

# Mitutoyo



# PROMOTION!

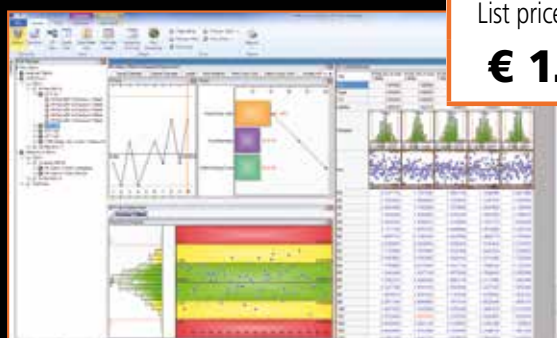
Valid November 1, 2019 through January 31, 2020

THE MITUTOYO PROMOTION



## MeasurLink 9 – Data Collection and Real-Time Statistical Process Control

MeasurLink is designed to collect and unite all measurement data in one central data base. Measurement results acquired via CMMs are automatically transferred into a SQL database and available for monitoring, analysis or reporting in real-time.



No. 64AAB607R

List price: ~~€ 1.850~~

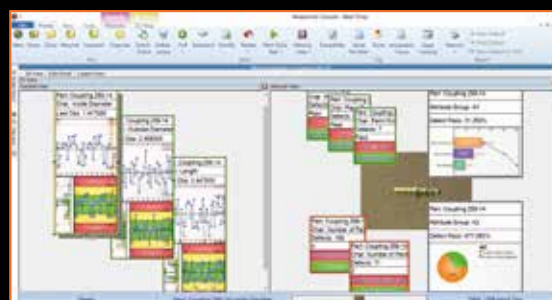
**€ 1.579**

> Data Analysis Module Process Analyzer gives you the flexibility to analyse your processes, identify problem areas and take corrective action to improve your product's quality.

> MeasurLink Process Manager: Network monitoring

> MeasurLink Gage Management:  
Gage inventory and calibration control

> MeasurLink Gage R & R:  
Gage Repeatability and reproducibility



> MeasurLink Real-Time Professional Edition enables customers to connect and acquire data from Mitutoyo Coordinate Measuring Machines, Vision and Form Measuring Systems via native integration (DDE).

> MeasurLink Real-Time Professional Edition plus HOOPS 3D support



### FREE MEASURLINK 9 - TRIAL VERSION

Those who would like to assure themselves of the great performance and the vast user-friendliness of MeasurLink 9 have the chance to test a full version of the powerful SPC suite for 60 days upon brief registration. Well-comprehensible tutorials introduce to the easy setup and use of the software suite. MeasurLink 9 offers a choice of 17 languages, with the online help function coming in English, French and German. Download:

[https://www.mitutoyo.eu/en\\_us/downloads/free-measurlink9/](https://www.mitutoyo.eu/en_us/downloads/free-measurlink9/)

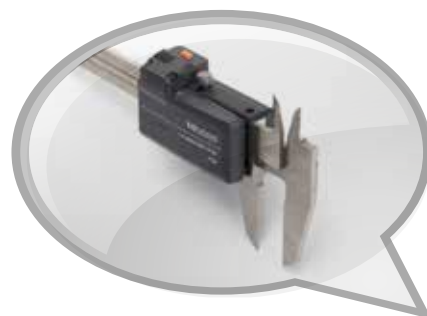


No.	Designation	List price €	Promotion price €
64AAB607R	(R)ML REAL-TIME PROFESSIONAL V9	1.850,00	1.579,00
64AAB608R	(R)ML REAL-TIME PROFESSIONAL 3D V9	2.055,00	1.749,00
64AAB609R	(R)ML PROCESS ANALYZER PROFESSIONAL V9	1.850,00	1.579,00
64AAB610R	(R)ML PROCESS MANAGER V9	1.850,00	1.579,00
64AAB611R	(R)ML GAGE R&R V9	1.011,00	869,00
64AAB612R	(R)ML GAGE MANAGEMENT V9	1.850,00	1.579,00
64AAB613R	(R)ML REPORT SCHEDULER V9	1.850,00	1.579,00
64AAB614FR	(R)ML FLOATING LICENSE V9, 30 LICENSES	10.297,00	8.759,00
64AAB614R	(R)ML SITE LICENSE V9, 30 LICENSES	20.595,00	17.499,00
64AAB615FR	(R)ML FLOATING LICENSE V9, 15 LICENSES	5.662,00	4.899,00
64AAB615R	(R)ML WORKGROUP LICENSE V9, 15 LICENSES	11.325,00	9.699,00
64AAB617FR	(R)ML FLOATING LICENSE V9, 10 LICENSES	4.117,00	3.499,00
64AAB617R	(R)ML WORKGROUP LICENSE V9, 10 LICENSES	8.235,00	6.999,00
64AAB618FR	(R)ML FLOATING LICENSE V9, 5 LICENSES	2.572,00	2.199,00
64AAB618R	(R)ML WORKGROUP LICENSE V9, 5 LICENSES	5.145,00	4.399,00

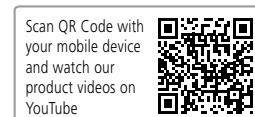
All prices exclude training & installation.

## ► USB INPUT TOOL / USB INPUT TOOL DIRECT

- > These devices allow direct connections of DIGIMATIC measuring instruments to a USB interface without the need for additional software.
- > Measurement data is converted into keyboard codes, enabling interaction with any program using keyboard entries (HID).
- > You can also connect the box type as well as the cable-integrated type to a PC USB port with fixed COM assignment in Microsoft® Windows® as a channel identification (VCP). The USB-ITPAK software contains the driver for the virtual COM port (VCP).



USB-ITPAK also supports the Mitutoyo wireless data transfer system U-WAVE.



**USB-ITPAK V 2.1** creates a procedure to input data from gauges equipped with DIGIMATIC output to Excel® sheets via

- A part manager automatically opening an Excel® sheet
- Entering sequence specified
- Input range specified per DIGIMATIC gauge, reducing improper input
- This software is compatible with:
  - USB INPUT TOOL DIRECT
  - USB INPUT TOOL
  - U-WAVE SYSTEM

No.	Remarks	List price €	Promotion price €
<b>264-016-10</b>	Interface box (requires additional DIGIMATIC cable) with data button (ø 18 mm) and footswitch connector	<del>219,00</del>	<b>169,00</b>
<b>06AFM380A</b>	High-grade IP protected model with data key (e.g. IP67 Caliper)	<del>122,00</del>	<b>93,90</b>
<b>06AFM380B</b>	High-grade IP protected model with data key (e.g. IP65 Micrometer)	<del>122,00</del>	<b>93,90</b>
<b>06AFM380C</b>	With data key (e.g. ABSOLUTE DIGIMATIC Caliper)	<del>107,00</del>	<b>81,90</b>
<b>06AFM380D</b>	10 pin, simple model (e.g. ID-F Indicator)	<del>107,00</del>	<b>81,90</b>
<b>06AFM380E</b>	6 pin, round model (e.g. digital caliper gauge)	<del>107,00</del>	<b>81,90</b>
<b>06AFM380F</b>	Simple, straight model (e.g. ID-C Indicator)	<del>107,00</del>	<b>81,90</b>
<b>06AFM380G</b>	High-grade IP protected dial indicator (e.g. ID-N Indicator)	<del>107,00</del>	<b>81,90</b>
<b>937179T</b>	Footswitch	46,00	—
<b>06ADV384</b>	USB footswitch adapter	<del>107,00</del>	<b>82,90</b>
<b>06AFM386</b>	USB-ITPAK V2.1 software for using Excel® for data collection	<del>253,00</del>	<b>199,00</b>

See page 2: data collection and real-time Statistical Process Control software MeasurLink

# DATA MANAGEMENT SYSTEMS

**MeasurLink® ENABLED**

Data Management Software by Mitutoyo

## U-WAVE<sup>fit</sup>



Slim, powerful and  
lightweight data measuring  
data transmission system

### ► U-WAVE AND U-WAVE fit – WIRELESS DATA TRANSMISSION SYSTEM

- Approx. 20 m (within visible range)
- Communication frequency: 2,4GHz wireless system for reliable and secure data transmission
- Easy data export to Microsoft® Excel® or other professional SPC software applications like Mitutoyo MeasurLink
- Transmitter confirms data transfer by a buzzer sound or a red/green LED signal.
- An IP67 transmitter is available.
- Low power consumption: 400.000 data transmissions with one battery



No. 02AZD810D

List price: ~~€ 324~~

**€ 219**

U-WAVE-R



For micrometers U-WAVE-TM  
with connection unit



U-WAVE-TC for calipers  
with connection unit



For various measuring  
instruments: U-WAVE-T  
with connection cable

U-WAVE-T connected to a Digimatic gauge  
by a special cable that fits the data interface  
of that particular gauge.

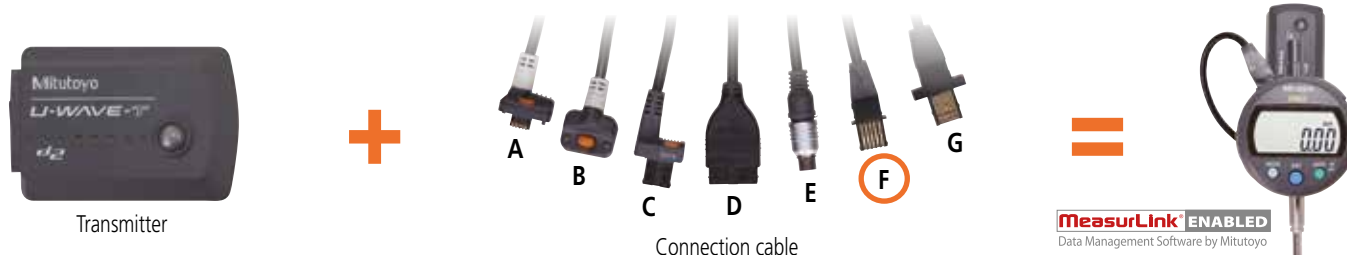





**U-WAVE-TC/TM (transmitter) for calipers and micrometers**

No.	Model	Measuring Instrument*	Remarks	Data reception indication	List price €	Promotion price €
<b>264-620</b>	U-WAVE-TC	100, 150, 200, 300 mm IP67 caliper/standard caliper	IP67 type	LED	<del>163,00</del>	<b>139,00</b>
<b>264-621</b>	U-WAVE-TC	100, 150, 200, 300 mm IP67 caliper/standard caliper	Buzzer type	Buzzer/LED	<del>163,00</del>	<b>139,00</b>
<b>264-622</b>	U-WAVE-TM	COOLANT PROOF (IP65) micrometer	IP67 type	LED	<del>163,00</del>	<b>139,00</b>
<b>264-623</b>	U-WAVE-TM	COOLANT PROOF (IP65) micrometer	Buzzer type	Buzzer/LED	<del>163,00</del>	<b>139,00</b>
<b>02AZF310</b>	Connection unit	IP67 caliper/COOLANT PROOF (IP65) micrometer	Waterproof type	–	<del>97,00</del>	<b>69,90</b>
<b>02AZF300</b>	Connection unit	Standard caliper	Standard type	–	<del>92,00</del>	<b>69,90</b>

\* For details of connectable measuring instruments please contact Mitutoyo or distributor



**MeasurLink<sup>®</sup> ENABLED**  
Data Management Software by Mitutoyo

**U-WAVE-T (transmitter) for miscellaneous measuring instruments**

No.	Model	Measuring Instrument	Remarks	Data reception identification	List price €	Promotion price €
<b>02AZD730G</b>	U-WAVE-T	e.g. Carbon Fibre Caliper, Holtest, Digital Indicator, Height Gauge, Borematic, Surftest, Quickmike	IP67 type	LED	<del>163,00</del>	<b>113,00</b>
<b>02AZD880G</b>	U-WAVE-T	e.g. Carbon Fibre Caliper, Holtest, Digital Indicator, Height Gauge, Borematic, Surftest, Quickmike	Buzzer type	Buzzer/LED	<del>163,00</del>	<b>113,00</b>
<b>02AZD790A</b>	Connection cable with data switch	e.g. IP 66 Carbon Fibre Caliper	Waterproof type		<del>97,00</del>	<b>49,90</b>
<b>02AZD790B</b>	Connection cable with data switch	e.g. IP 65 Internal Micrometer, Quickmike (new model see page 10)	Waterproof type		<del>97,00</del>	<b>49,90</b>
<b>02AZD790C</b>	Connection cable with data switch	e.g. Digital Indicator (ID-C, ID-S, ID-U), Height Gauge, Borematic	Standard type		<del>92,00</del>	<b>49,90</b>
<b>02AZD790D</b>	Connection cable	e.g. Digital Indicator ID-H, ID-F, Surftest SJ-210 and SJ-310	Standard type		<del>87,00</del>	<b>49,90</b>
<b>02AZD790E</b>	Connection cable	e.g. Digital Caliper Gauge Series 209	Standard type		<del>87,00</del>	<b>49,90</b>
<b>02AZD790F</b>	Connection cable	e.g. Digital Indicator (ID-C, ID-S, ID-U), Height Gauge, Borematic	Standard type		<del>87,00</del>	<b>49,90</b>
<b>02AZD790G</b>	Connection cable	e.g. IP66 Digital Indicator ID-N, ID-B	Waterproof type		<del>92,00</del>	<b>49,90</b>

**U-WAVE-R (receiver)**

No.	Remarks	Software	Number of U-WAVE-R units that can be connected to one PC	Number of U-WAVE transmitters that can be connected	List price €	Promotion price €
<b>02AZD810D</b>	U-WAVE-R + software	U-WAVE PAK	Up to 16	Up to 100	<del>324,00</del>	<b>219,00</b>

**Optional accessories for wireless transmission system**

No.	Designation	List price €	Promotion price €
<b>06AFM386</b>	USB-ITPAK V 2.1 software for using Excel <sup>®</sup> for data collection	<del>253,00</del>	<b>199,00</b>

Scan QR Code with your mobile device and watch our product videos on YouTube



See page 2: Data collection and real-time Statistical Process Control software MeasurLink



No.	Range [mm/inch]	Accuracy [mm]	Reading	Data output	Graduation [mm/inch]	Depth bar	Remarks	Certificate of inspection	List price €	Promotion price €
530-101	0-150	±0,05	Vernier		0,05	Flat	Standard type (0,05 mm)		30,00	23,90
530-104	0-150/0-6"	±0,05	Vernier		0,05 / 1/128"	Flat	Metric/inch standard type (0,05 mm)		30,00	23,90
530-108	0-200	±0,05	Vernier		0,05	Flat	Standard type (0,05 mm)		77,00	59,90
530-109	0-300	±0,08	Vernier		0,05	Flat	Standard type (0,05 mm)		187,00	149,00
530-122	0-150	±0,03	Vernier		0,02	Flat	Standard type (0,02 mm)		36,00	27,90
530-123	0-200	±0,03	Vernier		0,02	Flat	Standard type (0,02 mm)		60,00	43,90
530-124	0-300	±0,04	Vernier		0,02	Flat	Standard type (0,02 mm)		187,00	139,00
505-730	0-150	±0,03	Dial		0,02	Flat	Dial: 2 mm/revolution		100,00	79,90
505-732	0-150	±0,02	Dial		0,01	Flat	Dial: 1 mm/revolution		114,00	89,90
500-184-30	0-150	±0,02*	Digital		0,01	Round	Digital Standard	■	112,00	83,00
500-181-30	0-150	±0,02*	Digital		0,01	Flat	Digital Standard	■	112,00	83,00
500-182-30	0-200	±0,02*	Digital		0,01	Flat	Digital Standard	■	177,00	139,00
500-161-30	0-150	±0,02*	Digital	■ **	0,01	Flat	Digital Standard	■	139,00	99,90
500-155-30	0-150	±0,02*	Digital	■ **	0,01	Flat	with carbide tipped jaws	■	460,00	369,00
500-162-30	0-200	±0,02*	Digital	■ **	0,01	Flat	Digital Standard	■	198,00	149,00
500-205-30	0-300	±0,04*	Digital	■ **	0,01	Flat	Digital Standard	■	289,00	-
500-706-20	0-150	±0,02*	Digital		0,01	Flat	Digital IP67	■	166,00	129,00
500-707-20	0-200	±0,02*	Digital		0,01	Flat	Digital IP67	■	232,00	182,00
500-716-20	0-150	±0,02*	Digital	■ **	0,01	Flat	Digital IP67	■	214,00	159,00
500-717-20	0-200	±0,02*	Digital	■ **	0,01	Flat	Digital IP67	■	272,00	199,00
550-331-10	0-300	±0,04*	Digital	■ **	0,01	-	IP67 with nib-style jaws		423,00	329,00
551-331-10	0-300	±0,04*	Digital	■ **	0,01	-	IP67 with nib-style jaws and standard jaws		422,00	329,00

\* Excluding quantising error \*\* Instruments with data output - MeasurLink enabled

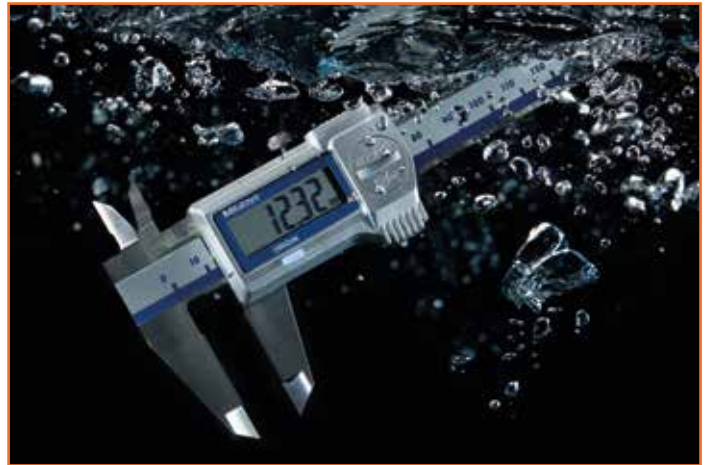
## ► U-WAVE WIRELESS TRANSMITTER IS PLACED ON THE BACK SIDE OF CALIPERS

- The outer shape of the transmitter unit is smaller than the display module.
- 20 m communication (within visible range)
- Secure and reliable data transmission
- Easy data export to Microsoft® Excel® or other applications
- Successful data transfer is confirmed by the transmitter through a buzzer or LED.
- Low power consumption (400.000 data transmissions with a single battery)



## ► COOLANT PROOF TECHNOLOGY (IP67 TYPE)

- Mitutoyo uses materials that are extremely resistant to emulsion, oil, grease and coolant when manufacturing its "COOLANT PROOF" measuring equipment.



## ► 500-155-30 CALIPER WITH CARBIDE TIPPED JAWS

- 500-155-30 is a caliper with carbide tipped measuring jaws for outside and inside measurement. Excellent for measuring abrasive parts.



## ► 500-205-30 CALIPER 20 MM BEAM WIDTH AIDS STABILITY!

- Thanks to the 20 mm beam width the flexural rigidity of the beam is excellent and so accuracy is maintained over the whole measuring range.



### Optional accessories

No.	Designation	Remarks	List price €	Promotion price €
264-620	U-WAVE Wireless transmitter	IP67 type	163,00	139,00
264-621	U-WAVE Wireless transmitter	Buzzer type	163,00	139,00
02AZF310	U-WAVE Connection unit	For IP67 caliper	97,00	69,90
02AZF300	U-WAVE Connection unit	For standard caliper	92,00	69,90
959149	Digimatic cable with data switch (1m)	For standard caliper	41,00	—
959150	Digimatic cable with data switch (2m)	For standard caliper	48,00	—
06AFM380C	USB Input Tool Direct Cable with data switch (2m)	For standard caliper	107,00	81,90
05CZA624	Digimatic cable with data switch (1m)	For IP67 caliper	79,00	—
05CZA625	Digimatic cable with data switch (2m)	For IP67 caliper	89,00	—
06AFM380A	USB Input Tool Direct Cable with data switch (2m)	For IP67 caliper	122,00	93,90



Safety  
Dust- and  
Water-  
Protected

www.tuv.com  
ID 2011207400

# PRINTER/STANDS

## ► STATISTIC PROCESSING PRINTER DP-1VA DATA PRINTER AND LOGGER

- Statistical evaluations, and data printout from calipers, micrometers and other measuring devices equipped with a Digimatic port.
- Excellent printing speed, prints upon one-touch start and at low noise level. The thermosensitive paper boasts outstanding durability and chemical resistance for long-term storage.
- Timer function for timed measurement data loading
- Easy data transfer from printer to PC. USB (VCP/HID) output for PC (USB IT-PAK Vers. 2.1 or later, MeasurLink, Excel etc.)
- Data Logger Function. Saves up to 1000 data records with time and date. Data can be saved even after the power has been turned off.



No. 264-505D

List price: ~~€ 475~~

**€ 389**



No.	Working radius [mm]	Magnetic force N	List price €	Promotion price €
7031B	159	300	<del>188,00</del>	<b>139,00</b>
7032B	260	600	<del>195,00</del>	<b>144,90</b>
7033B	352	600	<del>202,00</del>	<b>149,90</b>



No. 516-963-10

List price: € 1.349

**€ 999**



516-363-10



516-107-10

No.	Blocks/set	Material	Grade	Accuracy	Certificate of inspection	List price €	Promotion price €
516-362-10	47	Ceramic	0	EN ISO 3650	■	2.694,00	2.119,00
516-363-10	47	Ceramic	1	EN ISO 3650	■	2.252,00	1.749,00
516-346-10	87	Ceramic	0	EN ISO 3650	■	4.560,00	3.499,00
516-347-10	87	Ceramic	1	EN ISO 3650	■	3.625,00	2.799,00
516-962-10	47	Steel	0	EN ISO 3650	■	1.773,00	1.349,00
516-963-10	47	Steel	1	EN ISO 3650	■	1.349,00	999,00
516-964-10	47	Steel	2	EN ISO 3650	■	1.099,00	849,00
516-946-10	87	Steel	0	EN ISO 3650	■	2.857,00	2.199,00
516-947-10	87	Steel	1	EN ISO 3650	■	1.868,00	1.499,00
516-107-10	10	Steel	1	EN ISO 3650	■	517,00	399,00

## ► CHARACTERISTICS OF MITUTOYO STEEL GAUGE BLOCKS

- Outstanding dimensional stability: Mitutoyo steel gauge blocks are made exclusively from artificially aged material.
- High gauge reliability: Mitutoyo gauge blocks can be a useful standard for a long time due to their high dimensional stability.
- The maximum permitted length changes to gauge blocks over a year are defined in EN ISO 3650. Mitutoyo quality gauge blocks easily meet these and all other requirements.
- Steel gauge blocks are excellent for use as a standard because of the low measurement uncertainty.
- Mitutoyo steel Gauge Blocks have top quality surfaces guaranteeing high wringing force.



Accuracy check of a caliper

Block allocation 47			Block allocation 87		
Size	Step	Quantity	Size	Step	Quantity
1,005	–	1	1,001–1,009	0,001	9
1,01–1,19	0,01	19	1,01–1,49	0,01	49
1,2–1,9	0,1	8	0,5–9,5	0,5	19
1–9	1	9	10–100	10	10
10–100	10	10			

## ► CHARACTERISTICS OF MITUTOYO CERAMIC GAUGE BLOCKS (CERA-BLOCKS)

- Wear resistant
- CERA blocks feature ten times the abrasion resistance of steel gauge blocks and three times of hard metal blocks.
- Corrosion resistant
- More or less free from dimensional change over time
- Steel and ceramic have similar expansion coefficients which reduces measurement errors due to temperature change.
- Adheres also to steel blocks
- Free from burrs caused by scratches
- Non-magnetic: powder (iron grit, etc) will not adhere.
- Clearly visible marking: black characters on snow-white surface

# MICROMETERS

**MeasurLink® ENABLED**

Data Management Software by Mitutoyo



No.	Range [mm]	Accuracy [µm]	Reading	Data output	Graduation [mm]	Remarks	Certificate of inspection	List price €	Promotion price €
103-137	0-25	±2	analog		0,01	Standard type	■	47,00	36,90
103-138	25-50	±2	analog		0,01	Standard type	■	67,00	54,90
103-139-10	50-75	±2	analog		0,01	Standard type		88,00	69,90
103-140-10	75-100	±3	analog		0,01	Standard type		95,00	74,90
103-913-50	0-150		analog		0,01	Outside micrometer set	0-25, 25-50 mm	488,00	399,00
293-821-30	0-25	±2*	digital		0,001	Economy type	■	152,00	121,00
293-140-30	0-25	±2*	digital	■ **	0,001	QuantuMike, IP65, with 2 mm spindle pitch	■	310,00	229,00
293-141-30	25-50	±2*	digital	■ **	0,001	QuantuMike, IP65, with 2 mm spindle pitch	■	382,00	299,00
293-142-30	50-75	±2*	digital	■ **	0,001	QuantuMike, IP65, with 2 mm spindle pitch		463,00	369,00
293-143-30	75-100	±2*	digital	■ **	0,001	QuantuMike, IP65, with 2 mm spindle pitch		523,00	399,00
293-230-30	0-25	±2*	digital	■ **	0,001	IP65, standard type	■	257,00	199,00
293-231-30	25-50	±2*	digital	■ **	0,001	IP65, standard type	■	303,00	239,00
293-232-30	50-75	±2*	digital	■ **	0,001	IP65, standard type		399,00	319,00
293-233-30	75-100	±3*	digital	■ **	0,001	IP65, standard type		440,00	349,00
293-666-20	0-30	±2*	digital	■ **	0,001	Quickmike, IP65, 10 mm feed/revolution		480,00	369,00
293-667-20	25-55	±2*	digital	■ **	0,001	Quickmike, IP65, 10 mm feed/revolution		523,00	399,00
293-668-20	50-80	±3*	digital	■ **	0,001	Quickmike, IP65, 10 mm feed/revolution		560,00	449,00
323-250-30	0-25	±4*	digital	■ **	0,001	IP65, measuring surface ø 20 mm disc		697,00	549,00
331-251-30	0-25	±2*	digital	■ **	0,001	IP65, measuring surface ø 3 mm spline		665,00	519,00
331-252-30	25-50	±2*	digital	■ **	0,001	IP65, measuring surface ø 3 mm spline		721,00	569,00
350-271-30	0-25	±2*	digital	■ **	0,001	Micrometer head, IP65, ø 12, 18 mm stem		429,00	349,00

\* Excluding quantising error \*\* Instruments with data output - MeasurLink enabled

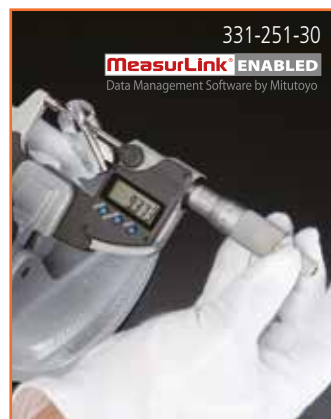
## ► Quickmike – WITH A NON-ROTATING SPINDLE, DELIVERS MUCH FASTER MOVEMENT THAN STANDARD MODELS

- With 10 mm feed per revolution, it delivers twenty times as fast as standard devices.
- Excellent resistance against water and dust (IP65) enables this micrometer to be used in machining situations that include splashing coolant fluid.
- ABSOLUTE linear scale means no restriction on adjustment speed.
- Larger measuring span – 30 mm



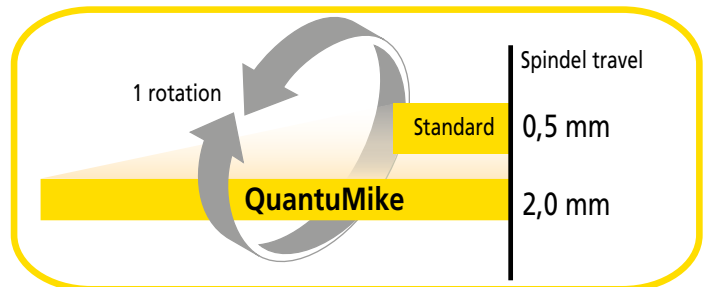
## ► MORE THAN 100 DIFFERENT TYPES OF MICROMETER FOR SPECIAL PURPOSES

- Mitutoyo carries more than 100 different types of digital micrometers in a special design to solve problems at hard to reach places.
- Almost all have high grade ingress protection IP65.



## ► QuantuMike – MOVEMENT FOUR TIMES AS FAST AS A STANDARD MICROMETER

- Faster measurement by using a coarser thread which feeds the spindle by 2 mm per thimble rotation
- Ratchet thimble mechanism ensures easy single-handed or stand operation.
- Excellent resistance against water and dust (IP65 protection level) enables this micrometer to be used in machining situations that include splashing coolant fluid.



## ► U-WAVE WIRELESS TRANSMITTER ON THE BACK SIDE OF MICROMETERS

- The outer shape of the transmission unit is smaller than the display module.
- 20 m communication (within visible range)
- Secure and reliable data transmission
- Easy data export to Microsoft® Excel® or other applications
- Data transfer is confirmed by the transmitter through a buzzer or LED.
- Low power consumption (400.000 data transmissions with a single battery)



### Optional accessories

No.	Designation	Remarks	List price €	Promotion price €
264-622	U-WAVE wireless transmitter	IP65 type (except Quickmike)	163,00	139,00
264-623	U-WAVE wireless transmitter	Buzzer type (except Quickmike)	163,00	139,00
02AZF310	U-WAVE connection unit	For IP65 micrometer (except Quickmike)	97,00	69,90
05CZA662	Digimatic cable with data switch (1m)		82,00	–
05CZA663	Digimatic cable with data switch (2m)		90,00	–
06AFM380B	USB Input Tool Direct Cable with data switch (2m)		122,00	93,90
156-101-10	Micrometer Stand	Adjustable angle type up to 100 mm range	57,00	44,90



Dust- and Waterproof IP65

www.tuv.com  
ID 4011207400



# DIGITAL INDICATORS

**MeasurLink<sup>®</sup> ENABLED**  
Data Management Software by Mitutoyo



No. 543-781B

List price: ~~€ 149~~

**€ 119**



543-505B



543-390B



543-551D



543-561D



547-401

No.	Type	Range [mm]	Digital step [mm]	Accuracy* [mm]	Power supply	Remarks	List price €	Promotion price €
543-781B	ID-S	12,7	0,01	0,02	Battery SR44	Economy type	<del>149,00</del>	<b>119,00</b>
543-505B	ID-SS	12,7	0,01	0,02	Solar powered from 40 Lux	Economy type	<del>152,00</del>	<b>119,00</b>
543-390B	ID-C	12,7	0,001	0,003	Battery SR44	Standard with Tolerance Function	<del>351,00</del>	<b>249,00</b>
543-551D	ID-F	25,4	0,001	0,003	AC-Adapter	Multi function type	<del>622,00</del>	<b>479,00</b>
543-553D	ID-F	50,8	0,001	0,006	AC-Adapter	Multi function type	<del>676,00</del>	<b>539,00</b>
543-561D	ID-H	30,4	0,0005	0,0015	AC-Adapter	High accuracy multi function type	<del>648,00</del>	<b>499,00</b>
543-563D	ID-H	60,9	0,0005	0,0025	AC-Adapter	High accuracy multi function type	<del>703,00</del>	<b>559,00</b>
547-401		0-12	0,001	±0,003	Battery SR44	Digital indicator thickness gauge	<del>781,00</del>	<b>599,00</b>

\* Excluding quantising error

## Illuminance

### 750-1000 Lux

technical drawing  
precision mechanic work

### 500 Lux

office

### 200-300 Lux

working with  
manufacturing machines

### 150 Lux

passages with vehicles  
loading zone

### 100 Lux

lunch room  
passages

### 50 Lux

warehouse  
storage room

## ► 543-505B SOLAR INDICATOR

> Even if the illuminance temporarily drops below 40 lux, normal measuring can be performed with the charged super-capacitor.

**MeasurLink<sup>®</sup> ENABLED**  
Data Management Software by Mitutoyo

**SOLAR**



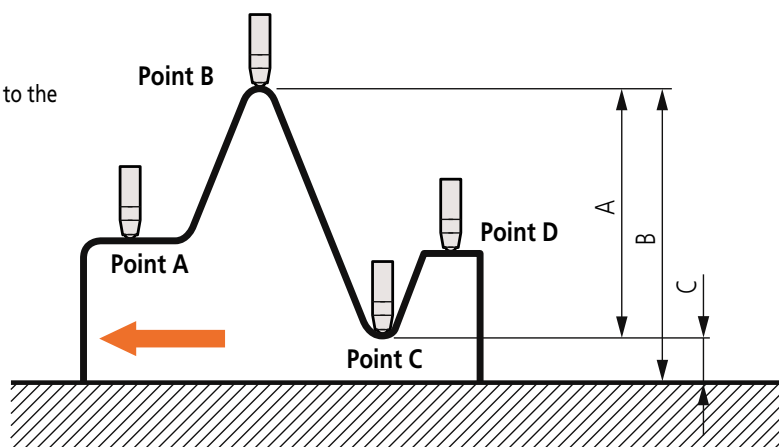
## ► 543-390B READ-OUT ROTATION

> 7-digit LCD can be rotated as much as 330° for read-out convenience.



► **543-551D, 543-553D, 543-561D, 543-563D**  
**MULTIFUNCTION INDICATOR**

- Backlight colour changes from green (OK) to red ( $\pm$ NG) with respect to the given tolerance limits
- ID-F and ID-H Indicator can measure MAX/MIN/RANGE (MAX-MIN).



► **543-561D, 543-563D**  
**INDICATOR WITH OPTIONAL REMOTE CONTROLLER**

- For ID-H indicator you can carry out e.g. zero setting with the optional remote controller, without having to touch the indicator.
- Functions:
  - Recall preset/ zero set
  - Switch for MAX/MIN/TIR
  - MAX/MIN/TIR reset
  - Trigger for data output

► **547-401 THICKNESS GAUGE**

- For measuring film, paper, sheet metal, etc, with a digital step of 1  $\mu$ m



**Optional accessories**

No.	Designation	Remarks	List price €	Promotion price €
7822	Interchangeable contact point set	For indicator	<del>48,00</del>	37,90
02AZD730G	U-WAVE wireless transmitter	IP67 type	<del>163,00</del>	113,00
02AZD880G	U-WAVE wireless transmitter	Buzzer type	<del>163,00</del>	113,00
02AZD790F	U-WAVE connection cable	For ID-S, ID-SS, ID-C & thickness gauge	<del>87,00</del>	49,90
02AZD790D	U-WAVE connection cable	For ID-F / ID-H	<del>87,00</del>	49,00
905338	Digimatic cable (1 m)	For ID-S, ID-SS, ID-C & thickness gauge	31,00	—
905409	Digimatic cable (2 m)	For ID-S, ID-SS, ID-C & thickness gauge	37,00	—
06AFM380F	USB Input Tool Direct Cable (2 m)	For ID-S, ID-SS, ID-C & thickness gauge	<del>107,00</del>	81,90
936937	Digimatic cable (1 m)	For ID-F & ID-H	48,00	—
965014	Digimatic cable (2 m)	For ID-F & ID-H	62,00	—
06AFM380D	USB Input Tool Direct Cable(2 m)	For ID-F & ID-H	<del>107,00</del>	81,90
21EZA198	Spindle lifting lever	For ID-S, ID-SS & ID-C	9,00	—
540774	Spindle lifting cable (500 mm)	For indicator	29,00	—
21EZA099	Remote Controller (max. 6 m distance)	For ID-H	81,00	—



Set-No. 7822 included:  
 ø 5 mm flat  
 ø 10 mm flat  
 Needle radius 0,4 mm  
 Spherical radius 7 mm  
 Shell radius 2,5 mm L=5 mm  
 Shell radius 2,5 mm L=10 mm

# ANALOG / DIAL TEST INDICATORS



No. 2046SB-60

List price: € 121

**€ 95,90**

2310SB-10

2110SB-10

513-404-10E

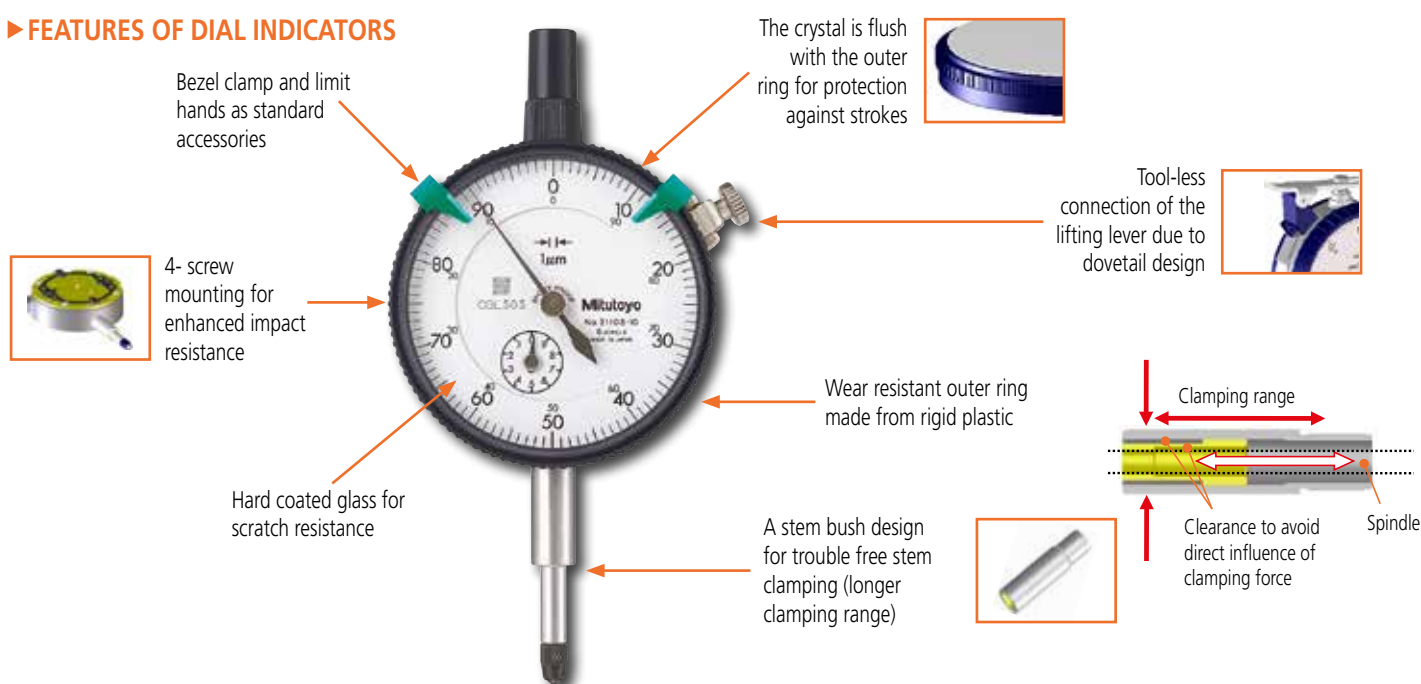
513-401-10E

513-475-10E

No.	Range [mm]	Graduation [mm]	Design	Scale	Stylus length [mm]	Remarks	List price €	Promotion price €
2046SB-60	10	0,01	Dial indicator	0-100(100-0)		IP64	121,00	95,90
2310S-10*	10	0,01	Dial indicator	0-100(100-0)		Coaxial revolution counter	66,00	50,90
2310SB-10	10	0,01	Dial indicator	0-100(100-0)		Coaxial revolution counter	66,00	50,90
2110S-10*	1	0,001	Dial indicator	0-100(100-0)		Shockproof	117,00	89,00
2110SB-10	1	0,001	Dial indicator	0-100(100-0)		Shockproof	117,00	89,90
513-404-10E	0,8	0,01	Dial test indicator basic set	0-40-0	20,9	Including ø 8 mm stem, ø 2 mm carbide stylus tip	86,00	69,90
513-405-10T	0,2	0,002	Dial test indicator full set	0-100-0	18,7	Including ø 8 mm stem, ø 2 mm carbide stylus tip	146,00	119,00
513-475-10E	0,2	0,002	Dial test indicator basic set	0-100-0	18,7	Including ø 8 mm stem, ø 2 mm ruby stylus tip	136,00	109,00
513-401-10E	0,14	0,001	Dial test indicator basic set	0-70-0	14,7	Including ø 8, 4 mm stem, ø 1, 2, 3 mm carbide stylus tip, swivel clamp, holding bar (100 mm)	153,00	119,00

\* With lug back plate

## ► FEATURES OF DIAL INDICATORS



## ► FEATURES OF DIAL TEST INDICATOR



### ø 8 mm stem to fit dovetails is a standard accessory

A ø 8 mm plain stem (21CAB104) that attaches to any dovetail on the frame is supplied as a standard accessory.



### Stylus length on the dial face

The length of the applied stylus affects the indicator's scale factor. The appropriate length is indicated on the dial face to assist a customer with ordering the correct replacement stylus.



### Attachable limit hands

Limit hands 21AAB363 (optional) can be attached to the bezel as for dial indicators, allowing easy identification of the upper and lower limits of tolerance.

## ► ACCURACY SPECIFICATION

► The accuracy specification is compliant to the new EN ISO 9493 for dial test indicator and EN ISO 463 for dial indicator

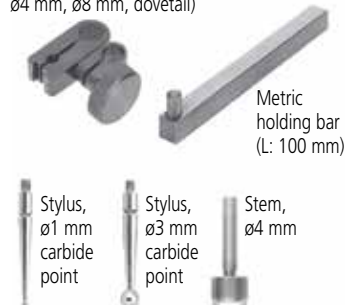
### EN ISO 9493/EN ISO 463

No.	Error of indicator over a range of					
	Any 10 scale divisions/ any 1/10 revolution [μm]	Any half revolution [μm]	Any full revolution [μm]	Measuring range [μm]	Hysteresis [μm]	Repeatability [μm]
2046SB-60	5	9	10	13	3	3
2310SB-10	5	9	10	13	3	3
2110SB-10	2,5	4	4,5	5	2	1
513-404-10E	5	6	–	8	3	3
513-405-10T	2	3	–	3	2	1
513-475-10E	2	3	–	3	2	1
513-401-10E	2	3	–	3	2	1

## Set configuration

### Full set: 513-405-10T

Swivel clamp (900321, for ø4 mm, ø8 mm, dovetail)



### Basic set: 513-404-10E / 513-475-10E / 513-401-10E



## Optional accessories

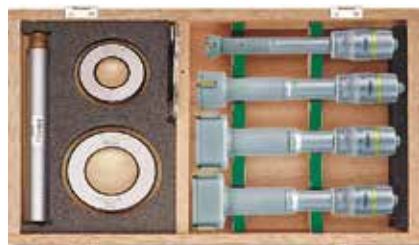
No.	Designation	Remarks	List price €	Promotion price €
7822	Interchangeable contact point set	For indicators	48,00	37,90
21AZB149	Spindle lifting lever	For dial indicators	6,00	–



### Set-No. 7822 included:

ø 5 mm flat  
ø 10 mm flat  
Needle radius 0,4 mm  
Spherical radius 7 mm  
Shell radius 2,5 mm L=5 mm  
Shell radius 2,5 mm L=10 mm

# INSIDE MEASURING INSTRUMENTS



368-913



No. 468-983

**MeasurLink<sup>®</sup> ENABLED**  
Data Management Software by Mitutoyo

List price: ~~€ 3.242~~

**€ 2.499**

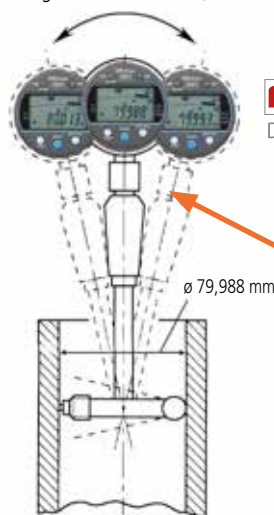


511-925-10

No.	Range [mm]	Design	Accuracy [μm]	Resolution [mm]	Remarks	Certificate of inspection	List price €	Promotion price €
368-911	6-12	3-point internal micrometer	±2	0,001	Incl. 3 micrometer, 2 setting rings	■	901,00	719,00
368-912	12-20	3-point internal micrometer	±2	0,005	Incl. 2 micrometer, 1 setting ring	■	779,00	629,00
368-913	20-50	3-point internal micrometer	±3	0,005	Incl. 4 micrometer, 2 setting rings	■	1.787,00	1.399,00
368-914	50-100	3-point internal micrometer	±3	0,005	Incl. 4 micrometer, 2 setting rings	■	2.101,00	1.699,00
468-981	6-12	IP65 digital 3-point internal micrometer	±2*	0,001	Incl. 3 micrometer, 2 setting rings	■	2.769,00	2.199,00
468-982	12-25	IP65 digital 3-point internal micrometer	±2* (12-20) ±3* (20-25)	0,001	Incl. 3 micrometer, 2 setting rings	■	3.077,00	2.399,00
468-983	25-50	IP65 digital 3-point internal micrometer	±3*	0,001	Incl. 3 micrometer, 2 setting rings	■	3.242,00	2.499,00
468-984	50-75	IP65 digital 3-point internal micrometer	±3*	0,001	Incl. 3 micrometer, 2 setting rings	■	2.550,00	1.999,00
468-985	75-100	IP65 digital 3-point internal micrometer	±3*	0,001	Incl. 2 micrometer, 1 setting ring	■	2.834,00	2.199,00
511-925-10	18-150	2-point Bore Gauge	2	0,001	Digital indicator 543-310B incl.		802,00	639,00

\* Excluding quantising error

Oscillating movement result (min. value)



## ► 511-925-10 WITH 543-310B BORE GAUGE INDICATOR

► As an alternative to a dial indicator the user can also employ a digital indicator designed for 2-Point inside measuring instruments. It features a minimum value holding function that allows to easily detect the diameter of the measured hole.

Optional accessories, see next page.

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Data Management Software by Mitutoyo

A fast measurement frequency mode detection cycle every 20 ms (50 times/s) is selectable to measure the diameter more reliably.



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Data Management Software by Mitutoyo



No.	Range [mm]	Graduation [mm]	Accuracy [mm]	Design	Remarks	List price €	Promotion price €
527-201	0-150	0,05	±0,05	Depth caliper	Without fine adjustment	115,00	89,90
527-101	0-150	0,02	±0,03	Depth caliper	With fine adjustment	133,00	99,90
527-102	0-200	0,01	±0,03	Depth caliper	With fine adjustment	139,00	109,00
7211	0-200**	0,01	±0,020	Dial indicator depth gauge	Base Size: 63,5x16 mm	204,00	159,00
547-211	0-200**	0,01	±0,020*	Digital indicator depth gauge	Base Size: 63,5x16 mm	439,00	349,00
128-101	0-25	0,01	±0,003	Depth micrometer	Base Size: 63,5x16 mm	143,00	115,00

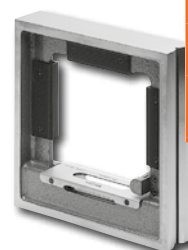
\* Excluding quantising error \*\*With 5 pcs. extensions

## APPLICATIONS



## Optional accessories for inside and depth measuring instruments

No.	Designation	Remarks	List price €	Promotion price €
02AZD730G	U-WAVE wireless transmitter	IP67 type	163,00	113,00
02AZD880G	U-WAVE wireless transmitter	Buzzer type	163,00	113,00
02AZD790B	U-WAVE connection cable	For IP65 internal micrometer	97,00	49,90
02AZD790F	U-WAVE connection cable	For Bore Gauge, digital depth gauge	87,00	49,90
905338	Digimatic cable (1 m)	For digital, depth gauge	31,00	-
905409	Digimatic cable (2 m)	For digital, depth gauge	37,00	-
06AFM380F	USB Input Tool Direct Cable (2 m)	For digital, depth gauge	107,00	81,90
05CZA662	Digimatic cable (2 m)	For IP65 3-point internal micrometer	82,00	-
05CZA663	Digimatic cable (2 m)	For IP65 3-point internal micrometer	90,00	-
06AFM380B	USB Input Tool Direct Cable (2 m)	For IP65 3-point internal micrometer	122,00	93,90



No.	Sensibility (mm/m per division)	Sensibility " (Arcsecond)	Dimensions [mm]	Accuracy	List price €	Promotion price €
960-601	0,1	20	200 x 44	DIN2267	381,00	299,00
960-603	0,02	4	200 x 44	DIN2267	467,00	379,00
960-703	0,02	4	200 x 44 x 200	DIN2267	807,00	649,00

# HEIGHT GAUGES

**MeasurLink® ENABLED**  
Data Management Software by Mitutoyo



No.	Range [mm]	Design	Graduation [mm]	Accuracy [μm]	Air floating	List price €	Promotion price €
514-102	0-300	Vernier height gauge with scriber	0,02	±40		424,00	319,00
192-130	0-300	Dial height gauge with scriber	0,01	±30		622,00	479,00
570-302	0-300	Absolute digital height gauge with scriber	0,01	±30*		604,00	449,00
570-304	0-600	Absolute digital height gauge with scriber	0,01	±50*		1.055,00	799,00
518-230	0-350	QM-Height 1D height gauge	0,001	±(2,4+2,1l/600)μm		3.485,00	2.799,00
518-232	0-600	QM-Height 1D height gauge	0,001	±(2,4+2,1l/600)μm		4.276,00	3.399,00
518-234	0-350	QM-Height 1D height gauge	0,001	±(2,4+2,1l/600)μm	■	3.849,00	2.999,00
518-236	0-600	QM-Height 1D height gauge	0,001	±(2,4+2,1l/600)μm	■	4.640,00	3.699,00
518-351D-21	0-600	Linear height 2D LH-600 E height gauge	0,0001	±(1,1+0,6l/600)μm	■	6.068,00	4.799,00
518-352D-21**	0-600	Linear height 2D LH-600 EG height gauge	0,0001	±(1,1+0,6l/600)μm	■	6.388,00	4.999,00

\* Excluding quantising error \*\* With "Power Grip" for movement



## ► ABSOLUTE DIGIMATIC HEIGHT GAUGE

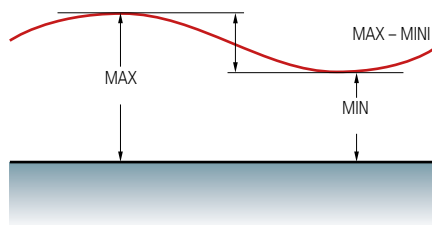
► The ABSOLUTE Height Gauge allows smooth movements via the slider adjustment wheel (hand-wheel). This height measuring instrument is available in two different measuring ranges.

## ► QM-HEIGHT: ABSOLUTE 1D HEIGHT GAUGE

- Easy to use 1D height measuring instrument with ABSOLUTE Scale.
- Types with and without pneumatic drive mechanism are available.
- This height gauge features various data output functions such as Digimatic, USB or a wireless (via U-WAVE) connection.
- You can easily implement frequently used measurements, such as inside/outside diameter and pitch calculations, by icons-based commands that also support easy one-key operations.



## ► QM-HEIGHT: ABSOLUTE 1D HEIGHT GAUGE

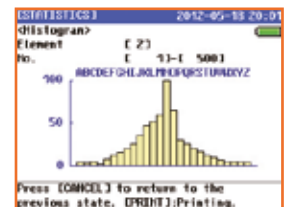
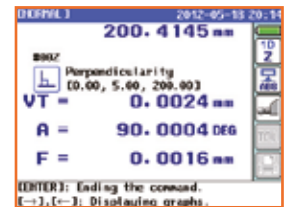


Max./Min./ RANGE measurement

Control box



Different measuring scenarios



## ► LINEAR HEIGHT LH-600 E/EG 2D HEIGHT GAUGE

- This height gauge is a high-performance 2D measuring system with pneumatic drive mechanism.
- LH-600 with a 5.7 inch color LCD TFT that improves display readability and operation.
- The self-explanatory control pad with colour LCD offers various functions such as automatic running of pre-learned part programs.
- Two different models with ergonomic hand grip (EG type) or without (E type) are available.

LH-600E

Design without hand grip.



LH-600EG

Model with hand grip. The button to activate the air cushion is pre-installed in the power grip.

### Optional accessories

No.	Designation	Remarks	List price €	Promotion price €
905338	Digimatic Cable (1m)	For Height Gauge with Scriber	31,00	—
905409	Digimatic Cable (2m)	For Height Gauge with Scriber	37,00	—
06AFM380F	USB Input Tool Direct Cable(2m)	For Height Gauge with Scriber	107,00	81,90
936937	Digimatic Cable (1m)	For QM-Height	48,00	—
965014	Digimatic Cable (2m)	For QM-Height	62,00	—
06AFM380D	USB Input Tool Direct Cable (2m)	For QM-Height	107,00	81,90
06AEG180D	AC-Adapter 6V DC, 2A	For QM-Height	71,00	—
63AAA043	DMX-0-1 USB	For Linear Height: HID (Human Interface Device) keyboard format Interface to send measuring data directly e.g. to MS Excel	250,00	199,00
12AAA807D	RS232-C cable	For Linear Height: Connection Cable from Linear Height to HID Interface 63AAA043	60,00	—
K650986	Stylus kit	For Linear Height: incl. holder, stylus: Ø=1, 2, 3, 4 mm a.s.o.	403,90	339,00
901-125	Granite Plate	1000 x 630 x 100 mm; DIN 876; Grade 0	1.276,00	—
901-933	Stand	Stand for Granite Plate for 901-125	383,00	—

# LINEAR SCALES / COUNTER

## ► KIT FOR NEW AND USED MANUAL MACHINE TOOLS

- > Linear Scale AT-715 and KA-200 COUNTER. This offer consists of 2 or 3 Linear Scales with an effective range of max. 1800 mm per scale.
- > ABSOLUTE technology – no reference point setup required at power-on
- > IP67 protection – thanks to electromagnetic induction scanning principle (high resistance to dust, water and oil). High durability
- > High accuracy (from  $\pm 5 \mu\text{m}$  up to  $10 \mu\text{m}$ ), depending upon effective range
- > Easy application in several types of manual machine tools, especially lathes

### 2-axis KA-200 COUNTER + two scales, max. effective range 2000 mm



2-axis KA-200 COUNTER  
plus two scales with max.  
2000 mm effective range

No. 539-8XX-2

€ 990

### 3-axis KA-200 COUNTER + three scales, max. effective range 3000 mm



3-axis KA-200 COUNTER  
plus three scales with max.  
3000 mm effective range

No. 539-8XX-3

€ 1.290



Additional measuring ranges are available (not included in basic set 1 and 2)



No.	Effective range [mm]	Total Length [mm]	List price €
539-860	2000	2198	1.052,60
539-861	2200	2398	1.170,30
539-862	2400	2598	1.286,90
539-863	2500	2698	1.346,20
539-864	2600	2798	1.403,50
539-865	2800	2998	1.521,10
539-866	3000	3198	1.637,70

Max. travelling speed	Effective range	Accuracy
50 m/min	100 – 500 mm	$\pm 5 \mu\text{m}$
	600 – 1800 mm	$\pm 7 \mu\text{m}$
	2000 – 3000 mm	$\pm 10 \mu\text{m}$

The offered set (above) contains Linear Scales with a range of up to 1800 mm

No.	Effective range [mm]	Total Length [mm]
539-801	100	278
539-802	150	328
539-803	200	378
539-804	250	428
539-805	300	488
539-806	350	538
539-807	400	588
539-808	450	638
539-809	500	698
539-811	600	798
539-813	700	898
539-814	750	938
539-815	800	998
539-816	900	1098
539-817	1000	1198
539-818	1100	1298
539-819	1200	1398
539-820	1300	1498
539-821	1400	1598
539-822	1500	1698
539-823	1600	1798
539-824	1700	1898
539-825	1800	1998



## ► KA-200 COUNTER

- > Easy to operate and multifunctional display unit for Linear Scales connection.
- > High performance-to-cost ratio 2/3-axis counter
- > Can be used as a milling counter or a lathe counter by entering modified parameters
- > Tool specification, addition of two axes, diameter display, preset value etc.

No.	Axis	List price €	Promotion price €
174-183D	2	<del>585,20</del>	399,00
174-185D	3	<del>704,90</del>	499,00



No. 174-183D

List price: € ~~585,20~~

**€ 399**

**MeasurLink® ENABLED**  
Data Management Software by Mitutoyo



No. 542-157

List price: € ~~715,50~~

**€ 549**

## ► SLIM HEAD LINEAR GAUGE LGK SERIES

- > Differential square-wave signal output enables to use it for a wide range of applications.
- > Applicable even where space is restricted, thanks to its small size.
- > Its photoelectric scale gives it high precision across the entire measuring range.
- > Long product life due to linear ball-bearings in the spindle unit

No.	Range [mm]	Measuring force *	Resolution [mm]	Accuracy	Signal pitch [μm]	Max. response speed	Mass [g]	List price €	Promotion price €
542-157	0-10	0,8 N/0,75 N/0,7 N	0,0005	(1,5 + L/50) μm	2	1500 mm/s	175	<del>715,50</del>	549,00

\* Spindle DOWN/Horizontal/UP

## ► STANDARD LINEAR GAUGE LGF SERIES

- > The advanced construction of the plunger guidance assembly makes it very resistant to external shocks and vibration.
- > Its differential square-wave signal output allows a wide range of applications.
- > Long product life due to linear ball-bearings in the spindle unit



No. 542-161

List price: € ~~585,20~~

**€ 449**

No.	Range [mm]	Measuring force *	Resolution [mm]	Stem ø	Accuracy	Signal pitch [μm]	Max. response speed	Mass [g]	List price €	Promotion price €
542-161	0-10	1,2/1,1/1 N	0,001	ø 8 mm	(1,5 + L/50) μm	4	1500 mm/s	260	<del>585,20</del>	449,00

\* Spindle DOWN/Horizontal/UP



No. 542-246

List price: € ~~2.317,20~~

**€ 1.749**

## ► HIGH RESOLUTION LINEAR GAUGE LGB SERIES

- > Designed extra compact, the small photoelectric scale ensures high precision across the entire range.
- > Differential square-wave signal output allows a wide range of applications.

No.	Range [mm]	Measuring force * [N]	Resolution [μm]	Stem ø [mm]	Accuracy	List price €	Promotion price €
542-246	0-5	0,65/0,6/0,55	0,1	8	(1,5 + L/50) μm	<del>2.317,20</del>	1.749,00

\* Spindle DOWN/Horizontal/UP

# LINEAR GAUGES / SENSORPAK

## ► EH COUNTER FOR LINEAR GAUGES

- > Multi-functional counter
- > The standard RS-232C and USB interfaces allow easy communication with an external PC (the USB can only be used with SENSORPAK).
- > The built-in networking function allows you to easily create a multi-point measuring system (RS link, max. 10 Counter).
- > The 2-gauge input type can calculate additions and subtractions between two gauges.



No.	Resolution [mm]	Max. input frequency	Input signal type	Applicable gauge	Gauge inputs	Mass [g]	List price €	Promotion price €
542-075D	0,0001/0,001/0,01	2,5 MHz (2-phase square wave), response speed depends on gauge specification	Differential square-wave	LGF, LGK, LGB, LG, LGM, LGH (excluding LGF-Z with reference point, LGH with 0,01 µm resolution)	1	760	<del>906,30</del>	<b>689,00</b>
542-071D	0,0001/0,001/0,01				2	800	<del>1.101,40</del>	<b>839,00</b>



**MeasurLink® ENABLED**  
Data Management Software by Mitutoyo

## ► SENSORPAK

- > Displays measurement values from up to 60 sensors simultaneously and in real time.
- > You can make calculations using measurement values from up to 30 sensors in real time.
- > It offers a huge range of different graphical presentations of using measurement, such as number representation, pointer representation, scale representation.
- > Data registration on control cards or data tables
- > You can also carry out further data processing with external software, such as Microsoft® Excel® or MeasurLink.

Model	Sensorpak
No.	02NGB072
Output function	Direct output to Microsoft® Excel® spreadsheet, CSV file output (compatible with MeasurLink)
Total tolerance judgement	GO/NG judgement (by specifying gauges to be used for total tolerance judgement) GO/NG signal output with optional I/O cable
Input function	Trigger function : by means of keys timer or external TRG (with optional I/O cable) Data input frequency: Max. 9999 times (with 60 gages connected) to 60000 times (with 6 gages connected)
Application counter	Counters with RS-232C interface (EH and EV), with USB interface (EH)
Display	Display type : Counter, bar graph, meter, chart (capable of simultaneous display) Tolerance judgement result: Colour display (green/red) Connectable gauges : Max. 60 gages

# HARDNESS TESTING MACHINES

Mitutoyo

► LEEB PORTABLE HARDNESS TESTING DEVICE HH-411

- This instrument is the hardness testing solution for big specimens
- Easy performance of test procedure
- Automatic recognition of impact direction
- Including HLD scale impact device
- Reference material block included in standard accessories

Standard model with HLD impact device

No.	Designation	Impact device	List price €	Promotion price €
810-298-10	HH-411	HLD	<del>2.850,00</del>	2.399,00

MeasurLink<sup>®</sup> ENABLED  
Data Management Software by Mitutoyo

No. 810-298-10  
List price: ~~€ 2.850~~  
**€ 2.399**



THE BRAND-NEW HR-600 SERIES

Inspecting big and heavy workpieces as well as fully automatic serial testing in CNC mode is what the brand-new HR-600 series of high-precision Rockwell hardness testing machines has been designed for. A push of a button triggers fully automatic test cycles for maximum process safety.

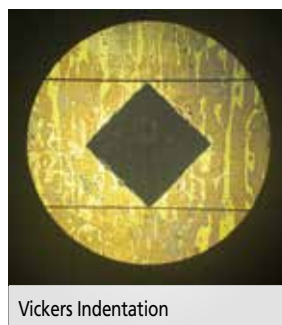


For more information:  
[HR-600Rockwell@mitutoyo.eu](mailto:HR-600Rockwell@mitutoyo.eu)

# HARDNESS TESTING MACHINES

## ► VICKERS HARDNESS TESTING MACHINE HV-110/120

- > 144 mm (5,7 inch) colour display (Type A) with excellent visibility, easy to operate user interface
- > High-quality objective lenses for best observation image
- > Electromagnetic test force control for all models
- > LED illumination extends the service life and offers a natural-colour observation image.
- > Supports Micro Brinell up to 62,5 kgf with optional test force weights, depending on model
- > 10x objective lens included



Vickers Indentation

No.	Designation	Test forces kgf	List price €	Promotion price €
<b>810-440D</b>	HV-110 Type A	1-50	<del>12.500,00</del>	<b>10.799,00</b>
<b>11AAC714</b>	20 x Objective lens	–	730,00	–
<b>11AAC715</b>	50 x Objective lens	–	880,00	–

No. 810-440D

List price: ~~€ 12.500~~

**€ 10.799**



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Data Management Software by Mitutoyo

## ► ROCKWELL HR-530

- > New and intuitive user interface
- > Multiple test force generation possibilities for Rockwell, Rockwell Superficial and Brinell hardness up to 187,5 kgf
- > Supports Brinell depth measurement, ISO2039-2 Plastic test and Rockwell Alpha test
- > HR-530 can perform 47 different hardness testing scales.
- > Workroom height 250mm or 395mm.
- > A lever indenter arm makes for easy reach of interior surfaces (min. Ø 40 mm / Ø 22 mm, when using an optional diamond indenter) and exterior surfaces and best overview over the specimen.
- > Real-time electronic test force control provides accurate loading, and perfectly eliminates overshooting of test force. It also enables a precisely executed test time cycle. Excellent repeatability is achieved.
- > Time-saving serial test mode, which allows serial testing without changing spindle position. Serial test can be operated by foot switch.
- > Auto-stop table elevation and automatic preloading provide stable test force generation.



Inside testing option

No. 810-336

List price: ~~€ 13.400~~

**€ 10.299**

Rockwell scales	Rockwell Superficial scales	Indenter
HRA, HRC, HRD	HR15N, HR30N, HR45N	Diamond
HRB, HRF, HRG	HR15T, HR30T, HR45T	Ball 1,5875 mm
HRE, HRH, HRK	HR15W, HR30W, HR45W	Ball 3,175 mm
HRL, HRM, HRP	HR15X, HR30X, HR45X	Ball 6,35 mm
HRR HRS, HRV	HR15Y, HR30Y, HR45Y	Ball 12,7 mm

No. 810-236

List price: ~~€ 11.200~~

**€ 8.599**



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No.	Designation	Test forces kgf	Max. workpiece height mm	Rockwell scales	Brinell Scales	Brinell depth measurement scales	Plastic test scales	List price €	Promotion price €
<b>810-236</b>	HR-530	3-187,5	250	30	11	2	5	<del>11.200,00</del>	<b>8.599,00</b>
<b>810-336</b>	HR-530L	3-187,5	395	30	11	2	5	<del>13.400,00</del>	<b>10.299,00</b>



## ► ECONOMIC ROCKWELL HARDNESS TESTING MACHINE ROCKWELL HR-210MR

- > The frame design provides maximum clearance for positioning the work piece, the only requirement is a flat table for mounting the testers.
- > Supports Brinell up to 187,5 kgf with an optional test force weight.
  - > Manual weight change
  - > Motorised test force application
- > Accurate hardness testing performance at entry level price
- > Increase process safety by adding K543817 clamping device

No.	Designation	Test forces kgf	List price €	Promotion price €
963-220D	HR-210MR	60/100/150	<del>4.800,00</del>	<b>3.799,00</b>



No. 963-220D

List price: ~~€ 4.800~~

**€ 3.799**



Clamping device

## ► WORKPIECE CLAMPING DEVICE

- > Avoids movement of the specimen during the hardness test
- > Ideal for shaft specimen and sheet material cutouts
- > Inside ø clamp 18 mm
- > Use Mitutoyo indenter for best result
- > Applicable for HR-MR models only

No.	Designation	Application models	List price €	Promotion price €
K543817	Clamping device	HR-110MR, HR-210MR, HR-430MR	<del>470,00</del>	<b>399,00</b>

## ► MICRO-VICKERS HARDNESS TESTING MACHINE HM-210A

- > High-performance hardness testing machine that uses advanced technology and is ideal for quality control
- > Touchscreen controlled
- > Electromagnetic force generation system
- > A high-performance optical system provides a high-quality image of the indentation.
- > 10x and 50x objective lenses included
- > 810-420 manual XY stage 25x25 mm included

Vise is an additional accessory.

No. 810-401D-ASET

List price: ~~€ 14.500~~

**€ 12.399**



No.	Designation	Test forces kgf	List price €	Promotion price €
810-401D-ASET	HM-210A	0,01-1	<del>14.500,00</del>	<b>12.399,00</b>

**MeasurLink® ENABLED**  
Data Management Software by Mitutoyo

# FORM MEASURING INSTRUMENTS

## ► COMPACT ROUNDNESS TESTER ROUNDTTEST RA-120

- > Quick and easy form deviation check in a production environment
- > D.A.T. (digital adjustment table) for guided centering and leveling
- > Comfortable one-hand positioning
- > Amazing turntable accuracy of  $(0,04+0,0006H)\mu\text{m}$

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Data Management Software by Mitutoyo

Scan QR Code with your mobile device and watch our product videos on YouTube



No.	Designation	List price €	Promotion price €
211-542D	RA-120	<del>13.800,00</del>	<b>11.199,00</b>



No. 211-542D

List price: ~~€ 13.800~~

**€ 11.199**

## ► MOBILE ROUGHNESS MEASUREMENT – SURFTEST SJ-210 / SURFTEST SJ-310

- > The portable instruments allow easy and accurate measurement of surface roughness. Our promise: Easy and intuitive menu navigation.
- > Sturdy design for industrial environment – perfectly made for on-site use!
- > EN ISO conform skid, stylus radius and measuring force
- > The SJ series performs roughness analyses according to various international standards (EN ISO, VDA, ANSI, JIS) and customised settings.
- > SJ-210 available in two different language types – total support of 21 languages

Scan QR Code with your mobile device and watch our product videos on YouTube



No.	Designation	List price €	Promotion price €
178-560-01D	SJ-210 Surftest	<del>2.215,00</del>	<b>1.949,00</b>
178-560-03D	SJ-210 Surftest	<del>2.215,00</del>	<b>1.949,00</b>
178-562-01D	SJ-210 R Surftest	<del>2.575,00</del>	<b>2.199,00</b>
178-564-01D	SJ-210 S Surftest	<del>4.100,00</del>	<b>3.299,00</b>
178-570-01D	SJ-310 Surftest	<del>4.450,00</del>	<b>3.699,00</b>
178-574-01D	SJ-310 S Surftest	<del>6.300,00</del>	<b>4.999,00</b>
178-029*	Granite stand	<del>738,00</del>	<b>599,00</b>
12AAA221	Granite stand adapter	<del>45,00</del>	<b>36,90</b>

\* 12AAA221 is required for SJ-210 / SJ-310

Detector types SJ-210 and SJ-310



Standard



R-type



S-type



No. 178-560-01D  
No. 178-560-03D

List price: ~~€ 2.215~~

**€ 1.949**



No. 178-570-01D

List price: ~~€ 4.450~~

**€ 3.699**

## ► SKIDLESS ROUGHNESS MEASUREMENT – SURFTEST SJ-410 / SURFTEST SJ-500

- > The skidless design enables creation of primary profiles (P), roughness profiles (R), waviness profiles (W) and more. It offers surface compensation of curved, radial and tilted surfaces.
- > The large colour multilingual LCD touchscreens facilitate easy readout and operation.
- > The SJ-410 series with brilliant optional accessories like autoset unit, X-axis adjustment unit and digital levelling unit mounted on the granite stand – single or in combination

**MeasurLink® ENABLED**  
Data Management Software by Mitutoyo

No. 178-580-01D

List price: ~~€ 8.430~~

**€ 6.999**



**Free download!**  
USB Communication  
Tool for

Software for SJ-210 / -310 / -410 / -500 series  
and RA-120 "USB Communication Tool" on:  
[http://www.mitutoyo.eu/en\\_us/downloads/  
software-and-updates/](http://www.mitutoyo.eu/en_us/downloads/software-and-updates/) (Registration required)



**MeasurLink® ENABLED**  
Data Management Software by Mitutoyo

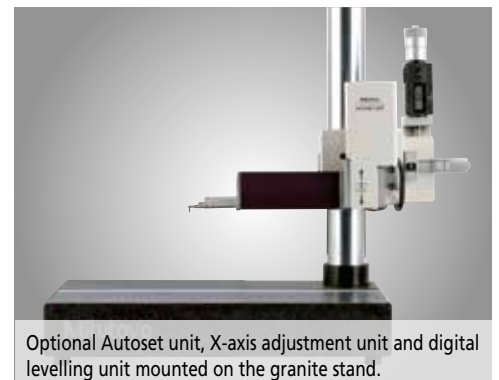
No. 178-532-01D

List price: ~~€ 12.600~~

**€ 9.999**



No.	Designation	List price €	Promotion price €
178-580-01D	SJ-411 SurfTest	<del>8.430,00</del>	<b>6.999,00</b>
178-582-01D	SJ-412 SurfTest	<del>9.900,00</del>	<b>8.199,00</b>
178-532-01D	SJ-500 SurfTest	<del>12.600,00</del>	<b>9.999,00</b>
178-010	Autoset unit	<del>2.370,00</del>	<b>1.899,00</b>
178-020	X-axis adjustment unit	<del>1.220,00</del>	<b>999,00</b>
178-030	Digital levelling unit	<del>1.800,00</del>	<b>1.499,00</b>
178-039	Granite stand	<del>732,00</del>	<b>599,00</b>



Optional Autoset unit, X-axis adjustment unit and digital levelling unit mounted on the granite stand.

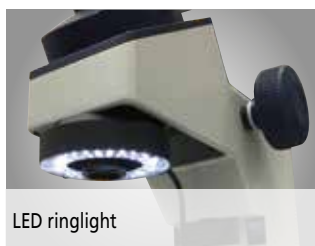
# MEASURING MICROSCOPES



## TM-505B SET-PRICE

List price: € 6.387

**€ 4.999**



LED ringlight

## ► MANUAL MEASURING MICROSCOPE TM GENERATION B SERIES

- > Robust and compact measuring microscope suitable for shop floor use
- > XY stage with digital micrometer heads and eye piece protractor enable easy measurement of dimensions and angles.
- > LED contour, surface and optional ringlight illumination with adjustable light intensity
- > Comfortable 30X magnification with 2X lens and 15X eyepiece
- > Available in 2 table sizes

### TM-505B Set

No.	Designation	List price €	Promotion price €
176-818D	TM-505B microscope XY table 50 x 50 mm	4.403,00	3.399,00
164-163	2x digital micrometer head 0-50 mm	1.584,00	1.200,00
63AAA001	LED ringlight with adjustable light intensity	400,00	400,00
Set Price		6.387,00	4.999,00

### TM-1005B Set

No.	Designation	List price €	Promotion price €
176-819D	TM-1005B microscope XY table 100 x 50 mm	5.783,00	4.350,00
164-163	2x digital micrometer head 0-50 mm	1.584,00	1.200,00
611675-031	Gauge block 50 mm Grade 1	63,00	49,00
63AAA001	LED ringlight with adjustable light intensity	400,00	400,00
Set Price		7.830,00	5.999,00

Order all code-numbers separately

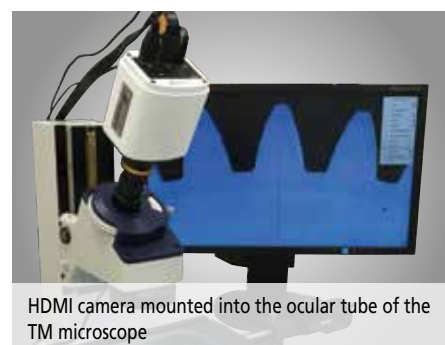
## ► DIGITAL CAMERA ACTION FOR TM MICROSCOPES

Mounting the HDMI6MDPX digital camera into the ocular tube transforms the TM microscope into a digital microscope.

- > HDMI6MDPX, 6 megapixel colour camera with direct HDMI output to a monitor
- > Integrated SD card for saving images and pre-installed software for performing basic in-screen measurements
- > Intuitive operation of the software with standard supplied USB mouse
- > No PC necessary

### HDMI6MDPX camera set

No.	Designation	List price €
63AAA353	HDMI6MDPX colour camera 0.37X optical C-Mount adapter Mechanical adapter for TM microscopes	1.724,00



HDMI camera mounted into the ocular tube of the TM microscope



HDMI6MDPX camera





## MF-B2010D SET-PRICE

List price: € 16.816

**€ 13.599**

## ► MEASURING MICROSCOPE MF GENERATION D

- > MF series measuring microscopes offer outstanding optical quality with their ML series objective lenses with long working distance.
- > Measuring accuracy is one of the highest in their class.
- > Continuously adjustable LED contour and surface illumination ensure optimum lighting conditions.
- > A comfortable 30X-magnified erect image comes with the 10X binocular and 3X ML lens.

### MF-B2010D Set

No.	Designation	List price €	Promotion price €
176-867-10	MF-B2010D microscope, XY table 200 x 100 mm. 3X ML lens included.	<del>13.100,00</del>	<b>10.591,00</b>
176-393*	Binocular 10X magnification	<del>1.446,00</del>	<b>1.159,00</b>
176-445D*	LED surface and contour illumination	<del>2.270,00</del>	<b>1.849,00</b>
<b>Set Price</b>		<del>16.816,00</del>	<b>13.599,00</b>

### MF-B2017D Set

No.	Designation	List price €	Promotion price €
176-868-10	MF-B2017D microscope, XY table 200 x 170 mm. 3X ML lens included.	<del>16.000,00</del>	<b>12.999,00</b>
176-393*	Binocular 10X magnification	<del>1.446,00</del>	<b>1.159,00</b>
176-445D*	LED surface and contour illumination	<del>2.270,00</del>	<b>1.841,00</b>
<b>Set Price</b>		<del>19.716,00</del>	<b>15.999,00</b>

\* Price only valid when bought in combination with MF-B2010D or MF-B2017D Order all code-numbers separately

## ► DIGITAL CAMERA ACTION FOR MF MICROSCOPES

Mounting the Invenio 55CIII camera onto the camera adapter transforms the MF microscope into a powerful digital microscope.

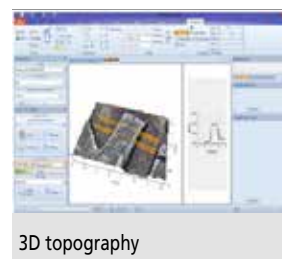
- > Invenio 55CIII, 5 megapixel colour camera with high speed USB3 communication
- > Ideal for documentation and analysis for a wide range of applications
- > Mitutoyo MF software package enhances the functionality of the microscope with:
  - > Reporting functionality of images and measurement results
  - > Images with extended depth of focus
  - > 3D topography observation by stacking images in Z-direction
  - > Counting of particles



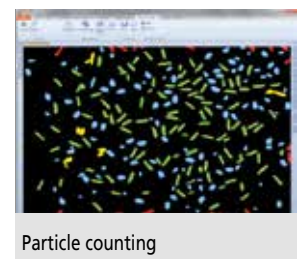
Invenio camera with C-mount adapter mounted on the MF microscope

### HDMI6MDPX camera set

No.	Designation	List price €
63AAA355	Invenio 55CIII digital USB colour camera 0.5X optical C-Mount adapter	1.665,00
63AAA066	Mitutoyo MF package: This package includes - Insight Basic - EEEF extended depth of focus - Topography - Segmentation and counting	1.500,00



3D topography



Particle counting

# OPTICAL MEASURING MACHINES

No. 302-701-1D

List price: € 12.880

**€ 9.999**



## ► PROFILE PROJECTOR PJ-A3000 SERIES

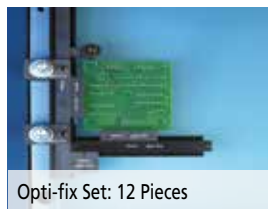
The PJ-A3000 series profile projectors with vertical optical system provide excellent versatility and ease of use for measurement of medium-sized work pieces.

- > Linear scales integrated in the XY stage
- > Built-in rotary encoder in the ø 315 mm projection screen
- > XY stage equipped with a quick-release mechanism for fast table movements
- > 10X objective lens included

No.	Designation	List price €	Promotion price €
302-701-1D	PJ-A3010F-200: XY stage: 200 x 100 mm	12.880,00	<b>9.999,00</b>

### Optional accessories

No.	Designation	List price €	Promotion price €
K550892	Opti-fix clamping system	500,00	<b>399,00</b>



Opti-fix Set: 12 Pieces

## ► PROFILE PROJECTOR PV-5110

The robust stand-alone PV-5110 profile projector with vertical optical system provides excellent observations with its big ø 508 mm projection screen.

- > Linear scales are integrated in the XY stage.
- > Built-in rotary encoder in the ø 508 mm projection screen
- > 10X objective lens is included
- > To suit customers' demands, the movement of the XY stage can either be displayed using the optional 2-axis KA Counter, the advanced QM-Data 200 data processor or the M2 data processing system.

No.	Designation	List price €	Promotion price €
304-919D	PV-5110: XY stage: 200 x 100 mm	15.450,00	<b>11.999,00</b>



KA Counter is optional

No. 304-919D

List price: € 15.450

**€ 11.999**

## ► M2 DATA PROCESSING SYSTEM FOR PROFILE PROJECTORS

Intuitive and easy to operate 2D data processor system with touch screen operation

### Mean features:

- > Measuring point acquisition by crosshair (63AAA406) or optional by optical edge detector (63AAA407)
- > Measure, construct and define 2D features.
- > Part program teach-in
- > Comprehensive measurement reports
- > Tolerance check according to DIN / ISO

### The system consist of:

- > M2 Metrology software
- > 2 axis interface box and 15 pin connecting cables
- > Power supply and USB cable.
- > Machine bracket, RAM Ball, RAM arm, VESA mount for mounting the optional tablet PC to the projector body.

### Optional but necessary accessory

- > Tablet PC with touch screen operation and Microsoft® Win10 ,64 Bit operating system.  
(Please consult your local Mitutoyo supplier for more details.)

No.	Designation	List price €
63AAA406*	M2 data processing system without edge detection.	1.750,00
63AAA407*	M2 data processing system with edge detection.	3.000,00

\* Tablet PC is not included



## ► CMM PALLET RECEIVER eco-fix KIT SERIES

The manual pallet receiver system for CMM enables the user to speed up and master repetitive measurements with ease. The base plate, equipped with handles and spheres on the bottom surface, can be repositioned quickly and precisely on the receiver pallet.

The use of a second base plate with the same fixture, can speed up serial measurements significantly. While the measurement program is running an identical follow up workpiece can be mounted on the fixture, so the workpiece changeover time can be reduced accordingly.



K551218: Application of the bottom receiver pallet system

No. K551218  
List price: ~~€ 1.970~~  
**€ 1.679**



K551218: 58 eco-fix clamping parts

No.	Designation	List price €	Promotion price €
K551218	<b>eco-fix kit S w. loading receiver pallet</b> Fixture kit for small and mid-size workpieces. Including: <b>Base plate 250 mm x 250 mm</b> 58 eco-fix clamping parts, e.g. brackets, location pins, spring clips, receiver pallet, handles and sphere bolts	<del>1.970,00</del>	<b>1.679,00</b>
K543812	Rack for 6 pallets	<del>1.792,00</del>	<b>1.479,00</b>



K543812: Pallet and workpiece not included in scope of delivery

## ► STYLI KIT M2/M3 MiSTAR

> This styli kit is tailor made for the measurement tasks of the MiSTAR shop floor CMM.

No.	Designation	List price €	Promotion price €
K651445	<b>Styli Kit M2/M3 MiSTAR</b> For TP20/200 SP25M probe systems. Including: <ul style="list-style-type: none"> <li>• 5-way stylus holder</li> <li>• 5 CFK M2 styli for best performance</li> <li>• M2 'M3 adaptor</li> <li>• Knuckle joint M2</li> <li>• M2 'M3 adaptor</li> <li>• Tungsten carbide styli M2 and M3</li> </ul>	<del>750,00</del>	<b>649,00</b>

No. K651445  
List price: ~~€ 750~~  
**€ 649**





ISO 9001

SCHUT.COM

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(Schut Geometrical Metrology)  
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E-mail: SchutNL@Schut.com

Action valid from November 1, 2019 through January 31, 2020. We reserve the right to make technical changes and developments; these prices only apply to business customers; all prices are understood to be net prices in EURO + VAT -further information is obtainable from [www.mitutoyo.eu](http://www.mitutoyo.eu).  
Delivery and prices of products offered herein are valid while supplies last. Technical changes, mistakes and printing errors excepted.

Coordinate Measuring  
Machines



Vision Measuring Systems



Form Measurement



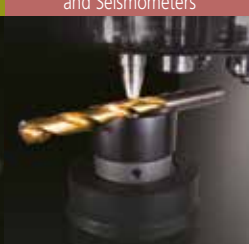
Optical Measuring



Sensor Systems



Test Equipment  
and Seismometers



Digital Scale and DRO Systems



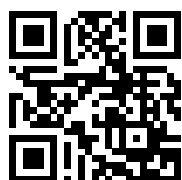
Small Tool Instruments  
and Data Management



**Whatever your challenges are,  
Mitutoyo supports you from start to finish.**

Mitutoyo is not only a manufacturer of top quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed up by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test and deliver bespoke measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.



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