,–	075036 D002	28,–
46	540101 0046	64,70	540120 0046	276,–	075036 D002	28,–
47	540101 0047	65,40	540120 0047	284,–	075036 D002	28,–
48	540101 0048	66,40	540120 0048	290,–	075036 D002	28,–
50	540101 0050	75,60	540120 0050	299,–	075036 D002	28,–
52	540101 0052	128,50	540120 0052	311,–	075036 D003	32,–
55	540101 0055	131,–	540120 0055	329,–	075036 D003	32,–
60	540101 0060	141,50	540120 0060	366,–	075036 D003	32,–
62	540101 0062	144,50	540120 0062	380,–	075036 D003	32,–
65	540101 0065	152,50	540120 0065	390,–	075036 D003	32,–
68	540101 0068	152,50	540120 0068	415,–	075036 D003	32,–
70	540101 0070	163,–	540120 0070	423,–		
72	540101 0072	179,–	540120 0072	449,–		
75	540101 0075	179,–	540120 0075	461,–		
80	540101 0080	190,–	540120 0080	488,–		
85	540101 0085	200,–	540120 0085	519,–		
90	540101 0090	215,50	540120 0090	559,–		
95	540101 0095	227,–	540120 0095	585,–		
100	540101 0100	240,–	540120 0100	620,–		

5132 5132

Other tolerance classes

Nominal diameter mm	Steel, H6 art.no.	€	Steel, H8 art.no.	€	Steel, H9 art.no.	€	Steel, F7 art.no.	€	Steel, K6 art.no.	€	DAkkS calibration art.no.	€
2	540103 0002	64,50	540105 0002	64,50	540107 0002	64,50	540111 0002	64,50	540115 0002	64,50	075036 D001	24,–
3	540103 0003	56,–	540105 0003	56,–	540107 0003	56,–	540111 0003	56,–	540115 0003	56,–	075036 D001	24,–
4	540103 0004	50,50	540105 0004	50,50	540107 0004	50,50	540111 0004	50,50	540115 0004	50,50	075036 D001	24,–
5	540103 0005	47,40	540105 0005	47,40	540107 0005	47,40	540111 0005	47,40	540115 0005	47,40	075036 D001	24,–
6	540103 0006	47,40	540105 0006	47,40	540107 0006	47,40	540111 0006	47,40	540115 0006	47,40	075036 D001	24,–
7	540103 0007	48,90	540105 0007	48,90	540107 0007	48,90	540111 0007	48,90	540115 0007	48,90	075036 D001	24,–
8	540103 0008	50,50	540105 0008	50,50	540107 0008	50,50	540111 0008	50,50	540115 0008	50,50	075036 D001	24,–
9	540103 0009	52,20	540105 0009	52,20	540107 0009	52,20	540111 0009	52,20	540115 0009	52,20	075036 D001	24,–
10	540103 0010	54,30	540105 0010	54,30	540107 0010	54,30	540111 0010	54,30	540115 0010	54,30	075036 D001	24,–
11	540103 0011	56,–	540105 0011	56,–	540107 0011	56,–	540111 0011	56,–	540115 0011	56,–	075036 D002	28,–
12	540103 0012	57,60	540105 0012	57,60	540107 0012	57,60	540111 0012	57,60	540115 0012	57,60	075036 D002	28,–
13	540103 0013	59,40	540105 0013	59,40	540107 0013	59,40	540111 0013	59,40	540115 0013	59,40	075036 D002	28,–
14	540103 0014	61,10	540105 0014	61,10	540107 0014	61,10	540111 0014	61,10	540115 0014	61,10	075036 D002	28,–
15	540103 0015	62,80	540105 0015	62,80	540107 0015	62,80	540111 0015	62,80	540115 0015	62,80	075036 D002	28,–
16	540103 0016	64,50	540105 0016	64,50	540107 0016	64,50	540111 0016	64,50	540115 0016	64,50	075036 D002	28,–
17	540103 0017	66,20	540105 0017	66,20	540107 0017	66,20	540111 0017	66,20	540115 0017	66,20	075036 D002	28,–
18	540103 0018	68,–	540105 0018	68,–	540107 0018	68,–	540111 0018	68,–	540115 0018	68,–	075036 D002	28,–
19	540103 0019	70,–	540105 0019	70,–	540107 0019	70,–	540111 0019	70,–	540115 0019	70,–	075036 D002	28,–
20	540103 0020	70,–	540105 0020	70,–	540107 0020	70,–	540111 0020	70,–	540115 0020	70,–	075036 D002	28,–
21	540103 0021	73,20	540105 0021	73,20	540107 0021	73,20	540111 0021	73,20	540115 0021	73,20	075036 D002	28,–
22	540103 0022	74,60	540105 0022	74,60	540107 0022	74,60	540111 0022	74,60	540115 0022	74,60	075036 D002	28,–
23	540103 0023	76,50	540105 0023	76,50	540107 0023	76,50	540111 0023	76,50	540115 0023	76,50	075036 D002	28,–
24	540103 0024	78,40	540105 0024	78,40	540107 0024	78,40	540111 0024	78,40	540115 0024	78,40	075036 D002	28,–
25	540103 0025	79,70	540105 0025	79,70	540107 0025	79,70	540111 0025	79,70	540115 0025	79,70	075036 D002	28,–
26	540103 0026	81,60	540105 0026	81,60	540107 0026	81,60	540111 0026	81,60	540115 0026	81,60	075036 D002	28,–
27	540103 0027	83,50	540105 0027	83,50	540107 0027	83,50	540111 0027	83,50	540115 0027	83,50	075036 D002	28,–
28	540103 0028	87,10	540105 0028	85,50	540107 0028	85,50	540111 0028	85,50	540115 0028	85,50	075036 D002	28,–
30	540103 0030	86,80	540105 0030	86,80	540107 0030	86,80	540111 0030	86,80	540115 0030	86,80	075036 D002	28,–
32	540103 0032	93,90	540105 0032	93,90	540107 0032	93,90	540111 0032	93,90	540115 0032	93,90	075036 D002	28,–
34	540103 0034	99,90	540105 0034	99,90	540107 0034	99,90	540111 0034	99,90	540115 0034	99,90	075036 D002	28,–
35	540103 0035	101,50	540105 0035	101,50	540107 0035	101,50	540111 0035	101,50	540115 0035	101,50	075036 D002	28,–
36	540103 0036	103,–	540105 0036	103,–	540107 0036	103,–	540111 0036	103,–	540115 0036	103,–	075036 D002	28,–
37	540103 0037	105,–	540105 0037	105,–	540107 0037	105,–	540111 0037	105,–	540115 0037	105,–	075036 D002	28,–
38	540103 0038	108,50	540105 0038	108,50	540107 0038	108,50	540111 0038	108,50	540115 0038	108,50	075036 D002	28,–
40	540103 0040	112,–	540105 0040	112,–	540107 0040	112,–	540111 0040	112,–	540115 0040	112,–	075036 D002	28,–
42	540103 0042	116,–	540105 0042	116,–	540107 0042	116,–	540111 0042	116,–	540115 0042	116,–	075036 D002	28,–
44	540103 0044	122,50	540105 0044	122,50	540107 0044	122,50	540111 0044	122,50	540115 0044	122,50	075036 D002	28,–
45	540103 0045	125,50	540105 0045	125,50	540107 0045	125,50	540111 0045	125,50	540115 0045	125,50	075036 D002	28,–
46	540103 0046	129,50	540105 0046	129,50	540107 0046	129,50	540111 0046	129,50	540115 0046	129,50	075036 D002	28,–
47	540103 0047	133,–	540105 0047	133,–	540107 0047	133,–	540111 0047	133,–	540115 0047	133,–	075036 D002	28,–
48	540103 0048	136,50	540105 0048	136,50	540107 0048	136,50	540111 0048	136,50	540115 0048	136,50	075036 D002	28,–
50	540103 0050	138,50	540105 0050	138,50	540107 0050	138,50	540111 0050	138,50	540115 0050	138,50	075036 D002	28,–
52	540103 0052	148,50	540105 0052	148,50	540107 0052	148,50	540111 0052	148,50	540115 0052	148,50	075036 D003	32,–
55	540103 0055	148,50	540105 0055	148,50	540107 0055	148,50	540111 0055	148,50	540115 0055	148,50	075036 D003	32,–
60	540103 0060	163,–	540105 0060	163,–	540107 0060	163,–	540111 0060	163,–	540115 0060	163,–	075036 D003	32,–
62	540103 0062	170,50	540105 0062	170,50	540107 0062	170,50	540111 0062	170,50	540115 0062	170,50	075036 D003	32,–
65	540103 0065	175,–	540105 0065	175,–	540107 0065	175,–	540111 0065	175,–	540115 0065	175,–	075036 D003	32,–
68	540103 0068	187,–	540105 0068	187,–	540107 0068	187,–	540111 0068	187,–	540115 0068	187,–	075036 D003	32,–
70	540103 0070	191,50	540105 0070	191,50	540107 0070	191,50	540111 0070	191,50	540115 0070	191,50		
72	540103 0072	198,50	540105 0072	198,50	540107 0072	198,50	540111 0072	198,50	540115 0072	198,50		
75	540103 0075	208,–	540105 0075	208,–	540107 0075	208,–	540111 0075	208,–	540115 0075	208,–		
80	540103 0080	221,–	540105 0080	221,–	540107 0080	221,–	540111 0080	221,–	540115 0080	221,–		
85	540103 0085	233,–	540105 0085	233,–	540107 0085	233,–	540111 0085	233,–	540115 0085	233,–		
90	540103 0090	249,–	540105 0090	249,–	540107 0090	249,–	540111 0090	249,–	540115 0090	249,–		
95	540103 0095	260,–	540105 0095	260,–	540107 0095	260,–	540111 0095	260,–	540115 0095	260,–		
100	540103 0100	278,–	540105 0100	278,–	540107 0100	278,–	540111 0100	278,–	540115 0100	278,–		
	5198		5198		5198		5198		5198			

SARA® Limit plug gauge set

DIN 2245 | DIN EN ISO 1938-1

- Tolerance class H7
- 1 of each limit plug gauge: 3, 4, 5, 6, 8, 10, 12 mm



Nominal dimension in assortment mm	art.no.	€	DAkkS calibration art.no.	€
3 | 4 | 5 | 6 | 8 | 10 | 12	540101 1000	180,–	073103 D072	172,–

5132

SARA® Limit gap gauge

DIN EN ISO 1938-1

- For go/no-go shaft testing
- **double-ended**
- Tolerances and deviations in accordance with DIN EN ISO 1938-1 and DIN 7163,
- Go ends of the limit gap gauges are manufactured with additional wear allowances in accordance with DIN EN ISO 1938-1
- Wear-resistant gauge steel, forged blank
- Aged and hardened, test faces ground and lapped
- **ISO tolerance class: h6**



540130 0022

- Intermediate dimensions, other tolerance classes – including numerical tolerances – and other versions, e.g. hard chrome-plated or carbide measuring faces and single-sided limit gap gauges, are available on request
- If required, all round-fit, taper and thread gauges can be supplied with a calibration certificate in accordance with VDI/VDE/DGQ 2618 guidelines

Nominal diameter mm	art.no.	€	DAkkS calibration art.no.	€
6	540130 0006	229,–	075693 D001	24,–
7	540130 0007	222,–	075693 D001	24,–
8	540130 0008	222,–	075693 D001	24,–
9	540130 0009	222,–	075693 D001	24,–
10	540130 0010	222,–	075693 D001	24,–
11	540130 0011	235,–	075693 D001	24,–
12	540130 0012	235,–	075693 D001	24,–
13	540130 0013	235,–	075693 D001	24,–
14	540130 0014	235,–	075693 D001	24,–
15	540130 0015	255,–	075693 D001	24,–
16	540130 0016	255,–	075693 D001	24,–
17	540130 0017	255,–	075693 D001	24,–
18	540130 0018	255,–	075693 D001	24,–
19	540130 0019	258,–	075693 D001	24,–
20	540130 0020	258,–	075693 D001	24,–
21	540130 0021	258,–	075693 D001	24,–
22	540130 0022	258,–	075693 D001	24,–
23	540130 0023	264,–	075693 D001	24,–
24	540130 0024	264,–	075693 D001	24,–
25	540130 0025	264,–	075693 D001	24,–
26	540130 0026	264,–	075693 D001	24,–
27	540130 0027	264,–	075693 D001	24,–
28	540130 0028	276,–	075693 D001	24,–
30	540130 0030	276,–	075693 D001	24,–
32	540130 0032	276,–	075693 D001	24,–
33	540130 0033	293,–	075693 D001	24,–
34	540130 0034	293,–	075693 D001	24,–
35	540130 0035	293,–	075693 D001	24,–
36	540130 0036	293,–	075693 D001	24,–
37	540130 0037	293,–	075693 D001	24,–

5134

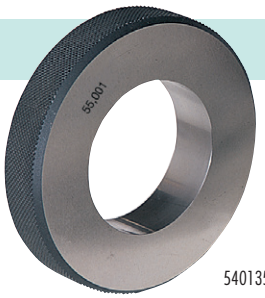
Nominal diameter mm	art.no.	€	DAkkS calibration art.no.	€
38	540130 0038	293,–	075693 D001	24,–
40	540130 0040	313,–	075693 D001	24,–
42	540130 0042	313,–	075693 D001	24,–
44	540130 0044	337,–	075693 D001	24,–
45	540130 0045	337,–	075693 D001	24,–
46	540130 0046	337,–	075693 D001	24,–
47	540130 0047	337,–	075693 D001	24,–
48	540130 0048	337,–	075693 D001	24,–
50	540130 0050	367,–	075693 D001	24,–
52	540130 0052	367,–	075693 D002	28,–
55	540130 0055	367,–	075693 D002	28,–
58	540130 0058	396,–	075693 D002	28,–
60	540130 0060	396,–	075693 D002	28,–
62	540130 0062	396,–	075693 D002	28,–
65	540130 0065	428,–	075693 D002	28,–
68	540130 0068	428,–	075693 D002	28,–
70	540130 0070	428,–	075693 D002	28,–
72	540130 0072	467,–	075693 D002	28,–
75	540130 0075	467,–	075693 D002	28,–
78	540130 0078	478,–	075693 D002	28,–
80	540130 0080	478,–	075693 D002	28,–
82	540130 0082	478,–	075693 D002	28,–
85	540130 0085	497,–	075693 D002	28,–
88	540130 0088	497,–	075693 D002	28,–
90	540130 0090	497,–	075693 D002	28,–
92	540130 0092	497,–	075693 D002	28,–
95	540130 0095	497,–	075693 D002	28,–
98	540130 0098	497,–	075693 D002	28,–
100	540130 0100	497,–	075693 D002	28,–

5134

SARA® Ring gauge

DIN 2250

- For setting and testing measuring instruments
- Wear-resistant gauge steel, aged and hardened, ground with lapped bore
- Labelled with actual dimension to three decimal places
- If ordering with calibration (....K), please specify if normal testing with shape deviation or simplified testing (diameter only) is required



540135 0055

Nominal diameter mm	art.no.	€	DAkkS calibration art.no.	€
4	540135 0004	74,70	075635 D003	31,50
5	540135 0005	70,70	075635 D003	31,50
6	540135 0006	60,30	075635 D003	31,50
7	540135 0007	60,30	075635 D003	31,50
8	540135 0008	60,30	075635 D003	31,50
9	540135 0009	60,30	075635 D003	31,50
10	540135 0010	60,30	075635 D003	31,50
11	540135 0011	61,50	075635 D003	31,50
12	540135 0012	61,50	075635 D003	31,50
13	540135 0013	61,50	075635 D003	31,50
14	540135 0014	61,50	075635 D003	31,50
15	540135 0015	61,50	075635 D003	31,50
16	540135 0016	62,90	075635 D003	31,50
17	540135 0017	62,90	075635 D003	31,50
18	540135 0018	62,90	075635 D003	31,50
19	540135 0019	62,90	075635 D003	31,50
20	540135 0020	62,90	075635 D003	31,50
21	540135 0021	68,90	075635 D003	31,50
22	540135 0022	68,90	075635 D003	31,50
23	540135 0023	68,90	075635 D003	31,50
24	540135 0024	68,90	075635 D003	31,50
25	540135 0025	68,90	075635 D003	31,50
26	540135 0026	68,90	075635 D003	31,50
27	540135 0027	69,40	075635 D003	31,50
28	540135 0028	70,40	075635 D003	31,50
30	540135 0030	72,30	075635 D003	31,50
32	540135 0032	72,30	075635 D003	31,50
33	540135 0033	77,10	075635 D003	31,50
34	540135 0034	77,10	075635 D003	31,50
35	540135 0035	77,10	075635 D003	31,50
36	540135 0036	79,80	075635 D003	31,50
37	540135 0037	82,10	075635 D003	31,50

5135

Nominal diameter mm	art.no.	€	DAkkS calibration art.no.	€
38	540135 0038	82,10	075635 D003	31,50
40	540135 0040	85,10	075635 D003	31,50
42	540135 0042	95,–	075635 D003	31,50
44	540135 0044	96,30	075635 D003	31,50
45	540135 0045	98,90	075635 D003	31,50
46	540135 0046	99,60	075635 D003	31,50
47	540135 0047	99,60	075635 D003	31,50
48	540135 0048	103,–	075635 D003	31,50
50	540135 0050	107,–	075635 D003	31,50
52	540135 0052	124,50	075635 D004	44,–
55	540135 0055	124,50	075635 D004	44,–
58	540135 0058	134,50	075635 D004	44,–
60	540135 0060	134,50	075635 D004	44,–
62	540135 0062	147,–	075635 D004	44,–
65	540135 0065	151,–	075635 D004	44,–
68	540135 0068	159,50	075635 D004	44,–
70	540135 0070	159,50	075635 D004	44,–
72	540135 0072	179,50	075635 D004	44,–
75	540135 0075	179,50	075635 D004	44,–
78	540135 0078	193,–	075635 D004	44,–
80	540135 0080	193,–	075635 D004	44,–
82	540135 0082	225,–	075635 D004	44,–
85	540135 0085	225,–	075635 D004	44,–
88	540135 0088	236,–	075635 D004	44,–
90	540135 0090	236,–	075635 D004	44,–
92	540135 0092	258,–	075635 D004	44,–
95	540135 0095	258,–	075635 D004	44,–
98	540135 0098	284,–	075635 D004	44,–
100	540135 0100	276,–	075635 D004	44,–
125	540135 0125	343,–	075635 D005	62,–
175	540135 0175	629,–	075635 D005	62,–

5135

SARA® Morse taper gauges

DIN 229

- Testing of conical shanks and drill holes on tools and machine tools
- Wear-resistant gauge steel, aged and hardened
- Ground, with lapped taper surfaces
- Tolerance class AT4
- 540501.... Taper plug gauge without tang DIN 229
  540505.... Taper sleeve gauge without tang DIN 229



- **The following plug gauges and gauge sleeves and/or ring gauges are available on request**:
  Taper gauges for steep-angle taper DIN 2079 and 2080
  Metric taper gauges according to DIN 234 and 235
  Drill chuck taper gauges according to DIN 2221 and 2222
  Serration gauges according to DIN 5481
  Gauges for splined shafts and splined profile hubs according to DIN 5462, 5463, 5464, 5465, 5471, 5472 and 5641
  Special-purpose gauges to your specifications



Morse taper plug gauge

Taper shank size	art.no.	€
MT 0	540501 0000	106,–
MT 1	540501 0001	111,–
MT 2	540501 0002	125,–
MT 3	540501 0003	149,–
MT 4	540501 0004	190,–
MT 5	540501 0005	278,–
MT 6	540501 0006	380,–

5136

Morse taper sleeve gauge

Taper shank size	art.no.	€
MK 0	540505 0000	269,–
MK 1	540505 0001	256,–
MK 3	540505 0003	302,–
MK 4	540505 0004	375,–
MK 5	540505 0005	509,–
MK 6	540505 0006	829,–

5136

SARA® Thread plug gauges

DIN 13 | DIN ISO 1502

- For Go/No-Go inspection of nut threads
- The Go/No-Go side is made of wear-resistant gauge steel, aged, hardened and fine-ground
- Tolerances and dimensions in accordance with DIN ISO 1502
- Go ends for thread limit plug gauges are manufactured with additional wear allowances in accordance with DIN ISO 1502
- **Tolerance class 6H (* = tolerance class 5H)**



For right-hand ISO metric thread, DIN 13

Thread type x nominal diameter x pitch mm	art.no.	€	DAkkS calibration art.no.	€
M 2	541001 0020	90,80	075016 D001	50,–
M 2.5	541001 0025	79,40	075016 D001	50,–
M 3	541001 0030	72,10	075016 D001	50,–
M 3.5	541001 0035	67,–	075016 D002	26,–
M 4	541001 0040	63,90	075016 D002	26,–
M 5	541001 0050	62,40	075016 D002	26,–
M 6	541001 0060	62,40	075016 D002	26,–
M 8	541001 0080	62,40	075016 D002	26,–
M 10	541001 0100	66,–	075016 D002	26,–
M 12	541001 0120	71,50	075016 D002	26,–
M 14	541001 0140	77,30	075016 D002	26,–
M 16	541001 0160	82,80	075016 D002	26,–
M 18	541001 0180	90,80	075016 D002	26,–
M 20	541001 0200	97,10	075016 D002	26,–

5137

Thread type x nominal diameter x pitch mm	art.no.	€	DAkkS calibration art.no.	€
M 22	541001 0220	107,–	075016 D002	26,–
M 24	541001 0240	113,50	075016 D002	26,–
M 27	541001 0270	127,–	075016 D002	26,–
M 30	541001 0300	142,–	075016 D002	26,–
M 33	541001 0330	163,–	075016 D002	26,–
M 36	541001 0360	175,–	075016 D002	26,–
M 39	541001 0390	201,–	075016 D002	26,–
M 42	541001 0420	268,–	075016 D002	26,–
M 45	541001 0450	268,–	075016 D002	26,–
M 48	541001 0480	280,–	075016 D002	26,–
M 52	541001 0520	299,–	075016 D003	27,–
M 56	541001 0560	435,–	075016 D003	27,–
M 60	541001 0600	450,–	075016 D003	27,–

5137

Set for right-hand ISO metric thread, DIN 13

Nominal dimension in assortment mm	art.no.	€	DAkkS calibration art.no.	€
M 3 | 4 | 5 | 6 | 8 | 10 | 12	541010 0001	469,–	073103 D071	206,–

5137





For right-hand ISO fine-pitch metric thread, DIN 13

Thread type x nominal diameter x pitch mm	art.no.	€	DAkkS calibration art.no.	€
M 8 x 0.5	541002 0805	135,50	075016 D002	26,–
M 8 x 0.75	541002 0807	130,–	075016 D002	26,–
M 8 x 1	541002 0810	74,60	075016 D002	26,–
M 9 x 1	541002 0910	89,–	075016 D002	26,–
M 10 x 0.75	541002 1007	88,20	075016 D002	26,–
M 10 x 1	541002 1010	78,60	075016 D002	26,–
M 10 x 1.25	541002 1012	87,–	075016 D002	26,–
M 11 x 1	541002 1110	92,80	075016 D002	26,–
M 12 x 1	541002 1210	86,10	075016 D002	26,–
M 12 x 1.25	541002 1212	95,20	075016 D002	26,–
M 12 x 1.5	541002 1215	78,–	075016 D002	26,–
M 14 x 1	541002 1410	90,10	075016 D002	26,–
M 14 x 1.25	541002 1412	100,50	075016 D002	26,–
M 14 x 1.5	541002 1415	82,80	075016 D002	26,–
M 16 x 1	541002 1610	96,40	075016 D002	26,–
M 16 x 1.5	541002 1615	87,–	075016 D002	26,–
M 18 x 1	541002 1810	100,50	075016 D002	26,–
M 18 x 1.5	541002 1815	92,40	075016 D002	26,–
M 20 x 1	541002 2010	109,–	075016 D002	26,–
M 20 x 1.5	541002 2015	98,50	075016 D002	26,–

5137

Thread type x nominal diameter x pitch mm	art.no.	€	DAkkS calibration art.no.	€
M 20 x 2	541002 2020	114,–	075016 D002	26,–
M 22 x 1.5	541002 2215	109,50	075016 D002	26,–
M 24 x 1	541002 2410	128,50	075016 D002	26,–
M 24 x 1.5	541002 2415	117,–	075016 D002	26,–
M 24 x 2	541002 2420	117,–	075016 D002	26,–
M 25 x 1.5	541002 2515	120,–	075016 D002	26,–
M 26 x 1.5	541002 2615	124,50	075016 D002	26,–
M 27 x 1.5	541002 2715	127,–	075016 D002	26,–
M 27 x 2	541002 2720	127,–	075016 D002	26,–
M 28 x 1.5	541002 2815	131,–	075016 D002	26,–
M 30 x 1	541002 3010	161,–	075016 D002	26,–
M 30 x 1.5	541002 3015	144,–	075016 D002	26,–
M 30 x 2	541002 3020	144,–	075016 D002	26,–
M 32 x 1.5	541002 3215	145,–	075016 D002	26,–
M 33 x 1.5	541002 3315	150,–	075016 D002	26,–
M 33 x 2	541002 3320	152,50	075016 D002	26,–
M 35 x 1.5	541002 3515	159,–	075016 D002	26,–
M 36 x 1.5	541002 3615	161,–	075016 D002	26,–
M 36 x 2	541002 3620	167,50	075016 D002	26,–
M 38 x 1.5	541002 3815	175,–	075016 D002	26,–

5137

Thread type x nominal diameter x pitch mm	art.no.	€	DAkkS calibration art.no.	€
M 40 x 1.5	541002 4015	184,50	075016 D002	26,–
M 40 x 2	541002 4020	184,50	075016 D002	26,–
M 42 x 1.5	541002 4215	191,–	075016 D002	26,–
M 42 x 2	541002 4220	195,–	075016 D002	26,–
M 45 x 1.5	541002 4515	198,50	075016 D002	26,–
M 45 x 2	541002 4520	204,–	075016 D002	26,–
M 48 x 1.5	541002 4815	209,–	075016 D002	26,–
M 48 x 2	541002 4820	209,–	075016 D002	26,–
M 50 x 1.5	541002 5015	211,–	075016 D002	26,–
M 50 x 2	541002 5020	211,–	075016 D002	26,–

5137

Thread type x nominal diameter x pitch mm	art.no.	€	DAkkS calibration art.no.	€
M 52 x 1.5	541002 5215	231,–	075016 D003	27,–
M 52 x 2	541002 5220	247,–	075016 D003	27,–
M 55 x 1.5	541002 5515	239,–	075016 D003	27,–
M 55 x 2	541002 5520	247,–	075016 D003	27,–
M 56 x 1.5	541002 5615	242,–	075016 D003	27,–
M 56 x 2	541002 5620	247,–	075016 D003	27,–
M 58 x 1.5	541002 5815	247,–	075016 D003	27,–
M 58 x 2	541002 5820	247,–	075016 D003	27,–
M 60 x 1.5	541002 6015	255,–	075016 D003	27,–
M 60 x 2	541002 6020	259,–	075016 D003	27,–

5137

SARA® Thread ring gauges

DIN 13 | DIN ISO 1502

- For testing bolt threads
- Wear-resistant gauge steel, aged and hardened
- Outer diameter milled
- Precision-ground thread
- Tolerances and dimensions in accordance with DIN ISO 1502
- **Tolerance class 6 g**
- **No-Go rings marked in red**
- Threaded gauges for other thread types e.g. trapezoid, pipe, BSF, UN, UNC, UNF, UNEF, NPTF, Pg, Edison screw thread and left-hand thread, as well as other dimensions and tolerance classes are available on request
- If required, all thread gauges can be supplied with a calibration certificate or DKD calibration certificate in accordance with the test equipment monitoring guidelines set out in VDI/VDE/DGQ 2618



541051 0240



541050 0240

For right-hand metric ISO thread, DIN 13

Thread type x nominal diameter x pitch mm	Good art.no.	€	Reject art.no.	€	Factory calibration art.no.	€
M 2	541050 0020	96,60	541051 0020	96,60	073103 W134	98,–

5138 5138

Thread type x nominal diameter x pitch mm	Good art.no.	€	Reject art.no.	€	DAkkS calibration art.no.	€
M 2.5	541050 0025	77,30	541051 0025	77,30	075690 D001	36,–
M 3	541050 0030	67,70	541051 0030	67,70	075690 D001	36,–
M 3.5	541050 0035	70,60	541051 0035	70,60	075690 D002	25,–
M 4	541050 0040	61,60	541051 0040	61,60	075690 D002	25,–
M 5	541050 0050	61,60	541051 0050	61,60	075690 D002	25,–
M 6	541050 0060	61,60	541051 0060	61,60	075690 D002	25,–
M 8	541050 0080	63,–	541051 0080	63,–	075690 D002	25,–
M 10	541050 0100	73,10	541051 0100	73,10	075690 D002	25,–
M 12	541050 0120	82,80	541051 0120	82,80	075690 D002	25,–
M 14	541050 0140	88,90	541051 0140	88,90	075690 D002	25,–
M 16	541050 0160	91,20	541051 0160	91,20	075690 D002	25,–
M 18	541050 0180	104,–	541051 0180	104,–	075690 D002	25,–
M 20	541050 0200	113,–	541051 0200	113,–	075690 D002	25,–

5138 5138

Thread type x nominal diameter x pitch mm	Good art.no.	€	Reject art.no.	€	DAkkS calibration art.no.	€
M 22	541050 0220	123,–	541051 0220	123,–	075690 D002	25,–
M 24	541050 0240	132,50	541051 0240	132,50	075690 D002	25,–
M 27	541050 0270	145,50	541051 0270	145,50	075690 D002	25,–
M 30	541050 0300	163,–	541051 0300	163,–	075690 D002	25,–
M 33	541050 0330	177,50	541051 0330	177,50	075690 D002	25,–
M 36	541050 0360	206,–	541051 0360	206,–	075690 D002	25,–
M 39	541050 0390	234,–	541051 0390	234,–	075690 D002	25,–
M 42	541050 0420	242,–	541051 0420	242,–	075690 D002	25,–
M 45	541050 0450	272,–	541051 0450	272,–	075690 D002	25,–
M 48	541050 0480	275,–	541051 0480	275,–	075690 D002	25,–
M 52	541050 0520	331,–	541051 0520	331,–	075690 D003	30,–
M 56	541050 0560	346,–	541051 0560	346,–	075690 D003	30,–
M 60	541050 0600	355,–	541051 0600	355,–	075690 D003	30,–

5138 5138

For right-hand ISO fine-pitch metric thread, DIN 13

Thread type x nominal diameter x pitch mm	Good art.no.	€	Reject art.no.	€	DAkkS calibration art.no.	€
M 8 x 0.5	541052 0805	111,–	541053 0805	111,–	075690 D002	25,–
M 8 x 0.75	541052 0807	111,–	541053 0807	111,–	075690 D002	25,–
M 8 x 1	541052 0810	72,10	541053 0810	72,10	075690 D002	25,–
M 9 x 1	541052 0910	99,20	541053 0910	99,20	075690 D002	25,–
M 10 x 0.75	541052 1007	111,–	541053 1007	111,–	075690 D002	25,–
M 10 x 1	541052 1010	78,–	541053 1010	78,–	075690 D002	25,–

5138 5138

Thread type x nominal diameter x pitch mm	Good art.no.	€	Reject art.no.	€	DAkkS calibration art.no.	€
M 10 x 1.25	541052 1012	98,10	541053 1012	98,10	075690 D002	25,–
M 11 x 1	541052 1110	99,30	541053 1110	99,30	075690 D002	25,–
M 12 x 1	541052 1210	88,90	541053 1210	88,90	075690 D002	25,–
M 12 x 1.25	541052 1212	115,–	541053 1212	115,–	075690 D002	25,–
M 12 x 1.5	541052 1215	83,–	541053 1215	83,–	075690 D002	25,–
M 14 x 1	541052 1410	96,50	541053 1410	96,50	075690 D002	25,–

5138 5138

Thread type x nominal diameter x pitch mm	Good art.no.	€	Reject art.no.	€	DAkkS calibration art.no.	€
M 14 x 1.25	541052 1412	106,50	541053 1412	106,50	075690 D002	25,–
M 14 x 1.5	541052 1415	88,50	541053 1415	88,50	075690 D002	25,–
M 16 x 1	541052 1610	100,50	541053 1610	100,50	075690 D002	25,–
M 16 x 1.5	541052 1615	91,20	541053 1615	91,20	075690 D002	25,–
M 18 x 1	541052 1810	107,–	541053 1810	107,–	075690 D002	25,–
M 18 x 1.5	541052 1815	96,50	541053 1815	96,50	075690 D002	25,–
M 20 x 1	541052 2010	113,–	541053 2010	113,–	075690 D002	25,–
M 20 x 1.5	541052 2015	104,–	541053 2015	104,–	075690 D002	25,–
M 20 x 2	541052 2020	112,50	541053 2020	112,50	075690 D002	25,–
M 22 x 1.5	541052 2215	111,–	541053 2215	111,–	075690 D002	25,–
M 24 x 1	541052 2410	132,50	541053 2410	132,50	075690 D002	25,–
M 24 x 1.5	541052 2415	119,50	541053 2415	119,50	075690 D002	25,–
M 24 x 2	541052 2420	125,50	541053 2420	125,50	075690 D002	25,–
M 25 x 1.5	541052 2515	124,50	541053 2515	124,50	075690 D002	25,–
M 26 x 1.5	541052 2615	128,–	541053 2615	128,–	075690 D002	25,–
M 27 x 1.5	541052 2715	132,50	541053 2715	132,50	075690 D002	25,–
M 27 x 2	541052 2720	138,50	541053 2720	138,50	075690 D002	25,–
M 28 x 1.5	541052 2815	137,–	541053 2815	137,–	075690 D002	25,–
M 30 x 1	541052 3010	171,–	541053 3010	171,–	075690 D002	25,–
M 30 x 1.5	541052 3015	144,–	541053 3015	144,–	075690 D002	25,–
M 30 x 2	541052 3020	159,–	541053 3020	159,–	075690 D002	25,–
M 32 x 1.5	541052 3215	153,–	541053 3215	153,–	075690 D002	25,–
M 33 x 1.5	541052 3315	168,–	541053 3315	168,–	075690 D002	25,–
M 33 x 2	541052 3320	176,50	541053 3320	176,50	075690 D002	25,–
	5138		5138			

Thread type x nominal diameter x pitch mm	Good art.no.	€	Reject art.no.	€	DAkkS calibration art.no.	€
M 35 x 1.5	541052 3515	175,–	541053 3515	175,–	075690 D002	25,–
M 36 x 1.5	541052 3615	178,–	541053 3615	178,–	075690 D002	25,–
M 36 x 2	541052 3620	186,50	541053 3620	186,50	075690 D002	25,–
M 38 x 1.5	541052 3815	189,–	541053 3815	189,–	075690 D002	25,–
M 40 x 1.5	541052 4015	198,50	541053 4015	198,50	075690 D002	25,–
M 40 x 2	541052 4020	208,–	541053 4020	208,–	075690 D002	25,–
M 42 x 1.5	541052 4215	208,–	541053 4215	208,–	075690 D002	25,–
M 42 x 2	541052 4220	205,–	541053 4220	205,–	075690 D002	25,–
M 45 x 1.5	541052 4515	212,50	541053 4515	212,50	075690 D002	25,–
M 45 x 2	541052 4520	221,–	541053 4520	221,–	075690 D002	25,–
M 48 x 1.5	541052 4815	217,–	541053 4815	217,–	075690 D002	25,–
M 48 x 2	541052 4820	227,–	541053 4820	227,–	075690 D002	25,–
M 50 x 1.5	541052 5015	223,–	541053 5015	223,–	075690 D002	25,–
M 50 x 2	541052 5020	235,–	541053 5020	235,–	075690 D002	25,–
M 52 x 1.5	541052 5215	232,–	541053 5215	232,–	075690 D003	30,–
M 52 x 2	541052 5220	243,–	541053 5220	243,–	075690 D003	30,–
M 55 x 1.5	541052 5515	242,–	541053 5515	242,–	075690 D003	30,–
M 55 x 2	541052 5520	255,–	541053 5520	255,–	075690 D003	30,–
M 56 x 1.5	541052 5615	253,–	541053 5615	253,–	075690 D003	30,–
M 56 x 2	541052 5620	257,–	541053 5620	257,–	075690 D003	30,–
M 58 x 1.5	541052 5815	251,–	541053 5815	251,–	075690 D003	30,–
M 58 x 2	541052 5820	257,–	541053 5820	257,–	075690 D003	30,–
M 60 x 1.5	541052 6015	263,–	541053 6015	263,–	075690 D003	30,–
M 60 x 2	541052 6020	275,–	541053 6020	275,–	075690 D003	30,–
	5138		5138			

SARA® Sets for right-hand ISO metric thread, DIN 13

DIN 13 | DIN ISO 1502



Sets for right-hand ISO metric thread, DIN 13

Nominal dimension in assortment mm	Good art.no.	€	Reject art.no.	€	DAkkS calibration art.no.	€
M 3 | 4 | 5 | 6 | 8 | 10 | 12	541060 0001	465,–	541061 0001	465,–	073103 D069	186,–
	5138		5138			

SARA® Thread gauges for Whitworth pipe threads

DIN EN ISO 228



Thread plug gauge

Thread type x nominal diameter x pitch mm	art.no.	€	DAkkS calibration art.no.	€
G 1/8"	541003 0001	81,90	075016 D002	26,–
G 1/4"	541003 0003	88,–	075016 D002	26,–
G 3/8"	541003 0005	99,60	075016 D002	26,–
G 1/2"	541003 0007	115,50	075016 D002	26,–
G 3/4"	541003 0011	135,–	075016 D002	26,–
G 1"	541003 0013	164,–	075016 D002	26,–
G 1 1/4"	541003 0015	245,–	075016 D002	26,–
G 1 1/2"	541003 0017	273,–	075016 D002	26,–
G 2"	541003 0019	350,–	075016 D002	26,–
	5137			

Thread ring gauge

Thread type x nominal diameter x pitch mm	Good art.no.	€	Reject art.no.	€	DAkkS calibration art.no.	€
G 1/8"	541054 0001	79,90	541055 0001	79,90	075690 D002	25,–
G 1/4"	541054 0003	95,60	541055 0003	95,60	075690 D002	25,–
G 3/8"	541054 0005	104,50	541055 0005	104,50	075690 D002	25,–
G 1/2"	541054 0007	118,–	541055 0007	118,–	075690 D002	25,–
G 3/4"	541054 0011	143,–	541055 0011	143,–	075690 D002	25,–
G 1"	541054 0013	174,50	541055 0013	174,50	075690 D002	25,–
G 1 1/4"	541054 0015	207,–	541055 0015	207,–	075690 D002	25,–
G 1 1/2"	541054 0017	224,–	541055 0017	224,–	075690 D002	25,–
G 2"	541054 0019	296,–	541055 0019	296,–	075690 D002	25,–
	5138		5138			



541055 0013

541054 0013

SARA® Thread gauges for tapered American NPT pipe threads

- In accordance with ANSI / ASME B.1.20.1





NPT limit plug gauge

Thread type x nominal diameter x pitch mm	art.no.	€	DAkkS calibration art.no.	€
1/16"-27 NPT	541005 0001	233,–	075682 D001	72,–
1/8"-27 NPT	541005 0002	233,–	075682 D001	72,–
1/4"-18 NPT	541005 0003	248,–	075682 D001	72,–
2/8"-18 NPT	541005 0004	269,–	075682 D001	72,–
1/2"-14 NPT	541005 0005	290,–	075682 D001	72,–
3/4"-14 NPT	541005 0006	325,–	075682 D001	72,–
1"-11.5 NPT	541005 0007	377,–	075682 D001	72,–
1 1/4"-11.5 NPT	541005 0008	509,–	075682 D001	72,–
1 1/2"-11.5 NPT	541005 0009	579,–	075682 D001	72,–
2"-11.5 NPT	541005 0010	729,–	075682 D002	72,–
2 1/2"-8 NPT	541005 0011	849,–	075682 D002	72,–
3"-8 NPT	541005 0012	1.049,–	075682 D002	72,–
	5137			

NPT limit ring gauge

Thread type x nominal diameter x pitch mm	art.no.	€	DAkkS calibration art.no.	€
1/16"-27 NPT	541057 0001	335,–	075682 D001	72,–
1/8"-27 NPT	541057 0002	385,–	075682 D001	72,–
1/4"-18 NPT	541057 0003	385,–	075682 D001	72,–
3/8"-18 NPT	541057 0004	385,–	075682 D001	72,–
1/2"-14 NPT	541057 0005	419,–	075682 D001	72,–
3/4"-14 NPT	541057 0006	455,–	075682 D001	72,–
1"-11.5 NPT	541057 0007	515,–	075682 D001	72,–
1 1/4"-11.5 NPT	541057 0008	699,–	075682 D001	72,–
1 1/2"-11.5 NPT	541057 0009	780,–	075682 D001	72,–
2"-11.5 NPT	541057 0010	970,–	075682 D002	72,–
2 1/2"-8 NPT	541057 0011	1.099,–	075682 D002	72,–
3"-8 NPT	541057 0012	1.399,–	075682 D002	72,–
	5138			

JBO Thread gauges *MultiCheck* with depth measurement

DIN 13

- Simultaneous testing of the thread gauge accuracy and the thread depth, time savings of up to 50 %
- Direct reading of the thread depth using the scale on the sliding sleeve
- Thread depth measurements up to 4xD
- Go and no-go ends made of wear-resistant gauge steel, aged, hardened and precision-ground
- Tolerances and dimensions in accordance with DIN ISO 1502
- Easy replacement of test pieces by user
- Replacement test piece, test piece for thread types, thread gauges with reading 0.01, analogue or digital on request



D	Vernier	Pitch mm	art.no.	€	DAkkS calibration art.no.	€
M3	0.5 mm	0.5	541015 0003	369,–	075116 D002	46,–
M4	0.5 mm	0.7	541015 0004	365,–	075116 D002	46,–
M5	0.5 mm	0.8	541015 0005	380,–	075116 D002	46,–
M6	0.5 mm	1.0	541015 0006	333,–	075116 D002	46,–
M8	0.5 mm	1.25	541015 0008	415,–	075116 D002	46,–
M10	0.5 mm	1.5	541015 0010	419,–	075116 D002	46,–
M12	0.5 mm	1.75	541015 0012	445,–	075116 D002	46,–
			5137			

SARA® Protractor

- Open graduated semicircle made of normal steel
- Scale 0 to 180°, reading 1°, locking screw
- Laser-etched scale, high-contrast, easy-readable, white millimetre division
- Hard-coded aluminium (HRC63)
- Non-scratch, black anodised surface

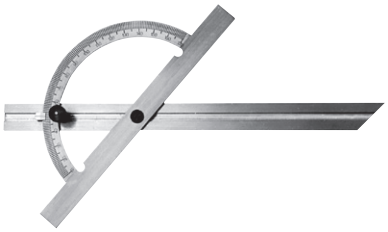

542002 0080

Degree arc diameter mm	Rail length mm	art.no.	€	DAkkS calibration art.no.	€
80	120	542002 0080	35,20	075006 D001	40,–
120	150	542002 0120	39,70	075006 D001	40,–
150	200	542002 0150	48,–	075006 D001	40,–
200	300	542002 0200	54,40	075006 D001	40,–
300	500	542002 0300	106,–	075006 D001	40,–

5139

Graduator, adjustable

- Open graduated semicircle made from normal steel
- Matt chrome-plated scale with an anti-glare finish
- Scale 10 to 170° with 1° readings
- Bar can be adjusted lengthwise using a locking screw, bar side bevelled 45°



Degree arc diameter mm	Rail length mm	art.no.	€	DAkkS calibration art.no.	€
100	150	542005 0100	54,10	075006 D001	40,–
150	300	542005 0150	65,80	075006 D001	40,–
200	400	542005 0200	81,20	075006 D001	40,–
300	600	542005 0300	143,–	075006 D001	40,–

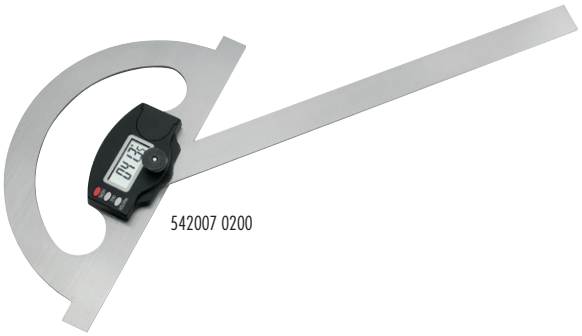
5139

SARA® Digital graduator

- Adjustment and zeroing possible on any level surface
- Measuring bar can be fixed in any position using the knurled-head screw
- Stainless steel, measuring edges precision-ground
- Measurement range: 180°
- Readings: 0.05°
- Accuracy: +/- 0.3°
- Functions: user-defined zeroing, hold value, rotate display for overhead measurement
- Supplied in a synthetic leather pouch with 1x CR2032 battery, no. 548079 6032


542007 0120


542007 0150


542007 0200

Degree arc diameter mm	Rail length mm	art.no.	€	DAkkS calibration art.no.	€
120	150	542007 0120	152,50	075006 D001	93,–
150	200	542007 0150	211,–	075006 D001	93,–
200	300	542007 0200	259,–	075006 D001	93,–

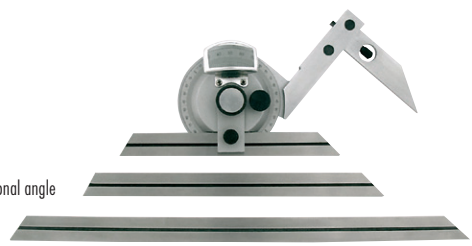
5139

SARA® Universal goniometer with magnifier and fine adjustment



- Reading parts matt chrome-plated
- Parallax-free reading with magnifier
- Scaling 4 x 90°, reading 1/12° = 5 min.
- 3 rails, 150, 200 and 300 mm, can be repositioned and locked
- 1 additional angle


Application example with additional angle



Rail length mm	art.no.	€	DAkkS calibration art.no.	€
150 | 200 | 300	542025 0001	190,–	075007 D001	

5139

SARA® Digital universal goniometer

Werks-norm



- Digital display with simultaneous display of values in degrees, minutes and seconds, and decimal
- Automatic switch-off
- Simple adjustment using fixed reference points
- Measuring bar fully moveable and lockable
- Measurement range 4 x 90° / 2 x 180° / 360°
- Fine adjustment for precisely calibrating angles
- **Function**: ON/OFF, ZERO for user-defined zeroing, reverse counting direction
- Supplied with 2x rails, additional angle, 60 x 50 mm framing square and CR2032 batteries, no. 548079 6032

Rail length mm	Digit increment	Error limit	art.no.	€	DAkkS calibration art.no.	€
150 | 300	0.005°/10"	+/- 5 min	542500 0360	690,–	075007 D001	46,–

5139

Mitutoyo Universal goniometer *DIGIMATIC*

Digi-matic USB



- Digital display in degrees or minutes, zeroing in any position
- Hardened stainless steel measuring bar and measuring edges
- Automatic switch-off after 10 minutes of inactivity
- Simple adjustment using fixed reference points
- Fully movable and lockable measuring bar
- Fine adjustment for precisely calibrating angles
- Ability to pre-set angles
- Can be combined with height meters using the holder provided
- Battery life up to 2,000 hours
- **Functions:** ON/OFF, PRESET for pre-setting user-defined angles, DATA/HOLD, switch from decimal to degrees and minutes, ZERO for user-defined zeroing, reverse counting direction
- Supplied with height meter holder and CR2032 battery, no. 548079 6032
- **Optional accessories:** Digimatic cable type F, no. 563100 0051 (1 m), no. 563100 0052 (2 m), USB cable type F-USB, no. 563110 0006

Max. angle scale	Error limit mm	Repetition precision µm	Rail length mm	art.no.	€	DAkkS calibration art.no.	€
-360° till +360°	± 2 min.	1 min.	150 mm	543001 0150	973,–	075007 D001	46,–
-360° till +360°	± 2 min.	1 min.	300 mm	543001 0301	1.008,–	075007 D001	46,–

5106

SARA® Measuring tool set for toolmakers



- Particularly suitable for working on tools and mould construction
- Contents, 1 unit each:
  Straightedge DIN 874, 100 mm with protective insulation
  Bevel edge square DIN 875/00, 75 x 55 mm / 40 x 28 mm / 25 x 20 mm
  Gauge block scriber 9 x 9 x 9 x 60 mm

Designation	art.no.	€	DAkkS calibration art.no.	€
Measuring tool set	544050 0001	193,50	073103 D023	71,–

5140

ATORN Stock square and try square

DIN 875/0 | DIN 875/1 | DIN 875/2 | INOX

- **Accuracy 0, 1 and 2**
- Made from high-strength normal or stainless steel
- Upright edges and flat sides finely ground
- Supplied in moulded packaging up to size 300 x 200 mm



Accuracy 0 (DIN 875/0), normal steel

Limb length	Cross-section length x cross-section width mm	Framing square art.no.	€	Try square art.no.	€	DAkkS calibration art.no.	€
100 x 70 mm	20 x 5	545001 0003	23,80	545010 0003	38,40	075664 D001	30,–
150 x 100 mm	25 x 5	545001 0004	29,–	545010 0004	61,–	075664 D002	40,–
200 x 130 mm	30 x 6	545001 0005	40,40	545010 0005	79,–	075664 D002	40,–
		5193		5193			

Accuracy 0 (DIN 875/0), stainless steel

Limb length	Cross-section length x cross-section width mm	Framing square art.no.	€	Try square art.no.	€	DAkkS calibration art.no.	€
75 x 50 mm	15 x 5	545007 0002	54,80	545017 0002	66,60	075664 D001	30,–
100 x 70 mm	25 x 5	545007 0003	66,–	545017 0003	82,–	075664 D001	30,–
150 x 100 mm	25 x 5	545007 0004	87,10	545017 0004	114,50	075664 D002	40,–
200 x 130 mm	30 x 6	545007 0005	101,–	545017 0005	143,50	075664 D002	40,–
		5193		5193			

Accuracy 1 (DIN 875/1), normal steel

Limb length	Cross-section length x cross-section width mm	Framing square art.no.	€	Try square art.no.	€	DAkkS calibration art.no.	€	Factory calibration art.no.	€
75 x 50 mm	15 x 5	545020 0002	13,30	545025 0002	17,20	075664 D001	30,–		
100 x 70 mm	20 x 5	545020 0003	15,80	545025 0003	20,30	075664 D001	30,–		
150 x 100 mm	25 x 5	545020 0004	20,40	545025 0004	29,30	075664 D002	40,–		
200 x 130 mm	30 x 6	545020 0005	25,80	545025 0005	34,50	075664 D002	40,–		
250 x 165 mm	35 x 7	545020 0006	34,60	545025 0006	45,50	075664 D002	40,–		
300 x 200 mm	40 x 8	545020 0007	48,40	545025 0007	62,50	075664 D002	40,–		
500 x 330 mm	50 x 10	545020 1009	228,–	545025 1009	279,–	075664 D002	40,–		
		5193		5193					

Accuracy 1 (DIN 875/1), stainless steel

Limb length	Cross-section length x cross-section width mm	Framing square art.no.	€	Try square art.no.	€	DAkkS calibration art.no.	€	Factory calibration art.no.	€
75 x 50 mm	15 x 5	545021 0002	13,70	545026 0002	20,90	075664 D001	30,–		
100 x 70 mm	20 x 5	545021 0003	16,35	545026 0003	24,70	075664 D001	30,–		
150 x 100 mm	25 x 5	545021 0004	21,–	545026 0004	37,70	075664 D002	40,–		
200 x 130 mm	30 x 6	545021 0005	33,30	545026 0005	47,80	075664 D002	40,–		
250 x 165 mm	35 x 7	545021 0006	41,20	545026 0006	62,80	075664 D002	40,–		
300 x 200 mm	40 x 8	545021 0007	51,90	545026 0007	89,80	075664 D002	40,–		
500 x 330 mm	50 x 10	545021 1009	402,–	545026 1009	468,–	075664 D002	40,–		
		5193		5193					

Accuracy 2 (DIN 875/2), normal steel

Limb length	Cross-section length x cross-section width mm	Framing square art.no.	€	Try square art.no.	€	DAkkS calibration art.no.	€	Factory calibration art.no.	€
75 x 50 mm	15 x 5	545030 0002	12,95	545035 0002	17,–	075664 D001	30,–		
100 x 70 mm	20 x 5	545030 0003	15,10	545035 0003	19,80	075664 D001	30,–		
150 x 100 mm	25 x 5	545030 0004	19,90	545035 0004	28,90	075664 D002	40,–		
200 x 130 mm	30 x 6	545030 0005	25,10	545035 0005	34,50	075664 D002	40,–		
250 x 165 mm	35 x 7	545030 0006	34,50	545035 0006	45,30	075664 D002	40,–		
300 x 175 mm	35 x 7	545030 0007	48,–	545035 0007	62,–	075664 D002	40,–		
500 x 250 mm	40 x 8	545030 1009	102,–	545035 1009	134,–	075664 D002	40,–		
600 x 300 mm	40 x 8	545030 1010	138,–	545035 1010	168,–	075664 D002	40,–		
750 x 375 mm	45 x 10	545030 1011	185,–					073103 W130	32,–
		5193		5193					

Metalworker's framing and try square



- For simple alignment and marking-out work in metalwork shops
- Galvanised surface
- Made from high-strength normal steel
- Upright edges and flat sides finished
- Accuracy in accordance with company standards **(cannot be calibrated)**

Limb length	Cross-section length x cross-section width mm	**Framing square** art.no.	€	**Try square** art.no.	€
150 x 100 mm	20 x 5	546001 0001	10,65	546005 0001	16,25
200 x 130 mm	22 x 5	546001 0002	11,35	546005 0002	20,50
250 x 160 mm	25 x 5	546001 0003	13,05	546005 0003	23,40
300 x 180 mm	25 x 5	546001 0004	16,05	546005 0004	29,70
400 x 230 mm	30 x 5	546001 0005	19,35	546005 0005	35,20
500 x 280 mm	30 x 5	546001 0006	22,70	546005 0006	47,60
750 x 375 mm	30 x 5	546001 0008	33,30	546005 0008	76,–
1000 x 500 mm	30 x 5	546001 0009	44,40	546005 0009	115,–
		5140		5140	

ATORN Acute angle with stop

DIN 875/2

- **45°**
- Made from normal steel
- Upright edges and flat sides finely ground

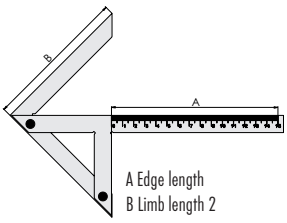


546025 0120

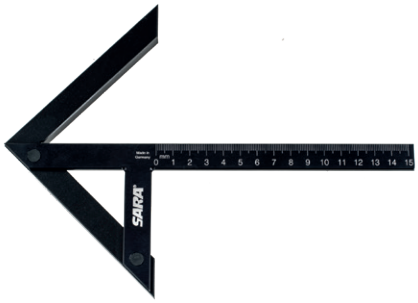
Limb length	Cross-section length x cross-section width mm	art.no.	€	**DAkkS calibration** art.no.	€
120 x 80 mm	20 x 5	546025 0120	51,–	075664 D002	40,–
150 x 100 mm	20 x 5	546025 0150	57,–	075664 D002	40,–
200 x 130 mm	25 x 5	546025 0200	74,–	075664 D002	40,–
		5193			

SARA® Centring square with millimetre divisions

- Hard-coded aluminium (HRC63)
- Non-scratch, black anodised surface
- Laser-etched scale
- Upright edges and flat sides finely ground
- Rail with high-contrast, easy-readable, white millimetre division



A Edge length
B Limb length 2



Edge length mm	Limb length 2 mm	Suitable for max. shafts mm	art.no.	€	**DAkkS calibration** art.no.	€
100	70	90	546011 0100	59,40	075665 D001	50,–
150	130	190	546011 0150	64,40	075665 D002	58,–
200	150	220	546011 0200	71,60	075665 D002	58,–
300	180	280	546011 0300	118,–	075665 D002	58,–
400	250	380	546011 0400	279,–	075665 D002	58,–
500	330	530	546011 0500	329,–	075665 D002	58,–
			5139			

Scribers

Fixed scribers

- **scriber, straight**
  CrV steel, hardened, one-piece design with straight tip and milled handle
- **Pointed scriber**, 165 mm
  CrV steel, hardened, one-piece design with straight and angled tips, milled handle
- **Pointed scriber**, 250 mm
  CrV steel, hardened, fitted with one straight and one angled screw-in needle, milled handle length 80 mm


547001 0165


547001 0180


547001 0250

Designation	L mm	art.no.	€
Straight scriber	180	547001 0180	5,50
Angled scriber	165	547001 0165	7,10
Angled scriber	250	547001 0250	5,10
		5142	

Scribers with replaceable carbide needles

- **ATORN carbide metal scribers** with push-on clip, retractable pencil system
  Replaceable needle, stable collet, nickel-plated metal shank, for materials up to approx. 60 HR



Designation	L mm	art.no.	€
ATORN scriber with push-on clip, mechanical pencil system	146	547005 0002	23,90
Scriber, 150 mm with carbide-pointed tip, hexagonal push-on clip, chrome-plated	150	547005 0004	7,60
		5142	

Divider

DIN 6486

- Strong shape with angular arms
- Made from finely ground forged steel
- Milled joint with rivet hinge
- Hardened tips and measuring faces
- With or without wing


547010 0200

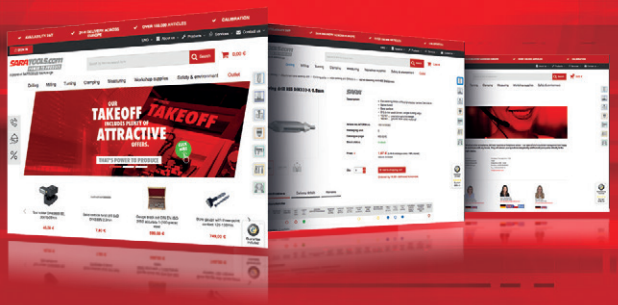

547015 0200

L mm	Without wing art.no.	€	With wing art.no.	€
150	547010 0150	13,40	547015 0150	18,30
200	547010 0200	16,20	547015 0200	22,30
250			547015 0250	27,90
300	547010 0300	27,–	547015 0300	36,50
	5142		5142	

Over 200,000 tools available online!

Advantages:
- convenient, clear and fast
- order by 19:30 for next-day delivery
- order measuring instruments including calibration
- available in real time
- in 8 languages





Register online now!

www.saratools.com

Precision spring-loaded divider

- Strong square design
- Made from ground and polished steel
- Hardened tips and measuring faces
- Quick and fine adjustment by means of a spindle with locking nut
- Annular springs ensure constant spring tension
- With fixed or replaceable tips

L mm	Fixed pointed tips art.no.	€	Replaceable pointed tips art.no.	€
140	547020 0140	15,30	547025 0140	16,50
290	547020 0290	22,50	547025 0290	23,60
Spare pointed tip			547025 0002	4,25
	5142		5142	



547025 0140



547020 0140

Inside and outside spring callipers

DIN 6487

- With angular steel arms
- Tips and measuring faces hardened and ground
- Quick and fine adjustment by means of a spindle with locking nut
- Annular springs ensure constant spring tension

L mm	Inside spring calliper art.no.	€	Outside spring calliper art.no.	€
150	547040 0151	13,20	547045 0151	11,70
200	547040 0201	15,95	547045 0201	14,85
300	547040 0301	18,50	547045 0301	19,65
	5142		5142	



547040 0151



547045 0151

SARA® Marking gauge

- Hardened aluminium (HRC63)
- Non-scratch, black anodised surface
- Laser-etched scale
- Flat rail
- Vernier scale 0.05 mm

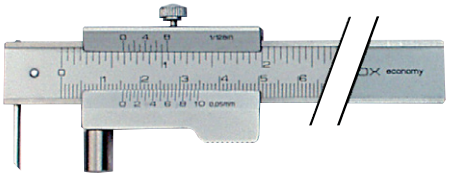


Max. length measuring range mm	art.no.	€	DAkkS calibration art.no.	€
200	547401 0200	39,70	072008 D001	16,–
300	547401 0300	45,20	072008 D002	21,–
	5108			

Scribing calliper

INOX

- For quick and simple marking out
- Reading parts matt chrome-plated
- Raised guide edges
- Inch/mm scale divisions
- Vernier scale 0.10 mm / 1/128 inch

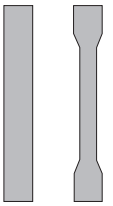


Designation	Max. length measuring range mm	art.no.	€	DAkkS calibration art.no.	€
Scribing calliper	200	500810 0102	57,50	072008 D001	16,–
Scribing calliper	400	500810 0201	111,50	072008 D003	42,–
Spare scriber	-	500810 0401	11,50		
		5108			

Precision flat ruler

DIN 874 DIN 874

- Alloyed special steel, ground on all sides
- Test surface in accordance with DIN 874
- Type A: rectangular cross-section
  Accuracy 0: for precision testing work
  Accuracy 1: for inspection work
  Accuracy 2: for general workshop use
- With etched test result
- Lengths over 1000 mm and stainless steel version available on request





Accuracy 0

L mm	Cross-section length x cross-section width mm	Flatness tolerance µm	Design	Weight kg	Special steel art.no.	€	DAkkS calibration art.no.	€
500	50x10	7	Type A	1.90	547618 0500	114,–	075035 D002	39,–
1000	60x12	12	Type A	5.65	547618 1000	283,–	075035 D003	62,–

5143

Accuracy 1

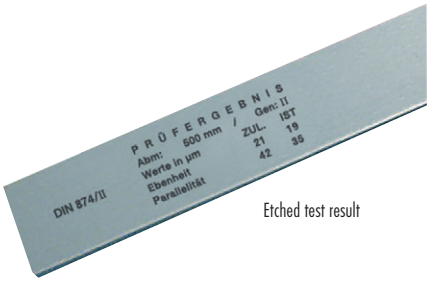
L mm	Cross-section length x cross-section width mm	Flatness tolerance µm	Design	Weight kg	Type A art.no.	€	DAkkS calibration art.no.	€
500	40 x 8	12	Type A	1.25	547620 0500	61,–	075035 D002	39,–
1000	50 x 10	21	Type A	3.80	547620 1000	114,50	075035 D003	62,–

5143

Accuracy 2

L mm	Cross-section length x cross-section width mm	Flatness tolerance µm	Design	Weight kg	art.no.	€	DAkkS calibration art.no.	€
500	30 x 6	21	Type A	0.70	547622 0500	41,10	075035 D002	39,–
1000	40 x 8	33	Type A	2.50	547622 1000	82,40	075035 D003	62,–

5143



Etched test result

Steel workshop ruler

DIN 866

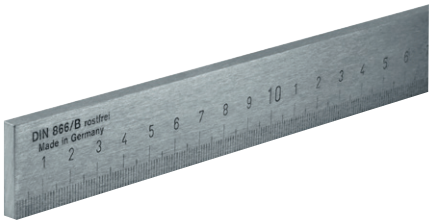
- Uprights ground and precisely adjusted
- One side with precise mm separation
- Tolerance class in accordance with DIN 2268
- Type A: 10 mm protective ends on both sides, DIN 866/A
  Type B: 10 mm protective end on right-hand side, DIN 866/B
- Lengths over 1000 mm and stainless steel version available on request



DIN 866/A

L mm	Cross-section length x cross-section width mm	Weight kg	art.no.	€	DAkkS calibration art.no.	€
500	30 x 6	0.70	548106 0500	47,40	075003 D001	44,–
1000	40 x 8	2.50	548106 1000	115,50	075003 D002	59,–

5143



DIN 866/B

L mm	Cross-section length x cross-section width mm	Weight kg	art.no.	€	DAkkS calibration art.no.	€
500	0.50	0.50	548109 0500	28,20	075003 D001	44,–
1000	1.40	1.40	548109 1000	54,40	075003 D002	59,–

5143

ATORN Straightedge

DIN 874 | INOX

- Wedge-shaped cross-section
- Hardened and burnished special steel, or hardened and matt chrome-plated stainless steel with an anti-glare finish
- Bevelled measuring edge finely lapped
- with plastic insulated handle



547501 0100

L mm	Hardened art.no.	€	Stainless steel, hardened art.no.	€
75	547501 0075	16,70	547505 0075	23,90
100	547501 0100	18,80	547505 0100	25,80
125	547501 0125	21,90	547505 0125	30,20
150	547501 0150	24,90	547505 0150	38,60
200	547501 0200	31,20	547505 0200	44,40
300	547501 0301	69,–	547505 0301	98,–
400	547501 0401	124,–	547505 0401	186,–
500	547501 0501	188,–	547505 0501	246,–
	5193		5193	

Steel scale

INOX

- Spring band steel
- Matt-finished surface, divisions and digits etched in black
- Scale accuracy: DIN 7168 m



548001 0300

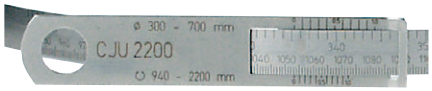
L mm	Cross-section length x cross-section width mm	art.no.	€
200	13 x 0.5	548001 0200	2,85
300	15 x 0.5	548001 0300	3,55
500	20 x 0.5	548001 0500	7,10
1000	20 x 0.5	548001 1000	24,–
2000	30 x 1.0	548001 2000	61,50
		5143	

Schwenk Tape measure *Circometer CJU*

- For measuring outer circumference and diameter
- Spring band steel with millimetre division, laser-scaled
- Vernier scale 0.1 mm
- Error margins in accordance with DIN 866
- Tape width 16 mm
- **Normal steel, or V2A version made from stainless spring steel**



548050 0700



Measurement range mm	Normal steel art.no.	€	Stainless steel art.no.	€
20-300 (Range 60-950)	548050 0300	93,40	548055 0300	108,50
300-700 (Range 940-2200)	548050 0700	114,50	548055 0700	139,50
700-1100 (Range 2190-3460)	548050 1100	141,–	548055 1100	190,50
1100-1500 (Range 3450-4720)	548050 1500	173,–	548055 1500	238,–
1500-1900 (Range 4710-5980)	548050 1900	208,–	548055 1900	290,–
1900-2300 (Range 5960-7230)	548050 2300	235,–	548055 2300	339,–
	5145		5145	

ATORN Spring tape measures

- Accuracy to EC Class II
- White steel strip
- Millimetre divisions on one side
- CE-tested

Max. measurement tolerance under EC standards ± mm			
Length m	Class I	Class II	Class III
2	0,30	0,70	1,40
3	0,40	0,90	1,80
5	0,60	1,30	2,60
8	0,90	1,90	3,80

With sliding end hook

L m	Width mm	art.no.	€	DAkkS calibration art.no.	€
3	16	548032 0003	9,30	075004 D003	44,–
5	19	548032 0005	14,40	075004 D005	52,–
8	25	548032 0008	22,30	075004 D008	69,–

5144



With magnetic end hook

L m	Width mm	art.no.	€	DAkkS calibration art.no.	€
5	19	548032 1005	21,60	075004 D005	52,–

5144

SOLA Spring tape measures

EC Class I accuracy

- Shock-proof ABS plastic casing, chrome-plated with belt clip
- Curved steel strip, painted yellow
- 2-part brake for pinpoint-accurate engagement
- Shock absorber system ensures gentle tape rewind
- For external and internal measurements

L m	Belt width mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
3	13	0.4	548041 0003	24,50	075004 D003	44,–
5	19	0.6	548041 0005	39,90	075004 D005	52,–

5144



EC Class II accuracy

- Sturdy, durable design
- High-strength plastic casing with belt clip
- Curved steel strip, painted yellow
- Automatic tape rewind and rewind lock
- Sliding end hook

L m	Belt width mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
2	16	0.7	548030 0002	14,10	075004 D003	44,–
3	16	0.9	548030 0003	17,–	075004 D003	44,–
5	16	1.3	548030 0005	25,20	075004 D005	52,–

5144



With viewing window, EC Class II accuracy

- Viewing window allows inside dimensions to be read easily
- High-strength plastic casing
- Automatic tape rewind and rewind lock
- Painted yellow
- Sliding end hook

L mm	Belt width mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
3	13	0.9	548040 0003	20,40	075004 D003	44,–

5144



With magnetic end hook, EC Class II accuracy

- Shock-proof ABS plastic casing, chrome-plated with belt clip
- Curved steel strip, painted yellow
- Exact band brake for precise internal measurements
- For external and internal measurements

L m	Belt width mm	Error limit mm	art.no.	€	DAkkS calibration art.no.	€
5	19	1.3	548030 1005	24,20	075004 D005	52,–
8	25	1.9	548030 1008	33,30	075004 D008	69,–

5144



KOMELON® Spring tape measures

- Carbon steel
- Deburred edges
- Extremely precise and easy-to-read print
- With tape measure lock
- End hook and tape protector made of stainless steel
- For external and internal measurements
- Sliding end hook
- EC Class II accuracy



SelfLock

- **Self-locking mechanism** for smooth tape rewind
- Easy-to-operate thumb button
- Ergonomic design for right-handed and left-handed users
- Long-lasting thanks to nylon coating
- Curved profile for improved stability and reduced sheen



L mm	Belt width mm	art.no.	€	DAkkS calibration art.no.	€
3	16	548046 0030	18,50	075004 D003	44,–
5	19	548046 0050	24,60	075004 D005	52,–
8	25	548046 0080	43,50	075004 D008	69,–

5144



MagGrip Dublx

- **Tape printed on both sides** for easy reading
- **Magnetic tip**
- Fluted end hook
- Long-lasting thanks to nylon coating
- Curved profile for improved stability and reduced sheen



L mm	Belt width mm	art.no.	€	DAkkS calibration art.no.	€
5	19	548047 0050	27,10	075004 D005	52,–
8	25	548047 0080	43,10	075004 D008	69,–

5144



INOX Rubber

- **Stainless steel** for improved rust resistance
- Nylon-coated silver tape for maximum service life
- Curved profile for improved stability and reduced sheen
- Shock-resistant housing



L mm	Belt width mm	art.no.	€	DAkkS calibration art.no.	€
3	16	548048 0030	23,60	075004 D003	44,–
5	19	548048 0050	33,20	075004 D005	52,–
8	25	548048 0080	58,90	075004 D008	69,–

5144



Powerblade II

- Wide tape measure with special curve for very high stability
- Hi-vis two-colour paint for easier reading
- Long-lasting thanks to nylon coating
- Patented magnet dual-end hook
- New compact casing with rubber protection

L mm	Belt width mm	art.no.	€	DAkkS calibration art.no.	€
5	27	548042 0050	37,50	075004 D005	52,–
8	27	548042 0080	49,90	075004 D008	69,–

5144



FastBack

- Fluted end hook
- Compact and ergonomic casing
- Long-lasting thanks to nylon coating
- FastBack model: with time-saving rapid reel action

L mm	Belt width mm	art.no.	€	DAkkS calibration art.no.	€
20	10	548036 1020	49,50	075004 D020	94,–
30	10	548036 1030	62,50	075004 D030	100,–

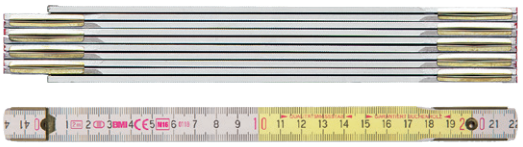
5144

Wooden folding ruler

- Selected wood
- Special UV paint guarantees resistance to moisture and dirt
- Easy-to-read black and red millimetre divisions, both sides, top and bottom
- EC Class III accuracy



548020 0002

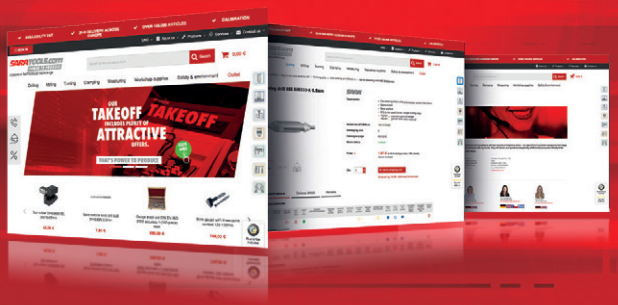


L mm	Number of chain links	Width mm	art.no.	€
2	10	16	548020 0002	5,30
			5143	

Over 200,000 tools available online!

Advantages:
- convenient, clear and fast
- order by 19:30 for next-day delivery
- order measuring instruments including calibration
- available in real time
- in 8 languages





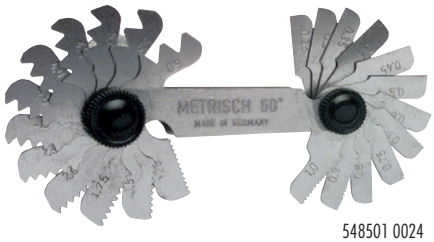
Register online now!

www.saratools.com

Thread pitch gauge

- For determining the pitch of external and internal threads
- Steel design with locking screw
- Stamped thread ridges
- Cannot be calibrated

Designation	art.no.	€
Thread template metric 24 sheets	548501 0024	6,80
	5147	

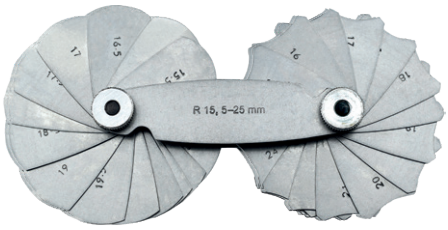


548501 0024

Radius gauge

- Concave and convex gauges for testing internal and external curves that form part of a circle
- Steel design with milled individual leaves
- Clamping screw for securing the leaves
- Cannot be calibrated

Designation	Nominal dimension in assortment mm	art.no.	€
Plantilla de radio	1.0 to 3.0 = 0.25, from 3.0 = 0.5	548505 0017	20,70
Plantilla de radio	7.5 to 15.0 = 0.5	548505 0016	22,40
Plantilla de radio	15.5 to 20.0 = 0.5, from 20.0 = 1.0	548505 0015	19,60
		5147	



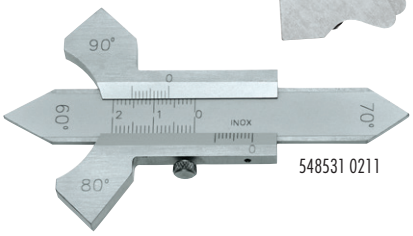
548505 0015

Weld gauges

- 548531 0210 for testing perpendicular weld seams
  12 leaf design (3 / 3.5 / 4 / 4.5 / 5 / 5.5 / 6 / 6.5 / 7 / 8 / 9 / 10 / 12 mm)
- 548531 0211 for measuring flat weld seams and corner weld seams
  Slider design, 20 mm measurement range, 0.1 mm readings
- Cannot be calibrated

Design	art.no.	€
12 blades	548531 0210	32,40
With slider	548531 0211	49,80
	5147	


548531 0210

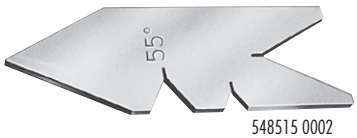


548531 0211

Threading tool and universal grinding gauge

- Steel
- With labelled recesses for the various angles and pitches
- Cannot be calibrated
- 5485150001 steel thread gauge for metric threads 60°
  5485150002 steel thread gauge for Whitworth threads 55°
  5485150003 trapezoidal threading tool gauge, 30°, for trapezoidal threads in accordance with DIN 103, pitch 2 - 12 mm
  5485150004 universal threading tool for all common tapered and flat threads

Designation	art.no.	€
Steel thread gauge, 60°	548515 0001	6,10
Steel thread gauge, 55°	548515 0002	6,10
Trapezoidal steel thread gauge, 30°	548515 0003	6,75
	5147	



548515 0002



548515 0003

Combined lathe tool and threading tool gauge

- With recesses for:
  Trapezoidal thread, DIN 103, pitch 2 - 12 mm / cutting angle 40° - 80°
  V thread, 55° and 60°
- Dimensions 90 x 40 x 2 mm
- Cannot be calibrated



Length x width x height mm	art.no.	€
90 x 40 x 2	548531 0010	13,25
	5147	

- Design as 548531 0011 but with riveted pointer for testing clearance angles



Length x width x height mm	art.no.	€
90 x 40 x 2	548531 0011	18,10
	5147	

Measuring wedges

- For quick, reliable reading of measurement values for gap measurements
- Reading 0.1mm
- not calibratable



Measurement range	Measurement range	Material	Material	art.no.	€
	0,5-11 mm	Plastic	Plastic	548300 5010	79,50
				5145	

Feeler gauge sets

- For measuring slots, gaps or play in bearing guides, bearings, pistons etc.
- Steel leaves can be used individually or combined
- Each leaf is labelled with its individual thickness measurement
- Cannot be calibrated

Steel in a metal sleeve

- Spring-hardened steel leaves, 100 mm long, tapered
- With clamping screw



548520 0020

Min./max. length of application area	Nominal dimension in assortment mm	Number of sheets	art.no.	€
0.05-1.0 mm	0.05-1.0 / 0.05-0.3=0.05 rising / from 0.3=0.1 rising	13	548520 0013	3,90
0.05-1.0 mm	0.05-1.0=0.05 rising	20	548520 0020	6,60
			5147	

Steel, ring-mounted

- Spring-hardened steel leaves, 200 mm long, constant width


548600 0013

Number of sheets	Min./max. length of application area	Nominal dimension in assortment mm	art.no.	€
13	0.05-1.00 mm	0.05-1.0 / 0.05-0.3=0.05 rising / from 0.3=0.1 rising	548600 0013	14,–
20	0.05-1.00 mm	0.05-1.0 rising by 0.05 mm	548600 0020	17,60
			5147	

Brass

- Non-magnetic



Min./max. length of application area	Designation	Nominal dimension in assortment mm	art.no.	€
0.05 - 1.0 mm	Feeler gauge set 20 sheets brass		548521 0020	32,50
			5147	

SARA® Feeler gauge strip rolls, 13 mm x 5 m

- For testing and adjusting valve play and electrode spacing, for measuring bearing play or for use as assembly supports
- Spring-hardened steel strip
- Length 5 m, width 12.7 mm
- Slotted dispenser box
- From 0.08 mm tape thickness, printed with nominal dimension every 120 mm

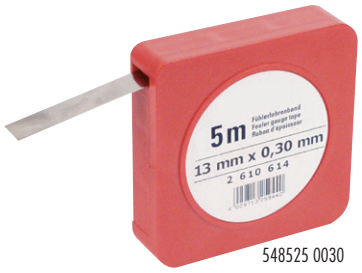
Normal steel

Nominal thickness mm	Normal steel art.no.	€
0.01	548525 0001	69,–
0.02	548525 0002	53,–
0.03	548525 0003	20,–
0.04	548525 0004	20,–
0.05	548525 0005	16,90
0.06	548525 0006	14,55
0.07	548525 0007	14,55
0.08	548525 0008	14,55
0.09	548525 0009	14,55
0.10	548525 0010	14,55
0.12	548525 0012	14,55
0.15	548525 0015	14,55
0.18	548525 0018	14,55
0.20	548525 0020	14,55
0.25	548525 0025	14,55

5147

Nominal thickness mm	Normal steel art.no.	€
0.30	548525 0030	14,55
0.35	548525 0035	16,90
0.40	548525 0040	16,90
0.45	548525 0045	16,90
0.50	548525 0050	16,90
0.55	548525 0055	25,40
0.60	548525 0060	25,40
0.65	548525 0065	25,40
0.70	548525 0070	25,40
0.75	548525 0075	25,40
0.80	548525 0080	25,40
0.85	548525 0085	27,–
0.90	548525 0090	27,–
0.95	548525 0095	27,–
1.00	548525 0100	27,–

5147



548525 0030

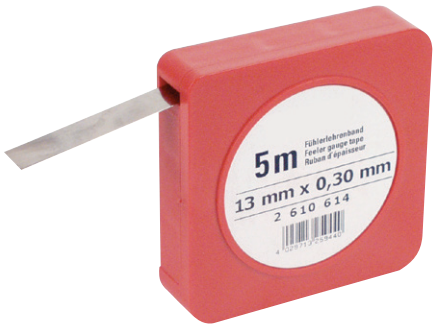
Stainless steel

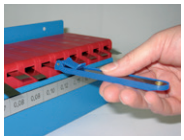
Nominal thickness mm	Stainless steel art.no.	€
0.01	548524 0001	74,80
0.02	548524 0002	56,60
0.03	548524 0003	24,60
0.04	548524 0004	24,60
0.05	548524 0005	21,40
0.06	548524 0006	18,20
0.07	548524 0007	18,20
0.08	548524 0008	18,20

5147

Nominal thickness mm	Stainless steel art.no.	€
0.09	548524 0009	18,20
0.10	548524 0010	18,20
0.12	548524 0012	18,20
0.15	548524 0015	18,20
0.18	548524 0018	18,20
0.20	548524 0020	18,20
0.25	548524 0025	18,20

5147





Set

- 15 feeler gauge strips
- In a wall bracket with feeler gauge strip holder for dispensing strip sections

Designation	Normal steel art.no.	€	Stainless steel art.no.	€
Feeler gauge strip set 0.01 to 0.25 mm | 0.01 mm | 0.02 mm | 0.03 mm | 0.04 mm | 0.05 mm | 0.06 mm | 0.07 mm | 0.08 mm | 0.09 mm | 0.10 mm | 0.12 mm | 0.15 mm | 0.18 mm | 0.20 mm | 0.25 mm	548525 1000	289,–		
Feeler gauge strip set 0.30 to 1.00 mm | 0.30 mm | 0.35 mm | 0.40 mm | 0.45 mm | 0.50 mm | 0.55 mm | 0.60 mm | 0.65 mm | 0.70 mm | 0.75 mm | 0.80 mm | 0.85 mm | 0.90 mm | 0.95 mm | 1.00 mm	548525 2000	330,–		
Feeler gauge strip set 0.01 to 0.25 mm | 0.01 mm | 0.02 mm | 0.03 mm | 0.04 mm | 0.05 mm | 0.06 mm | 0.07 mm | 0.08 mm | 0.09 mm | 0.10 mm | 0.12 mm | 0.15 mm | 0.18 mm | 0.20 mm | 0.25 mm			548524 1000	330,–
	5147		5147	



Accessories

- Feeler gauge strip holder with clip for strips up to 13 mm in width
- Size 125 x 17

Designation	art.no.	€
Feeler gauge strip holder	548526 0001	5,75
	5147	



Feeler gauge strips in rolls

- For setting up tools and moulds, adjusting equipment and apparatus, compensating for tolerances, supporting equipment, aligning machinery, adjusting bearing play etc.
- **Materials:**
  548527.... / 548528.... C-steel, hardened spring band steel with material no. 1.1274, magnetic
  548529.... rust-free, hardened spring band stainless steel with material no. 1.4310, weak magnetism



Nominal thickness	C-steel 25 mm x 5 m		C-steel 50 mm x 5 m		Stainless steel 100 mm x 5 m	
	art.no.	€	art.no.	€	art.no.	€
0.01 mm	548527 0001	81,–	548528 0001	113,–	548529 0001	156,–
0.02 mm	548527 0002	43,–	548528 0002	63,20	548529 0002	100,50
0.03 mm	548527 0003	32,–	548528 0003	46,20		
0.04 mm	548527 0004	31,60	548528 0004	45,50		
0.05 mm	548527 0005	27,30	548528 0005	42,50	548529 0005	68,10
0.06 mm	548527 0006	21,70	548528 0006	32,–		
0.07 mm	548527 0007	21,70	548528 0007	32,–		
0.08 mm	548527 0008	21,70	548528 0008	32,–		
0.09 mm	548527 0009	21,70	548528 0009	32,–		
0.10 mm	548527 0010	21,70	548528 0010	31,–	548529 0010	64,50
0.12 mm			548528 0012	32,60		
0.15 mm	548527 0015	22,20	548528 0015	32,60	548529 0015	64,50
0.18 mm			548528 0018	32,90		
0.20 mm	548527 0020	22,20	548528 0020	32,20	548529 0020	79,50
0.25 mm	548527 0025	22,60	548528 0025	32,90	548529 0025	83,50
0.30 mm	548527 0030	22,50	548528 0030	32,60	548529 0030	79,50
0.35 mm			548528 0035	36,10		
0.40 mm	548527 0040	24,90	548528 0040	36,10	548529 0040	92,50
0.45 mm			548528 0045	36,10		
0.50 mm	548527 0050	26,10	548528 0050	36,10	548529 0050	106,50
0.60 mm	548527 0060	35,70	548528 0060	57,50	548529 0060	141,50
0.70 mm	548527 0070	38,60	548528 0070	57,50	548529 0070	160,50
0.80 mm	548527 0080	39,80	548528 0080	57,80	548529 0080	173,–
0.90 mm	548527 0090	39,80	548528 0090	57,80	548529 0090	174,50
1.00 mm	548527 0100	39,20	548528 0100	57,80	548529 0100	179,–
	5147		5147		5147	

Foil strips (precision gauge strip)

- For setting up tools and moulds
- Adjusting equipment and apparatus
- Aligning machinery, altering bearing play
- Rolls 150 mm wide x 5000 mm long
- **Materials:**
  548532....: Brass (CuZn 37 / 2.0321)
  548536....: Unalloyed steel (C590 / 1.0338)
  548541....: Stainless steel (CrNi / 1.4310)



Nominal thickness	Brass		C-steel		stainless	
	art.no.	€	art.no.	€	art.no.	€
0.025 mm	548532 0025	61,20	548536 0025	60,20	548541 0025	118,50
0.050 mm	548532 0050	58,60	548536 0050	31,30	548541 0050	93,10
0.075 mm	548532 0075	68,40	548536 0075	33,50	548541 0075	92,60
0.100 mm	548532 0100	65,20	548536 0100	32,90	548541 0100	85,90
0.150 mm	548532 0150	84,60	548536 0150	35,80	548541 0150	87,20
0.200 mm	548532 0200	90,30	548536 0200	37,–	548541 0200	108,–
0.250 mm	548532 0250	107,50	548536 0250	40,10	548541 0250	112,–
0.300 mm	548532 0300	114,50	548536 0300	40,60	548541 0300	108,–
0.400 mm	548532 0400	132,50	548536 0400	47,80	548541 0400	127,–
0.500 mm	548532 0500	160,–	548536 0500	52,–	548541 0500	142,–
	5147		5147		5147	

Präzisions-Folien GmbH Underlay foil (precision design)

- For setting up tools and moulds, adjusting equipment and apparatus, compensating for tolerances, supporting equipment, aligning machinery, adjusting bearing play etc.
- **Materials:**
  548550.... C-steel, hardened spring band steel with material no. 1.1274, magnetic
  548551.... /548552.... rust-free, hardened spring band stainless steel with material no. 1.4310, weak magnetism
- Supplied in sturdy sliding box
  548550.... 10 sheets per box
  548551.... / 558552.... 5 sheets per box



Nominal thickness	C-steel 50 mm x 300 mm		Stainless steel 100 mm x 500 mm		Stainless steel 150 mm x 500 mm	
	art.no.	€	art.no.	€	art.no.	€
0.01 mm	548550 0001	76,80	548551 0001	92,–		
0.02 mm	548550 0002	43,80	548551 0002	52,30		
0.05 mm	548550 0005	27,10	548551 0005	36,40	548552 0005	56,10
0.10 mm	548550 0010	21,50	548551 0010	34,70	548552 0010	52,70
0.15 mm	548550 0015	22,50	548551 0015	34,70	548552 0015	53,80
0.20 mm	548550 0020	22,–	548551 0020	43,10	548552 0020	66,60
0.25 mm	548550 0025	22,60	548551 0025	45,50	548552 0025	69,50
0.30 mm	548550 0030	22,60	548551 0030	43,10	548552 0030	66,60
0.40 mm	548550 0040	24,90	548551 0040	49,90	548552 0040	74,80
0.50 mm	548550 0050	24,90	548551 0050	57,50	548552 0050	87,20
0.60 mm	548550 0060	40,–	548551 0060	80,60	548552 0060	118,50
0.70 mm	548550 0070	40,40	548551 0070	90,90	548552 0070	132,50
0.80 mm	548550 0080	40,90	548551 0080	94,30	548552 0080	145,–
0.90 mm	548550 0090	41,10	548551 0090	95,10	548552 0090	153,50
1.00 mm	548550 0100	40,40	548551 0100	96,80	548552 0100	156,–
	5147		5147		5147	

NOGA Magnetic measuring stands *PH*

- For quick and precise positioning of dial indicators
- Improved fine adjustment on the magnetic base
- Strong, switchable magnetic base
- Universal holding fixture for common dial indicators
- Robust arm mechanism with three-point system
- Measuring instrument holding fixture: Ø 8 mm, 6 mm, 3/8 inch and dovetail



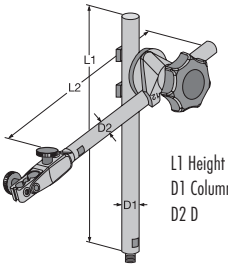
Fine adjustment holding fixture



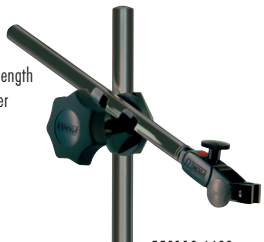
Fine adjustment of magnetic base



Arm mechanism



L1 Height L2 Arm length
D1 Column diameter
D2 D



550110 6400



550110 2040



550110 6610

Fine adjustment on the measuring instrument holding fixture

Model	Height mm	Pillar diameter mm	Arm length mm	D mm	Foot size mm	Adhe-rence strength	MD	art.no.	€
PH 6400	203	14	185	12	60 x 50 x 55	800	M8	550110 6400	105,–
PH 6600	260	16	225	16	75 x 50 x 55	1000	M8	550110 6600	171,–
PH 6800	350	18	225	16	120 x 50 x 55	1300	M10 x 1.25	550110 6800	205,–
								5149	

Fine adjustment on magnetic base

Model	Height mm	Pillar diameter mm	Arm length mm	D mm	Foot size mm	Adherence strength	Thread	art.no.	€
PH3100	120	10	110	8	40 x 30 x 35	320N	M5	550110 3100	68,30
PH2040	203	14	185	12	60 x 50 x 55	800N	M8	550110 2040	106,–
PH4016	260	16	225	16	75 x 50 x 55	1000N	M8	550110 4016	171,–
								5149	

Measuring stand w/o base, fine adjustment – measuring instrument holding fixture

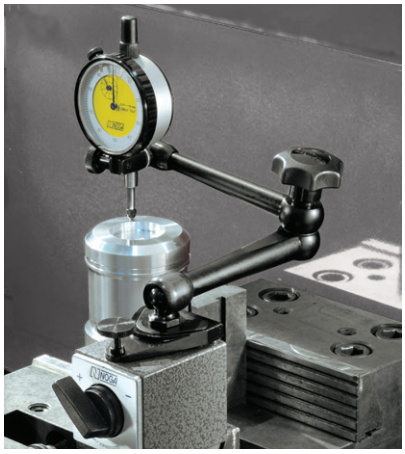
- Measuring instrument holding fixture: Ø 8 mm, 6 mm, 3/8 inch and dovetail

Model	Height mm	Pillar diameter mm	Arm length mm	D mm	D	art.no.	€
PH 6410	203	14	185	12	M8	550110 6401	92,90
PH 6610	260	16	225	16	M8	550110 6610	143,50
PH 6810	350	18	285	16	M10x1.25	550110 6810	154,–
						5149	

NOGA Magnetic measuring stands

- For quick and precise positioning of dial indicators
- **With mechanical central clamping mechanism**
- Improved fine adjustment on the magnetic base
- Strong, switchable magnetic base
- Universal holding fixture for common dial indicators
- Robust arm system with central clamping mechanism







Arm mechanism

Fine adjustment on the measuring instrument holding fixture



DG 61003



Fine adjustment holding fixture

Complete stand with fine adjustment on the measuring instrument holding fixture

- Measuring instrument holding fixture: ∅ 8 mm, 6 mm, 3/8 inch and dovetail

Model	Projection mm	Foot size mm	Adherence strength	art.no.	€
NF 61003	110	40 x 30 x 35	320	550501 1001	164,50
DG 61003	220	60 x 50 x 55	800	550501 2001	233,–
MG 61003	250	60 x 50 x 55	800	550501 3001	259,–
MA 61003	520	120 x 50 x 55	1300	550501 4001	509,–

5149





DG 10503

Complete stand with fine adjustment on magnetic foot

- ∅ 8 mm and dovetail holding fixture for measuring instruments

Model	Projection mm	Foot size mm	Adherence strength	Connection thread	art.no.	€
NF 10403	110	40 x 30 x 35	320	M5	550501 1101	135,–
DG 10503	220	60 x 50 x 55	800	M8	550501 2101	173,50
MG 10503	250	60 x 50 x 55	800	M8	550501 3101	202,–

5149



Fine adjustment holding fixture



Articulated stand without base, fine adjustment to the measuring instrument holding fixture

- Measuring instrument holding fixture: ∅ 8 mm, 6 mm, 3/8 inch and dovetail

Model	Projection mm	Connection thread	art.no.	€
NF 60103	110	M5	550501 1010	150,50
DG 60103	220	M8	550501 2010	191,–
MG 60103	250	M8	550501 3110	240,–
MA 60103	520	M10 x 1.25	550501 4010	470,–

5149

NOGA Feet for measuring stands

- Magnetic feet with high holding force on the V-shaped base and flat rear side
- All contact faces finely ground.
- DG 0040 vacuum base
- Sturdy lightweight metal design with integrated membrane for suction clamping on any level, non-porous and grease-free surface (e.g. granite plates).


NF 0037


DG 0036


DG 0038


DG 0039


DG 1003


DG 0040


Switchable magnetic foot


Switchable magnetic foot with fine adjustment

Model	Designation	Foot size mm	Adherence strength	Connection thread	art.no.	€
NF 0037	Switchable magnetic base	40 x 30 x 35	320N	M5	550505 0037	34,70
NF 3778	Switchable magnetic foot with fine adjustment	40 x 30 x 35	320N	M5	550505 0031	40,10
DG 0036	Switchable magnetic base	60 x 50 x 55	800N	M8	550505 0010	39,20
DG 3678	Switchable magnetic foot with fine adjustment	60 x 50 x 55	800N	M8	550505 0011	44,20
DG 0038	Switchable magnetic base	75 x 50 x 55	1000N	M8	550505 0012	59,10
DG 0118	Switchable magnetic foot with fine adjustment	75 x 50 x 55	1000N	M8	550505 0118	108,–
DG 0039	Switchable magnetic base	120 x 50 x 55	1300N	M10 x 1.25	550505 0020	89,60
DG 1003	Switchable magnetic base	75 x 50 x 55	1000N	M6 / 8 / 10 /10x1.25 / 12	550505 1003	91,–
DG 0040	Vacuum foot	Ø 92 x 22	350N	M8	550505 0040	81,90

5149

NOGA Magnetic measuring stand set



- Measuring stand with dial indicator and magnetic base
- Dial indicator:
  10 mm measurement range
  0.01 mm resolution
  Accuracy DIN 878







Projection mm	Foot size mm	Adherence strength	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
250	60 x 50 x 55	800N	550505 0005	305,–	073009 D003	25,–

5149

ATORN 3D articulated measurement stand

- For quick and precise positioning of dial indicators
- Maintenance-free mechanical central clamping mechanism
- Strong, switchable magnetic base with V-shaped underside, holds firm in any position!
- Combined dial indicator holding fixture with fine adjustment for dial indicators with a Ø 8 mm shank and for dial test indicators with a dovetail mount





Height mm	Action radius mm	Foot size mm	Adherence strength N	art.no.	€
220	130	36 x 30 x 35	300	550520 0210	254,–
310	200	60 x 50 x 55	750	550520 0305	294,–
390	280	60 x 50 x 55	750	550520 0385	349,–

5189

ATORN Magnetic stand with flexible column (gooseneck)

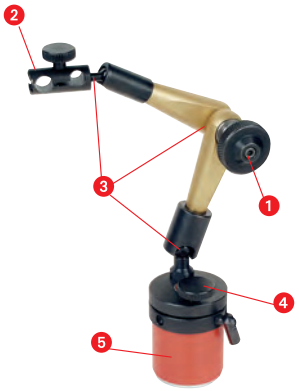


- Particularly suitable for measuring in areas that are difficult to access
- Eccentric lever as a central clamping mechanism
- Tension cable can be retightened
- 6 sleeves, each Ø 17 mm
- Holding magnet with smooth and V-shaped underside
- Combined dial indicator holding fixture with fine adjustment for dial indicators with a Ø 8 mm shank and for dial test indicators with a dovetail mount

Height mm	Foot size mm	Adherence strength N	art.no.	€
380	70 x 46 x 65	500	550521 0380	258,–

5189

HG Small hydraulic stand with magnetic base



- Particularly suitable for use with levers
- Ideal in confined spaces
- Extra-powerful pot magnet, non-switchable
- Dial indicator holding fixture, Ø 8 mm and dovetail
- **Version:**
  1 Hydraulic clamp
  2 Dial indicator holding fixture, Ø 8 mm and dovetail
  3 Joints, fully movable
  4 Fine adjustment on base
  5 extra-strong permanent magnet
- central, hydraulic clamping
- Supplied in cardboard packaging

Fußgröße mm	Ausladung mm	art.no.	€
Ø 35 x 30	150	550505 2000	152,50

5150

HG Hydraulic magnetic measuring stand



551001 0400

- Central hydraulic clamping mechanism
- Fine adjustment
- Clamp force infinitely variable up to the maximum
- Articulated arms can rotate through 360° and swivel through 180°
- Dial indicator holding fixture, Ø 8 mm and dovetail
- **Design:** hydraulic clamp, central joint, ball joints, switchable magnetic foot with V-shaped underside
- Supplied in cardboard packaging, with or without magnetic foot

Designation	Action radius mm	Foot size mm	Adherence strength	Connection thread	art.no.	€
Hydraulic measuring stand with magnetic foot	220	60 x 50 x 55	800N	M8	551001 0220	185,–
Hydraulic measuring stand without magnetic foot	220	-	-		551001 0221	152,50
Hydraulic measuring stand with magnetic foot	260	60 x 50 x 55	800N	M8	551001 0260	194,50
Hydraulic measuring stand without magnetic foot	260	-	-		551001 0261	158,50
Hydraulic measuring stand with magnetic foot	300	60 x 50 x 55	800N	M8	551001 0300	225,–
Hydraulic measuring stand without magnetic foot	300	-	-		551001 0301	195,50
Hydraulic measuring stand with magnetic foot	400	80 x 50 x 55	1000N	M10	551001 0400	342,–
Hydraulic measuring stand without magnetic foot	400	-	-		551001 0401	269,–
Hydraulic measuring stand with magnetic foot	550	80 x 50 x 55	1000N	M10	551001 0550	483,–
Hydraulic measuring stand without magnetic foot	550	-	-		551001 0551	413,–

5150

Mitutoyo Magnetic stand with dial test indicator

- Powerful pot magnet
- Holding fixture for magnetic stand
- Dial test indicator measurement range 0.8 mm
- Readings: 0.01 mm
- Contact point length 20.9 mm
- Supplied in plastic packaging



Designation	Scale value mm	art.no.	€	DAkkS calibration art.no.	€
Magnetic stand with lever dial indicator	0.01	525501 0112	173,–	071250 D001	28,–

5102

NOGA Articulated stand for dial test indicators

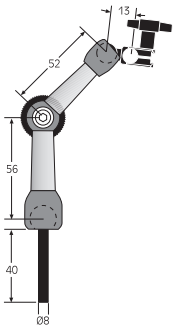
- For precisely positioning and aligning workpieces
- Centring bores
- The stand is clamped directly into the machine chuck by means of a straight clamping shank
- All joints are movable
- All joints fixed by means of a central clamping screw
- Dial indicator holding fixture, Ø 8 mm, with V-block clamp for dial test indicators
- Cylindrical clamping shank (Ø 8 mm, length = 40 mm)











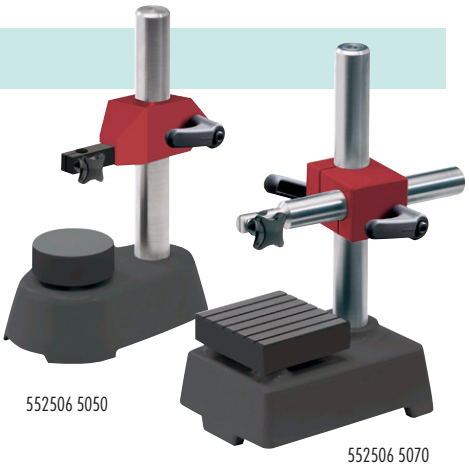


Designation	art.no.	€
Articulated stand	550510 0013	111,50
Articulated stand with dial test indicator, measurement range 0.8 mm, 0.01 mm readings, sensor tip length 20.9 mm	550510 5000	244,–

5149

SARA® Measuring table

- Special cast iron base
- Stable measuring column, Ø 22 mm
- Hardened measuring faces
- DIN 876/0



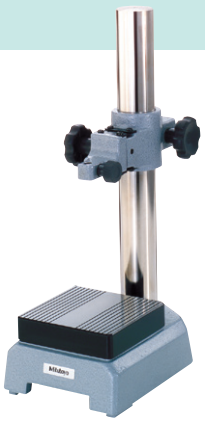
552506 5050

552506 5070

Max. measurement height mm	Measuring table size mm	Projection mm	Weight kg	art.no.	€
100	Ø 50	50	2.0	552506 5050	289,–
100	70x60	75	3.5	552506 5070	379,–

5151

Mitutoyo Measuring table



- Robust cast iron base
- Dial indicator locating bore Ø 8 mm
- Fine adjustment of dial indicator holding fixture: 1 mm
- Column hardened and precision-ground, Ø 40 mm
- Total height 389 mm
- Measuring table ground and lapped

Max. measurement height mm	Measuring table size mm	Projection mm	Weight kg	art.no.	€
200	110 x 110	75	12.5	552510 0200	670,–
				5102	

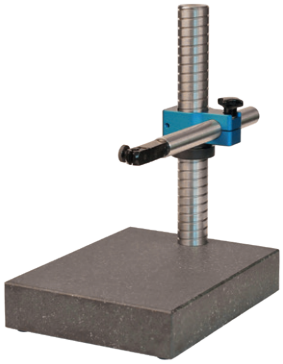
NOGA Measuring table with universal measuring stand



- Measuring table base made of black natural granite
- Universal holding fixture for common dial indicators
- Robust arm mechanism with three-point system
- Column Ø 16 mm
- Ø 8 mm holding fixture for measuring instruments

Measuring table size mm	Max. measurement height mm	Projection mm	art.no.	€
200x150	180	230	553003 0001	420,–
			5149	

ATORN Precision measuring table with granite base



- Measuring table base made of black natural granite
- Precision-lapped measuring area
- Stable column
- Height adjustment with and without helical thread with adjusting ring
- Dial indicator locating bore Ø 8 mm

Adjustable measuring arm

Measuring table size mm	Max. measurement height mm	Projection mm	Pillar diameter mm	Design	art.no.	€
250x200	230	200	35	Column with helical thread	553008 1010	650,–
					5153	

ATORN Universal measuring table with 3D articulated stand

DIN 876/0

- Black natural granite measuring table
- Measuring area diamond-lapped to a precision finish
- Articulated stand for quick and precise positioning of dial indicators
- Robust arm system with **mechanical central clamping mechanism**
- Universal dial indicator holding fixture with fine adjustment for all common dial indicators



553020 0001

Measuring table size mm	Action radius mm	art.no.	€
400 x 250 x 50	285	553020 0001	405,–
400 x 400 x 50	375	553020 0002	719,–

5153

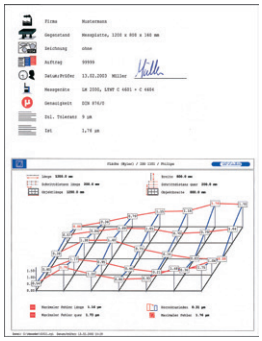
ATORN Measuring and inspection plates

DIN 876/0

Manufacturer's test certificate included

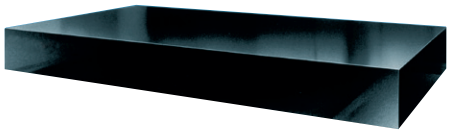
All prices are ex works and include packaging!

- Completely non-warping, tension-free, non-corrosive and acid-resistant
- Non-magnetic and non-conductive, with no temperature sensitivity due to a low thermal expansion coefficient
- Hard and wear-resistant: Hardness grade 6 - 7 on the Mohs scale.
- Homogenous fine-pored material structure results in consistent hardness, which prolongs service life and maintains accuracy
- Maintenance-free; only dirt removal is required to prevent measurement accuracy from becoming impaired
- High contact area ratio due to diamond-lapped measuring faces
- All measuring and inspection plates are supplied with a manufacturer's test certificate
- DKD certificate available on request
- Prices ex works, including packaging



Measuring and inspection plates

- Without steel ball inserts



Length x width x thickness mm	Weight kg	Flatness tolerance µm	art.no.	€
400x400x50	25	6	554011 0400	590,–
630x400x70	53	7	554011 0630	830,–

5153

Measuring and inspection plates with underframes

- Underframe made of profile tubing, with bearing fitting
  Designed for working height approx. 900 mm (plate upper edge)



Length x width x thickness mm	Weight kg	Flatness tolerance µm	art.no.	€
1000x630x100	203	8	554012 1000	2.529,–
1200x800x160	495	9	554012 1200	3.139,–

5153

Measuring and inspection plates with base cabinets

- Sheet steel base cabinet (sturdy construction)
- 3 fully opening drawers, lockable
- Drawer height 120, 150 and 240 mm
- Load capacity per drawer: 100 kg
- Working height approx. 900 mm
- Measuring plate can be aligned by means of adjustable bearing fittings



Length x width x thickness mm	Weight kg	Flatness tolerance µm	art.no.	€
1000x630x100	330	8	554015 1000	3.429,–
1200x800x160	640	9	554015 1200	4.519,–

5153

Granite cleaning products

- **Cleaning spray**
  - For the simple cleaning of granite parts
- **Care spray**
  - Specially formulated for maintaining granite components
  - Perfect cleaning and long-lasting seal
  - Protects surfaces against oxidation and wear
  - Allows accessories to be easily moved on the granite surface



Designation	art.no.	€
Cleaning spray	554010 0501	51,30
Cleaning spray	554010 0505	21,40
	5152	

Measuring and inspection plates

DIN 876

- Accuracy in accordance with DIN 876
- Completely non-warping, tension-free, non-corrosive and acid-resistant
- Non-magnetic and non-conductive, with no temperature sensitivity due to a low thermal expansion coefficient
- Hard and wear-resistant: Hardness grade 6 - 7 on the Mohs scale.
- High contact area ratio due to diamond-lapped measuring face
- Plates are supported at structurally predetermined points by steel ball inserts that are fixed to the underside of the plate
- Supplied with steel ball inserts (250 x 250 mm plate without steel ball inserts) and manufacturer's test certificate
- Prices ex works, excluding packaging

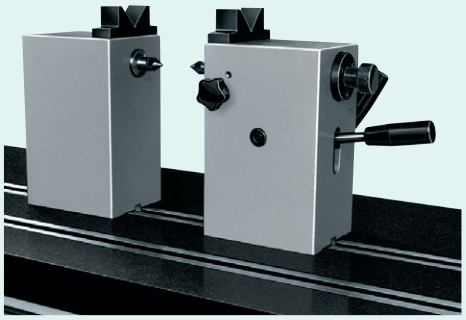
Manufacturer's test certificate included



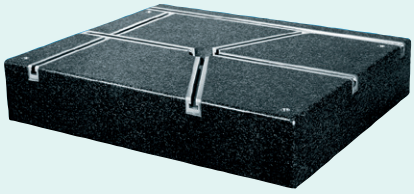
Length x width x thickness mm	Weight kg	Flatness tolerance µm	DIN 876/0 art.no.	DIN 876/0 €	DIN 876/1 art.no.	DIN 876/1 €
250 x 250 x 50	10	5 / 13	554002 0001	214,–	554006 0001	194,50
400 x 250 x 50	15	6 / 14	554002 0002	291,–	554006 0002	279,–
400 x 400 x 50	25	6 / 14	554002 0003	404,–	554006 0003	385,–
500 x 400 x 90	55	6 / 15	554002 0004	446,–	554006 0004	409,–
600 x 500 x 100	90	6 / 16	554002 0005	630,–	554006 0005	600,–
630 x 400 x 70	50	7 / 17	554002 0006	599,–	554006 0006	570,–
630 x 630 x 70	80	7 / 17	554002 0007	795,–	554006 0007	759,–
800 x 600 x 120	175	7 / 18	554002 0008	999,–	554006 0008	910,–
1000 x 630 x 100	175	8 / 20	554002 0009	1.065,–	554006 0009	1.019,–
1000 x 630 x 140	250	8 / 20	554002 0010	1.229,–	554006 0010	1.119,–
1000 x 800 x 140	320	8 / 20	554002 0011	1.335,–	554006 0011	1.219,–
1000 x 1000 x 100	280	8 / 20	554002 0012	1.670,–	554006 0012	1.529,–
1000 x 1000 x 160	480	8 / 20	554002 0013	1.979,–	554006 0013	1.889,–
1200 x 800 x 160	450	9 / 22	554002 0014	1.979,–	554006 0014	1.889,–
1200 x 1000 x 160	530	9 / 22	554002 0015	2.465,–	554006 0015	2.249,–
1500 x 1000 x 190	855	10 / 25	554002 0016	2.685,–	554006 0016	2.559,–
1600 x 1000 x 160	720	11 / 26	554002 0017	2.685,–	554006 0017	2.559,–
2000 x 1000 x 220	1320	12 / 30	554002 0018	3.649,–	554006 0018	3.475,–
			5152		5152	

Base units for measuring and inspection plates

Additional accessories for measuring and inspection plates (e.g. individual supports, clamping T-slots or pairs of tailstocks) are available on request



Tailstock pair on plate with steel T-slot rail design B



Granite base with 5 T-slot rails (special version)



Profiled tube underframe



- Robust welded structure of profiled tubing designed for a working height of approx. 900 mm (plate upper edge)
- Supplied with bearing fittings, shipped in disposable packaging
- Prices ex works, excluding packaging

Suitable for	Weight kg	art.no.	€
Insert size 400 x 400 x 50	23	554025 0003	299,–
Insert size 500 x 400 x 90	24	554025 0004	299,–
Insert size 600 x 500 x 100	26	554025 0005	309,–
Insert size 630 x 400 x 70	25	554025 0006	319,–
Insert size 630 x 630 x 70	26	554025 0007	329,–
Insert size 800 x 600 x 120	30	554025 0008	339,–
Insert size 1000 x 630 x 100	35	554025 0009	359,–
Insert size 1000 x 630 x 140	35	554025 0010	359,–
Insert size 1000 x 800 x 140	37	554025 0011	412,–
Insert size 1000 x 1000 x 100	45	554025 0012	437,–
Insert size 1000 x 1000 x 160	45	554025 0013	437,–
Insert size 1200 x 800 x 160	45	554025 0014	437,–
Insert size 1200 x 1000 x 160	50	554025 0015	451,–
Insert size 1500 x 1000 x 190	55	554025 0016	462,–
Insert size 1600 x 1000 x 160	56	554025 0017	462,–
Insert size 2000 x 1000 x 220	60	554025 0018	509,–

5152

Tool cabinet



- Made from iron angle brackets clad with steel sheeting, painted silver grey
- Working height approx. 900 mm (plate upper edge)
- Drawers mounted on roller bearings
- Removable shelf
- Lockable doors
- Shipped in disposable packaging
- Prices ex works, excluding packaging

Suitable for	Design	Weight kg	art.no.	€
Insert size 630 x 400 x 70	1 door, 1 shelf	40	554030 0006	580,–
Insert size 630 x 630 x 70	1 door, 1 shelf	42	554030 0007	609,–
Insert size 800 x 600 x 120	1 door, 1 shelf	53	554030 0008	715,–
Insert size 1000 x 630 x 100	2 doors, 1 drawer, 1 shelf	60	554030 0009	715,–
Insert size 1000 x 630 x 140	2 doors, 1 drawer, 1 shelf	60	554030 0010	720,–
Insert size 1000 x 800 x 140	2 doors, 1 drawer, 1 shelf	63	554030 0011	779,–
Insert size 1000 x 1000 x 100	2 doors, 1 drawer, 1 shelf	85	554030 0012	779,–
Insert size 1000 x 1000 x 160	2 doors, 1 drawer, 1 shelf	85	554030 0013	779,–
Insert size 1200 x 800 x 160	2 doors, 1 drawer, 1 shelf	85	554030 0014	785,–
Insert size 1200 x 1000 x 160	2 doors, 1 drawer, 1 shelf	95	554030 0015	845,–
Insert size 1500 x 1000 x 190	2 doors, 1 drawer, 1 shelf	103	554030 0016	899,–
Insert size 1600 x 1000 x 160	2 doors, 1 drawer, 1 shelf	105	554030 0017	899,–
Insert size 2000 x 1000 x 220	3 doors, 2 drawers, 1 shelf	120	554030 0018	985,–

5152

Concentricity gauge

- For testing the radial and axial run-out accuracy of rotating parts
- Size 0350 tailstocks with V-block attachments

Base plate design:
- Special cast iron
- Finely ground supporting surface
- With 2 T-slots, for holding tailstocks and measuring stand
- Slot width 10 mm (12 mm*)
- Distance between T-slots 58 mm (100 mm*)
- Planarity in accordance with DIN 876/2

Tailstock design:
- Adjustable
- Left-hand tailstock with fixed tip, right-hand tailstock with movable tip
- Quill Ø 16 mm (22 mm*)
- Movable tip travel approx. 10 mm
- Hardened steel quill and centre, precision-ground

Measuring stand design:
- With fine adjustment
- Locating bore 8H7
- Column Ø and height: 16 x 200 mm (22 x 240 mm*)
- Cross-arm Ø and length: 16 x 60 mm (16 x 125 mm*)
- Base plate supplied with tailstocks and measuring stand

* Values in brackets are for concentricity gauge no. 5547600450



554760 0200

Designation	Length x width mm	Weight kg	art.no.	€
Concentricity gauge point height 50mm, max. point width 200mm	350 x 110	8	554760 0200	699,–
Concentricity gauge point height 75mm, max. point width 350mm	500 x 110	12	554760 0350	911,–
Concentricity gauge point height 100mm, max. point width 450mm	700 x 180	35	554760 0450	2.292,–

5154



554761 0001



554761 0003



554761 0011

Accessories

Designation	suitable for	art.no.	€
V-block inserts	554760 0200 / 0350	554761 0001	126,–
V-block jacks	554760 0200 / 0350	554761 0002	231,–
Roller jacks	554760 0200 / 0350	554761 0003	223,–
V-block inserts	554760 0450	554761 0010	161,–
V-block jacks	554760 0450	554761 0011	318,–
Roller jacks	554760 0450	554761 0012	302,–

5154

Special measuring jobs

INFO

Please contact us!





V-block pair

- With clamp
- Hardened
- Ground outer edges
- V-block accuracy: 0.005 mm to the standing surface
- Prices per pair



Length x width x height mm	Max. diameter of workpiece mm	art.no.	€
45 x 40 x 35	25	556002 0040	95,–
70 x 45 x 41	40	556002 0045	138,50

5155

ATORN Double V-block pair

- Indent 90° with clamp
- Hardened
- V-block and clamping surfaces level, machined in parallel, finely ground and adjusted
- V-block accuracy: 0.004 mm to the base surface
- Stainless steel version available on request



Length x width x height mm	for min./max. workpiece diameter	art.no.	€
50 x 40 x 40	5-30 mm	556006 0031	190,–
75 x 55 x 55	5-50 mm	556006 0051	286,–
100 x 75 x 75	7-70 mm	556006 0071	422,–

5189

Individual parts

Designation	art.no.	€
V-block, Ø 5-30, individual with clamp	556008 0031	99,50
V-block, Ø 5-50, individual with clamp	556008 0051	154,–
V-block, Ø 7-70, individual with clamp	556008 0071	232,–

5189

ATORN Magnetic measuring and clamping V-block

- Steel
- 90° recess
- Level, parallel and perpendicular finish
- Magnetic force can be switched on/off
- Magnetic holding surface on the side opposite the switch
- Planarity and parallelism tolerance 0.004 mm, Perpendicularity tolerance 0.01 mm
- Supplied in a case



Length x width x height mm	for min./max. workpiece diameter	Adherence strength N	art.no.	€
80 x 67 x 96	6-66 mm	900/Ø 400	556018 0080	510,–
100 x 70 x 96	6-70 mm	1800/Ø 400	556018 0100	750,–

5189

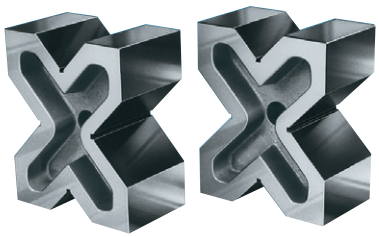
Hardened finish

Length x width x height mm	for min./max. workpiece diameter	Adherence strength N	art.no.	€
70 x 45 x 70	2-40 mm	600/Ø 300	556019 0070	520,–
80 x 67 x 96	6-66 mm	900/Ø 400	556019 0080	620,–
100 x 70 x 96	6-70 mm	1800/Ø 400	556019 0100	899,–

5189

Parallels

- **Pair, with four 90° V-recesses**
- Made from high-density special cast iron with high wear-resistance; all four supporting surfaces and V-recesses finished in pairs to the same height; supporting surfaces and V-recesses precision ground; lateral faces planed
- **Grade 1**: V-recesses in the base surface, accuracy: 0.016 mm
- Supplied in pairs, in disposable packaging

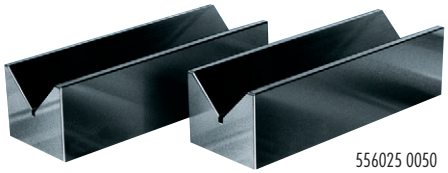


556010 0120

Length x width x height mm	Weight kg	for min./max. workpiece diameter	art.no.	€
60 x 100 x 120	7	8-90 mm	556010 0090	445,–
75 x 130 x 150	13	10-120 mm	556010 0120	590,–
90 x 170 x 200	24	12-180 mm	556010 0180	930,–
			5155	

V-block pair with 90° recess

- Made from high-density special cast iron with high wear-resistance, V-recesses finished in pairs to the same height, lateral faces planed
- **Grade 3**:
  Supporting surfaces and V-recesses finely planed, parallelism between support and V-block, accuracy: 0.06 mm
  Grade 1:
  Supporting surfaces and V-recesses finely planed, parallelism between support and V-block, accuracy: 0.016 mm



556025 0050

Length x width mm	for min./max. workpiece diameter	Grade 3 art.no.	Grade 3 €	Grade 1 art.no.	Grade 1 €
100 x 40	6-40 mm	556020 0040	86,70	556025 0040	129,–
150 x 50	8-50 mm	556020 0050	140,–	556025 0050	196,–
200 x 70	8-70 mm	556020 0070	240,–	556025 0070	315,–
250 x 85	12-85 mm	556020 0085	459,–	556025 0085	639,–
300 x 100	12-100 mm	556020 0100	609,–	556025 0100	889,–
		5155		5155	

Angle plate

- With clamping slots, precisely machined on both sides
- Angle precision in accordance with DIN 875 (clamping surface support)
- Made of high-density special casting with high wear-resistance, supporting surface and clamping surface machined at angles to one another, planed lateral faces, cast clamping slots,
- **Quality 3**: Bearing and clamping surface finish planed, planarity according to DIN 876/3
  Quality 1: Bearing and clamping surface ground, planarity according to DIN 876/2
  Quality 0: Supporting and clamping surface precision-ground, planarity in accordance with DIN 876/1



556035 0004

Grade 3

Length x width x height mm	Perpendicularity deviation mm	Slot width mm	Weight kg	art.no.	€
150 x 75 x 100	0.030	14	4	556030 0001	189,–
200 x 100 x 150	0.030	16	8	556030 0002	255,–
275 x 150 x 200	0.040	20	20	556030 0003	480,–
400 x 225 x 300	0.050	24	45	556030 0004	849,–
500 x 300 x 400	0.060	24	85	556030 0005	1.339,–
				5155	

Grade 1

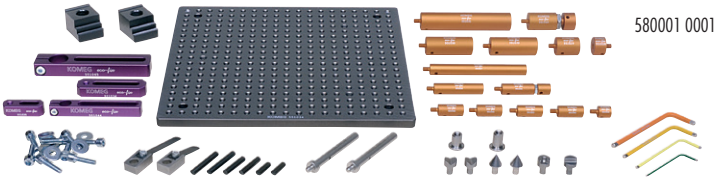
Length x width x height mm	Perpendicularity deviation mm	Slot width mm	Weight kg	art.no.	€
150 x 75 x 100	0.015	14	4	556035 0001	292,–
200 x 100 x 150	0.015	16	8	556035 0002	470,–
275 x 150 x 200	0.020	20	20	556035 0003	749,–
400 x 225 x 300	0.025	24	45	556035 0004	1.409,–
500 x 300 x 400	0.030	24	85	556035 0005	2.109,–
				5155	

Grade 0

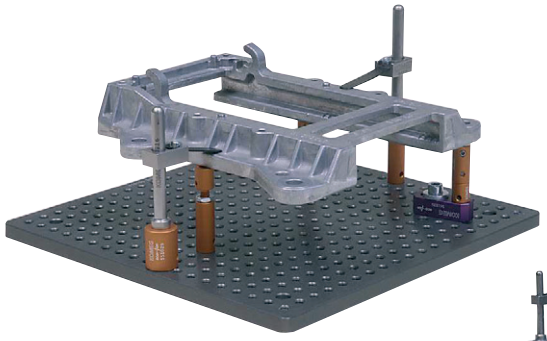
Length x width x height mm	Perpendicularity deviation mm	Slot width mm	Weight kg	art.no.	€
150 x 75 x 100	0.007	14	4	556037 0001	445,–
200 x 100 x 150	0.007	16	8	556037 0002	639,–
275 x 150 x 200	0.009	20	20	556037 0003	1.019,–
400 x 225 x 300	0.011	24	45	556037 0004	2.179,–
500 x 300 x 400	0.013	24	85	556037 0005	3.469,–
				5155	

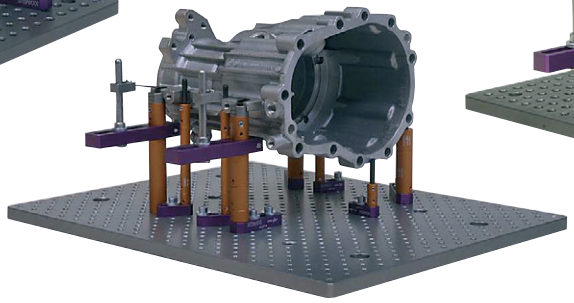
Mitutoyo Clamping system for coordinate metrology *ECO-FIX*

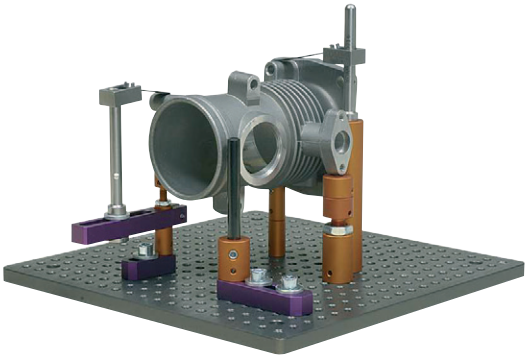
- Assembly kits for immediate use
- Cost-effective
- Extremely easy to handle
- No fasteners required
- Quick assembly
- Compatible with leading manufacturers' products, no adapter required
- We will be happy to provide a list of the set contents on request



580001 0001







We bring colour to the measuring lab!

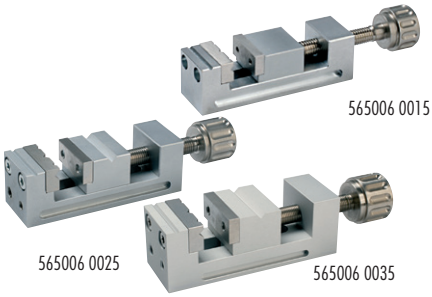
Designation	Hole distance mm	art.no.	€
ECO-FIX assembly kit S, 60-piece, base plate 250 x 250 mm	12.5	580001 0001	1.068,10
ECO-FIX montážní sada L, 99 dílů, základní deska 500 x 400 mm	25	580001 0005	2.041,–

5107

ATORN Mini precision vices

- For mounting and positioning small parts on projectors, measuring microscopes or during roughness measurements
- Replaceable clamping jaws with ground horizontal and vertical V-blocks
- Angle precision 0.01 mm
- Parallelism 0.01 mm

Ideal for use with measuring microscopes and measuring projectors



565006 0015

565006 0025

565006 0035

Size	Jaw width mm	Clamping width mm	Clamping depth mm	Length x width x height mm	Material	art.no.	€
1	15	14	8	50x15x15	Brass	565006 0015	162,–
2	25	23	15	75x25x25	Aluminium	565006 0025	199,–
3	35	35	35	100x35x35	Aluminium	565006 0035	252,–

5192

Complete set

- One vice in each size (Size 1/2/3), including 1 base jaw and 1 V-block jaw
- 1 pair of plastic jaws each (15 / 25 / 35 mm jaw width)
- 1 pair of stepped jaws each (15 / 25 / 35 mm jaw width)
- 1 pair of prism jaws with positioning pin (15 / 25 / 35 mm jaw width)
- 1 Midi divider (Ø 1.2-6.0 mm) and 1 Mini divider (Ø 0.4-3.5 mm)
- 2 bench vice stands
- 3 holding plates including screws
- 1 pair of double V blocks with clamp, 25 x 20 x 20 mm, clamping range 2-15 mm
- 4 pin wrenches
- Supplied in a sturdy carry case



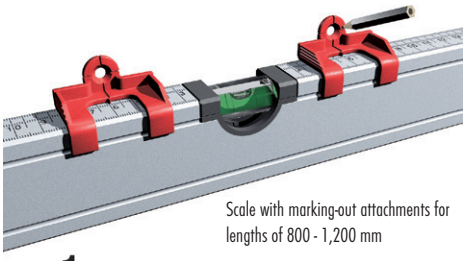
Designation	art.no.	€
Size 1 to Size 3 and accessories	565006 1005	1.740,–

5192

ATORN Light metal spirit level

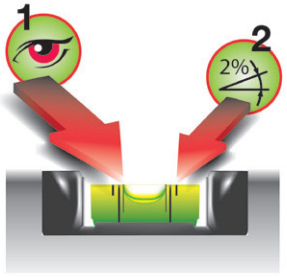
- **With and without magnet**
- Strong aluminium rectangular profile
- Non-slip contact due to silicon pads on rear
- Rubber end caps act as shock absorbers
- Laser-marked round horizontal vial
- Precision readings due to additional markers for the zero position and 2 % gradients
- Magnifying effect for improved readability
- 270° vial viewing angle without protruding edges
- Vials made from high-strength, unbreakable polycarbonate
- Measurement accuracy in normal position: 0.5 mm/m
- 556508.... Lengths 800 to 1200 mm with additional scale on the upper measuring face and 2 adjustable measuring and scribing attachments
  556509.... with magnetic sole



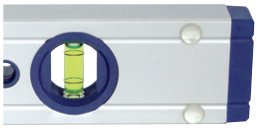


Scale with marking-out attachments for lengths of 800 - 1,200 mm





Precision readings



Non-slip silicon pads

L mm	art.no.	€	With magnet art.no.	With magnet €
200	556508 0200	33,–		
300	556508 0300	35,–		
400	556508 0400	40,–	556509 0400	65,–
500	556508 0500	42,20		
600	556508 0600	44,40	556509 0600	70,–
1000	556508 1000	60,–	556509 1000	104,–
1500	556508 1500	87,–		
2000	556508 2000	108,–		
	5179		5179	

ATORN Electronic inclinometer

- Made of thick-walled four-chamber hollow aluminium profile, cross-section 60 x 26 mm, with two milled measuring surfaces
- Impact-resistant protective ends
- Display switchable between degrees, percent or millimetres/metres
- HOLD function (measurement value memory)
- Switchable acoustic signal for the 0° or the 90° position
- Easy to read thanks to high-contrast 16 mm high LCD display
- Arrows in the display indicate the direction in which the device should be moved to reach the 0° or 90° position
- Display switches automatically for overhead readings
- Error margins:
  at 0° and 90° = 0.05°
  at 1° to 89° = 0.2°
- Measurement range 4 x 90°
- Very slight horizontal and vertical adjustment by means of integrated measuring computer
- Battery life approx. 300 hours
- Supplied with battery 6LR61 no. 548079 4022, in stable plastic pipe



L mm	Designation	Length of the test face mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
256	Digital inclinometer 4x90°	230	556540 2001	319,–	075008 D004	86,–
			5158			

SARA® Digital inclinometer

- Robust metal casing
- With 2 magnets on the bottom and side surfaces
- Rotating display
- Measurement range 360° (4 x 90°)
- Supplied with battery 6LR61 no. 548079 4022



Digit increment °	Length x width x height mm	art.no.	€
0.05	57 x 57 x 31	556550 0001	68,–
		5158	

Precision spirit level

DIN 877



- For aligning horizontal and vertical surfaces and shafts
- Base body made from high-quality special cast iron
- Flat and 150° V-shaped underside, finely ground
- Finely ground supporting surface and front faces
- Longitudinal and transverse vials made from acrylic glass
- No recalibration necessary due to tension-free vial installation
- Fully insulated against heat from hands and breath
- Recesses in the housing permit side view of the vial
- Supplied in a plastic case



556524 0160

L mm	0,3 mm/m art.no.	€	DAkkS calibration art.no.	€
160	556521 0160	199,–	075008 D006	64,–
200	556521 0200	234,–	075008 D006	64,–
250	556521 0250	262,–	075008 D006	64,–
300	556521 0300	278,–	075008 D006	64,–
	5157			

L mm	0,1 mm/m art.no.	€	DAkkS calibration art.no.	€
160	556522 0160	205,–	075008 D005	74,–
200	556522 0200	245,–	075008 D005	74,–
250	556522 0250	264,–	075008 D005	74,–
300	556522 0300	294,–	075008 D005	74,–
	5157			

L mm	0,04 mm/m art.no.	€	DAkkS calibration art.no.	€
160	556523 0160	294,–	075008 D004	86,–
200	556523 0200	340,–	075008 D004	86,–
250	556523 0250	399,–	075008 D004	86,–
300	556523 0300	444,–	075008 D004	86,–
	5157			

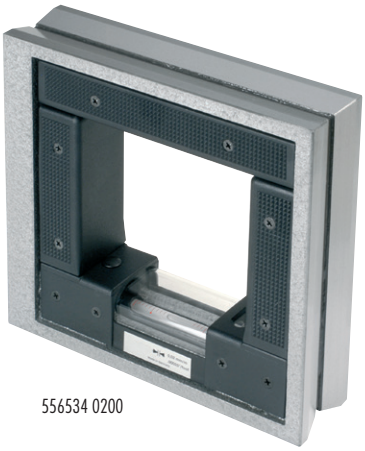
L mm	0,02 mm/m art.no.	€	DAkkS calibration art.no.	€
160	556524 0160	337,–	075008 D003	96,–
200	556524 0200	401,–	075008 D003	96,–
250	556524 0250	439,–	075008 D003	96,–
300	556524 0300	479,–	075008 D003	96,–
	5157			

Precision frame spirit level

DIN 877



- For aligning horizontal and vertical surfaces and shafts
- Base body made from high-quality special cast iron
- 3 sides V-shaped, 1 side flat, finely ground
- Longitudinal and transverse vials made from acrylic glass
- No recalibration necessary due to tension-free vial installation
- Fully insulated against heat from hands and breath
- Recesses in the casing allow vials to be viewed from the side
- Supplied in a wooden case



556534 0200

L mm	0,3 mm/m art.no.	€	DAkkS calibration art.no.	€
100	556531 0100	330,–	075008 D006	64,–
150	556531 0150	396,–	075008 D006	64,–
200	556531 0200	470,–	075008 D006	64,–
	5157			

L mm	0,1 mm/m art.no.	€	DAkkS calibration art.no.	€
100	556532 0100	384,–	075008 D005	74,–
150	556532 0150	442,–	075008 D005	74,–
200	556532 0200	561,–	075008 D005	74,–
	5157			

L mm	0,04 mm/m art.no.	€	DAkkS calibration art.no.	€
100	556533 0100	496,–	075008 D004	86,–
150	556533 0150	620,–	075008 D004	86,–
200	556533 0200	780,–	075008 D004	86,–
	5157			

L mm	0,02 mm/m art.no.	€	DAkkS calibration art.no.	€
150	556534 0150	642,–	075008 D003	96,–
200	556534 0200	779,–	075008 D003	96,–
	5157			

SARA® 3D probe SAVEplus



- Slim and attractive design
- For determining the spindle centre when aligning workpieces on X, Y, and Z axes
- Adjustable scale
- Probe insert with predetermined break point at the far top
- Probes can be replaced by the user
- Supplied with standard probe insert

D1 mm	L mm	art.no.	€	Factory calibration art.no.	€
12	128	558002 0010	259,–	073103 W161	78,–
		5198			

TSCHORN® 3D probe

IP67



- New and improved model
- Minimised guide play and more stable positioning
- Optimised button mechanism
- For determining the spindle centre when aligning workpieces on X, Y, and Z axes
- To protect the measuring unit, large over-travel allowances have been incorporated into the probe unit
- Probe insert with predetermined break point at the far top
- Probes can be replaced by the user
- Supplied with standard probe insert

D1 mm	L mm	Width mm	art.no.	€	Factory calibration art.no.	€
12	133.5	44.5	558002 0003	271,50	073103 W161	78,–
			5198			

Accessories



- Spare button with ceramic predetermined break point
- Suitable for 558002 0002 and 558002 0010

Type	Material	Probe head diameter mm	Sensor insert length mm	art.no.	€
Spare button short	Ceramics	3	27	558003 0010	39,90
Spare button long	Ceramics	6	62	558003 0011	66,20
				5198	

TSCHORN® Digital 3D probe

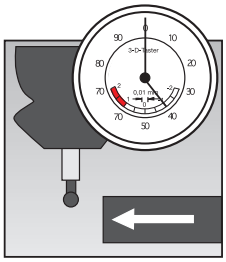


- Digital 3D probe in a slim design
- Digital and analogue display for optimal reading
- Determining the spindle centre when aligning the workpieces in the X, Y and Z axes
- Automatic switching of the display from coarse resolution (1.5 mm to 0.25 mm) to fine resolution (0.25 mm to 0)
- Coloured LED for coarse resolution (LED off), fine resolution (LED green), crash warning when exceeding 1 mm over the tool edge (LED red)
- Automatic shutdown after 2 minutes of non-use
- Probe with ceramic predetermined breaking point
- Probes can be replaced by users themselves
- Supplied with standard probe and CR2450 No. 548079 6450 battery

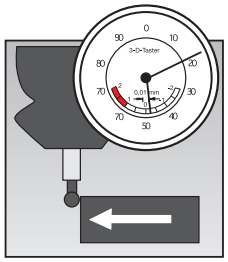
D1 mm	L mm	art.no.	€
Ø 12	139	558002 1001	369,–
		5198	

ATORN Universal 3D probe

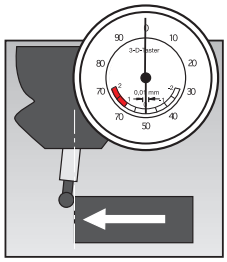
- For determining the spindle centre when aligning workpieces on X, Y, and Z axes
- Easily readable dial indicator
- True-running accuracy can be calibrated via 4 adjustment screws in the casing
- Robust metal casing
- No plus/minus sign problems, as actual value readings are independent of the direction
- Automatic probe radius compensation
- Ceramic predetermined break point prevents damage to the mechanism if maximum probe displacement is exceeded
- Probes can be replaced by the user
- For use on all machine tools including EDM equipment due to insulation between the probe insert and the holding fixture
- Dial indicator diameter: 57 mm
  Casing width: 65 mm
  Clamping shank: 20 mm Ø x 50 mm, similar to DIN 1835B or DIN 69871A, SK 40
  Probe ball diameter: 4 mm
- Supplied in moulded packaging, including operating manual



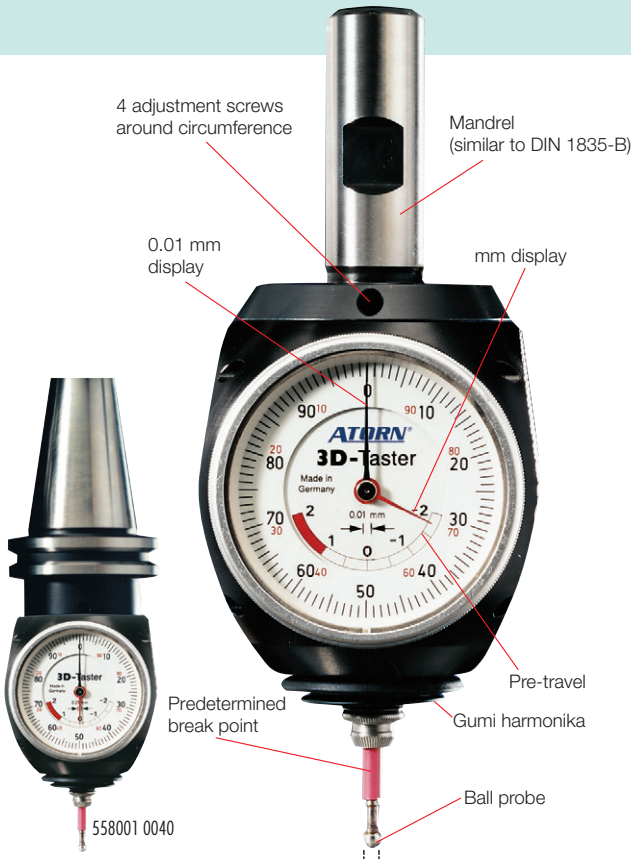
Move towards the workpiece edge

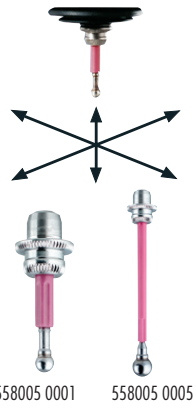


When contact is made with the edge, the display will change



If the small and large pointers are at "zero", the spindle axis and contact edge are exactly in line. The machine control system is zeroed.





558005 0001 558005 0005

Designation	art.no.	€	Factory calibration art.no.	€
Universal 3D probe, shank Ø 20 mm	558001 0001	420,–	073103 W161	78,–
Universal 3D probe, shank DIN 69871A, SK 40	558001 0040	489,–	073103 W161	78,–

5159

Replacement contact points

Probe head diameter mm	Sensor insert length mm	art.no.	€
4	33	558005 0001	43,25
8	75	558005 0005	67,–

5183

Universal 3D probe, digital

- **Digital display,** otherwise design as order no. 558001....,
- Clamping shank: 20 mm Ø x 50 mm, similar to DIN 1835B or DIN 69871A, SK 40
  Reading: 0.001 mm, mm/inch selection
  Probe ball diameter: 4 mm
  Measurement accuracy: 0.005 mm
- Supplied in moulded packaging, with CR2032 battery (no. 548079 6032) and operating manual





558005 0001 558005 0005

Designation	art.no.	€	Factory calibration art.no.	€
Universal 3D probe, digital, shank Ø 20 mm	558001 0005	930,–	073103 W161	78,–

5160

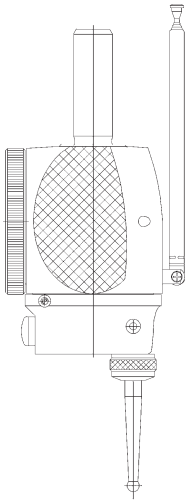
Replacement contact points

Probe head diameter mm	Sensor insert length mm	art.no.	€
4	33	558005 0001	43,25
8	75	558005 0005	67,–

5183

HAIMER® Precision centring device *Centro*

- For aligning workpieces on machine tools with vertically or horizontally rotating spindles
- Non-rotating, easily readable dial indicator
- Robust metal casing
- Large display range
- Straight clamping shank, Ø 16 mm
- With stanchion to hold the dial indicator in the desired position
- Centring accuracy: 0.003 mm
  Casing Ø: 80 mm
  Clamping shank: Ø 16 mm x 48 mm
  Dial indicator Ø: 60 mm
  Length (without clamping shank): 92 mm
  Max. Speed: 150 rpm
  Bore measurement range: Ø 6 - 125 mm
  Shaft measurement range: Ø 0 - 125 mm with bent probe tip
- Base unit supplied with Ø 5 mm straight probe insert and telescopic rod featuring an articulated base, in moulded packaging







Curved probe insert (optional)

Designation	art.no.	€	Factory calibration art.no.	€
Centring device, shank Ø 16 mm	558012 0001	465,–	073103 W162	78,–

5185

Accessories for Haimer centring devices

Designation	art.no.	€
Probe insert, straight with ball, Ø 5 mm	558014 0001	32,–
Probe insert, straight with ball, Ø 2 mm	558014 0002	35,–
Probe insert, curved with ball, Ø 5 mm	558014 0003	42,–

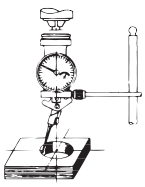
5185

Precision centring device *CO-AX*

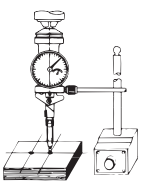
- For aligning workpieces on machine tools with vertically or horizontally rotating spindles
- Non-rotating, easily readable dial indicator
- Robust metal casing
- Wide display range
- Straight clamping shank Ø 10 mm
- With stanchion to hold the dial indicator in the desired position
- Replacement of the probe tips facilitates large working range inside and outside
- Dial indicator diameter Ø 40 mm with tolerance marks
- Functional range Ø 4-300 mm, inside and outside
- Optimum speed 150^{rpm}
- Supplied with stanchion 160 mm,
  3 inner probes (50/100/150 mm),
  3 outer probes (50/100/150 mm),
  Centre probe,
  Wooden storage boxes



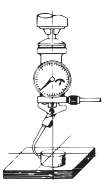




Internal diameter



Centring



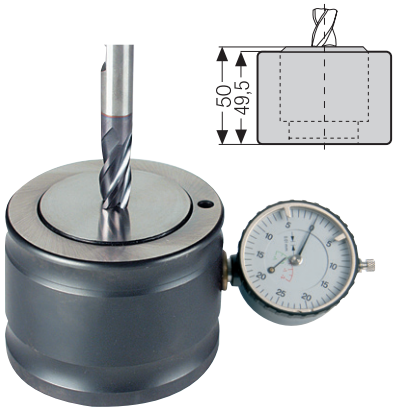
Outside diameter

Designation	Scale value mm	art.no.	€	Factory calibration art.no.	€
Centring device CO-AX	0.01	530010 0070	399,–	073103 W162	78,–

5162

Zero adjuster, height 50 mm

- For setting the reference point in the machine
- The adjustment device is placed on the workpiece and the tool (e.g. milling cutter) moved towards the spring-mounted contact surface until both pointers on the dial gauge are at zero. The lower edge of the tool is now positioned at exactly 50 mm ± 0.01 mm. The reference dimension 50 mm is entered into the machine control system.
  Attention: Process may only be performed while the tool is stationary.
- Base body and probe tip are case hardened (60 HRC), finely ground
- Two guide diameters for optimum handling of the contact surface
- 558020 0005: six magnets in the base, surface ground
- Supplied with dial gauge, operating manual and measurement log



Designation	External Ø mm	Measuring surface diameter mm	Scale value mm	art.no.	€
with dial gauge	64.5	47	0.01	558020 0001	297,–
with dial gauge and magnets	64.5	47	0.01	558020 0005	364,–

5163

Zero adjuster, height 100 mm

- Height adjustment dial for determining the position of the workpiece surface on the Z axis
- Can also be used horizontally
- Height tolerance ± 0.01 mm
- Especially suitable for micro-drills

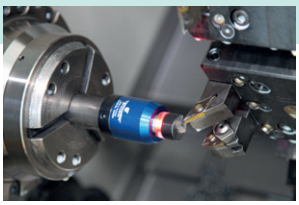




Design	Measuring surface diameter mm	Length x width x height mm	Scale value mm	art.no.	€
with dial gauge	10	90 x 48 x 25	0.01	558021 0001	186,50

5163

Height adjustment device for lathes



- For quick and easy determination of the reference point in the lathes
- Suitable for horizontal and vertical use
- Can be used only on electrically conductive materials
- **With illuminated display,** LED indicators with good all-round visibility
- Height tolerance ± 0.01 mm
- Travel reserve 2 mm
- Hardened probe tip, functional surfaces ground and lapped
- **Base equipped with three magnets for better grip when used horizontally**
- Supplied in wooden box with works certificate incl. 2x SR 44 batteries no. 500534 0001



Height mm	External Ø mm	Measuring surface diameter mm	art.no.	€
60	32	19	558030 1060	245,–

5162

Height adjustment device

- For quickly and easily determining the axial reference point for the machine spindle without damaging the workpiece.
- Can only be used on electrically conductive materials.
- **With illuminated display,** LED indicators with good all-round visibility
- Height tolerance ± 0.01 mm
- Over-travel margin 3 mm
- Hardened probe insert, functional faces ground and lapped
- **With three magnets for better grip**
- Supplied with 2x SR44 batteries, no. 500534 0001



Red lighting all the way around upon contact



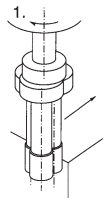
558030 0001

Height mm	External Ø mm	Measuring surface diameter mm	art.no.	€
50	55	14.0	558030 0001	359,–

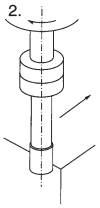
5162

Edge probe for rotary applications

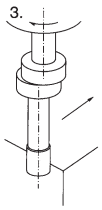
- For determining tool reference faces and edges
- **Recommended speed: approx. 600 rpm**
- All parts hardened and burnished
- Ground clamping and contact diameters
- Surfaces between holding fixture and probe head lapped
- Probe head is connected to the clamping shank via an extension spring
- Alignment accuracy 0.01 mm
- Supplied in a case



Approach, probe does not rotate smoothly



Probe touches the workpiece and runs quietly



Probe moves sideways with a jerk = reference point



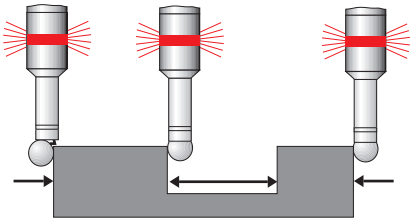
558040 0002 558040 0001

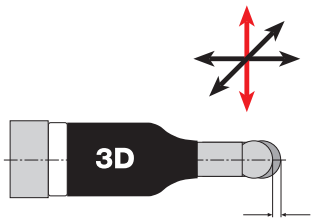
Clamp in shank diameter mm	Probe head diameter mm	L mm	art.no.	€
10	10/4	90	558040 0001	59,50
10	10	84	558040 0002	59,50
6	6	50	558040 0003	59,50

5162

Edge finder with illuminated display

- For positioning reference points on metallic workpieces
- Two-axis and three-axis measurements available
- Can also be used to determine the centre or diameter of a bore
- The distance from the spindle centre to the contact surface is 5.00 mm
- Can only be used on electrically conductive materials
- True-running accuracy ± 0.01 mm
- Hardened steel body with ground functional surfaces
- LED indicator lamps with good all-round visibility
- Supplied with batteries





Safety spring range 2 mm



558062 1016 558063 3020

Straight shank, 2D and 3D

- Incl. 1x 23A battery, no. 548079 4223

Clamp in shank diameter mm	L mm	Ball diameter mm	2D version art.no.	€	3D version art.no.	€
16	99	10	558062 1016	180,–		
20	94	10	558062 1020	180,–		
16	118	10			558063 3020	219,–

5162 5162

Straight shank, 2D and 3D, with signal tone

- Incl. 1x 23A battery, no. 548079 4223

Clamp in shank diameter mm	L mm	Ball diameter mm	2D version art.no.	€	3D version art.no.	€
20	119	10	558064 1020	279,–		
20	131	10			558065 1020	365,–

5162 5162



558064 1020

SCHWEIZER Hand-held magnifier *Tech-Line*

- Aplanatic lens system made from scratch-resistant silicate glass
- Large depth of field and high-contrast view
- Low-reflection black lens frame
- Metal or plastic handle with two-component paint, resistant to virtually all chemicals and solvents

Designation	Lens diameter mm	Magnification	art.no.	€
Tech-Line hand-held magnifier with plastic handle	90/22.8	2x/4x	560220 0204	88,60
Tech-Line hand-held magnifier with plastic handle	65	4x	560220 0004	69,10
Tech-Line hand-held magnifier with metal handle	28	8x	560220 0008	51,20
Tech-Line hand-held magnifier with metal handle	28	10x	560220 0010	53,50

5164



560220 0204

560220 0008

SCHWEIZER Hand-held reading glass

- Chrome-plated brass magnifier head
- High-quality black plastic handle
- Size 0035 high-quality reading glass with bi-convex silicate glass lenses
  Size 0255 high-quality bifocus reading lens with 2 different magnifications

Magnification	Lens diameter mm	art.no.	€
3.5x	65	560124 0035	46,10
2.5x / 5x	75 / 22.8	560124 0255	60,90

5164



560124 0255

SCHWEIZER Stand magnifiers and pocket microscope *Tech-Line*

Stand magnifiers

- Ideal for all planar tests, as a single stand magnifier or as a measuring magnifier with duo scale
- Fixed focus or vario-focus versions
- Aplanatic silicate glass lens, scratch-proof
- Large depth of field and high-contrast view
- Casing made from shock-proof, transparent plastic
- Insertion guide for effortlessly retrofitting with duo scales

Designation	Magnification	Lens diameter mm	art.no.	€
Fix-Focus	8x	30	560106 0008	38,10
Fix-Focus	10x	30	560106 0010	47,20
Vario-Focus	8x	22.8	560106 1008	52,40
Vario-Focus	10x	22.8	560106 1010	60,–

5164



560106 1008



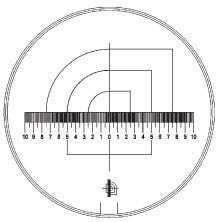
560106 0008

Duo scales

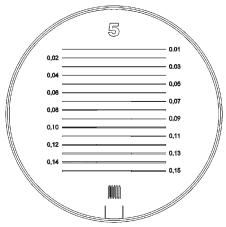
- Can be used with fixed-focus and vario-focus stand magnifiers, and the pocket microscope in conjunction with a stand adapter
- Two scales (Duo-Scale) on one plate: Ø 25 mm for stand magnifiers 8x and 10x, Ø 2.5 for pocket microscope 40x, 50x and 60x
- Scratch-resistant glass
- Hard chrome scale on the underside to prevent parallax errors

Designation	art.no.	€
Scale 1 - Measuring scale 20 mm	560106 5001	69,50
Scale 2 - Polar grid, angle, radius	560106 5002	69,50
Scale 3 - Angle	560106 5003	69,50
Scale 4 - Polar grid	560106 5004	69,50
Scale 5 - Thickness	560106 5005	69,50

5164



560106 5001



560106 5005

Set

- 8x vario-focus stand magnifier plus scales, supplied in an aluminium box

Contents	art.no.	€
Vario-Focus 8x plus scale	560106 5101	109,–
Vario-Focus 8x plus scales 1 to 5	560106 5102	320,–

5164



560106 5502

SCHWEIZER Precision thread counter *Tech-Line*

- With aplanatic precision silicate lens
- Glass measurement scale: 10 mm, division 0.1 mm
- Brass frame, matt chrome-plated



Magnification	Lens diameter mm	art.no.	€
8x	16.2	560123 0018	91,80

5164

SCHWEIZER Precision folding magnifier *Tech-Line*

- Innovative single-handed operation
- Aplanatic lens consisting of two plano-convex silicate lenses
- Black plastic frame
- Plastic casing with solvent-resistant painted finish



560125 0010

Magnification	Lens diameter mm	art.no.	€
6x	22.8	560125 0006	30,50
8x	22.8	560125 0008	36,30
10x	22.8	560125 0010	38,90
15x	22.8	560125 0015	41,10
20x	16.2	560125 0020	46,30

5164

SCHWEIZER Bi-convex folding magnifier *Tech-Line*

- Bi-convex silicate lenses
- High-gloss polished stainless steel casing



560128 0309

560128 0305

Magnification	Lens diameter mm	art.no.	€
3x + 3x + 3x = 9x	38	560128 0309	49,40
3x + 5x = 8x	38	560128 0305	47,40

5164

SCHWEIZER Watchmaker's loupes

Standard version
- Lens ground from silicate glass
- Biconvex, 10x with plano-convex ancillary lens
- Shock-resistant plastic frame with air vent

Version *Tech-Line*
- Aplanatic optics
- Plastic housing, with solvent-resistant painted finish



560116 0010

Magnification	Design	Lens diameter mm	art.no.	€
3x	Standard	25	560115 0003	11,90
5x	Standard	25	560115 0005	11,90
7x	Standard	25	560115 0007	14,20
10x	Tech-Line	22.8	560116 0010	19,95
15x	Tech-Line	16.2	560116 0015	24,80

5164

SCHWEIZER LED hand-held illuminated magnifier Tech-Line *CLASSIC*

- Mobile hand-held illuminated magnifier with state-of-the-art light technology and ergonomic shape
- 2-level boost switch to optimise the lighting, with acoustic feedback and haptic guidance
- High-contrast and homogeneous light thanks to optimal adjustment and light intensity
- Light colour 4500K - neutral white
- Low energy consumption thanks to modern SMD LEDs
- Ergonomic design, non-slip soft-touch handle zone and pleasant haptics
- Supplied with 3x LR-3 battery



560127 0010

Magnification	Lens design	Lens diameter mm	art.no.	€
10x	Aplanatic	30	560127 0010	81,10
15x	Aplanatic	22.8	560127 0015	81,10
2x / 4x	Bifocal/biconvex	70 / 22.8	560127 0002	96,–
4x	Aspherical	55	560127 0004	99,50
8x	Aplanatic	30	560127 0008	83,80

5164

SCHWEIZER Headband magnifier Tech-Line *BINO LED*

- Very robust metal construction, painted in low-sheen black
- Swivel-mounted LED unit for adjusting the lighting
- Light colour 6000 K
- The headband magnifier can be worn under glasses



- Supplied without interchangeable lenses

Designation	art.no.	€
Headband magnifier with LED lighting	560130 0001	102,50
	5164	

Interchangeable lenses

- Fold-up interchangeable lens case for various enlargements: 2x to 3.5x
- Interchangeable lenses are scratch-resistant and resistant to virtually all chemicals and solvents
- Metal-enclosed silicate glass interchangeable lenses
- Outstanding depth of field

Designation	art.no.	€
Interchangeable lenses 2.5x	560135 1025	27,40
Interchangeable lenses 2x	560135 1020	26,40
Interchangeable lenses 3.5x	560135 1035	34,50
Interchangeable lenses 3x	560135 1030	29,70
	5164	



SCHWEIZER Cleaning set

- High-end cleaning solution for all glass and plastic lenses and magnifiers
- Anti-static effect
- High-quality microfibre cleaning cloth included



Designation	art.no.	€
Cleaning set	560131 0001	14,25
	5164	

Stereoscopic zoom microscope, trinocular

- Version with 3rd lens barrel to adapt e.g. a camera
- sturdy, robust microscope
- cordless battery-powered operation (optional)
- Magnification 7x to 45x
- Eyepiece pair 10x, with dioptric adjustment
- Working distance 100mm
- Integrated handle for easy transportation
- Equipped with long-life LED direct/backlight, colour temperature 6300 K
- Supplied with eyepiece pair 10x and power supply



Designation	art.no.	€
Stereo microscope	561052 0001	494,–
	5169	

USB ocular camera for microscope

- Low-cost introduction to image/video transmission and visual measurement
- USB camera with EDGE technology for enhanced image reproduction
- Compatible with virtually all stereo and measuring microscopes using an adapter
- Adapter for Ø 23 mm, 30 mm/30.5 mm eyepieces and C-mount supplied
- USB 2.0 interface
- Images can be saved in all standard formats
- Optional reticle
- Simple measuring options for circles, angles, spacing
- Calibration function through supplied calibration standard
- Supplied with USB eyepiece camera with DinoCapture software and calibration stand



Designation	art.no.	€
USB retrofit camera 1.3 MP	561058 0005	409,–
	5169	

USB digital hand-held microscope

- For industrial inspection, quality control, assembly, repair, material defect analysis
- Low-cost introduction to image/video transmission and visual measurement
- CMOS Color Sensor
- Cameras available with EDGE technology for improved image reproduction
- Micro touch snapshot function for saving live images/videos directly
- Transfer of images to smartphone or tablet through optional WiFi adapter
- USB 2.0 interface
- Casing: Ø 32 x 105 mm
- DinoCapture software: 2D image measurement (lines, radius, diameter, circumference, polygon, angle) input of texts, output of measuring data in Excel at the click of a mouse
- Supplied with: USB hand microscope with USB cable L=1.8 m, DinoCapture software on CD

- 5610570.... Plastic casing, sensor resolution 1.3 MP, image resolution 1280,x,1024 pixels
- 5610571.... Metal casing, sensor resolution 5 MP, image resolution 2592 x 1944 pixels



561057 0001

Designation	Magnification	Working distance mm	art.no.	€
USB hand-held microscope AM4113ZT 1.3MP	10x to 50x / 200x	0.5 - 60	561057 0001	429,–
USB hand-held microscope AM4115ZT 1.3MP EDGE	20x to 200x	0.5 - 60	561057 0004	629,–
USB hand-held microscope AM7515MZT 5 MP EDGE	20x to 200x	0.5 - 60	561057 1002	999,–
			5169	

Stands

- Column stands
- With focussing option

Height adjustment	Projection mm	art.no.	€
145 mm	-	561057 3005	69,–
200 mm	150	561057 3006	240,–
		5169	



561057 3005

561057 3006

ATORN Digital microscope *Inspector*

- digital microscope system for visual inspection and for simple baseline measurements
- quick display of live image in full HD resolution (1080p)
- simple operation and control through integrated software
- outstanding representation of the workpiece thanks to image-enhancing functions
- no time-consuming recalibration for zoom alterations
- programmable buttons for quick and easy operation
- network-compatible for documenting and archiving images
- available with LED incident light or with LED direct/backlight
- 2.2x to 122x magnification, even with standard lenses
- Supplied with 5x lens, keypad, mouse, power supply, HDMI cable, Mini-USB cable, USB memory stick
- HD-Ready or FULL-HD monitor available as optional accessories





Designation	art.no.	€
Digital microscope II with LED ring light	561070 1001	7.500,–
Digital microscope II with LED ring light and LED transmitted light	561070 1002	7.700,–

5169

Accessories

Designation	Lens diameter mm	Magnification	art.no.	€
5x lens (standard accessory)	58	Optical 66x / digital 112x	561071 0001	250,–
25x lens	58	optical 258x / digital 660x	561071 0002	1.200,–
50x lens	58	optical 662x / digital 1324x	561071 0003	1.800,–
10x lens, planar	58	optical 122x / digital 266x	561071 0004	850,–
diffused LED dome light	-		561071 0006	1.350,–
PC module for live image capture	-		561071 0008	550,–
External control unit keypad KPIII	-		561071 1011	600,–

5169





561071 0004



561071 0006

Mitutoyo Workshop measuring microscope

- Compact and robust base body made from special cast iron
- Coordinate measuring table
- Dovetail guide with rack and pinion drive for adjusting the microscope head to alter focus
- Standard magnification 30x (lens 2x, eyepiece 15x)
- Test item displayed without inversion
- Backlighting, incident lighting and ring lamp
- Replaceable crosshair graticule built into the eyepiece
- Additional graticules (e.g. for determining radii or for thread measurement) are available on request
- Angle measuring device, can be rotated through 360°, Vernier scale 6 minutes
- Supplied with 2x lens, 15x eyepiece, graticule with crosshair, measuring table **with digital built-in micrometer no. 505404 0001**, LED backlighting and LED incident lighting, LED ring lamp with holding fixture adapter, 2 spare bulbs (24 V), spare fuse (0.5 A), covering hood, power supply for connection to 230 V / 50 Hz, Operating manual, shipped in disposable packaging



QM-DATA can be connected

Set

- Contains 7 pieces: TM-505B / TM-1005B microscope, lens with 2x magnification, eyepiece with 15x magnification, crosshair reticule, 2 digital built-in micrometers, ring light with holding fixture adapter

Model	E mm	art.no.	€
TM 505B	50 x 50	561501 1012	7.617,–
TM 1005B	100 x 50	561501 1013	9.227,–

5105



Supplied with ring light

Eyepieces and lenses

- Sizes 0115 and 0202 are already included in the all-in-one device

Designation	art.no.	€
10x eyepiece	561510 0110	231,–
15x eyepiece	561510 0115	231,–
20x eyepiece	561510 0120	254,–
2x lens	561510 0202	277,–
5x lens	561510 0205	366,–
10x lens	561510 0210	366,–

5105

Total enlargements with ocular lens combinations:

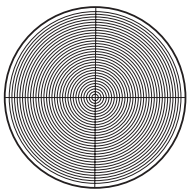
Lens	Ocular 10x	15x	20 x
2x	**20x** (6.5 mm)	**30x** (6.5 mm)	**40x** (5 mm)
5x	**50x** (2.6 mm)	**75x** (2.6 mm)	**100x** (2 mm)
10x	**100x** (1.3 mm)	**150x** (1.3 mm)	**200x** (1 mm)

The data provided in brackets specifies the image diameter.

Replaceable eyepiece graticules

Designation	art.no.	€
Graticule, circle, Ø 0.05-4.0 mm	561510 0042	125,–

5105

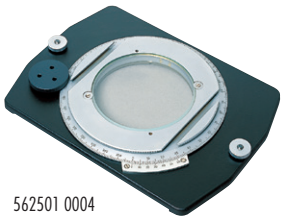


561510 0042

Holding fixture for test items

Designation	art.no.	€
Rotatable table for No. 5615010001	562501 0003	928,–
Rotatable table for No. 5615010002	562501 0004	1.140,–

5105

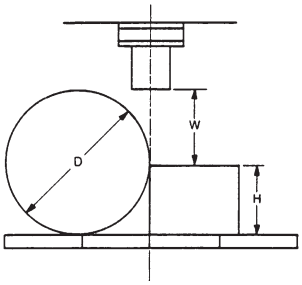


562501 0004

Mitutoyo Measuring projector *PJ-PLUS*



- Profile projector for accurate transmitted and incident light testing of small to medium-sized workpieces
- Clear image across the entire screen Ø of 315 mm
- Screen can be rotated 360° with cross hairs
- 10x lens with separate semi-opaque incident mirror included
- LED transmitted and incident lighting with infinitely variable luminous intensity control for long service life at low power consumption
- Telecentric lighting system for uniform lighting
- Fanless design prevents contaminants from entering the unit
- Built-in digital displays for reading the angle of the rotatable screen
  Switch between 1 arc minute or 0.01 degree, with 0.001 mm resolution for the X and Y axis
- RS-232C interface for X and Y axis
- **562001 1010** with 100 x 100 mm coordinate measuring table, fine and quick adjustment across the entire movement range, integrated glass scales, max. workpiece weight: 10 kg
- **562001 2010** with 200 x 100 mm coordinate measuring table, fine and quick adjustment across the entire movement range, integrated glass scales, max. workpiece weight: 8 kg
- Supplied with power cable for 230 V / 50 Hz, covering hood, 10x lens, anti-glare protection, operating manual in disposable shipping packaging
- **Calibration on request**



Model	E mm	art.no.	€
PJ-PLUS P1010A	100 x 100	562001 1010	11.980,–
PJ-PLUS P2010A	200 x 100	562001 2010	14.940,–

5107

	PJ-P1010A				PJ-2010A			
	10x	20x	50x	100x	10x	20x	50x	100x
Field of view Ø mm	31,5	15,7	6,3	3,1	31,5	15,7	6,3	3,1
W mm	66 (20)	32,5 (2)	12,6 (12,6)	5 (5)	66 (20)	32,5 (2)	12,6 (12,6)	5 (5)
H mm	91	91	91	91	90,5	90,5	90,5	90,5
D mm	207	87	27	10	185	87	27	10

()= with incident lighting

Accessories

Designation	art.no.	€
10x lens with semi-opaque incident mirror (standard accessory)	562030 0050	951,–
20x lens with semi-opaque incident mirror	562030 0051	951,–
50x lens with semi-opaque incident mirror	562030 0052	1.250,–
100x lens with semi-opaque incident mirror	562030 0053	1.250,–
Special incident mirror with 10x lens	562030 0010	119,–
Special incident mirror with 20x lens	562030 0011	94,–

5105

Over 200,000 tools available online!
Register online now!



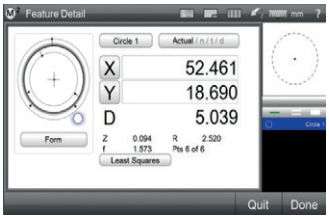
www.saratools.com

Mitutoyo M2 data processing system

- Intuitive 2D data processing system
- Measurement points recorded by way of crosshairs (562705 0001) or optical edge sensor (562705 0002)
- Easy to measure points, degrees, circles, angles, etc.
- Constructs measurement points and links various elements
- Parts program development in Teach-in process
- Tolerance inspection in accordance with DIN/ISO
- Comprehensive measurement reports
- A Windows 10-compatible PC is required to use the software.
- M2 measurement software supplied with interface box, connection cable, device holder for optional tablet PC on the projector housing, power supply and USB cable



Tablet PC not included in scope of delivery

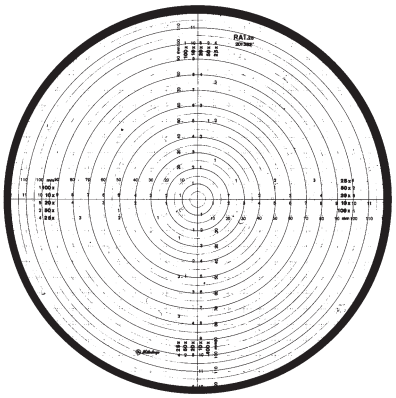


Designation	art.no.	€
M2 data processing system without edge detection	562705 0001	2.098,–
M2 data processing system with edge detection for PJ and PH projectors	562705 0002	3.595,–
M2 data processing system with edge detection for PV projectors	562705 0003	3.456,–

5104

Mitutoyo Standard target

- For comparing screen displays on measuring projectors
- Standard targets are reference drawings on which specific geometric shapes, e.g. circles, are drawn as fixed dimensions for the different magnifications.
- **With radii**
- Made from low-warp, transparent plastic, coated with a protective layer
- Geometric shapes printed on the underside
- Line widths: 0.05, 0.08, 0.10 and 0.12 mm, different for even millimetre and intermediate dimensions. Linear division line accuracy: 0.05 mm over 300 mm. Thermal expansion: 0.08 mm per 10° C
- Standard targets in other versions (e.g. for threads) available on request



Designation	D mm	art.no.	€
Standard target, type RA (radii)	300	562520 3012	430,–
Standard target, type RA (radii)	500	562520 5103	626,–

5105





MITUTOYO
Measuring equipment catalogue
635 pages
Art.no. 019900 0086

Overview of all free manufacturers' catalogues on page 20/21

Mitutoyo Surface roughness testing device *Surftest SJ-220*

- User-friendly, mobile surface roughness measurement device with colour LCD touchscreen for easy, precise on-site measurement
- Skid probe system with user-friendly and intuitive menu guidance
- Battery-operated, portable system for measurement close to production
- The 2.8 inch colour LCD touchscreen with back lighting offers outstanding readability, even in low light conditions
- Calculation results, evaluated profiles, BAC curve and ADC curve can be displayed
- Operated via keys on the front and touchscreen
- Various (optional) feeds extend the range of application
- Supports 25 languages
- Data transmission via Bluetooth (optional) to PC or mobile device
- Probe system skid radius 40 mm, contact force of skids < 400 mN
- Measurement force of probe point 0.75 mN, probe point radius 2 µm, probe point angle 60°

  Technical data:
  Profiles: P-Profile, R-Profile, DF, R-Motif
  Standards: DIN EN ISO 21920, DIN EN ISO 4287, DIN EN ISO 13565, DIN EN ISO 12085, VDA 2006, JIS, ASME
  Measurement range: X = 17.5mm / Z = 360µm**Graphical analysis:** BAC / ADC curves
  Measurement ranges Z / resolution: 360 µm = 0.02 µm / 100 µm = 0.006 µm / 25 µm = 0.002 µm
  Cut-off lengths: λc: 0.08, 0.25, 0.8, 2.5, 8.0 mm / λs: 2.5, 8 µm
  Individual measurement section: 0.08, 0.25, 0.8, 2.5, 8.0 mm
  Number of individual measurement sections: x1 - x10
  Digital filter: Gauss filter, 2CR75, PC75
- Supplied with transport bag, mains power supply unit, USB 2.0 cable, roughness gauge and user manual



570521 1001



Bluetooth data transmission with optional transmitter





Designation	art.no.	€	Factory calibration standard roughness art.no.	€	Factory calibration device art.no.	€
Surface roughness measuring device Surftest SJ-220	570521 1001	2.940,–	073103 W158	180,–	079942 W901	115,–
Surface roughness testing device Surftest SJ-220R	570521 1010	3.510,–	073103 W158	180,–	079942 W901	115,–
Surface roughness testing device Surftest SJ-220S	570521 1020	4.850,–	073103 W158	180,–	079942 W901	115,–

5105



Feed unit SJ-220S, travel right/left

Mitutoyo Roughness standard

- For adjusting surface roughness meters (standard accessory with SJ-210 / SJ-310 / SJ-410)
- Approx. Ra 3.0 µm / Rmax (Ry) 9.4 µm
- Standard size 32 x 22 mm
- In shock-proof, anti-slip plastic casing, approx. 55 x 46 mm



Designation	art.no.	€	Factory calibration standard roughness art.no.	€
Roughness standard Ra approx. 3.0 µm / Rmax (Ry) 9.4 µm	570530 0101	354,–	073103 W158	180,–

5105

Mitutoyo Surftest *SJ-210* surface roughness tester

Digi-matic USB

- Portable mains-independent skid system for determining surface roughness
- Separate feed allows measurements in hard-to-reach places, as well as overhead measurements
- Dust-protected, touch-sensitive control panel and integrated printer
- Extremely easy-to-use and intuitive menu navigation
- Measurement results / profiles shown clearly on a 14.5 cm (5.7") colour display
- 16 languages
- Storage of up to 10 measurement conditions
- Statistics function and colour-coded tolerance analysis
- Customisable password protection
- Storage of measurement data on an optional SD card
- Automated calibration function / can be calibrated based on the average of up to 12 measurements
- Choice of mains or battery operation
- Profile method with single skid system
- Measurement range: X-axis feed = 16 mm, S feed = 5.6 mm
- 60° contact point with 2 µm radius / measuring force 0.75 mN
- Measuring speed: 0.25 mm/s, 0.5 mm/s, 0.75 mm/s
- Analysis parameters: Ra, Rq, Rz, Ry, Rp, Rv, Rt, R3z, Rsk, Rku, Rc, RPc, RSm, Rmax, Rz1max , S, HSC, RzJIS, Rppi, RΔa, RΔq, Rlr, Rmr, Rmr(c), Rδc, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2, Vo, λa, λq, Lo, Rpm, tp, Htp, R, RX, AR, W, AW, Wx, Wte
- Cut-off length: 0.08 mm / 0.25 mm / 0.8 mm / 2.5 mm / 8 mm
- Number of individual measurement sections: 1x, 2x, 3x, 4x, 5x, 6x, 7x, 8x, 9x, 10x, unset length
- Digital filter: 2CR75 / PC75 / Gaussian
- Parameters in accordance with DIN EN ISO, VDA, JIS, ANSI and MOTIF
- Data communication: Digimatic, RS-232, SD memory card
- Supplied with roughness standard, mains adapter and 5 rolls of spare paper



Designation	art.no.	€	Factory calibration standard roughness art.no.	€	Factory calibration device art.no.	€
Surface Roughness Tester SJ-310	570526 1310	4.950,–	073103 W158	180,–	079942 W901	115,–
Surface Roughness Tester SJ-310R	570526 1330	5.325,–	073103 W158	180,–	079942 W901	115,–
Surface Roughness Tester SJ-310S	570526 1350	6.990,–	073103 W158	180,–	079942 W901	115,–

5105



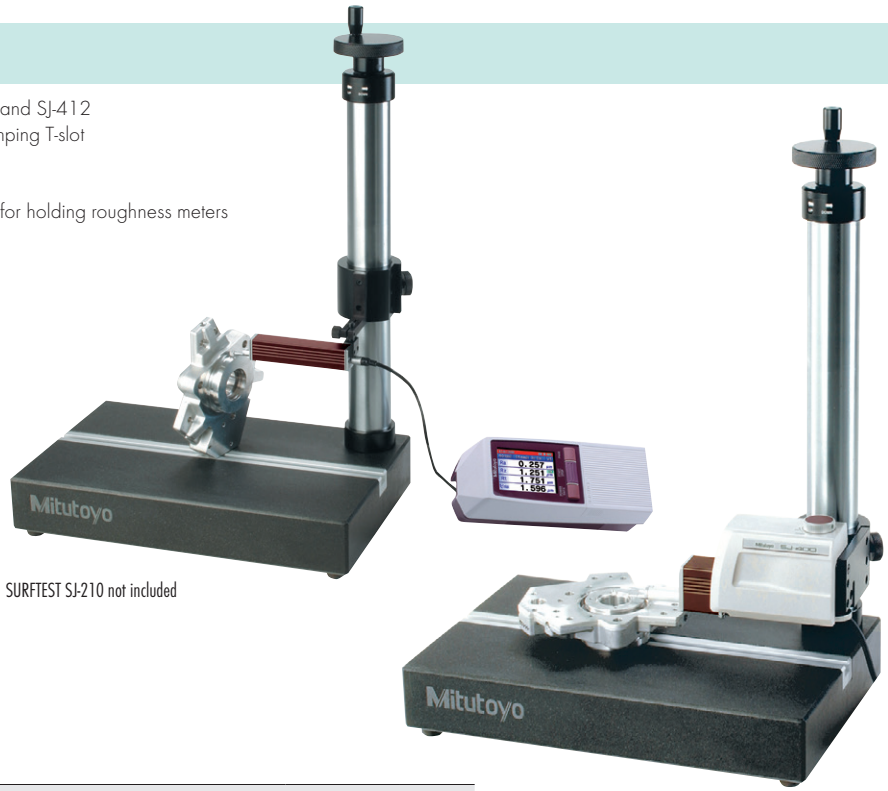
Use with height meter 5305020300 via adapter 5705310016



Transverse measurement, S version

Mitutoyo Measuring stand

- For surface roughness testers SJ-210, SJ-310, SJ-411 and SJ-412
- Granite measuring table, 400 x 250 mm, with a clamping T-slot
- Total height: approx. 555 mm
  Height adjustment: 250 mm
- 570531 0116 requires adapter no. 570531 0017 for holding roughness meters



SURFTEST SJ-210 not included

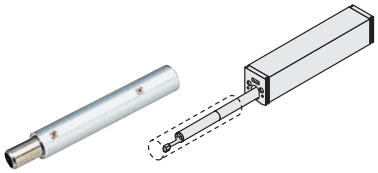
Designation	art.no.	€
Measuring stand for surface roughness testers SJ-411 and SJ-412	570531 0107	1.125,–
Measuring stand for surface roughness testers SJ-210 and SJ-310	570531 0116	1.125,–

5103

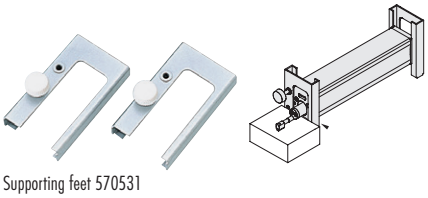
Surface roughness testing equipment not included in scope of delivery

Mitutoyo Accessories

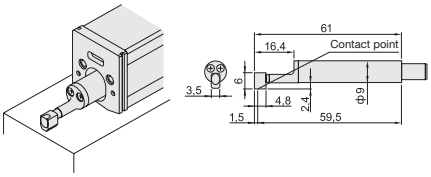
- For Surftest SJ-210 / SJ-310 surface roughness testers



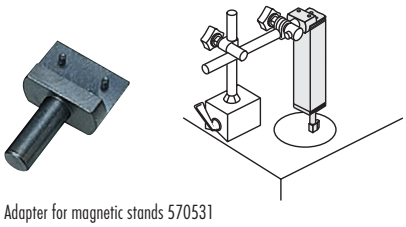
Extension 570531 0010



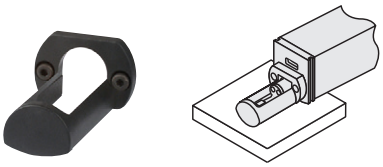
Supporting feet 570531 0015



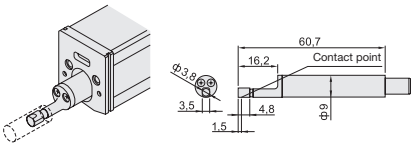
Standard probe head 570531 0050



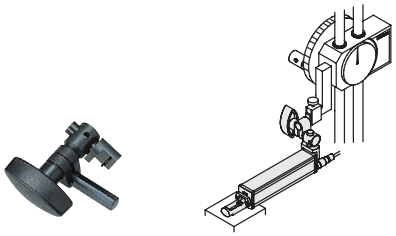
Adapter for magnetic stands 570531 0017



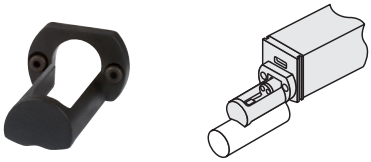
Skid for flat parts 570531 0020



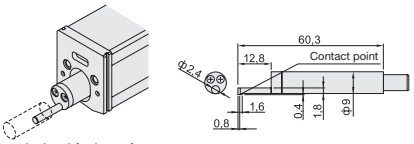
Probe head for bores from Ø 4 mm 570531 0051



Adapter for height meters and marking-out instruments 570531 0016



Skid for straight parts 570531 0021



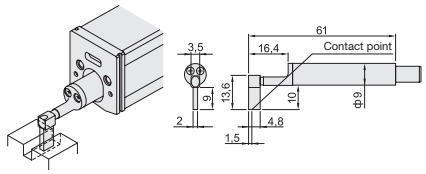
Probe head for bores from Ø 2.8 mm 570531 0052

Probe heads, adapters, skids

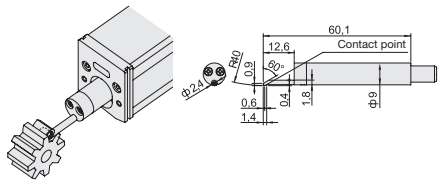
- Probe heads with 2 µm tip radius, 60° point angle and 0.75 mN measuring force
- Size 0001 with 5 µm tip radius, 90° point angle and 4 mN measuring force
- Size 0050 comes as standard with SJ-210 / SJ-310
- Sizes 0015 / 0020 / 0021 come as standard with SJ-310

Designation	art.no.	€
Standard probe head, bores from Ø 7 mm	570531 0050	692,–
Probe head, bores from Ø 4 mm	570531 0051	840,–
Probe head, bores from Ø 2.8 mm	570531 0052	840,–
Probe head for narrow grooves	570531 0053	840,–
Probe head for tooth flank measurements	570531 0054	1.470,–
Probe head for transverse feed (standard with S-version)	570531 0055	743,–
Probe head for bores from Ø 7 mm (5 µm 90° / 4 mN)	570531 0001	558,–
Probe head extension, 50 mm	570531 0010	258,–
1 pair of feet to adjust the height of the feed unit (standard accessory SJ-310)	570531 0015	156,–
Adapter for height meters and marking-out instruments	570531 0016	105,–
Adapter for surface roughness testers SJ-210 / SJ-310	570531 0017	53,–
Skid for flat workpieces (standard accessory SJ-310)	570531 0020	105,–
Skid for straight workpieces, 160° V-block (standard accessory SJ-310)	570531 0021	105,–
Spare connection cable, display feed unit SJ-210	570531 0022	89,–
Battery pack for Surftest SJ-210	570531 1011	123,50

5105



Probe head for narrow grooves 570531 0053



Probe head for tooth flank measurement 570531 0054

Consumables for *Surftest SJ-310* and *SJ-410*

Designation	art.no.	€
Packet with 5 rolls of graph paper	563030 0101	35,–

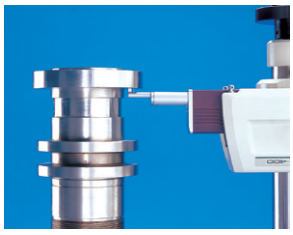
5103

Mitutoyo Surftest SJ-411 / 412 surface roughness tester

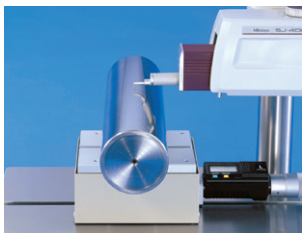
Digi-matic USB

- Portable mains-independent reference level system for determining the primary profile P, surface roughness R and ripple W
- Dust-protected, touch-sensitive control panel and integrated printer
- Extremely easy-to-use and intuitive menu navigation
- Measurement results / profiles shown on a 14.5 cm (5.7") colour display.
- Radius and incline compensation
- 16 languages
- D.A.T. function (Digital Adjustment Tilting)
- 5 probes can be calibrated independently of one another
- Storage of up to 10 measurement conditions
- Statistics function and colour-coded tolerance analysis
- Customisable password protection
- Storage of measurement data on an optional SD card
- Automated calibration function / can be calibrated based on the average of up to 12 measurements
- Choice of mains or battery operation
- Measurement procedure = reference level measuring system
- Measurement ranges: Z-axis: adjustable 800 (up to 2,400 µm) / 80 / 8 µm
  X axis SJ-411 = 25 mm / SJ-412 = 50 mm
- 60° contact point with 2 µm radius / measuring force 0.75 mN
- Measuring speed: 0.05 mm/s, 0.1 mm/s, 0.2 mm/s, 0.5 mm/s, 1 mm/s
- Analysis parameters: Ra, Rq, Rz, Ry, Rp, Rv, Rt, R3z, Sk, Rku, Rc, RPc, RSm, Rmax, Rz1max, S, HSC, RzJIS, Rppi, RΔa, RΔq, Rlr, Rmr, Rmr(C), Rδc, Rk, Rpk, Rvk, Mr1, Mr2, A1, A2, Vo, λa, λq, Lo, Rpm, tp, Htp, R, Rx, AR, W, AW, Wx, Wte
- Analysis profiles: P-profile (P), R-profile (R), filtered ripple profile (W), R-motif, W-motif
- Parameters in accordance with DIN EN ISO, VDA, JIS, ANSI and MOTIF
- Cut-off length: 0.08 mm / 0.25 mm / 0.8 mm / 2.5 mm / 8 mm
- Number of individual measurement sections: 1x, 2x, 3x, 4x, 5x to 20x, unset length
- Digital filter: 2CR75 / PC75 / Gaussian
- Data communication: Digimatic, RS-232, SD memory card
- Supplied with roughness standard, mains adapter and 5 rolls of spare paper




Overhead measurement


Radius measurement


Slot measurement

Model	X travelling distance	art.no.	€	Factory calibration standard roughness art.no.	€	Factory calibration device art.no.	€
SJ-411	25	570528 0415	9.640,–	073103 W158	180,–	079942 W901	115,–
SJ-412	50	570528 0416	11.310,–	073103 W158	180,–	079942 W901	115,–

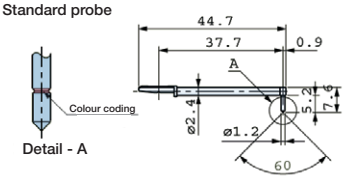
5175

Accessories

Designation	art.no.	€
Standard probe (probe head R 2 µm)	570531 0101	308,–
Probe for small holes	570531 0102	383,–
Probe for very small holes	570531 0103	493,–
Probe for deep holes	570531 0104	559,–
Probe for grooves (10 mm)	570531 0105	334,–
Probe for deep grooves (20 mm)	570531 0106	334,–

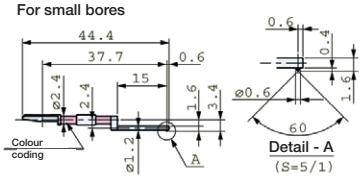
5104

Standard probe



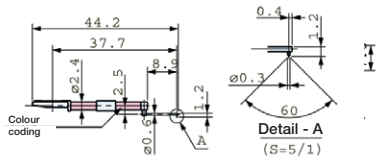
570531 0101

For small bores



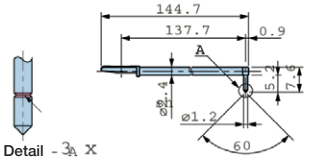
570531 0102

Standard probe
For extremely small bores



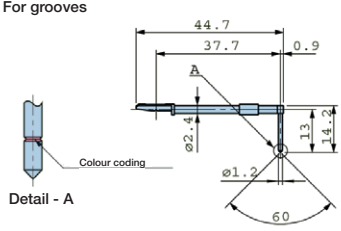
570531 0103

For deep bores



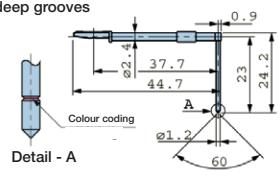
570531 0104

For grooves



570531 0105

For deep grooves



570531 0106

Digital length measurement system

The DRO system (**D**igital **R**ead **O**ut) newly developed by Mitutoyo includes the linear scales of the AT 100 series and the display units (counters) of the K series. Linear scales and counters offer maximum precision in reading axial adjustments of machine tools and measuring instruments.
The DRO system can be assembled to optimally fulfil specific tasks such as use on turning, milling or grinding machines.
The linear scales are supplied in a attachable state and are easy to install. The performance of machines and facilities is increase, read errors are eliminated. Backlash in guides or adjustment backlash is apparent because the dimension of every movement of the slide or a guide piece is read. Linear errors in an axis of travel can be compensated for on the display unit. Fitting must take place parallel to the axis (within 0.2 mm on scale length), or else deviations may arise.



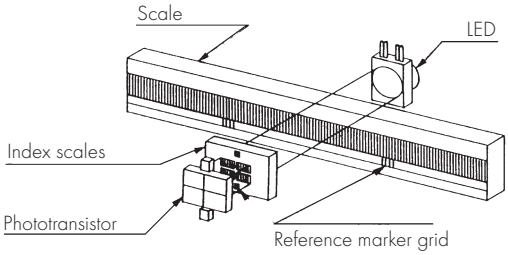
AT 715

The linear scale systems are offered with three cross sections:

AT 116 Standard profile (cross section 22 x 35 mm) up to 1500 mm with permanently attached connection cable

AT 715 Standard profile with ABSOLUTE scale (cross-section 22 x 36.5 mm) up to 1800 mm with permanently attached connection cable

The aluminium housing of the linear scale is fitted with an oil-resistant plastic lip on the encoder side. The connection cable are housed in steel and shielded. If the standard length of the connection cable is not sufficient, extension cables (special accessories) are available.
The easy-to-use display units of the K series are available in different models for a wide variety of tasks.



Functional principle AT 112F / AT 116

Caution!
When selecting suitable scales, please always take into account the effective travel of your machine that can be adjusted by hand. Please also bear in mind that a mini-profile AT 112F is available for use in confined installation surroundings.

	KA counter
Zero position	•
ABS origin only AT 715	•
Adjustment of resolution	•
Switchable counting direction	•
mm/inch switching	•
Preselection/zero position	•
Halving of displayed value	•
ABS/INC coordinate switching	•
Zero approximation (INC coordinate)	•
Signal sensor	optional
Hole circle machining	•
Hole row machining	•
Scale reference points* only AT 112 / 115	•
Tool specifications	10
Addition of the values of two axes*	•
RS-232C output	optional
Linear error compensation	•
Stabilisation of last position on display	•
• = Standard accessories * = This function is not available in the two-axes version	

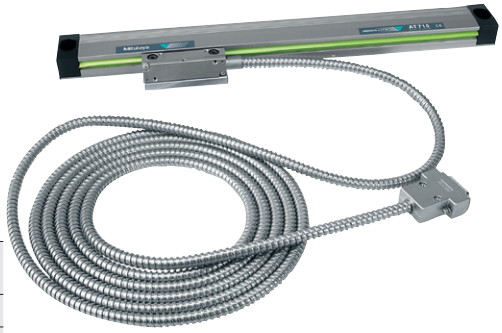


Mitutoyo Digital length measurement system *LINEAR SCALE AT 715*

ABSOLUTE®

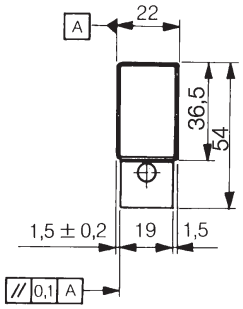
TÜVRheinland® ZERTIFIZIERT
Sicherheit
Staub- und wasserge-schützt
www.tuv.com
ID 0000007295

- **ABSOLUTE scale**
- Linear scale ready for direct mounting with aluminium profile casing
- Includes fasteners
- Profile cross-section 22 x 35 mm (without encoder unit)
- **Connection only to KA-COUNTER** (574021....)
- Error margin:
  100-500 mm = 5 µm
  600-1800 mm = 7 µm
  2000-3000 mm = 10 µm
- Supplied with operating manual, shipped in disposable packaging
- **Attention:** When selecting suitable scales, please always take into account the effective manually adjusted travel for your machine. Please also bear in mind that a mini-profile AT 112F is available for use in confined installation surroundings.



Nominal dimension mm	Max. length measuring range mm	L mm	Cable length m	art.no.	€
100	120	278	3.5	573030 0101	423,–
150	170	328	3.5	573030 0151	423,–
200	220	378	3.5	573030 0201	423,–
250	270	428	3.5	573030 0251	423,–
300	330	488	3.5	573030 0301	426,–
350	380	538	3.5	573030 0351	429,–
400	430	588	3.5	573030 0401	432,–
450	480	638	3.5	573030 0451	435,–
500	540	698	3.5	573030 0501	451,–
600	640	798	3.5	573030 0601	454,–
700	740	898	3.5	573030 0701	460,–
750	790	938	3.5	573030 0751	464,–
800	840	998	3.5	573030 0801	474,–
900	940	1098	3.5	573030 0901	506,–
1000	1040	1198	5.0	573030 1001	535,–
1100	1140	1298	5.0	573030 1101	555,–
1200	1240	1398	5.0	573030 1201	573,–
1300	1340	1498	5.0	573030 1301	609,–
1400	1440	1598	5.0	573030 1401	638,–
1500	1540	1698	5.0	573030 1501	680,–
1600	1640	1798	5.0	573030 1601	728,–
1700	1740	1898	5.0	573030 1701	763,–
1800	1840	1998	5.0	573030 1801	805,–
2000	2040	2198	5.0	573030 2001	1.300,–
2200	2240	2398	5.0	573030 2201	1.400,–
2400	2440	2598	7.0	573030 2401	1.600,–
2500	2540	2698	7.0	573030 2501	1.600,–
2600	2640	2798	7.0	573030 2601	1.700,–
2800	2840	2998	7.0	573030 2801	1.800,–
3000	3040	3198	7.0	573030 3001	2.000,–

5105



Cross section dimensions

Mitutoyo Extension cable

- For ***LINEAR SCALE*** Length measurement systems
- Ready-made, steel-covered and shielded extension cable including connector
- **Caution:** Only one extension cable may be connected at any time, otherwise electronic data transfer may be impaired. If you require longer cables, please contact us.



suitable for AT 715

Cable length m	AT 715 art.no.	€
2	573046 0002	222,–
5	573046 0005	312,–
7	573046 0007	380,–

5105

Mitutoyo Digital display unit *LINEAR SCALE model KA200*

- Compact design
- Easily readable 15 mm high LED digits
- For connecting model AT 103, AT 116, AT 112F and AT 715 scales on two or three axes
  For connection to turning and milling machines (adjustable mode)
- Adjustable resolution: 0.001 mm and 0.005 mm resolution (for AT1xx scales)
- Display: 8 digits, (-) sign, zero point
  Connection: 230 V / 50 Hz
  Power consumption: 30 VA
- Supplied with mains power cable and operating manual, shipped in disposable packaging

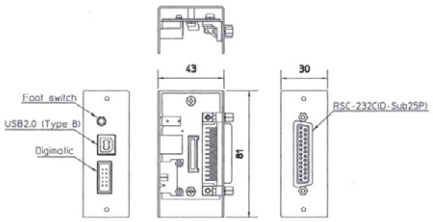


Designation	Length x width x height mm	Weight kg	art.no.	€
Display unit KA for 2 axes	300 x 70 x 167	1.25	574021 2004	683,–
Display unit KA for 3 axes	300 x 70 x 167	1.30	574021 2005	822,–

5105

Accessories

- Interface plug-in card with a variety of possible uses
- Page 1 with RS-232C interface
- Page 2 with USB output, DIGIMATIC input and foot switch connection socket

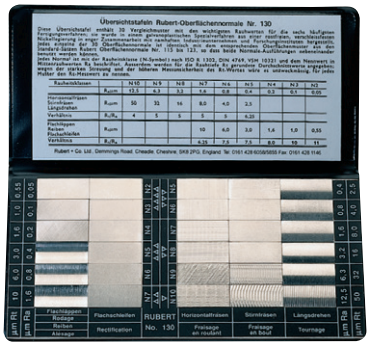


Designation	art.no.	€
Interface plug-in card	574021 1200	281,–

5105

Surface comparison standard

- **For visual and tactile comparison**
- Wear-resistant and stainless
- Cannot be calibrated
- Supplied in a synthetic leather case



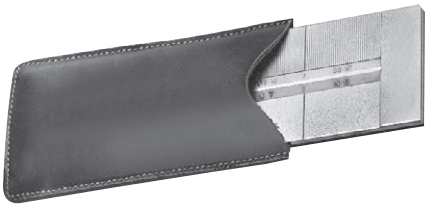
Sentence

- 30 reference samples for the entire spectrum of machining processes, approx. 120 x 90 mm: Horizontal milling, reaming, face milling, lapping, longitudinal turning, flat grinding

Designation	art.no.	€
Surface comparison standard Ra 0,05-12,5µm (N2 - N10)	570601 0010	430,–

5169

- Separate plate for every machining process
- Enclosed table with Rp, Rt and Rz values



Designation	Number of samples	Machining method	art.no.	€
Surface comparison standard, Ra 3.2-25µm	8	Metal blasting	570602 0002	382,–
Surface comparison standard Ra 0.0125-0.2µm (N0-N4)	5	Hand polishing	570602 0004	485,–
Surface comparison standard Ra 0.4-50µm (N5-N12)	8	Turning	570602 0006	239,–
Surface comparison standard Ra 0.4-50µm (N5-N12)	8	Face milling	570602 0007	239,–
Surface comparison standard Ra 0.025-3.2µm (N1-N8)	8	Flat grinding	570602 0008	239,–
Surface comparison standard Ra 0.025-3.2µm (N1-N8)	8	Circular grinding	570602 0009	239,–
Surface comparison standard Ra 0.4-50µm (N5-N12)	8	Spark erosion	570602 0010	239,–

5169

SAUTER Layer thickness measuring instrument *JCT 100*

- For the precise, non-destructive measurement of layer thicknesses on iron, steel and non-ferrous metals
- Combination of magnetic and eddy current measurement methods
- Automatic detection of base material (F/N)
- Sturdy, low-wear sensor technology
- High measurement accuracy with one- and two-point calibration
- Automatic or manual rotation of the display to make it easier to read
- Evaluation via coloured LED display: green (OK), red (below threshold), yellow (above threshold)
- Bluetooth app (Android) for **wireless data transmission**
- Statistics function, scan mode, threshold function, voice transmission, LED torch
- Storage function for multiple measurements
  Measurement range 0 to 2000 µm
  Readability: 0.1 µm Tolerance: ±2% from maximum value
  Units: µm / mil (inch)
  Sensor type: internal, FE & NFE
  Interfaces: USB 2.0, Bluetooth
  Power supply: rechargeable battery
  Dimensions (L × W × H): 152 × 65 × 35 mm
- Comes in a handy transport box with accessories and user manual



Min./max. layer thickness of measuring range	Design	art.no.	€
0 - 2000 µm	Sensor placement internally	577014 0100	399,–
		5171	

SAUTER *TC* layer thickness measuring instrument

- For quick and non-destructive layer thickness measurement of coatings on ferro-magnetic base materials and non-ferrous metals
- With external (TE) probe
- Small, handy device
- Easily readable LCD display
- RS 232 C interface
- Measurement principle
  Model TE-F for measuring non-magnetic layers on a ferro-magnetic base material (steel/iron)
  Model TE-N for measuring non-conductive layers (anodic oxide layer, painted surface protection etc.) on non-ferrous metals
  Model TE-FN combination of both aforementioned measurement principles
- Measurement range 0 to 1250 µm
  Resolution < 100 µm = 0.1 µm / > 100 µm = 1 µm
  Minimum strength of base material 0.3 mm
  Smallest measuring area Ø 6 mm
  Smallest curve radius: F = 1.5 mm convex, F = 25 mm concave, N = 3 mm convex, N = 50 mm concave
  Accuracy ± 4 % of measured value (standard)
  ± 1 % of measured value (two-point calibr.)
  Power supply 4 x LR3 Micro, AAA
  Weight 81 g
  Dimensions L x W x H, 131 x 65 x 28 mm
- Supplied in transport box with zero point plate, spacer foils, 4 batteries LR3 No. 5480794003 and operating manual



577004 0001



With external probe

Designation	Min./max. layer thickness of measuring range	Design	art.no.	€	Factory calibration art.no.	Factory calibration €
TE-F	0-1250 µm	Base material ferromagnetic	577004 0001	415,–	073103 W159	115,–
TE-FN	0-1250 µm	Base material ferromagnetic and non-ferrous metal	577004 0003	529,–	073103 W159	115,–
			5171			

SAUTER *HMM* rebound hardness tester

- For testing the hardness of large, solid workpieces
- Minimum wall thickness 8 mm, 3 mm for coupling with a solid base
  Minimum workpiece weight 3 kg, 2 kg for coupling with a solid base
- Workpiece surface Ra < 10 µm
- Integrated data memory for up to 9 measurements
- Basis of LEEB hardness test and calculation
- Switchable backlighting, battery operation
- Dimensions L x W x H: 150 x 80 x 30 mm
- Direct display of HRC, HRB, HV, HB, HS, HL and tensile strength parameters
- **Technical data:**
  Hardness scale ranges
  HRC 19.8 - 68.5
  HRB 13.5 - 101.7
  HV 80 - 976
  HB 30 - 655





Wireless infra-red printer included

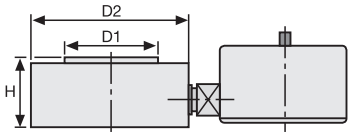
Designation	Hardness value	Error limit %	art.no.	€	**Factory calibration** art.no.	€
HMM	170 - 960 HL	1.5	576103 0001	1.209,–	073103 W135	187,–
HMM without printer	170 - 960 HL	1.5	576103 0010	1.079,–	073103 W135	187,–

5171

Load cell

- For measuring pressure forces; low height and versatile; for occasional inspection measurements e.g. during adjustment and service work,
- **Hydraulic design**
- Drag indicator
- Supplied in a carry case with calibration certificate





Max. force measuring range	Scale value, force	D mm	d4 mm	External Ø mm	Height mm	art.no.	€
0-250 N	5 N	34	75	63	30	576610 0001	649,–
0-400 N	10 N	34	75	63	30	576610 0002	649,–
0-630 N	10 N	34	75	63	30	576610 0003	649,–
0-1 kN	10 N	34	75	63	30	576610 0004	649,–
0-1.6 kN	50 N	34	75	63	30	576610 0005	649,–
0-2.5 kN	50 N	34	75	63	30	576610 0006	649,–
0-4 kN	100 N	34	75	63	30	576610 0007	649,–
0-6.3 kN	100 N	34	75	63	30	576610 0008	649,–
0-10 kN	200 N	34	75	63	30	576610 0009	649,–
0-16 kN	500 N	34	75	63	30	576610 0010	649,–
0-25 kN	500 N	34	75	63	30	576610 0011	649,–
0-40 kN	1 kN	34	75	63	30	576610 0012	649,–
0-63 kN	1 kN	55	90	63	32	576610 0013	710,–
0-100 kN	1 kN	55	90	63	32	576610 0014	710,–
0-160 kN	5 kN	112	145	63	38	576610 0015	925,–
0-250 kN	5 kN	112	145	63	38	576610 0016	925,–
0-400 kN	10 kN	112	145	63	38	576610 0017	925,–
0-630 kN	10 kN	112	145	63	38	576610 0018	925,–

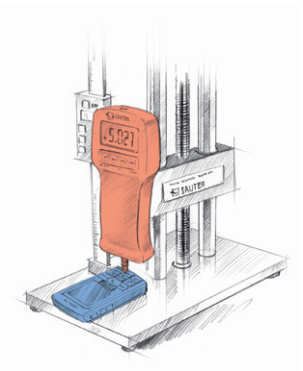
5171

SAUTER Digital force measuring devices

Model FK

- Robust device for measuring tensile and compressive force
- Reliable operation thanks to ergonomic casing
- Attachment for all SAUTER test stands on the back
- Display switches automatically depending on direction of use
- Peak-hold function for recording peak values
- Track function for continuous measurement
- Measuring frequency 1,000 Hz
- Measurement uncertainty 0.5 % (of max. value)
- Overload protection 200 %
- Automatic switch-off
- Battery operation
- Selectable units: N, kg, lb, oz
- Dimensions: Length 195 x width 84 x height 35 mm, weight: 600 g
- Supplied with batteries, mains adapter, one of each attachment: Hooked, pointed, V-shaped, blade and flat, and one 90 mm extension bar
- Measurement ranges of 10, 25 and 50 N available on request







Max. force measuring range	Digit increment, force	art.no.	€
100 N	0.05 N	576631 0100	290,–
250 N	0.10 N	576631 0250	290,–
500 N	0.20 N	576631 0500	290,–
1000 N	0.50 N	576631 1000	290,–

5171

KERN Crane scales HCD

- High-resolution crane scale
- Rotating hook with safety lock
- Functions conveniently accessed via radio remote control, range approx. 20 m
- Data hold function: if the scales are left idle, the weight displayed will automatically freeze until the hold button is pressed
- Tare: resets the display to "0" while a load is on the scales so that any loads removed or added are displayed directly
- **Technical data:**
  - Backlit LCD display with 28 mm high digits
  - Battery operation, 4 x 1.5 V LR6 AA approx. 100 hours
  - Casing dimensions 65 x 24 x 100 mm
  - Operating temperature 5-35 °C
- Calibration according to DAkkS
- Supplied with remote control and batteries



Weighing range max. kg	Reading g	Device dimensions mm	Weight kg	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
60	20	150 x 79 x 97	0.85	576034 2060	203,–	079401 0012	152,–
150	50	150 x 79 x 97	0.85	576034 2150	203,–	079401 0012	152,–
300	100	150 x 79 x 97	0.85	576034 2300	203,–	079401 0012	152,–

5174

KERN Crane scale HFD

- high-resolution crane scales up to 12 tons
- robust design
- supports SOLAS-compliant weighing of freight
- Data Hold function: if the scales are left idle, the displayed weight will automatically freeze until the hold button is pressed
- Functions conveniently accessed via radio remote control, range approx. 20m
- Reading switches automatically as loads get heavier
- Internal battery, 70-hour operating time (without backlight)
- Housing dimensions 194 x 129 x 145mm
- Operating temperature -10 to 40°C
- Supplied with remote control without safety hooks



Weighing range max. kg	Reading mm	Device dimensions mm	Weight kg	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
600	50 / 100 / 200	194 x 160 x 129	9	578036 0006	490,–	079401 0013	270,–
1500	100 / 200 / 500	194 x 160 x 129	9	578036 0015	500,–	079401 0013	270,–
3000	200 / 500 / 1000	194 x 160 x 129	10	578036 0030	660,–	079401 0015	680,–
6000	500 / 1000 / 2000	194 x 160 x 129	15	578036 0060	869,–	079401 0015	680,–
12000	1000 / 2000 / 5000	194 x 160 x 129	20	578036 0120	979,–	079401 0017	960,–

5174

Hook with safety lock for crane scale HFD



Designation	art.no.	€
Hook with safety lock for crane scale HDF 3000 kg	578036 5002	71,20
Hook with safety lock for crane scale HDF 600 / 1500 kg	578036 5001	50,90
Hook with safety lock for crane scale HDF 6000 / 12000 kg	578036 5003	132,–

5174

KERN Counting scales CPB

230 V RS232C

- Professional counting and weighing
- 3 displays: Unit weight, total weight and total unit quantity
- Large LCD display, digit height 20 mm
- Battery and mains operation
- Battery charge status indicator
- 225 x 294 mm stainless steel weighing platform
- Dimensions, width x depth x height = 320 x 350 x 125 mm
- Weight 3.9 kg
- DAkkS calibration
- Supplied with mains adapter, no battery



578057 0002

Reading g	Designation	Weighing range max. kg	Unit weight (counted) min. g	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
0.1	CPB 6K0,1N	6	0.10	578057 0002	290,–	079401 0011	130,–
0.2	CPB 15K0,2N	15	0.25	578057 0003	290,–	079401 0011	130,–
0.5	CPB 30K0,5N	30	0.50	578057 0004	290,–	079401 0011	130,–

5174

KERN Counting system CCS

PCS 230 V RS232C

- Comprising quantity scales (platform scales) and reference scales
- Stainless steel weighing plates
- Quantity scales with IP65 weighing cells
- Reference scales can also be used separately as counting scales
- Large, backlit LCD display with 20 mm high digits
- Precise counting by means of automated reference optimisation, which gradually improves the average value of the part weight
- DAkkS calibration
- Supplied with mains adapter



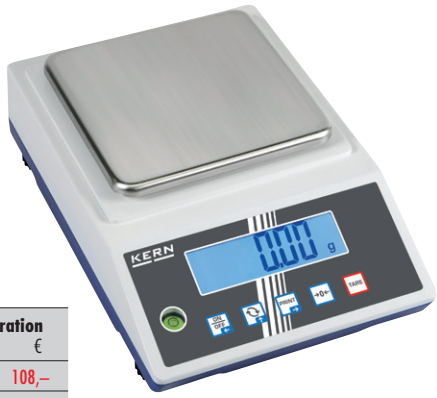
Designation	Weighing range max. kg	Reading g	Unit weight (counted) min. g	Insert size mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
CCS 30K0,1	30	10	0.1	400 x 300 x 128	578058 0030	660,–	079401 0020	250,–
CCS 60K0,1	60	20	0.1	400 x 300 x 128	578058 0060	725,–	079401 0021	290,–
CCS 60K0,1L	60	20	0.1	500 x 400 x 137	578058 0061	815,–	079401 0021	290,–
CCS 150K0,1	150	50	0.1	500 x 400 x 137	578058 0150	755,–	079401 0021	290,–
CCS 150K0,1L	150	50	0.1	650 x 500 x 142	578058 0151	1.089,–	079401 0021	290,–
CCS 300K0,1	300	100	0.1	650 x 500 x 142	578058 0300	1.129,–	079401 0021	290,–

5174

KERN Precision scales PCB

PCS 230 V RS232C

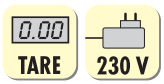
- Simple, self-explanatory 5-key operation
- Option to switch between mains/battery operation
- Backlit LCD display with 15 mm high digits
- Settling time 3 sec.
- **Calibration program (CAL):** for accuracy adjustment, optional external calibration weight required
- **Unit counting**: 5, 10, 25 and 50 unit reference counts available
- Display can be switched between units and weight
- **Formulation**: separate memory for the weight of the tare container and formulation components (net total)
- Battery operation (optional): 6LR61, with automatic switch-off
- Dimensions: 163 x 245 x 79 mm
- DAkkS calibration
- Supplied with power supply, no battery



Designation	Weighing range max. g	Reading g	Unit weight (counted) min. g	Insert size mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
PCB 200-3	200	0.001	0.002	Ø 82	578031 0201	305,–	079401 0010	108,–
PCB 300-2	300	0.01	0.02	Ø 82	578031 0300	249,–	079401 0010	108,–
PCB 1000-2	1200	0.01	0.02	130 x 130	578031 1001	290,–	079401 0010	108,–
PCB 2000-1	2000	0.1	0.2	130 x 130	578037 2001	229,–	079401 0010	108,–
PCB 3000-2	3600	0.01	0.02	130 x 130	578031 3001	330,–	079401 0010	108,–
PCB 6000-1	6000	0.1	0.2	170 x 150	578031 6001	249,–	079401 0011	130,–
PCB 6000-0	6000	1	2	170 x 150	578031 6000	168,–	079401 0011	130,–
PCB 2000-1 2023e	2000	0.1	0.2	130 x 130	578031 2000	229,–	079401 0010	108,–

5174

KERN Platform scales EOB



- Package scales for shipping
- Easy to operate, with four buttons
- Large LCD display, 25 mm high digits
- Display unit can be freely positioned, flexible 1.8 m cable
- Mains power and optional battery operation (6x LR6/AA) available
- Battery operation: with automatic switch-off (after 3 min.)
- DAkkS calibration
- Supplied with power supply, no battery
- Versions with larger weighing platforms available on request


578042 0004

Reading g	Designation	Weighing range max. kg	Insert size mm	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
5	EOB 15K5	15	315 x 305 x 65	578042 0012	176,–	079401 0011	130,–
10	EOB 35K10	35	315 x 305 x 65	578042 0001	176,–	079401 0011	130,–
20	EOB 60K20	60	315 x 305 x 65	578042 0002	176,–	079401 0012	152,–
50	EOB 150K50	150	315 x 305 x 65	578042 0003	176,–	079401 0012	152,–
100	EOB 300K100A	300	315 x 305 x 65	578042 0004	176,–	079401 0012	152,–

5174

KERN Platform scales DE-D



- Package, industrial and counting scales in one instrument
- Dual-range scales, resolution automatically adapted to the weighing range
- Large LCD display, digit height 25 mm
- Display unit (225 x 110 x 45 mm) with approx. 1.4 m connection cable
- Wall bracket for display unit optional
- Optional stand also available for raising the display unit
- Option to switch between mains/battery operation
- Settling time 2 - 3 sec.
- **Unit counting**: 5, 10, 25 and 50 unit reference counts available
- Display can be switched between units and weight
- **Formulation**: Separate memory for the weight of the tare container and formulation components (net total)
- DAkkS calibration
- Supplied with power supply, no battery


578052 3000

Reading g	Designation	Weighing range max. kg	Unit weight (counted) min. g	Insert size mm	Weight kg	art.no.	€	DAkkS calibration art.no.	DAkkS calibration €
1 / 2	DE 6K1D	3 / 6	4	318 x 308 x75	4	578052 0060	208,–	079401 0012	152,–
2 / 5	DE 15K2D	6 / 15	10	318 x 308 x75	4	578052 0150	208,–	079401 0011	130,–
5 / 10	DE 35K5D	15 / 35	10	318 x 308 x75	4	578052 0350	214,–	079401 0011	130,–
10 / 20	DE 60K10D	30 / 60	20	318 x 308 x75	4	578052 0600	208,–	079401 0011	130,–
20 / 50	DE 150K20D	60 / 150	40	318 x 308 x75	4	578052 1500	219,–	079401 0012	152,–
50 / 100	DE 300K50D	150 / 300	10	522 x 403 x 90	16	578052 3000	355,–	079401 0012	152,–

5174

Accessories

Designation	art.no.	€
Device holder	578053 0001	40,70
Column, height approx. 450 mm	578053 0003	130,–
Wall bracket	578053 0002	32,50

5174


Shown with column