

- 0 +

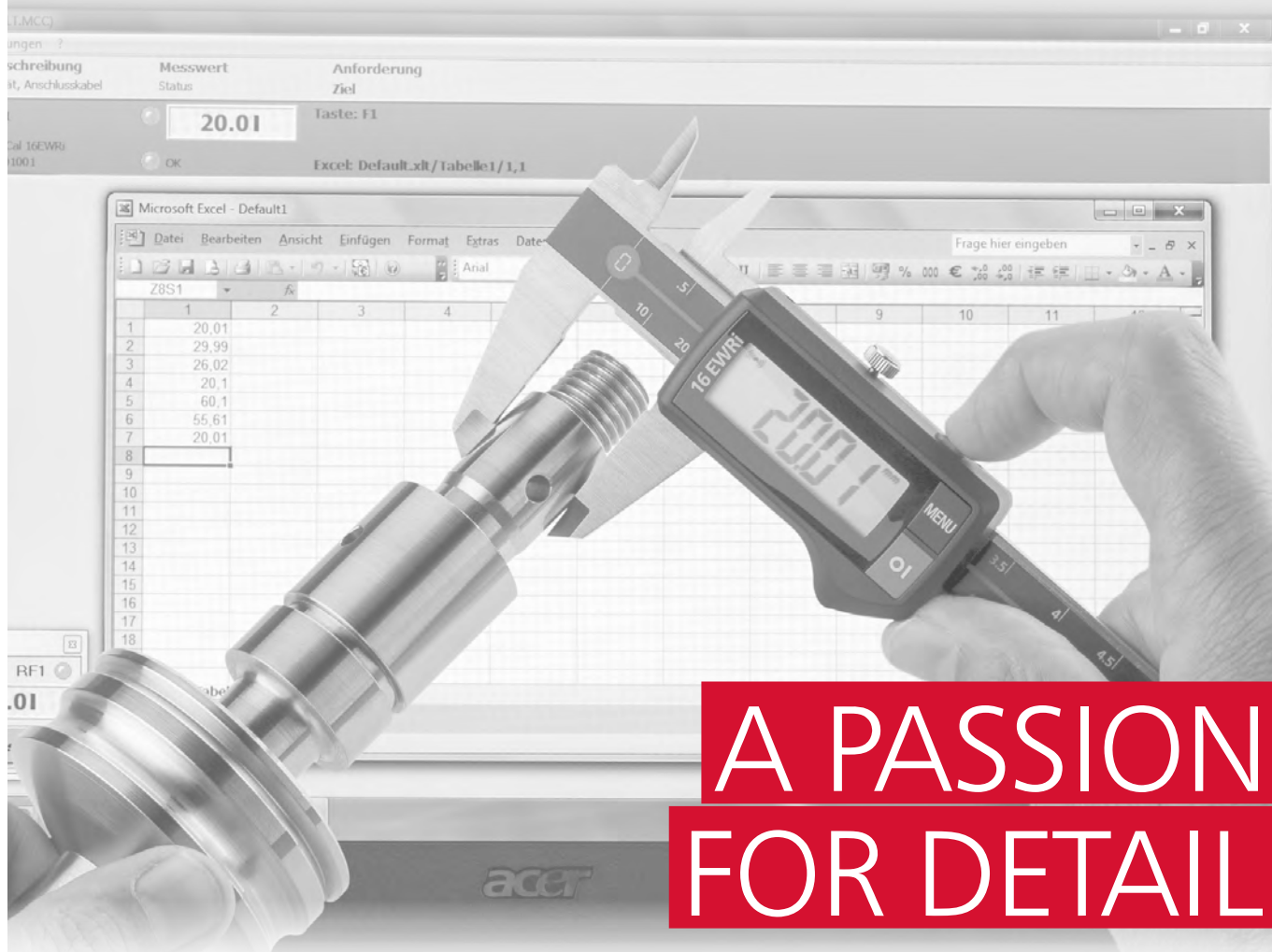


EXACTLY

MAHRLIGHTS

THE MAGAZINE DEVOTED TO DETAIL

1 | 2017



A PASSION FOR DETAIL

MARCOM PROFESSIONAL SOFTWARE – “SMAHRT METROLOGY” – SIMPLE, SMART AND NOW AVAILABLE TO DOWNLOAD FREE OF CHARGE

Our contribution to Industry 4.0. MarCom Professional software interface for connecting measuring instruments by cable or wireless. See page 6

INTEGRATED WIRELESS

Measuring instruments with integrated wireless transmitter. See from page 8

MILLIMAR C 1200

Now with dynamic measuring function. See page 23

MARSURF PS10 – “SMARTSURF”

Entry-level surface metrology with intuitive touch operation. See page 27

SPECIAL OFFER PRICES VALID FROM APRIL 1ST TO MAY 31ST, 2017



**DIMENSIONAL METROLOGY:
EXPERIENCE, INNOVATION AND
DEDICATION.**

A PASSION FOR DETAIL

MEASUREMENT AND EVALUATION: THE TWO BELONG TOGETHER

Measurement in production is one side of quality assurance – the other is the professional evaluation of measuring data. The two go hand in hand, and both determine success in production.

A lot has changed in recent years in both measuring and evaluation. Mahr offers innovative solutions, which will make your everyday work much easier and better.

Wireless devices: faster measurements without wires

Our new calipers and dial indicators with integrated wireless transmission mean that measured values can be transmitted to a PC wirelessly. This makes it much easier to record and document measuring data and thus also speeds up quality assurance processes.

MarCom Professional: the software for evaluating measurements

This is where the software comes in: the wirelessly transmitted measuring data can be processed using "MarCom Professional". The evaluation provides valuable and necessary information about production. This serves as the basis for reliably monitoring processes and increasing productivity.



Free download

We have a very special offer for our Mahrlights readers: You can now download the "MarCom Professional" software free of charge (see page 6/7)!

MAHR's combination of wireless devices and evaluation software brings you another major step closer to the benefits of the Industry 4.0 networked factory. Find out more in this latest issue of Mahrlights.

Enjoy!

ppa. Manuel Hüsken
General Sales Manager

ppa. Heiko Kern
Sales Manager for Trade

SMAHRT METROLOGY



WIRELESS DEVICES FOR MORE MEASURING CONVENIENCE

Mahr's new wireless devices with **integrated wireless transmitter** are designed for user-friendly, practical and cost-effective use in your factory. They will make your measurement recording processes much faster and more efficient.

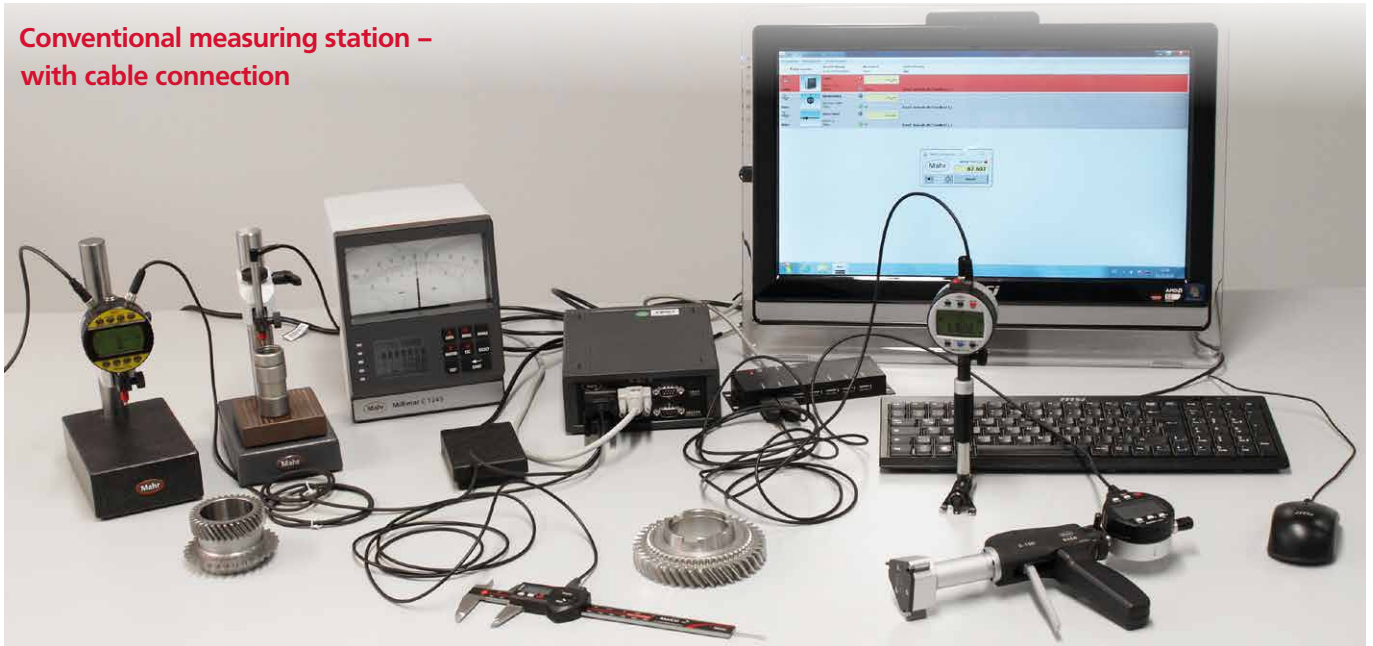
Mahr's caliper and dial indicators herald a new era:

Mahr has enhanced its "MarCal" and "MarCator" ranges with state-of-the-art technology. These special measuring instruments

- feature "**Integrated Wireless**",
- have a transmitter directly integrated in the measuring instrument,
- are **energy-efficient** and do not require a separate battery.



Conventional measuring station – with cable connection



BENEFIT FROM THESE OUTSTANDING ADVANTAGES:

Data link	Integrated wireless	Cable connection
Range	Max. 6 m	Max. 2 m (without extension cable)
Freedom of movement and operation	Fully autonomous measuring without limits	Limited freedom of movement , especially at measuring stations with multiple measuring instruments
Wear	No risk of damage or wear	Risk of: - cable breaks, cable kinks - embrittlement from oil, etc.
Interface	1 affordable i-Stick receiver for 8 measuring instruments (maximum 4 i-Sticks per PC) Free MarCom Professional software interface	One cable is required for each measuring instrument Additional hardware interface must be purchased
Safety	Visual feedback of successful transmission on display of measuring instrument, or error message	No feedback from transmission Unplugged cables or cable breaks are not identified

Innovative measuring station – with integrated wireless



SMAHRT CONNECTIVITY

Sending measuring results

Data

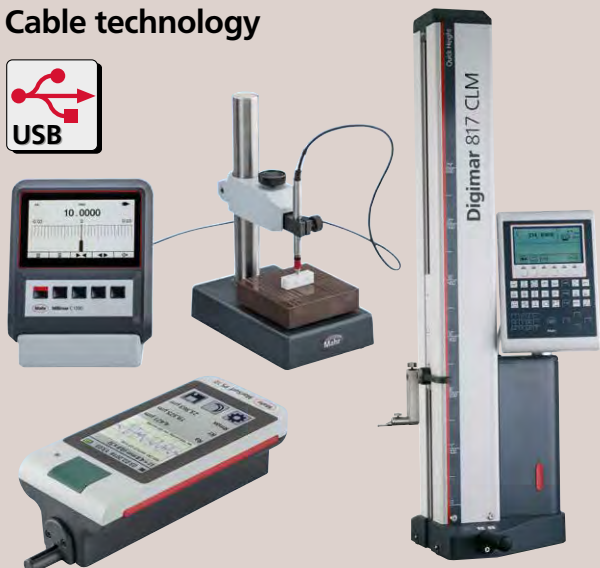
Integrated wireless technology



Retrofitted wireless technology

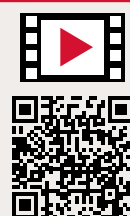


Cable technology



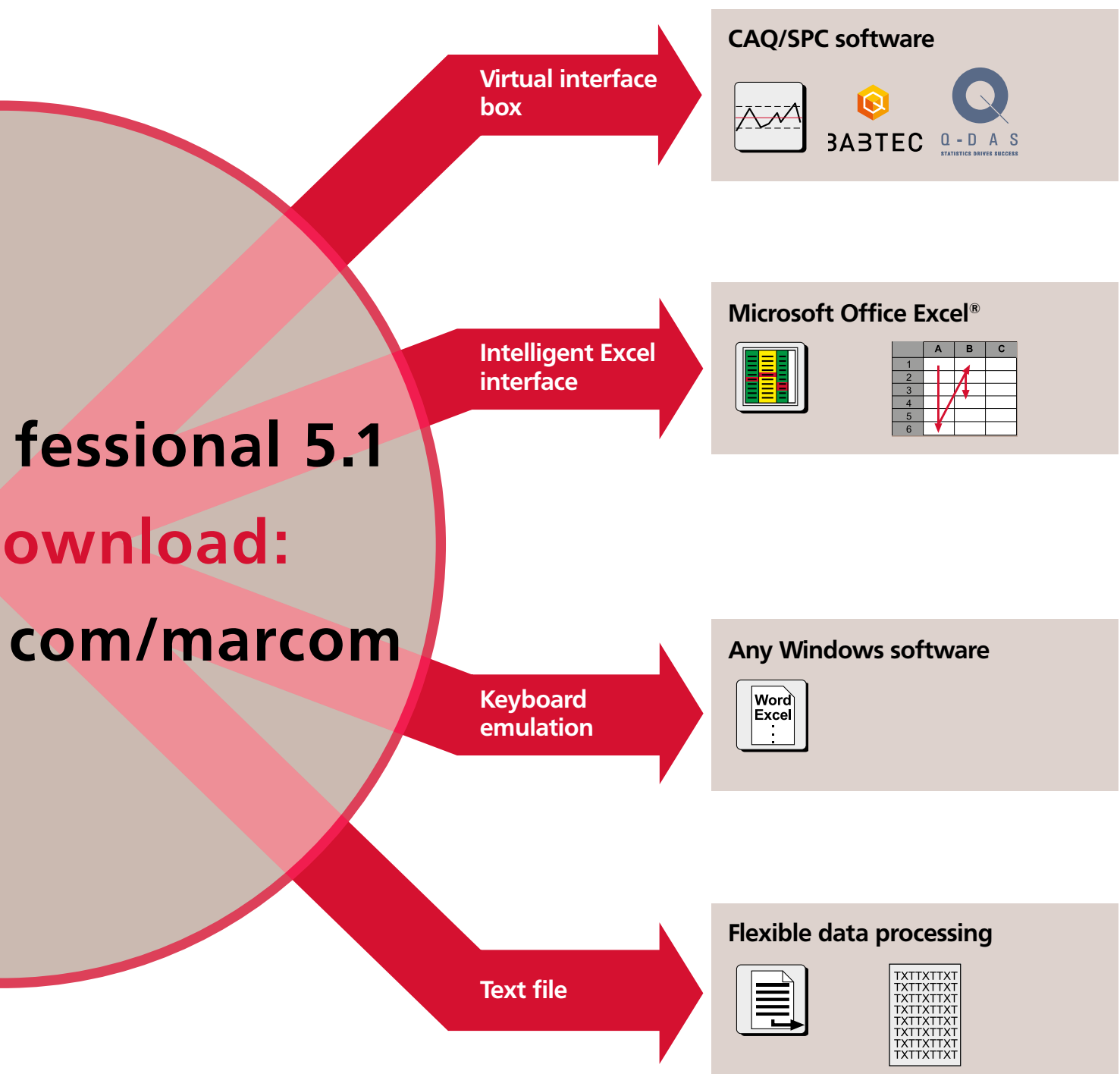
MarCom Pro
Free to d
[www.mahr.](http://www.mahr.com)

Scan the QR code
to watch simple and
practical applications



HIGHLIGHT: Our contribution to Industry 4.0: You can now download MarCom Professional software free of charge!

transfer **Data processing**



CAQ/SPC software

Microsoft Office Excel®

Any Windows software

Flexible data processing

SPECIAL OFFER PRICES

MARCAL. THE WIRELESS CALIPER

With the **MarConnect system** you will always have the **optimal connection to all evaluation systems** – either via integrated wireless or data cable. Mahr's **Reference System** makes the caliper **easier** to handle. Thanks to the

high **degree of protection IP67**, the MarCal 16 EWR is **perfect for use in the harshest ambient conditions.**

MARCAL 16 EWRi Digital Caliper

With integrated wireless

REFERENCE



Starter Pack
£ 206.72
 Order no. 9105795

Starter Pack

16 EWRi incl. i-stick wireless receiver and MarCom Professional 5.1 see order no. 9105795 and 9105796

Features

Functions: ON/OFF, AUTO-ON/OFF, HOLD (storage of measured values), RESET (set display to zero), PRESET (enter a numerical value), mm/inch, Reference System, LOCK function (key lock), DATA (data transmission)

- **Integrated wireless transmitter**
- Immediate measurement thanks to the **Reference System**
- Excellent resistance to dust, coolants and lubricants:

Protection class IP67

- Power supply: Battery life approx. 3 years (approx. 0.5 in wireless mode)
- Lapped guideways
- Slide and beam made of hardened stainless steel



Product	Measuring range		Resolution mm/inch	Depth rod		Details	Order no.	List price	Offer price
	mm	(inch)						£	£
16 EWRi	0 – 150	(6")	0.01 / 0.0005	•		Starter Pack: incl. i-stick wireless	9105795	258.40	206.72
16 EWRi	0 – 150	(6")	0.01 / 0.0005	•		receiver and MarCom Professional 5.1	9105796	258.40	206.72

MARCAL 16 EWRi Digital Caliper

With integrated wireless



Offer price
£ 136.43
 Order no. 4103400

16 EWRi excluding i-Stick wireless receiver and MarCom Professional 5.1. Features as above.



Product	Measuring range		Resolution mm/inch	Depth rod		Details	Order no.	List price	Offer price
	mm	(inch)						£	£
16 EWRi	0 – 150	(6")	0.01 / 0.0005	•		Data interface:	4103400	181.90	136.43
16 EWRi	0 – 150	(6")	0.01 / 0.0005	•		Integrated wireless	4103402	181.90	136.43

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

DIGITAL MEASUREMENT WITH MARCATOR

Our **innovative range of digital dial gauges contains high precision electronic measuring systems**, enabling a multitude of additional practical measuring functions. Simple to operate with a large, easy to read display, our digital dial

gauges meet all the requirements of a modern measuring instrument. **Quick and simple data processing** ensures results are available when you need them.

MARCATOR 1086 Ri

Digital dial indicators

Resolution from 0.5 µm and tolerance display



Offer price
£ 251.81
 Order no. 4337624



REFERENCE

Features

Functions: ON/OFF, RESET (set display to zero), mm/inch, reversal of counting direction, PRESET (enter a numerical value), TOL (enter tolerance limit values), ABS (display can be set to zero, without losing the reference to the preset value), DATA (data transmission via connection cable), factor (adjustable), LOCK (lock individual keys)

- High contrast LCD
- Operating and display unit (bezel) can be rotated 280°
- Lifter protection cap on end of measuring pin
- Immediate measurement thanks to the **Reference System**
- Power supply: Battery life approx. 3 years

MARCATOR 1087 Ri

Digital dial indicators

Resolution from 0.5 µm and dynamic max/min functions



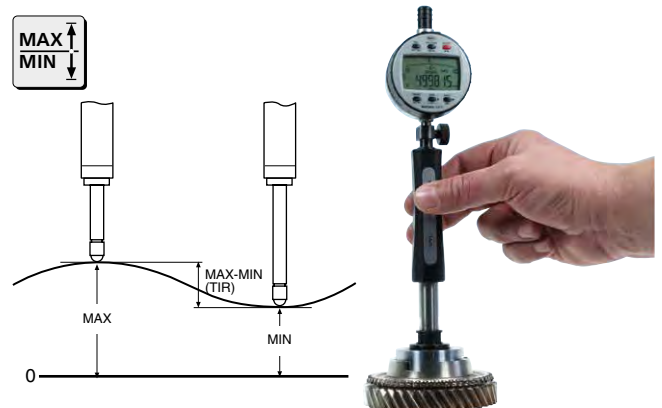
Offer price
£ 295.16
 Order no. 4337663



REFERENCE

Additional functions of MarCator 1087 Ri

MAX/MIN memory for reversing point search, TIR (MAX-MIN) for radial runout and flatness test



Product	Measuring range		Resolution, switchable mm/inch	Details	Order no.	List price	Offer price
	mm	(inch)				£	£
1086 Ri	12.5	(0.5")	0.0005 / 0.001 / 0.002 / 0.005 /	Data interface: Integrated wireless	4337624	335.75	251.81
1086 Ri	25	(1")	0.01 mm		4337625	379.95	284.96
1087 Ri	12.5	(0.5")	(0.00002" / 0.00005" / 0.0001" /	Data interface: Integrated wireless	4337663	393.55	295.16
1087 Ri	25	(1")	0.0002" / 0.0005")		4337665	443.70	332.78

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

MARCONNECT. THE NEW WIRELESS STANDARD

With **MarConnect Integrated Wireless** measuring instruments you're always guaranteed **optimal connection to all evaluation systems**. Being able to record measuring

data without annoying data cables makes the measuring instrument much easier to handle and more efficient.

Digital calipers for special applications

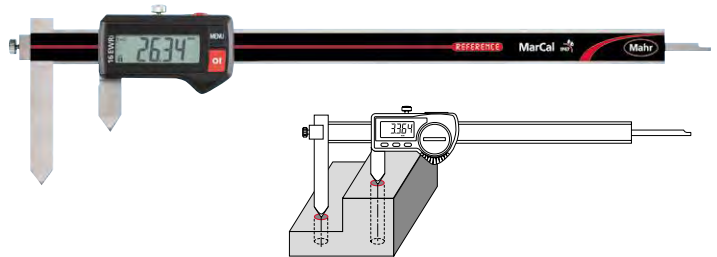
Mahr offers a range of calipers for special applications featuring our state-of-the-art measuring system with integrated wireless. The range includes special calipers, universal calipers right through to depth gauges.



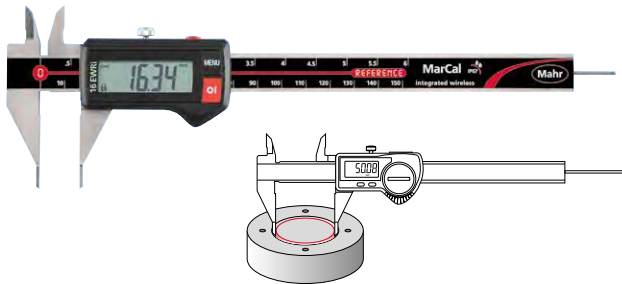
16 EWri-Li



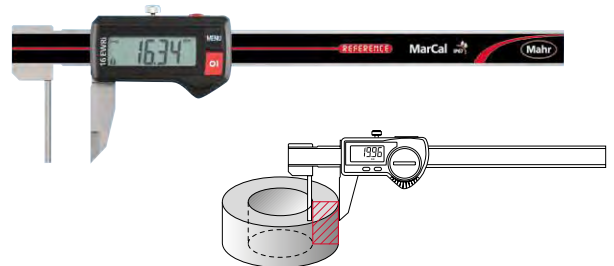
16 EWri-BA



16 EWri-SM



16 EWri-RW



30 EWri-D



16 EWri-V



Find out more in our catalog or on our website:
www.mahr.com

Need some more information? Our technical advisers will be happy to answer any questions you may have.

THE CUTTING EDGE IN DATA TRANSMISSION

In modern production it is imperative that measuring results are recorded and evaluated accurately. These results are not only valuable benchmarks for assessing products, but they can also be used to evaluate and optimize production

processes. Mahr sets high standards with its **up-to-date wireless data transmission solutions. Simple, Reliable and Professional.**

MARCONNECT i-Stick wireless receiver for measuring instruments with integrated wireless



Wireless receiver i-Stick incl. software interface



Offer price
£ 76.50
Order no. 4102220

Features

- Measurement without the nuisance of additional modules
- Large freedom of movement, up to 6 m wireless
- Secure and simple data transmission
- Long battery life span
- Inexpensive
- Comes with free MarCom Prof. 5.1 software

Product		i-Stick
Number of channels		3
Number of connectable measuring instruments with integrated wireless		8 per stick
Radio frequency	MHz	2400
For measuring instruments		MarCal 16 EWri / 30 EWri MarCator 1086 Ri / 1087 Ri / 1087 Bri
Order no.		4102220
Package contents		i-Stick
List price	£	76.50
Offer price	£	61.20

Product	Description	Order no.	List price £	Offer price £
MC-R	Remote control for MarCom	4102221	73.95	59.16

MARCOM PROFESSIONAL 5.1 software interface

Processing measuring data



For free download
www.mahr.com/marcom

Features

- Integrated virtual interface boxes
- Possible to connect to SPC software via a virtual interface box
- Freely configure the desired data transmission (e-Stick, i-Stick, FM 2, USB, RS232C)

Product	MarCom Professional 5.1
Number of connectable wireless receivers for i-stick	4
Number of connectable measuring instruments with integrated wireless	32
Number of connectable wireless receivers for e-stick	1
Number of connectable transmission modules for e-stick	8
Number of connectable wireless receivers for FM 2	1
Number of connectable sender modules for wireless receiver FM 2	100
Number of connectable measuring instruments with USB interface	128
Number of connectable USB foot switches	128
Number of connectable measuring instruments with RS232C interface	2
Number of virtual interface boxes (8 inputs)	4



MARCAL. THE REFERENCE CALIPER

Mahr's **Reference System** has made the caliper much **easier and more convenient** to handle as the zero position only has to be set once and the setting is stored for all further measurements. Due to the **high degree of IP67 protection**,

the MarCal 16 EWR is protected against dust, coolants and lubricants and is therefore **ideal for use in the harshest ambient conditions**.

MARCAL 16 ER Digital Caliper

REFERENCE



DIN 862

Large display



Offer price
£ 69.81
Order no. 4103010

Features

- Functions: ON/OFF, AUTO-ON/OFF, RESET (set display to zero), mm/inch, Reference System, LOCK function (key lock)
- Immediate measurement thanks to the **Reference System**
 - Power supply: Battery life approx. 3 years
 - Lapped guideways
 - Slide and beam made of hardened stainless steel



MarCal 16 ER, 200 mm, Order no. 4103018

Product	Measuring range		Resolution mm/inch	Depth rod		Data output	Height of digits mm	Order no.	List price	Offer price
	mm	(inch)							£	£
16 ER	0 – 150	(6")	0.01 / 0.0005	•			11	4103010	93.08	69.81
16 ER	0 – 150	(6")	0.01 / 0.0005	•	•		11	4103012	93.08	69.81
16 ER	0 – 200	(8")	0.01 / 0.0005	•	•		8.5	4103018	159.80	119.85
16 ER	0 – 300	(12")	0.01 / 0.0005	•	•		8.5	4103020	203.15	152.36

MARCAL 16 EWR Digital Caliper

Excellent protection against dust, coolants and lubricants

REFERENCE



DIN 862



Offer price
£ 104.55
Order no. 4103300

Features

- Functions: ON/OFF, AUTO-ON/OFF, RESET (set display to zero), mm/inch, Reference System, LOCK function (key lock)
- Immediate measurement thanks to the **Reference System**
 - Excellent resistance to dust, coolants and lubricants: **Protection class IP67**
 - Power supply: Battery life approx. 3 years
 - Lapped guideways
 - Slide and beam made of hardened stainless steel



MarCal 16 EWR, 200 mm, Order no. 4103068

Product	Measuring range		Resolution mm/inch	Depth rod		Data output	Height of digits mm	Order no.	List price	Offer price
	mm	(inch)							£	£
16 EWR	0 – 150	(6")	0.01 / 0.0005	•			11	4103300	139.40	104.55
16 EWR	0 – 150	(6")	0.01 / 0.0005	•	•		11	4103302	139.40	104.55
16 EWR	0 – 200	(8")	0.01 / 0.0005	•	•		8.5	4103068	199.75	149.81
16 EWR	0 – 300	(12")	0.01 / 0.0005	•	•		8.5	4103070	267.75	200.81

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

MARCAL 30 EWR Digital Depth Gauge

For measuring deep down



Offer price
£ 214.20
 Order no. 4126700

REFERENCE



Features

Functions: ON/OFF, AUTO-ON/OFF, RESET (set display to zero), PRESET (enter a numerical value), mm/inch, Reference System, LOCK function (key lock), DATA (in conjunction with data cable)

- Immediate measurement thanks to the **Reference System**
- Excellent resistance to dust, coolants and lubricants: **Protection class IP67**
- Power supply: Battery life approx. 3 years
- Lapped guideways
- Slide and beam made of hardened stainless steel

MARCAL 30 EWR-D Digital Depth Gauge

For your special applications



Offer price
£ 327.04
 Order no. 4126523

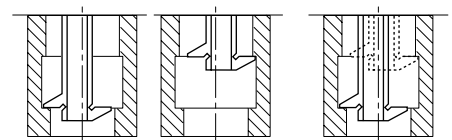
REFERENCE



Features

same as MarCal 30 EWR

Measuring groove widths and distances between grooves



Product	Measuring range		Resolution mm/inch	Data output 	Order no.	List price	Offer price
	mm	(inch)				£	£
30 EWR	0 – 150	(6")	0.01 / 0.0005	•	4126700	285.60	214.20
30 EWR	0 – 300	(12")	0.01 / 0.0005	•	4126701	374.85	281.14
30 EWR	0 – 500	(20")	0.01 / 0.0005	•	4126702	453.90	340.43
30 EWR-D	0 – 200	(8")	0.01 / 0.0005	•	4126523	436.05	327.04
30 EWR-D	0 – 300	(12")	0.01 / 0.0005	•	4126524	555.90	416.93

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

MARCAL. THE LIGHTWEIGHT DIGITAL CALIPER

Our **18 EWR Digital Caliper** has a **lightweight design**, due to its narrow cross-section. And with additional weight-reducing holes in the measuring jaws from 500 mm, it makes for optimum handling during measurement.

MARCAL 18 EWR Digital Caliper

Lightweight steel design

REFERENCE



Offer price
£ 270.30
Order no. 4112704

MarCal 18 EWR, 300 mm, Order no. 4112705

Features

Functions: AUTO-ON/OFF, DATA (data transmission via connection cable), ON/OFF, PRESET (enter a numerical value), RESET (set display to zero), Reference System, LOCK function (key lock), mm/inch

- Immediate measurement thanks to the **Reference System**
- Excellent resistance to dust, coolants and lubricants:

Protection class IP65

- Power supply: Battery life approx. 3 years
- Digit height: 10 mm (300 mm), 12.5 mm (500 mm)

Product	Measuring range		Resolution	Details	Order no.	List price	Offer price
	mm	(inch)				£	£
18 EWR	300	(12")	0.01 / 0.0005	with measuring blades for external dimensions	4112704	360.40	270.30
18 EWR	500	(20")	0.01 / 0.0005		4112712	688.50	516.38
18 EWR	300	(12")	0.01 / 0.0005	without measuring blades for external dimensions	4112705	332.35	249.26
18 EWR	500	(20")	0.01 / 0.0005		4112713	612.00	459.00

MARCAL 16 FN Caliper with Scale Reading

The classic precision vernier caliper



Offer price
£ 18.17
Order no. 4100400

Features

- All reading parts have a glare free, satin chrome finish
- Slide and beam made of hardened stainless steel
- Measuring surfaces are made of hardened stainless steel
- Measuring blades for inside measurement
- Step measuring function
- Raised guideways for the protection of the scale

Product	Measuring range	Vernier value	Vernier value	Error limit	Order no.	List price	Offer price
	mm					mm	inch
16 FN	0 – 150	0.05	1/28	0.05	4100400	24.23	18.17
16 FN	0 – 200	0.05	1/28	0.05	4100401	65.45	49.09
16 FN	0 - 300	0.05	1/28	0.05	4100402	157.68	118.26

MARCAL. THE TROUBLESHOOTER

16 EWR-V - The universal caliper for difficult to reach measuring points such as recesses and grooves. Use in conjunction with special anvils to solve every measuring problem.

MARCAL 16 EWR-V Digital Universal Caliper

The trouble shooter

REFERENCE

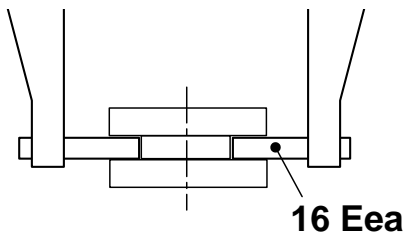


Offer price
£ 327.04
 Order no. 4118807

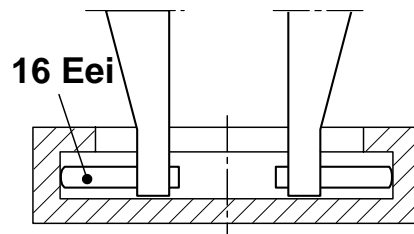


Features

- Functions: AUTO-ON/OFF, DATA (data transmission via connection cable), HOLD (storage of measured values), ON/OFF, PRESET (enter a numerical value), RESET (set display to zero), Reference System, LOCK function (key lock), mm/inch
- Immediate measurement thanks to the **Reference System**
 - Excellent resistance to dust, coolants and lubricants: **Protection class IP67**
 - Power supply: Battery life approx. 3 years
 - Lapped guideways
 - Slide and beam made of hardened stainless steel
 - Package contents: Includes standard accessories



Anvils for outside measurements



Anvils for inside measurements

Product	Measuring range		Resolution mm/inch	Depth rod 	Details	Order no.	List price	Offer price
	mm	(inch)					£	£
16 EWR-V	0 - 200	(8")	0.01 / 0.0005	•	Digit height: 8.5 mm	4118807	436.05	327.04

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

SPECIAL OFFER PRICES

MICROMAR. EVERYTHING REVOLVES AROUND PRECISION

Besides calipers, micrometers are the most frequently used hand measuring instruments. With precision ground spindles, carbide tipped measuring faces and a robust

frame construction; the modern micrometer from the **Mahr Micromar series ensures maximum precision** and a **long working life**.

MICROMAR 40 ER / 40 EWR Digital Micrometer

With simple one handed operation



Set of 4 Micromars 40 EWR with 4 micrometers, Order no. 4151709

REFERENCE



Features

Functions: RESET (set display to zero), ABS (set display to zero without the reference to the preset being lost), mm/inch, PRESET (enter a numerical value), Reference System, LOCK function (key lock), DATA (data transmission via connection cable)

- Immediate measurement thanks to the **Reference System**
- High contrast display
- Spindle and anvil are carbide tipped
- Rapid drive
- Hard lacquered steel frame, heat insulated
- Power supply: Battery life approx. 2 years

Product	Measuring range		Resolution	Spindle thread pitch	IP40	IP65	Order no.	List price	Offer price
	mm	(inch)						mm/inch	mm
40 ER	0 - 25	(0 - 1")	0.001 / 0.00005	0.635			4151601	128.35	96.26
40 EWR	0 - 25	(0 - 1")	0.001 / 0.00005	0.635			• 4151721	172.13	129.09
40 EWR	0 - 25	(0 - 1")	0.001 / 0.00005	0.635			• 4151705	220.15	165.11
40 EWR Set	0 - 100	(0 - 4")	0.001 / 0.00005	0.635			• 4151709	1,160.25	870.19

While stocks last!

MICROMAR 40 EWR Digital micrometer screws (special models).

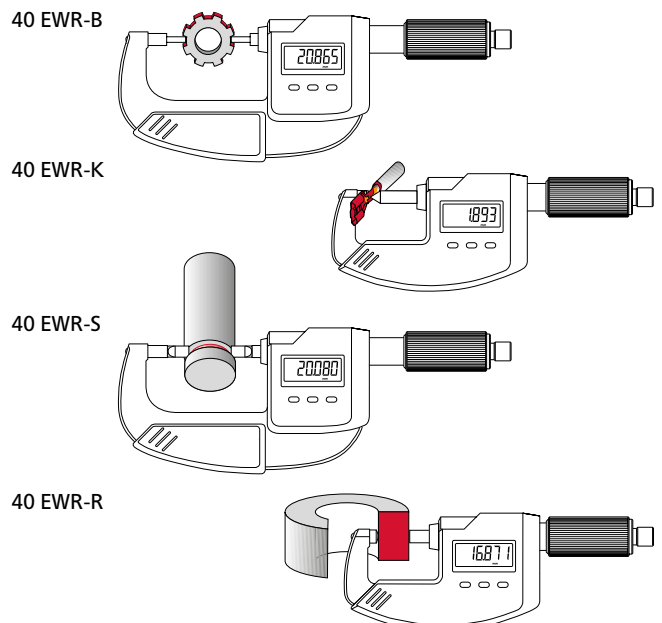
Special measuring surfaces for special measuring tasks

4 models for special applications, for measuring

- grooves and spline shafts
- crimp heights
- recesses
- pipe wall thickness

Find out more on our website:
www.mahr.com

Need some more information? Our technical advisers will be happy to answer any questions you may have.



MICROMAR 40 A Micrometer screwDIN
863-1

The classic micrometer



Offer price
£ 31.24
 Order no. 4134000

Features

- Operating and display units have a glare free, satin chrome finish
- Spindle and anvil are made of hardened steel, carbide tipped
- Heat insulators
- Rapid drive with integrated ratchet
- Locking device

Product	Measuring range mm	Reading mm	Spindle thread pitch mm	Details	Order no.	List price £	Offer price £
40 A	0 – 25	0.01	0.5	Hard lacquered steel frame	4134000	41.65	31.24

MICROMAR 44 AS Set of Self-Centering Inside MicrometersDIN
863-4

For measurements to the bottom of the bore hole



Offer price
 from
£ 502.99

Features

- Operating and display units have a satin chrome finish
- Spindle is made of stainless steel, hardened and ground
- Rapid drive with integrated ratchet
- Self-centering measuring head consists of three laterally positioned probes, each are offset at intervals of 120°
- Probes from 12 mm are carbide tipped
- From 12 mm the probes can be used to measure to the bottom of a bore
- From 40 mm all measuring heads are made of aluminum to reduce weight

Product	Measuring range mm	Reading mm	Error limit µm	Number of Micrometers	Setting rings mm	Order no.	List price £	Offer price £
44 AS	6 – 12	0.001	4	3	8, 10	4190350	862.75	647.06
44 AS	12 – 20	0.001	4	2	16	4190351	670.65	502.99
44 AS	20 – 50	0.005	4	4	25, 40	4190352	1,521.50	1,141.13
44 AS	50 – 100	0.005	5	4	60, 85	4190353	1,806.25	1,354.69

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

MICROMAR INNER MICROMETERS

Micromar 3-Point inner micrometers - for rapid bore hole measurement in any production plant. Three laterally positioned measuring heads, together with the mechanically

reproducible measuring force for self-centering the measuring instrument in the bore hole, ensures **reliable and accurate measuring results.**

MICROMAR 44 EWR Self-centering

Digital Micrometer Sets



REFERENCE

Immediate measurement thanks to the Reference System



Offer price from **£ 940.31**

Features

Functions: RESET (set display to zero), ABS (set display to zero without the reference to the preset being lost), mm/inch, PRESET (enter a numerical value), Reference System, LOCK function (key lock), DATA (data transmission via connection cable)

- Threaded connection for changing the measuring heads
- Self-centering measuring head consists of three laterally positioned probes, each are offset at intervals of 120°
- Probes from 12 mm are carbide tipped
- From 12 mm the probes can be used to measure to the bottom of a bore
- From 40 mm all measuring heads are made of aluminum to reduce weight

Product	Measuring range mm	Reading mm/inch	Error limit μm	Number of Micrometers	Setting rings mm	Order no.	List price £	Offer price £
44 EWR	6 – 12	0.001 / 0.00005	4	3	8, 10	4191160	1,436.50	1,077.38
44 EWR	12 – 20	0.001 / 0.00005	4	2	16	4191161	1,253.75	940.31
44 EWR	20 – 50	0.001 / 0.00005	4	4	25, 40	4191162	1,946.50	1,459.88
44 EWR	50 – 100	0.001 / 0.00005	5	4	60, 85	4191163	2,341.75	1,756.31

MICROMAR 844 AS Self-centering

Measuring Pistol Set, incl. MarCator 1086 R



REFERENCE

For rapid measurements



Offer price from **£ 1,088.00**

Features

- Threaded connection for changing the measuring heads
- Self-centering measuring head consists of three laterally positioned probes, each are offset at intervals of 120°
- Probes from 12 mm are carbide tipped
- From 12 mm the probes can be used to measure to the bottom of a bore
- From 40 mm all measuring heads are made of aluminum to reduce weight
- Digital indicator can be rotated to any desired measuring position

Product	Measuring range mm	Number of 44 Ak measuring heads	Setting rings mm	Indicating instrument included	Resolution mm/inch	Order no.	List price £	Offer price £
844 AS	6 – 12	3	8, 10	MarCator 1086 R	0.0005 / 0.00002	4487760	1,525.75	1,220.60
844 AS	12 – 20	2	16		0.0005 / 0.00002	4487761	1,360.00	1,088.00
844 AS	20 – 50	4	25, 40		0.0005 / 0.00002	4487762	2,006.00	1,604.80
844 AS	50 – 100	4	60, 85		0.0005 / 0.00002	4487763	2,435.25	1,948.20

MARCATOR POINTS YOU IN THE RIGHT DIRECTION

Due to their versatility, dial indicators rank as some of the most commonly used transducers. That is certainly the case with our MarCator series. Our mechanical dial indicators have **precision gears and pinions for maximum accuracy.**

Also available in shockproof and waterproof versions.

MARCATOR 810 A Precision Dial Indicator

DIN 878

The classic indicator with a lifter protection cap



Offer price
£ 27.20
Order no. 4311050

Features

- High contrast dial face
- Adjustable colored tolerance markers for optimum contrast
- Chrome plated metal housing
- Lifter protection cap with dust protection function
- High precision gears and pinions

Product	Measuring range mm	Reading mm	Dial diameter mm	Details	Order no.	List price £	Offer price £
810 A	10	0.01	50	Measuring force: 0.7 - 1.3 N	4311050	34.00	27.20

MARSTAND 815 MG Measuring Stand with Magnetic Base

Simple one handle positioning



Offer price
from
£ 122.06

Features

- 3D measuring stand, can reach any position within the operating range
- Easy to position, all three joints can be fixed into position with just one handle
- Maintenance-free mechanical clamping system
- Arm components are made of black anodized high quality aluminum
- Dial indicator holder with 8 mm mount diameter and dovetail for dial test indicator measuring devices
- Equipped with microfine adjustment, free of backlash
- Very powerful ON/OFF magnet
- Package contents: Excludes dial gauge

Product	Fine adjustment range mm	Total height mm	Projection (max.) mm	Vee-block for shaft diameter mm	Magnetic force of vee-block N	Order no.	List price £	Offer price £
815 MG		224	130		300	4420350	152.58	122.06
815 MG	5	316	200	6 - 120	800	4420360	170.85	136.68
815 MG		401	280			4420370	207.40	165.92
815 MG	2	444	330		1000	4420380*	391.85	313.48

* Specifically designed for measuring instruments with μm resolution

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

DIGITAL MEASUREMENT WITH MARCATOR

Our **innovative range of digital dial gauges contains high precision electronic measuring systems**, enabling a multitude of additional practical measuring functions. Simple to operate with a large, easy to read display, our digital dial

gauges meet all the requirements of a modern measuring instrument. **Quick and simple data processing** ensures results are available when you need them.

MARCATOR 1075 R Digital Dial Gauge

With large display



Offer price
£ 100.98
 Order no. 4336010



REFERENCE

Features

Functions: ON/OFF, RESET (set display to zero), mm/inch, reversal of counting direction, PRESET (enter a numerical value), DATA (data transmission via connection cable), LOCK function (key lock), AUTO-ON/OFF

- High contrast LCD
- Protection cap on end of measuring pin
- Power supply: Battery life approx. 3 years

Product	Measuring range		Resolution	Details	Order no.	List price	Offer price
	mm	(inch)				mm/inch	£
1075 R	12.5	(0.5")	0.01 / 0.0005"	Digit height: 12 mm	4336010	126.23	100.98
1075 R	12.5	(0.5")	0.005 / 0.0001"		4336020	167.03	133.62
1075 R	12.5	(0.5")	0.001 / 0.00005"		4336030	256.70	205.36

MARCATOR 1086 R

Digital Dial Indicators

Resolution from 0.5 µm and tolerance display



Offer price from
£ 189.04



REFERENCE

Features

Functions: ON/OFF, RESET (set display to zero), mm/inch, reversal of counting direction, PRESET (enter a numerical value), TOL (enter tolerance limit values), ABS (display can be set to zero, without losing the reference to the preset value), <0> (tolerance GO / NO GO display mode), DATA (data transmission via connection cable), factor (adjustable), LOCK (lock individual keys)

- High contrast LCD
- Operating and display unit (bezel) can be rotated 280°
- Lifter protection cap on end of measuring pin
- Immediate measurement thanks to the **Reference System**
- Power supply: Battery life approx. 3 years

Product	Measuring range		Resolution, switchable	Details	Order no.	List price	Offer price
	mm	(inch)				mm (inch)	£
1086 R	12.5	(0.5")	0.01 / 0.0005"	0.0005 / 0.001 / 0.002 / 0.005 / 0.01 mm (0.00002" / 0.00005" / 0.0001" / 0.0002" / 0.0005")	4337130	236.30	189.04
1086 R	12.5	(0.5")	0.0005 / 0.001 / 0.002 / 0.005 / 0.01 mm		4337620	291.55	233.24
1086 R	25	(1")	(0.00002" / 0.00005" / 0.0001" / 0.0002" / 0.0005")		4337621	347.65	278.12

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

MARCATOR 1087 R

Digital Dial Indicators

Resolution from 0.5 μm and dynamic max/min functions



REFERENCE

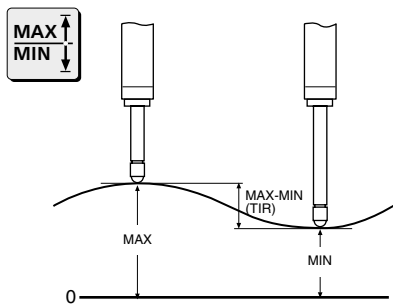


Offer price
£ 293.08
Order no. 4337660

Features

Functions: ON/OFF, RESET (set display to zero), mm/inch, reversal of counting direction, PRESET (enter a numerical value), TOL (enter tolerance limit values), MAX/MIN (store the search for the reversal point), TIR (MAX-MIN) for testing radial runout and flatness, ABS (display can be set to zero, without losing the reference to the preset value), DATA (data transmission via connection cable), factor (adjustable), LOCK (lock individual keys)

- High contrast LCD
- Operating and display unit (bezel) can be rotated 280°
- Lifter protection cap on end of measuring pin
- Immediate measurement thanks to the **Reference System**
- Power supply: Battery life approx. 3 years



Product	Measuring range		Resolution, switchable	Details	Order no.	List price	Offer price
	mm	(inch)				mm/inch	£
1087 R	12.5	(0.5")	0.0005 / 0.001 / 0.002 / 0.005 / 0.01 mm		4337660	366.35	293.08
1087 R	25	(1")	(0.00002" / 0.00005" / 0.0001" / 0.0002" / 0.0005")		4337661	415.65	332.52

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

MARTEST. HIGHLY SENSITIVE MEASUREMENT

Since 1936 Mahr has been one of the world's leading suppliers of dial test indicator measuring devices. **Sensitive, computer-optimized mechanisms ensure maximum**

reliability and precision. MarTest instruments are ideal for use in workshop conditions, with sealed dials ensuring **liquid resistance.**

MARTEST 800 S / SG

Dial Test Indicator Measuring Device - standard version



Offer price
£ 57.46
Order no. 4305200

Features

- High contrast dial face, sealed with an O-Ring
- Satin chrome finished housing with 3 integrated dovetail guideways
- Shockproof mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensuring infallible readings
- Ball-bearing mounted double lever, overload protection thanks to friction clutch
- Measuring anvil with carbide ball \varnothing 2 mm

With hardened mineral glass, resistant to breakage and scratching

Product	Measuring range mm	Reading mm	Dial diameter mm	Measuring anvil length mm	Order no.	List price £	Offer price £
800 S	\pm 0.4	0.01	28	14.5	4305200	71.83	57.46
800 SG			38		4307200	72.68	58.14

MARTEST 800 SGM / SL

Dial Test Indicator Measuring Device - for special measurements



Offer price
£ 81.26
Order no. 4308200

Features

- High contrast dial face, sealed with an O-Ring
- Satin chrome finished housing with 3 integrated dovetail guideways
- Shockproof mechanism
- Anti-magnetic model
- Automatic adjustment to the contacting direction ensuring infallible readings
- Ball-bearing mounted double lever, overload protection thanks to friction clutch
- Measuring anvil with carbide ball \varnothing 2 mm

With hardened mineral glass, resistant to breakage and scratching

Product	Measuring range mm	Reading mm	Dial diameter mm	Measuring anvil length mm	Order no.	List price £	Offer price £
800 SGM	\pm 0.1	0.002	38	14.5	4308200	101.58	81.26
800 SL	\pm 0.25	0.01	28	41.24	4306200	114.75	91.80

MILLIMAR. MADE FOR PRECISION

Mahr provides a whole world of dimensional metrology excellence. The Millimar range of products comprises perfectly matched probes and evaluation units, as well as highly precise

mechanical components and customer solutions. For every measuring task in length metrology we have the solution: Millimar by Mahr.

MILLIMAR C 1200 Compact Length Measuring Instrument

Now with added functions



Offer price
£ 648.08
Order no. 5312010

Features

- Functions: ON/OFF, mm/inch, reversal of counting direction, measuring range switching, TOL (enter tolerance limit values), PRESET (enter a numerical value), factor (adjustable), DATA (data transmission), MAX/MIN memory for reversing point search, TIR (MAX-MIN) for testing radial runout and flatness
- High resolution and high contrast TFT color display
 - Fully adjustable display for ideal viewing angle
 - Extremely easy to operate
 - Suitable for mains or battery operation
 - With battery operation also suitable for mobile use
 - Compact housing

New features

- Dynamic measuring functions (max, min, max-min)
- Key lock
- Asymmetric tolerance display

Product	Indication range		Resolution	Reading	Order no.	List price	Offer price
	Digital display	Analog display					
	μm	μm	μm	μm		£	£
C1200	± 5000	± 5000, ± 2000, ± 1000, ± 300, ± 100, ± 30, ± 10, ± 3	0.1	500, 200, 100, 20, 10, 2, 1, 0.2	5312010	762.45	648.08

MILLIMAR P2004 M Inductive Probe

The Standard Probe



Offer price
£ 167.28
Order no. 5323010

Features

- Measuring pin mounted in ball-bearing guide
- High linearity over the entire measuring range
- Excellent electromagnetic shielding (EMC)
- All probes can be easily converted from axial to radial by mounting a slip-on cap (included in package)
- Further standard probes are also available upon request, for example: probes with a compressed air (pneumatic) lifter or with vacuum retraction as well as larger measuring ranges

Product	Measuring range	Measuring force	Repeatability	Measuring value hysteresis		Order no.	List price	Offer price
				f _w	f _u			
	mm	N	μm	μm	μm		£	£
P2004 M	± 2	0.75	0.1		0.5	5323010	245.05	182.79

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

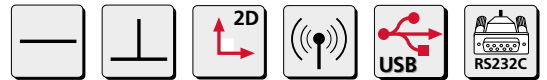
AIM HIGH

Digimar height measuring instruments guarantee the ultimate in flexibility and quality control. Our motorised Digimar height measuring instruments are **simple to operate**; all the basic

functions **can be executed** with a single key, offering **ease of use and accuracy**.

DIGIMAR 817 CLM Height Measuring Instrument

With Quick Mode. Rapid measurement with the highest accuracy



Offer price from
£ 3,787.60

Features

Functions:

- Contacting from below and above
- Reversal point of a bore hole / shaft (above and/or below)
- Calculate distances and/or symmetry
- Dynamic measuring functions
- Measure perpendicularity and straightness
- Measure in 2D mode
- Measuring programs
- Statistics
- Process measured data etc.

Operating and display unit:

- Large and clearly defined function keys
- Easy to read backlit graphic LCD
- Operator guidance with self-explanatory icons / pictograms
- Future-proof thanks to software updates
- Selectable auto-off function, without loss of measured values

Measuring system:

- Excellent accuracy and reliability due to the optical incremental measurement system with the double reader head
- Dynamic probe system enabling high repeatability
- Air bearings system for light and smooth movement
- Precise measuring head guidance on stainless steel guideways
- Motorised measuring slide simplifies measurement runs
- Probe constant remains after the instrument is switched off
- Integrated rechargeable battery with a long operating life for mains-independent measurement
- Temperature compensation via internal temperature sensor

Product		817 CLM		
Measuring range	mm	0 – 350	0 – 600	0 – 1000
Range of application from . . . to	mm	170 . . . 520	170 . . . 770	170 . . . 1170
Resolution	mm	0.01, 0.005, 0.001, 0.0005, 0.0001		
Error limit		(1.8 + L/600) L in mm		
Repeatability: Bore	µm	1		
Repeatability: Plane	µm	0.5		
Perpendicularity error in µm	µm	5	6	10
Operating time max.	h	10		
Measuring force	N	1.0 +/- 0.2 N		
Rel. humidity, non-condensing	%	65		
Working temperature	°C	20		
Operating temperature	°C	10 – 40		
Order no.		4429010	4429011	4429012
List price	£	4,734.50	5,219.00	8,767.75
Offer price	£	3,787.60	4,175.20	7,014.20

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

DIGIMAR 816 CL Height Measuring Instrument

Perfect for accurate measurements in the production environment



Offer price
from
£ 2,856.00

Features

Functions:

- Contacting from below and above
- Width between ledge and/or distance between a groove incl. center of the ledge and/or groove
- Diameter of a bore hole and/or shaft incl. center of the bore hole and/or shaft
- Reversal point of a bore hole / shaft (above and/or below)
- Calculate distances and/or symmetry
- Dynamic measuring functions
- Measuring program
- Process measured data

Operating and display unit:

- Easy to read backlit graphic LCD
- Clear function keys
- Language-neutral operator guidance with self-explanatory icons / pictograms
- Possible to set additional zero points on a workpiece
- Memory can store up to 99 measured values

Measuring system:

- Excellent accuracy and reliability due to the optical incremental measurement system with the double reader head
- Dynamic probe system enabling high repeatability
- Air bearings system for light and smooth movement
- Precise measuring head guidance on stainless steel guideways
- Motorised measuring slide simplifies measurement runs
- Probe constant remains after the instrument is switched off
- Integrated rechargeable battery with a long operating life for mains-independent measurement
- Temperature compensation via internal temperature sensor

Product		816 CL	
Measuring range	mm	0 – 350	0 – 600
Range of application from . . . to	mm	170 . . . 520	170 . . . 770
Resolution	mm	0.01, 0.001	
Error limit		(2.8 + L/300) L in mm	
Repeatability: Bore	µm	3	
Repeatability: Plane	µm	2	
Perpendicularity error in µm	µm	15	20
Operating time max.	h	10	
Measuring force	N	1.0 +/- 0.2 N	
Rel. humidity, non-condensing	%	65	
Working temperature	°C	20	
Operating temperature	°C	10 – 40	
Order no.		4429030	4429031
List price	£	3,570.00	4,046.00
Offer price	£	2,856.00	3,236.80

IDEAL FOR THE WORKSHOP

When you need to measure and check workpieces quickly in the workshop, trust Mahr's height measuring and scribing instruments.

DIGIMAR 814 SR Height Measuring and Scribing Instrument

Exact positioning by handwheel



REFERENCE

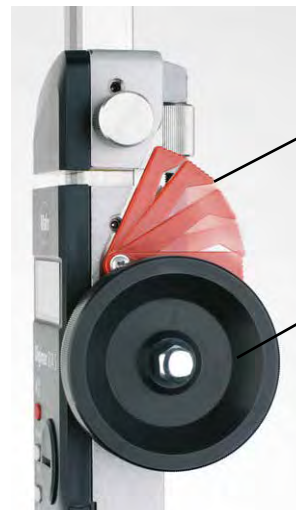
Offer price
£ 418.20
 Order no. 4426100



Features

Functions: RESET (set display to zero), mm/inch, ABS (switch between relative and absolute measurement), reference lock/unlock, PRESET (enter a numerical value), DATA (data transmission via connection cable), AUTO-ON/OFF

- Life of battery up to 3 years
- Travel speed 1.5 m/s (60"/s)
- Ergonomic, sturdy base
- Hardened and lapped contact surface which produces both a smooth and even movement
- Slide and rail are made of hardened stainless steel
- Handwheel for positioning and measuring
- Fine adjustment
- Locking screw
- Interchangeable measuring and scriber tips, carbide tipped



Product	Measuring range		Resolution mm/inch	Details	Order no.	List price	Offer price
	mm	(inch)				£	£
814 SR	0-350	(0-14")	0.01 / 0.0005"	Digit height: 12 mm	4426100	522.75	418.20
814 SR	0-600	(0-24")	0.01 / 0.0005"		4426101	918.00	734.40

ROUGHNESS WITH PRECISION

Careful testing is paramount wherever surface structures affect the functioning, processing or appearance of components or products.

MarSurf brings Mahr expertise and knowhow as the top quality solution for all your surface metrology requirements.

MARSURF PS 10 SET Mobile Roughness Measuring Instrument

Intuitive and simple to use



Features

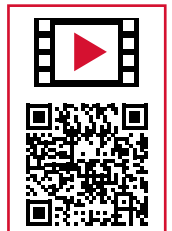
- Simple and intuitive to use: As easy to use as a smart phone
- Large, illuminated 4.3" TFT touch display
- Create complete PDF measuring records directly in the measuring instrument
- Customer-specific comments can be entered directly into the MarSurf PS 10 for the PDF measuring record
- Data backup as TXT, X3P, CSV or PDF file
- Instrument flexibility: Removable drive unit
- 31 surface parameters offer the same range of functions as a laboratory instrument.

Package contents:

- Drive unit (detachable)
- 1 standard probe conforming to standards
- Built-in rechargeable battery, charger / 3 adapters, USB cable
- Roughness standard integrated into housing (detachable), including Mahr calibration certificate
- Probe protection, carry case with shoulder strap
- Extension cable for drive unit
- Operating instructions



Offer price
£ 1,668.98
 Order no. 6910230



Product		PS 10
Measuring range	μm	350
Parameters		Ra, Rq, Rz (Ry (JIS) equivalent to Rz), Rz (JIS), Rmax, Rp, RpA (ASME), Rpm (ASME), Rpk, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, RPC, Rmr (tp (JIS, ASME) equivalent to Rmr), RSm, RSk, S, CR, CF, CL, R, Ar, Rx
Stylus tip	μm	2
Calibration function		Dynamic; Ra, Rz, Rsm
Memory		min. 3900 profiles, min. 500,000 results, min. 1500 PDF measuring records, expandable to 32 GB with microSD card (320x memory capacity)
Data interface		USB, MarConnect (RS232), microSD slot for SD / SDHC cards up to 32 GB
Battery		Lithium-ion battery, 3.7 V, nominal capacity 11.6 Wh, min. 1200 measurements
Measuring principle		Stylus method
Probe		Inductive skidded probe
Measuring force	N	0.75 mN
Order no.		6910230
List price	£	1,963.50
Offer price	£	1,668.98

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

MARSURF M 300 SET Mobile Roughness Measuring Instrument

Perfect for accurate measurements in the production environment



Features

- Automatic profile detection and corresponding selection of filters and traversing length conforming to standards
- Individual sampling lengths and short cutoff can be selected
- Printing of R-profile (ISO/ASME/JIS), P-profile (MOTIF), material ratio curve, measuring record
- Measuring units ($\mu\text{m}/\mu\text{inch}$) and standards (ISO/JIS/ASME/MOTIF) are selectable

M 300 SET contents:

- M 300 evaluation instrument
- RD 18 drive unit with integrated standard
- PHT 6-350 / 2 μm default probe (conforming to standards)
- Height adjustment, probe protection, 2x USB cable, carrying case, etc.
- Includes Mahr Calibration certificate



M 300

Offer price
£ 2,805.00
 Order no. 6910401

Product		M 300
Measuring range	μm	350
Parameters		Ra, Rz (Ry (JIS) equivalent to Rz), Rz (JIS), Rq, Rmax, Rp, RpA (ASME), Rpm (ASME), Rpk, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, R3z, RpC, Rmr (tp (JIS, ASME) equivalent to Rmr), RSm, RSk, S, CR, CF, CL, R, Ar, Rx, Rv
Stylus tip	μm	2 μm
Calibration function		Dynamic
Memory		Store up to 40,000 results and up to 30 profiles
Dimensions (L x W x H) of the drive unit	mm	130 x 70 x 50
Dimensions (L x W x H) of the evaluation instrument	mm	190 x 140 x 75
Weight of the drive unit	g	approx. 300
Weight of the evaluation unit	kg	approx. 1
Measuring principle		Stylus method
Probe		Inductive skidded probe
Measuring force	N	0.75 mN
Order no.		6910401
List price	£	3,740.00
Offer price	£	2,805.00

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

MARSURF M 300 C SET Mobile Roughness Measuring Instrument

Perfect for accurate measurements in the production environment



Features

- Automatic profile detection and corresponding selection of filters and traversing length conforming to standards
- Individual sampling lengths and short cutoff can be selected
- Printing of R-profile (ISO/ASME/JIS), P-profile (MOTIF), material ratio curve, measuring record
- Measuring units ($\mu\text{m}/\mu\text{inch}$) and standards (ISO/JIS/ASME/MOTIF) are selectable

M 300 C SET contents:

- M 300 or M 300 C evaluation instrument
- Cylindrical drive unit RD 18 C
- PHT 6-350 / $2\ \mu\text{m}$ default probe (conforming to standards)
- Roughness standard PRN 10 with a Mahr calibration certificate
- Height adjustment, probe protection, 1x USB cable (for connection to a PC), carrying case, etc.

M 300 C

Note: An additional separate MarSurf RD 18 C2 drive unit for transverse tracing for M 300 C is also available!

Offer price
£ 2,805.00
 Order no. 6910431

Product		M 300 C
Measuring range	μm	350
Parameters		Ra, Rz (Ry (JIS) equivalent to Rz), Rz (JIS), Rq, Rmax, Rp, RpA (ASME), Rpm (ASME), Rpk, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, R3z, RpC, Rmr (tp (JIS, ASME) equivalent to Rmr), RSm, RSk, S, CR, CF, CL, R, Ar, Rx, Rv
Stylus tip	μm	2 μm
Calibration function		Dynamic
Memory		Store up to 40,000 results and up to 30 profiles
Dimensions (L x W x H) of the drive unit	mm	139 x 26
Dimensions (L x W x H) of the evaluation instrument	mm	190 x 140 x 75
Weight of the drive unit	g	approx. 300
Weight of the evaluation unit	kg	approx. 1
Measuring principle		Stylus method
Probe		Inductive skidded probe
Measuring force	N	0.75 mN
Order no.		6910431
List price	£	3,740.00
Offer price	£	2,805.00

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

THE SECOND DIMENSION IN METROLOGY

With MarVision optical measuring instruments, Mahr offers you a **quick and reliable solution to many different 2D measurement tasks** – from precision products for the manufacturing industry to medical technology and

miniaturized electronic components. **Precise measuring instruments** and **efficient operating and evaluation units** meet the highest demands.

MARVISION SM 150 / SM 160 Stereo-Zoom Microscopes

Inspection of workpieces on the shop floor or in the quality control laboratory



Offer price
£ 690.80
 Order no. 4245001

Features

- High quality optics for light intensive and sharp 3D images
- Continuously variable magnification due to the adjustable zoom lens
- Focusing with an ergonomic handwheel, mounted either side, ideal for either a left or right handed operator
- Vee-block head tilted to 45° and rotatable through 360°; with dioptic adjustment (54 – 76 mm)
- Illumination 12 V /15 W, integrated incident and transmitted light, continuously variable (SM 150 only)

Product	Magnification	Field of view diameter	Observation tube angle	Optical tube	Working distance	Max. height of test piece	Order no.	List price £	Offer price £
SM 150	Variable	28 – 5 mm	45 °	Binocular	105 mm	75 mm	4245001	767.55	690.80
SM 160	7x – 45x						4245003	1,092.25	983.03

MARVISION SM 151 Stereo-Zoom Microscope incl. CamSet

Powerful stereo microscope for documentation with first class optics



Offer price
£ 1,403.01
 Order no. 9104848

Features

- High quality optics for light intensive and sharp 3D images
- Continuously variable magnification due to the adjustable zoom lens
- Focusing with an ergonomic handwheel, mounted either side, ideal for either a left or right handed operator
- Vee-block head tilted to 45° and rotatable through 360°; with dioptic adjustment (54 – 76 mm)
- Illumination 12 V /15 W, integrated incident and transmitted light, continuously variable

Product	Magnification	Field of view diameter	Observation tube angle	Optical tube	Working distance	Max. height of test piece	Order no.	List price £	Offer price £
SM 151	Variable 7x – 45x	28 – 5 mm	45 °	Trinocular	105 mm	75 mm	9104848	1,558.90	1,403.01

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017

MARVISION MM 420 / MM 420 CNC Workshop Measuring Microscope with Image Processing

Simple, but powerful, measuring functions



Offer price
£ 14,951.93
 Order no. 9106534

M3 software with
 touchscreen PC

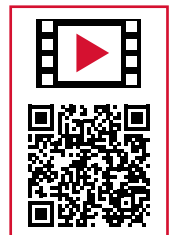
MM 420

Applications:

- Measurement or determination of geometric elements (point, straight line, circle, distance, intersection point, etc.) by automatic edge detection, e.g. on punched and bent components, plastic components, and circuit boards.

Features

- Integrated color camera
- Zoom lens, optionally motorized
- LED ring light: 1 ring and 4 segments, individually switchable and dimmable
- LED transmitted light: dimmable
- Solid granite base
- Sturdy steel XY table, precision-mounted
- Quick and fine adjustment of axes
- Optical incremental measuring system for outstanding accuracy and reliability
- Laser pointer for position finding



Operating and display unit M3 software with touchscreen PC

- 23" touchscreen with keyboard and mouse
- Based on Windows 10; therefore possible to install further software
- Operation via the Multi-Touch screen or with a mouse/keyboard
- Large video image
- Reference/actual evaluation with tolerances
- Measuring record output with company logo
- Represented graphically with dimensions
- Automatic edge detection, even on low-contrast parts
- Statistics (minimum, maximum, range, standard deviation, 6-sigma etc.)
- Stitching (stitching of several individual pictures to create one big picture (rectangular stitching, open stitching))

Product		MM 420	MM 420	MM 420 CNC
Lens		Fixed	Zoom	Motorized Zoom
Magnification	mm	select either 40x, 60x, 100x	0.7x - 4.5x	6.5:1
Measuring range X/Y	mm		200 / 100	
200 extension in Z	mm		315 / 220	
Size of table	mm		370 x 210	
Maximum table load	kg		20	
Measuring system			Built-in incremental scale	
Measuring system - resolution	µm		0.001	
Measuring system - E1 X/Y in µm			1.9 + (L/100)	
Measuring system - E2 XY in µm			2.9 + (L/100)	
Working distance	mm		115	
Max. workpiece height 0.5x	mm		20	
Lighting			LED incident and transmitted light, adjustable	
Dimensions H x W x D	mm	700 x 480 x 430	700 x 650 x 550	700 x 650 x 550
Order no.		9106534	4247601	4247701
List price	£	16,613.25	17,425.00	26,966.25
Offer price	£	14,951.93	15,682.50	24,269.63

Accessories for microscopes: see general catalog, MarVision - Chapter 18

All illustrations and technical data are without guarantee. All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017



Handheld gauges



Millimar



Digimar



MarVision



MarSurf



MarSurf



MarSurf



MarSurf



MarSurf



MarForm



MarForm



Precimar



Precimar



Precimar



MarShaft



MarGear



MarSolution



MarSolution

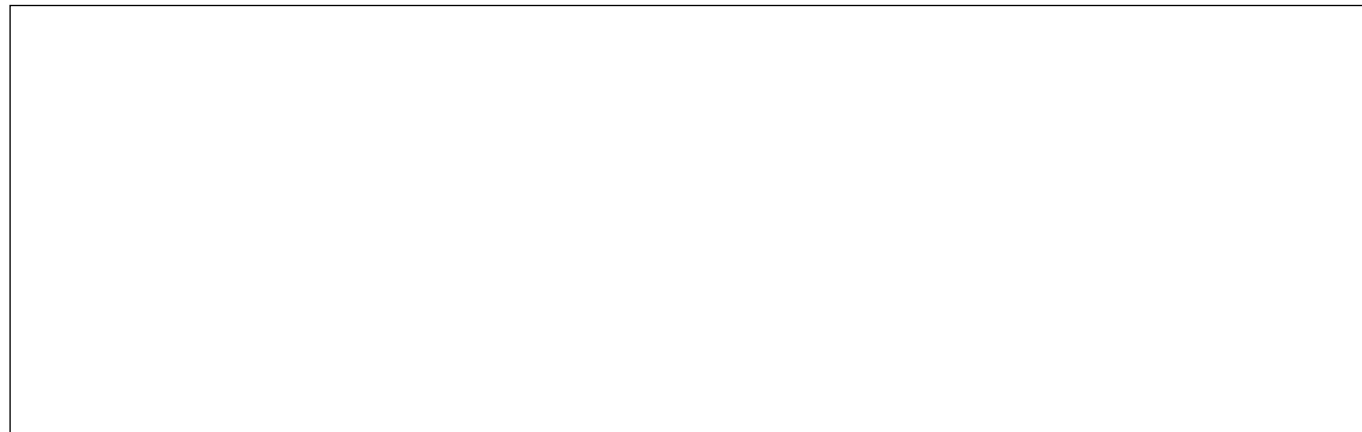
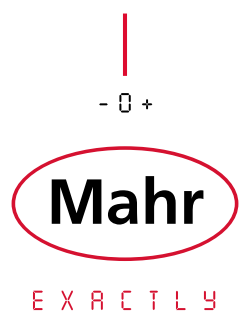


MarSolution



Services

www.mahr.com



Mahr GmbH
Standort Esslingen
Reutlinger Straße 48, 73728 Esslingen
Tel. +49 711 9312 600, Fax +49 711 9312 725
mahr.es@mahr.de, www.mahr.com

© by Mahr GmbH
We reserve the right to make changes to our products, especially due to technical improvements and further developments. All illustrations and technical data are therefore without guarantee.
All list prices are the recommended retail prices. The net prices are shown in £, they exclude sales tax and are valid from April 1st, 2017 until May 31st, 2017