

# MAHR SPOTLIGHTS



**SPRING PROMOTION**  
PROMOTION PRICES VALID UNTIL  
~~6/30/2013~~

**EXTENDED THROUGH 8/31/2013**

*Quantities  
may be limited*

|  
- 0 +



EXACTLY



# MarConnect Integrated Wireless

## Wireless Data Collection at Significant Savings

- Integration means lower overall cost
- Price comparable to wired system
- Data collection has never been easier
- Eliminate cables and multiplexing hardware
- Data transfer easily to any Windows® program
- No external transmitter, batteries or antennas



**Inexpensive**

**MarConnect** integrated wireless

With the integrated wireless receiver, up to 8 digital indicators can be connected per i-stick, therefore expensive interface boxes are no longer required. When just attaching a digital indicator you have already wireless data transmission capability.

**Long battery life**

**MarConnect** integrated wireless

Due to the wireless interface being integrated in the digital indicator's electronics, the digital indicator is extremely energy efficient. In addition, contrary to conventional wireless data transmission systems, no additional battery is needed.

System	Battery Life
Conventional	~0.25 years
MarConnect	up to 0.5 years (+ 50%)

# NEW !

## NO EXTERNAL TRANSMITTER REQUIRED!



### Simple data transmission



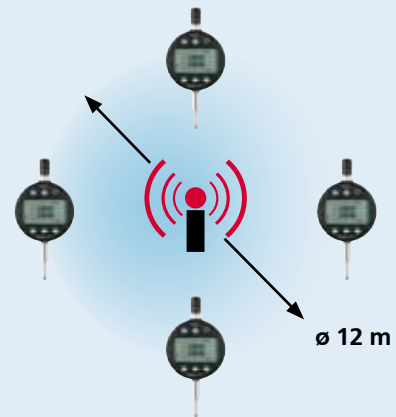
With the i-stick, you can simply **transfer your measured values via Integrated Wireless to the PC**. The measured values are sent directly (as with a data cable) via the MarCom software to MS Excel or by keyboard code into any Windows application.

ID	Beschreibung	Messwert	Aufbereitung
RF1	Maßstab 100/75	10.001	100/75
RF2	Maßstab 100/75	50.001	100/75
RF3	Maßstab 100/75	49.990	100/75

### Large transmitting range



The integrated wireless clearly gives you more **freedom of movement** when used with a digital indicator in conjunction with an indicating measuring instrument. For example: when measuring on or at the machine or with large workpieces, you are not obstructed by any cables.



### Secure data transmission



With the integrated wireless your data will be transferred to the digital indicator; this is confirmed with a message in the digital indicator's display to whether the sent data has been transferred correctly, and/or whether you are in the reception range of the i-stick.

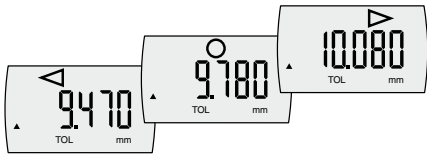
# MarCator 1086 R

▶ | The new Digital Indicator **MarCator** 1086 R: With the large display and the integrated tolerance function, your measurement results are clearly visual. | ◀

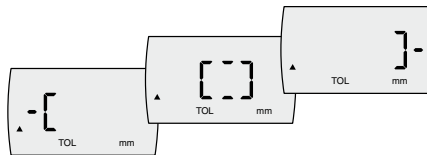
## Clear display

### Tolerance indication with the displayed value

Displayed is the actual measured value and the tolerance zone position



### Tolerance indication without the value in the display. In and Out-of-tolerance will be indicated in the display as a symbol.



### IP Protection class IP54 (optional)

- Protection cap is sealed
- Rubber bellows for the measuring spindle
- Sealed battery compartment



## Error free operation

**Lock function:** This prevents unintentional activation of an operating button. Either all the operating buttons or only certain individual buttons can be locked. If a locked operating button is pressed, the "LOC" symbol appears in the display.



## Universal Data-Interface



- **Integrated Wireless (Optional)**  
The wireless interface for the price of a data cable



- **USB**  
No interface box is required! Simple and inexpensive way to set up multiple measuring instruments via a USB hub



- **Digimatic**  
To connect a Digimatic compatible evaluation instrument



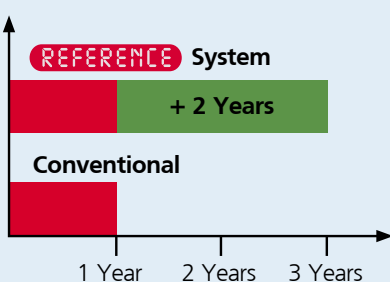
- **Mahr Opto RS232C**  
For direct connection to a COM port on a PC

**ABS Absolute function:** Digital Indicator can be set in any position to 0.000 without losing the reference to the preset value.

Code Initial	IP	International Protection
First Numeral	5	Dust protected
Second Numeral	4	Protection against splash water in all directions

## Battery service life is 3 years\*

The new Reference System is extremely energy efficient as when the indicator is in standby mode; almost no power is required, thus extending the life of the battery up to 3 years\*.



\* 1086 R without integrated wireless

## Just set once to zero

**REFERENCE** The new Digital Indicators 1086 R are equipped with the innovative Reference System. The zero position only has to be set one time; once it is set, the zero remains stored for all further measurements. Therefore, when the indicator is switched ON or the measuring spindle is moved, the indicator is immediately ready for measurement; thus, the need to reset as with a conventional indicator is now obsolete.

## Digital Indicators MarCator 1086 R



REFERENCE



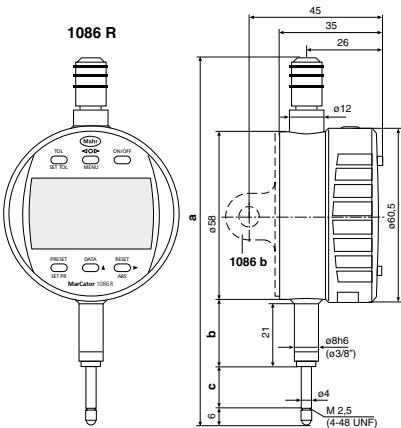
12,5 mm



25 mm



50 mm



List Price From  
**\$599.00**  
Promo Price From  
**\$540.00**

### Dimensions

Meas. range		a	b	c
mm	(inch)	mm	mm	mm
12.5	(.5")	126.3	23	13.5
25	(1")	153.4	26.8	26.5
50	(2")	267.3	40	52
100	(4")	420.3	91	103

### Features

#### Functions:

- ON/OFF
- RESET (Set display to zero)
- mm/inch
- Reversal of the counting direction
- PRESET (Allows the entry of any value using set buttons)
- 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 (when connected with a data connection cable)
- Factor (adjustable)
- Immediate measurement due to the Reference System
- Individual buttons can be locked - Lock Function
- Operating and display unit (bezel) can be rotated 280°
- High contrast LCD with 11 mm high digits
- Operating time approx. 3 years (2000 work. hrs/year)
- Maximum measuring speed 1.5 m/s (60"/s)
- Lifter protection cap on the measuring spindle
- MarConnect data output: choose either
  - USB
  - OPTO RS232C
  - Digimatic
  - i-wi (Option)
- Operating temperature 10 - 40°C
- Class of protection IP42 in accordance to IEC 60529
- Supplied with:
  - Battery, operating instructions

### Technical Data

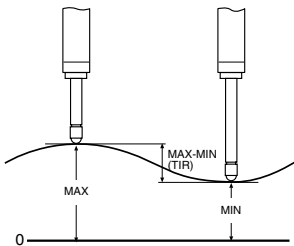
Measuring range		Resolution	Span of error*	MarConnect Integrated wireless	Mounting shank	Order no.	List price	Promo price
mm	(inch)	mm / inch	mm		dia.			
12.5	(.5")	0.01 / 0.0005"	0.02	●	8h6	<b>4337134P</b>	\$599.00	<b>\$540.00</b>
12.5	(.5")	0.01 / 0.0005"	0.02	—	8h6	<b>4337130P</b>	\$432.00	<b>\$399.00</b>
12.5	(.5")	0.001 / 0.00005"	0.005	●	8h6	<b>4337124P</b>	\$699.00	<b>\$630.00</b>
12.5	(.5")	0.001 / 0.00005"	0.005	—	8h6	<b>4337120P</b>	\$520.00	<b>\$470.00</b>
<b>Accessories for Models with integrated wireless:</b> i-stick wireless receiver for up to 8 digital indicators includes Marcom Standard 3.0						<b>4102220P</b>	\$149.00	<b>\$135.00</b>
<b>Software Marcom standard 3.0</b> - one i-stick and one cabled display						<b>4102551P</b>	\$111.00	<b>\$99.00</b>
<b>Software Marcom Professional 3.0</b> - 4 i-sticks and 127 cabled displays						<b>4102552P</b>	\$382.00	<b>\$340.00</b>

# MarCator 1087 R

▶ | The new Digital Indicator **MarCator** 1087 R: The multi-functional Digital Indicator with a combined analog and digital display as well as tolerance and dynamic measuring functions. | ◀

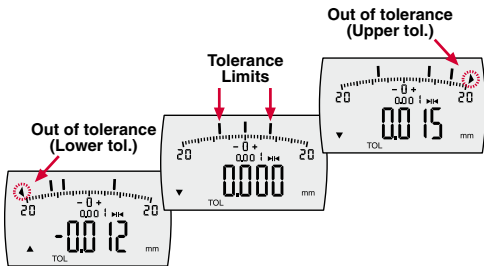
## Dynamic measuring functions

- **MAX-MIN**-Function ideal for testing flatness and concentricity
- **MAX** and / or **MIN** for searching the reversal point



## Clear display tolerance indication

The integrated bar graph visualizes the tolerance deviation. Out of tolerance; above the upper or below the lower tolerance limit is represented by arrows shown in the display.



## Universal Data-Interface

- **Integrated Wireless (optional)**  
The wireless interface for the price of a data cable



- **USB**  
No interface box is required! Simple and inexpensive way to set up multiple measuring instruments via a USB hub



- **Digimatic**  
To connect a Digimatic compatible evaluation instrument



- **Mahr Opto RS232C**  
For direct connection to a COM port on a PC



- **Absolute function:**  
Digital Indicator can be set in any position to 0.000 without losing the reference to the preset value.



## Just set once to zero

**REFERENCE** The new Digital Indicators 1087 R are equipped with the innovative Reference System. The zero position only has to be set one time: once it is set, the zero remains stored for all further measurements. Therefore, when the indicator is switched ON or the measuring spindle is moved, the indicator is immediately ready for measurement; thus, the need to reset as with a conventional indicator is now obsolete.

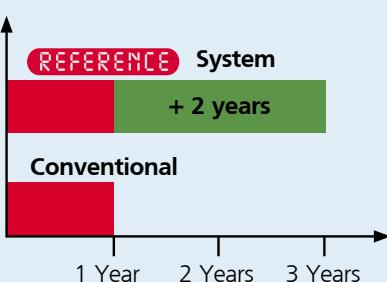
## Error free operation



**Lock function:** This prevents unintentional activation of an operating button. Either all the operating buttons or only certain individual buttons can be locked. If a locked operating button is pressed, the "LOC" symbol appears in the display.

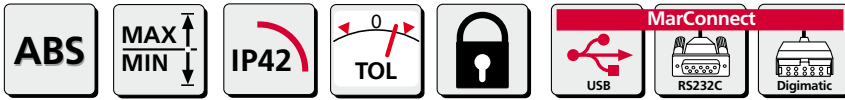
## Battery service life is 3 years\*

The new Reference System is extremely energy efficient as when the indicator is in standby mode; almost no power is required, thus extending the life of the battery up to 3 years.\*



\* 1086 R without integrated wireless

## Digital Indicators MarCator 1087 R with analog display



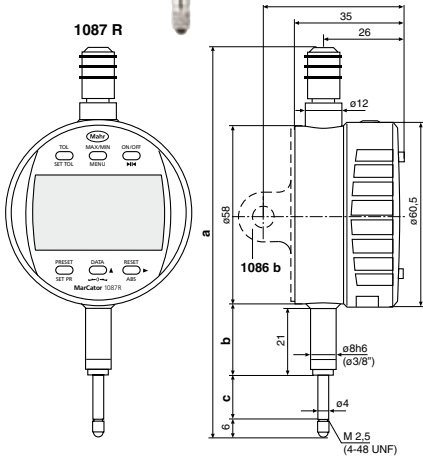
12,5 mm



List Price From  
**\$799.00**  
Promo Price From  
**\$720.00**



25 mm



### Dimensions

Meas. range		a	b	c
mm	(inch)	mm	mm	mm
12.5	(.5")	126.3	23	13.5
25	(1")	153.4	26.8	26.5

### Analog display

Readings		Display range	
mm	/ inch	mm	/ inch
0.001	/ .00005	± 0.02	/ ± .001
0.002	/ .0001	± 0.04	/ ± .002
0.004	/ .0005	± 0.08	/ ± .01
0.01	/ .001	± 0.2	/ ± .02

### Features

#### Functions:

- ON/OFF
- RESET (Set display to zero) mm/inch
- Reverse the counting direction
- PRESET (Allows the entry of any value using set buttons)
- TOL (Enter tolerance limit values)
- Tolerance band max. 1.6 mm
- MAX/MIN memory, ideal for searching the reversal point
- TIR (MAX-MIN) ideal for testing concentricity and flatness
- ABS (Display can be set to zero, without losing the reference to the Preset value)
- 0 (Set analog display to zero)
- DATA (when connected with a data connection cable)
- Factor (adjustable)
- Immediate measurement due to the Reference System
- Individual buttons can be locked - Lock Function
- Operating and display unit (bezel) can be rotated 280°
- High contrast LCD with 8.5 mm high digits
- Operating time approx. 3 years (2000 work. hrs/year)
- Maximum measuring speed 1.5 m/s (60"/s)
- MarConnect data output: choose either
  - USB
  - OPTO RS232C
  - Digimatic
  - i-wi (Option)
- Operating temperature 10 - 40°C
- Class of protection IP42 in accordance to IEC 60529
- Supplied with: Battery, operating instructions

### Technical Data

Measuring range		Resolution	MarConnect	Mounting shank	Order no.	List price	Promo price
mm	(inch)	mm / inch		dia.			
12.5	(.5")	0.001 / .00005"	●	8h6	<b>4337163P</b>	\$799.00	<b>\$720.00</b>
12.5	(.5")	0.001 / .00005"	—	8h6	<b>4337160P</b>	\$630.00	<b>\$567.00</b>

- Accessories for Models with integrated wireless:** i-stick wireless receiver for up to 8 digital indicators includes Marcom Standard 3.0 **4102220P** \$149.00 **\$135.00**
- Software Marcom standard 3.0** - one i-stick and one cabled display **4102551P** \$111.00 **\$99.00**
- Software Marcom Professional 3.0** - 4 i-sticks and 127 cabled displays **4102552P** \$382.00 **\$340.00**

### MarCal. Digital Caliper 16 EWR with Reference System, Protection Class IP67



**REFERENCE**

**Available for fast delivery**

List Price  
\$179.00  
Promo Price  
**\$130.00**

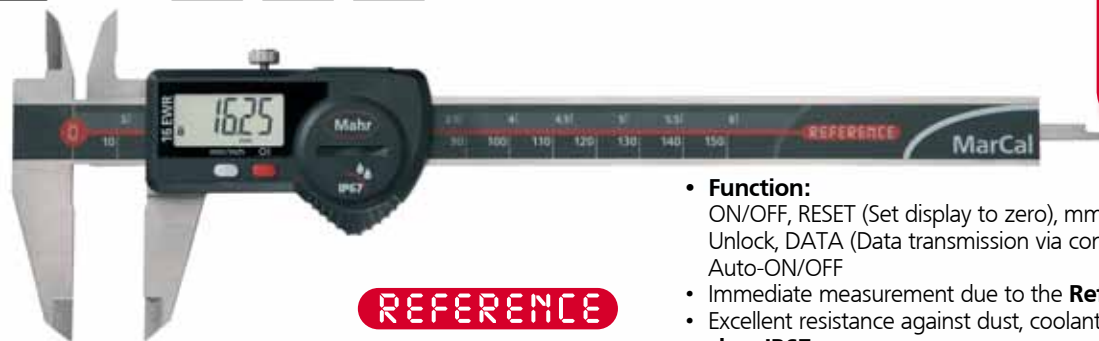
- **Functions:** ON/OFF, RESET (Set display to zero), mm/inch, Reference-Lock/Unlock, Auto-ON/OFF
- Immediate measurement due to the **Reference system**
- Excellent resistance against dust, coolants and lubricants, **Protection Class IP67**
- Life of the battery up to **3 years**
- High contrast Liquid Crystal Display with 8.5 mm high digits
- Lapped guideway



For further detailed information see:  
[www.mahr.com](http://www.mahr.com)  
WebCode 13526-11250

	Measuring range		Resolution	Error Limit G	Depth rod		Friction Wheel	Order no.	List price	Promo price
	mm	(inch)	mm / inch	mm						
16 EWR	150	(6")	0.01 / 0.0005"	0.03	●			4103060P	\$179.00	<b>\$130.00</b>
16 EWR	150	(6")	0.01 / 0.0005"	0.03		●		4103062P	\$179.00	<b>\$130.00</b>
16 EWR	150	(6")	0.01 / 0.0005"	0.03	●		●	4103061P	\$179.00	<b>\$130.00</b>
16 EWR	150	(6")	0.01 / 0.0005"	0.03		●	●	4103063P	\$179.00	<b>\$130.00</b>

### MarCal Digital Caliper 16 EWR with Reference System, Protection Class IP67



**REFERENCE**

List Price From  
\$214.00  
Promo Price From  
**\$165.00**

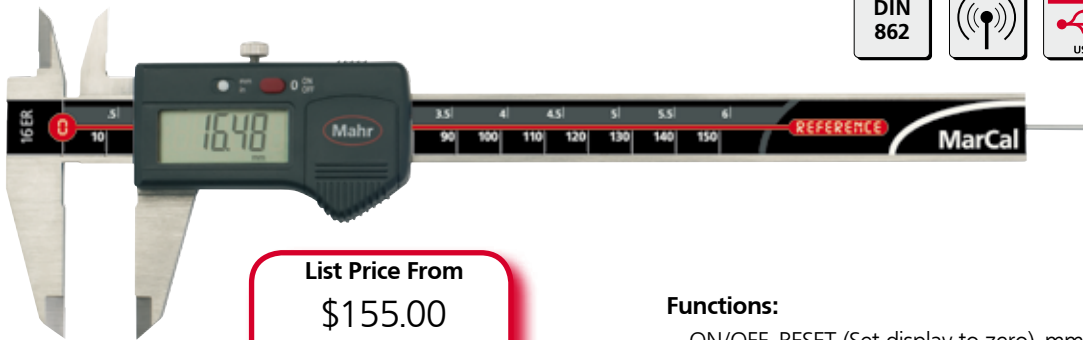
- **Function:** ON/OFF, RESET (Set display to zero), mm/inch, Reference-Lock/Unlock, DATA (Data transmission via connection cable), Auto-ON/OFF
- Immediate measurement due to the **Reference system**
- Excellent resistance against dust, coolants and lubricants, **protection class IP67**
- **MarConnect** data output, choose alternatively: USB, OPTO RS232C or Digimatic
- Life of the battery up to **3 years**
- High contrast Liquid Crystal Display with 8.5 mm high digits
- Measuring blades for inside measurement



For further detailed information see:  
[www.mahr.com](http://www.mahr.com)  
WebCode 2553

	Measuring Range		Resolution	Error Limit G	Depth Rod		Friction Wheel	Order no.	List price	Promo price
	mm	(inch)	mm / inch	mm / inch						
16 EWR	150	(6")	0.01 / 0.0005"	0.03 / 0.001"	●			4103064P	\$214.00	<b>\$165.00</b>
16 EWR	150	(6")	0.01 / 0.0005"	0.03 / 0.001"		●		4103066P	\$214.00	<b>\$165.00</b>
16 EWR	150	(6")	0.01 / 0.0005"	0.03 / 0.001"	●		●	4103065P	\$214.00	<b>\$165.00</b>
16 EWR	150	(6")	0.01 / 0.0005"	0.03 / 0.001"		●	●	4103067P	\$214.00	<b>\$165.00</b>
16 EWR	200	(8")	0.01 / 0.0005"	0.03 / 0.001"		●		4103068P	\$248.00	<b>\$191.00</b>
16 EWR	200	(8")	0.01 / 0.0005"	0.03 / 0.001"		●	●	4103069P	\$276.00	<b>\$199.00</b>
16 EWR	300	(12")	0.01 / 0.0005"	0.04 / 0.0015"				4103070P	\$371.00	<b>\$286.00</b>
16 EWR	300	(12")	0.01 / 0.0005"	0.04 / 0.0015"			●	4103071P	\$420.00	<b>\$295.00</b>

## MarCal. Digital Caliper 16 ER with Reference system



List Price From  
\$155.00  
Promo Price From  
**\$118.00**

### Functions:

- ON/OFF, RESET (Set display to zero), mm/inch, Reference-Lock/Unlock, Auto-ON/OFF
- Immediate measurement due to the **Reference system**
- MarConnect** data output, choose alternatively: USB, OPTO RS232C or Digimatic
- Life of the battery up to **3 years**
- High contrast Liquid Crystal Display with 8.5 mm high digits
- Beam and crossbeam are made of hardened stainless steel



For further detailed information see:  
[www.mahr.com](http://www.mahr.com)  
WebCode 2184

	Measuring range		Resolution	Error limit G	Depth Rod			Order no.	List price	Promo price
	mm	(inch)			mm / inch	mm / inch	DIN 862			
16 ER	150	(6")	0.01 / 0.0005"	0.03 / 0.001"	●	●	●	4103002P	\$155.00	<b>\$118.00</b>
16 ER	150	(6")	0.01 / 0.0005"	0.03 / 0.001"	●	●	●	4103003P	\$155.00	<b>\$118.00</b>
16 ER	200	(8")	0.01 / 0.0005"	0.03 / 0.001"	●	●	●	4103004P	\$210.00	<b>\$147.00</b>
16 ER	300	(12")	0.01 / 0.0005"	0.04 / 0.0015"	●	●	●	4103005P	\$330.00	<b>\$229.00</b>

## MarCal 16 EWR carbide or ceramic measuring faces



16 EWR-C

List Price  
\$347.00  
Promo Price  
**\$260.00**



16 EWR-H

List Price  
\$563.00  
Promo Price  
**\$425.00**

### Features

- Features are the same as the MarCal 16 EWR
- Carbide or ceramic measuring faces

### Technical Data

	Type	Measuring range		Resolution	Error limit G	Depth rod	Order no.	List price	Promo price
		mm	(inch)						
16 EWR-C	Ceramic outside measuring faces	150	(6")	0.01/ 0.0005"	0.03	●	4103072P	\$347.00	<b>\$260.00</b>
16 EWR-H	Carbide outside measuring faces	150	(6")	0.01/ 0.0005"	0.03	●	4103073P	\$563.00	<b>\$425.00</b>

## Digital Micrometer Micromar 40 EWR



REFERENCE

List Price From  
\$250.00  
Promo Price From  
**\$230.00**



### Features

#### Functions:

- RESET (Zero setting the display for Relative measurement)
- ABS (Switch between Relative and Absolute measurement) mm/inch
- Reference-Lock/Unlock
- PRESET (Reference setting)
- DATA (Data transmission via connection cable)
- Immediate measurement due to the Reference system
- MarConnect data output, choose alternatively  
USB  
OPTO RS232C  
Digimatic
- High contrast Liquid Crystal Display with 8.5 mm high digits
- Hard lacquered steel frame, heat insulated
- Spindle and anvil are carbide tipped
- Spindle is made of stainless steel, hardened throughout and ground
- Ratchet is integrated in the thimble
- Rapid drive
- Supplied with:  
Case, battery, operating instructions and setting standard (starting with measuring range 25-50 mm)

### Technical Data

	Measuring range		Resolution mm / inch	Error limit G* µm	Spindle thread pitch mm	Data output	Order no.	List price	Promo price
	mm	(inch)							
40 EWR	0 - 25	(0 - 1")	0.001 / 0.00005"	2	0.635	—	<b>4151721P</b>	\$250.00	<b>\$230.00</b>
40 EWR	0 - 25	(0 - 1")	0.001 / 0.00005"	2	0.635	●	<b>4151705P</b>	\$275.00	<b>\$245.00</b>
40 EWR	25 - 50	(1 - 2")	0.001 / 0.00005"	2	0.635	●	<b>4151706P</b>	\$285.00	<b>\$250.00</b>
40 EWR	50 - 75	(2 - 3")	0.001 / 0.00005"	3	0.635	●	<b>4151707P</b>	\$575.00	<b>\$445.00</b>
40 EWR	75 - 100	(3 - 4")	0.001 / 0.00005"	3	0.635	●	<b>4151708P</b>	\$603.00	<b>\$450.00</b>

\* at fixed zero point (better than DIN 863-1)

## Digital Micrometer Micromar 40 ER



**REFERENCE**



**List Price**  
\$227.00  
**Promo Price**  
**\$180.00**

### Features

#### Functions:

- RESET (Zero setting the display for Relative measurement)
- ABS (Switch between Relative and Absolute measurement)
- mm/inch
- Reference-Lock/Unlock
- PRESET (Reference setting)
- Immediate measurement due to the Reference system
- High contrast Liquid Crystal Display with 8.5 mm high digits
- Hard lacquered steel frame, heat insulated
- Spindle and anvil are carbide tipped
- Spindle is made of stainless steel, hardened throughout and ground
- Ratchet is integrated in the thimble
- Rapid drive
- Supplied with:  
Case, battery and operating instructions

### Technical Data

	Measuring range		Resolution	Error limit G *	Spindle thread pitch	Order no.	List price	Promo Price
	mm	(inch)	mm / inch	µm	mm			
<b>40 ER</b>	0 - 25	(0-1")	0.001 / 0.00005"	2	0.635	<b>4151601P</b>	\$227.00	<b>\$180.00</b>

\* at fixed zero point (better than DIN 863-1)

## Portable Thickness Gages MaraMeter 22P

- 22P-20 has the indicator built into the frame for maximum ruggedness
- Lift lever for one hand operation
- Continuous reading dials with revolution counter for absolute measurement of thin materials, plastic films and small parts
- Thickness Gage XLI-22P-20 is supplied with the µMaxum II Digital Electronic Indicator and can be Left/Right hand operated or front mounted
- XLI-22P-20 digital indicator can be rotated for right or left-hand use

**List Price From**  
\$523.00  
**Promo Price From**  
**\$392.00**

**Available for fast delivery**



### Technical Data

	Measuring range		Throat depth	Dial diameter	Dial grad	Resolution		Order no.	List price	Promo price
	Max	Min				(in) (selectable)	(mm) (selectable)			
<b>Dial thickness gage</b>	1.00"	0.0"	2.00	2.250"	0.001"	-	-	<b>22P-20P</b>	\$523.00	<b>\$392.00</b>
<b>Digital thickness gage</b>	1.00"	0.0"	2.00	2.250"	-	0.00001, 0.00002, 0.00005, 0.0001, 0.0002, 0.0005, 0.001	0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01, 0.02	<b>XLI-22P-20P</b>	\$793.00	<b>\$595.00</b>

## Adjustable Bore Gages 1280 P

### Adjustable Bore Gages 1280 P

Superior Accuracy for Production and Inspection.



1282P-3W2 and 1280P-1W1

#### Features

- Rugged construction for long life and low maintenance: Stainless steel gaging head, one piece centralizing yoke with replaceable tungsten carbide balls.
- Heavy duty housing protects Indicator.
- Flow-through design makes Series 1280P Bore Gages swish clean, no disassembly required.
- Outstanding stability: Holds mastered value.
- Furnished with either Dial Indicator or Maxum<sup>®</sup>/// Digital Electronic Indicator.
- Digital bore gages with output are provided with Maxum<sup>®</sup>/// Indicators. The Dynamic memory of the Maxum<sup>®</sup>/// greatly simplifies operation and assures repeatable readings with a single sweep of the diameter being measured.
- Output available for Statistical Quality Control requirements.

**List Price From**  
\$1,354.00  
**Promo Price From**  
**\$1,220.00**

#### Technical Data

**With Dial Indicator**

Range of Sensitive Contact: 0.63 mm / **.025"**,  
0.002 mm / **.0001"** grad.

**With Maxum<sup>®</sup>/// Indicators**

Range of Sensitive Contact: 0.39 mm / **.020"**  
Resolution: 0.001 mm / **.00005"** resolution,  
0.001 mm / **.001"** grad.

If gage capacity is 25 mm / 1" or greater, the Maxum<sup>®</sup>/// Indicator is covered with a cast aluminum protective housing. If under 25 mm / 1" capacity, the protective housing is not normally furnished.

Capacity mm / inch	Gaging depth mm / inch	End of head contact mm / inch	With dial indicator Order no.	List price	Promo price
12 - 25mm / 0.5 - 1"	76mm / 3"	2.77 / .11"	<b>1280P-1S1P</b>	\$1,354.00	<b>\$1,220.00</b>
25 - 50mm / 1 - 2"	152mm / 6"	4.37 / .17"	<b>1280P-2S2P</b>	\$1,344.00	<b>\$1,210.00</b>
50 - 203mm / 2 - 8"	152mm / 6"	7.92 / .31"	<b>1280P-3S2P</b>	\$1,556.00	<b>\$1,400.00</b>
12 - 25mm / 0.5 - 1"	152mm / 6"	2.77 / .11"	<b>1280P-1S2P</b>	\$1,354.00	<b>\$1,220.00</b>
25 - 50mm / 1 - 2"	305mm / 12"	4.37 / .17"	<b>1280P-2S3P</b>	\$1,344.00	<b>\$1,210.00</b>
50 - 203 / 2 - 8"	305mm / 12"	7.92 / .31"	<b>1280P-3S3P</b>	\$1,556.00	<b>\$1,400.00</b>
Capacity	Gaging depth	End of head contact mm / inch	With Maxum <sup>®</sup> /// indicator Order no.	List price	Promo price
12 - 25mm / 0.5 - 1"	76mm / 3"	2.77 / .11"	<b>1282P-1S1P</b>	\$1,702.00	<b>\$1,540.00</b>
25 - 50mm / 1 - 2"	152mm / 6"	4.37 / .17"	<b>1282P-2S2P</b>	\$1,692.00	<b>\$1,530.00</b>
50 - 203mm / 2 - 8"	152mm / 6"	7.92 / .31"	<b>1282P-3S2P</b>	\$1,864.00	<b>\$1,680.00</b>
12 - 25mm / 0.5 - 1"	152mm / 6"	2.77 / .11"	<b>1282P-1S2P</b>	\$1,702.00	<b>\$1,540.00</b>
25 - 50mm / 1 - 2"	305mm / 12"	4.37 / .17"	<b>1282P-2S3P</b>	\$1,692.00	<b>\$1,530.00</b>
50 - 203 / 2 - 8"	305mm / 12"	7.92 / .31"	<b>1282P-3S3P</b>	\$1,864.00	<b>\$1,680.00</b>

Series 1280P Adjustable Bore Gages are normally furnished with adjusting wrenches and steel contacts.

## Handles / Housing

All 1280P Gages have a removable handle as a part of the Indicator Housing.

All 1282P Gages can be equipped with a handle which projects at 90° to the gage housing.

1282P Gages with capacity 12-25 mm / .50-1" are not normally furnished with a protective housing. Handles and Housings may be ordered separately.

For Handles order **HA-88** with **AT-124** Adaptor. For Housings order **EHG-1198**.

## Gaging Extensions

Specify the Reference Contact Gaging Extensions required. For all diameters below 50 mm / 2" the Reference Contact is integral with each Extension. For diameters over 50 mm / 2" the Reference Contact is separate and interchangeable among Extension Sets.

*Talk to the Mahr Federal Tech Group for further information.*



## Other bore gage solutions from Mahr Federal

### Dial bore gage 844 N



- Measuring the diameter, roundness and conical form of a bore as well as the distances of plane-parallel surfaces
- Measuring head consists of a carbide-tipped moving anvil and an interchangeable stationary anvil which has a hardened steel ball; alternatively a carbide ball is available
- Insensitive to temperature due to both the shank and transfer rod being made from heat resistant Invar steel
- Measuring head, holder, extensions, right-angle attachments and depth stops are all part of this extensive modular system

### Dimentron® plug gage



Fixed Plug Gaging is the inspection tool that allows you to measure many jobs faster, more conveniently, and more accurately than by other gaging methods. In the measurement of all hole conditions, the Dimentron System is unsurpassed for speed and accuracy. In standard applications it offers sufficient magnification and reliability to measure tolerances well beyond the scope of mechanical gages. For critical dimension applications special designs can be implemented to enhance the performance for some of the most demanding requirements.

### Air gages for bores



Air gages measure dimension deviations quickly and precisely. For years, they have proven themselves as high quality length measuring units in industrial production and inspection rooms. Air measuring tooling such as plug and ring gages determine the part dimension without contact. The measuring values of the air tooling is quickly displayed by a range of Millimeter display units for bench or portable application.

## How to Receive Your Free Caliper

▶ | This promotional brochure contains products carrying a **Free Caliper Symbol** as seen below. When you order a product with the Free Caliper Symbol from this brochure - by the special order number specified, you will also receive one free **16 ER** - our newest and performance packed caliper, order number **4103002**. The values in this brochure are hot, but when combined with the free 16 ER they are untouchable! Order yours today. | ◀



## Digimar. Height Measuring and Scribing Instrument 814 SR



**REFERENCE**

- Functions: RESET (Zero setting the display for Relative measurement), ABS (Switching from Relative to Absolute Measurement), mm/inch, Reference-Lock/Unlock, PRESET (enter a numerical value)
- Life of the battery up to **3 years**
- **MarConnect** data output, choose alternatively: USB, OPTO RS232C or Digimatic
- High contrast Liquid Crystal Display with 12 mm high digits
- Sturdy heavy-duty base, easy to handle
- Hardened and lapped contact surface which produce both a smooth and even movement
- Hand crank for positioning and measuring

**List Price**  
\$1,760.00  
**Promo Price**  
**\$1,584.00**  
Order no. 4426101+Cal



**List Price**  
\$1,350.00  
**Promo Price**  
**\$1,215.00**  
Order no. 4426100+Cal

**NEW**



For further detailed information see:  
[www.mahr.com](http://www.mahr.com)  
WebCode 12414-8410

	Measuring range		Resolution	Order no.	List Price	Promo Price
	mm	(inch)	mm/inch			
<b>814 SR</b>	350	(14")	0,01 / .0005"	<b>4426100+CAL</b>	\$1,350.00	<b>\$1,215.00</b>
<b>814 SR</b>	600	(24")	0,01 / .0005"	<b>4426101+CAL</b>	\$1,760.00	<b>\$1,584.00</b>

## Digimar Height Measuring Instrument 816 CL 1D

**Digimar 816 CL 350 / 600 mm:** The robust and user-friendly height measuring instrument.



### User-friendly



#### Clearly displayed measured values

- High contrast back-lit graphic display
- The actual measuring function is clearly shown in the display
- Retrace the measuring procedure in the list of measured values

#### Self-explanatory operator guidance

- Well-appointed functions keys, the function keys are clearly defined with a function symbol
- All standard functions can be directly executed by pressing just one key
- Further functions can be selected via the menu key

The operating and display unit has a back-lit display

### Precise measuring results on the production line



#### Robust design

- Robust guide column and measuring carriage
- The measuring system with the double reader head system is not only extremely accurate, but also insensitive to the contamination of dirt

#### Measuring results independent of the user

- The motorized measuring carriage minimizes the influence caused by the operator and simplifies the measuring procedures

Probe contact due to the motorized measuring carriage eliminates user error and increases accuracy



For further detailed information see:

[www.mahr.com](http://www.mahr.com)  
WebCode 13461

List Price  
\$5,310.00  
Promo Price  
**\$4,779.00**  
Order no. 4429030+Cal



816 CL 0 - 350 mm



816 CL 0 - 600 mm

List Price  
\$5,700.00  
Promo Price  
**\$5,130.00**  
Order no. 4429031+Cal



**NEW**

Measuring range	mm / inch	0-350 / 14"	0-600 / 24"
Application range	mm / inch	520 / 20.47"	770 / 30.31"
Resolution	mm / inch		
Measuring error*	µm		
1-D		•	•
Motorized measuring carriage		•	•
Bore diameter		•	•
Max-Min		•	•
Measuring program		1	1
Temperature compensation		•	•
Air bearings, 3-point air cushion		•	•
Data interface			Opto RS232 / USB

<b>Order no.</b>	<b>4429030+CAL</b>	<b>4429031+CAL</b>
List price	\$5,310.00	\$5,700.00
<b>Promo price</b>	<b>\$4,779.00</b>	<b>\$5,130.00</b>

\* At 20°C in conjunction with a base plate in accordance to DIN 876/0 and a standard probe K6/51

## Digimar. Height Measuring Instrument Digimar 817 CLM Quick Height - 2D

**Digimar 817 CLM** Quick Height. 350 / 600 / 1000 mm: The new Height Measuring Instrument with the innovative Quick Mode. Highly accurate rapid measurements, a wide range of measuring and evaluation possibilities and excellent operator comfort.

### Fast measurement . . .

... by hand with "Quick-Mode" (patented)



List Price From  
\$8,750.00  
Promo Price From  
**\$6,499.00**

### Display

Comfort to operate all measurement functions with the function keys



817 CLM - 2D 0 - 350 mm

817 CLM - 2D 0 - 600 mm

817 CLM - 2D 0 - 1000 mm



For further detailed information see:

[www.mahr.com](http://www.mahr.com)

WebCode 12369-8298



ree  
16 ER Caliper

- Measuring range
- Application range
- Resolution
- Measuring error\*
- Quick Mode
- 2-D
- Motorized measuring carriage
- Bore diameter
- Max-Min
- Tolerance monitoring
- Perpendicularity / Straightness measurement
- Measuring programs
- Temperature compensation
- Air bearings
- Integrated USB memory
- Data interface
- USB printer interface

- mm / in
- mm / in
- mm
- in
- µm
- QUICK MODE
- 2D
- Motorized measuring carriage
- Bore diameter
- Max-Min
- Tolerance monitoring
- Perpendicularity / Straightness measurement
- Measuring programs
- Temperature compensation
- Integrated USB memory
- Data interface
- USB printer interface

	2D		
	0-350 / 14"	0-600 / 24"	0-1000 / 40"
Application range	520 / 20.47	770 / 30.31	1170 / 46.0
Resolution	0.01 / 0.005 / 0.001 / 0.0005 / 0.0001		
Measuring error*	0.001" / 0.005" / 0.0001" / 0.00005" / 0.00001"		
Quick Mode	1,8+L/600 (L in mm)		
2-D	●	●	●
Motorized measuring carriage	●	●	●
Bore diameter	●	●	●
Max-Min	●	●	●
Tolerance monitoring	●	●	●
Perpendicularity / Straightness measurement	●	●	●
Measuring programs	40	40	40
Temperature compensation	●	●	●
Air bearings	●	●	●
Integrated USB memory	●	●	●
Data interface	RS232	RS232	RS232
USB printer interface	●	●	●
<b>Order no.</b>	<b>4429010+CAL</b>	<b>4429011+CAL</b>	<b>4429012+CAL</b>
<b>List price</b>	<b>\$8,750.00</b>	<b>\$9,570.00</b>	<b>\$15,670.00</b>
<b>Promo price</b>	<b>\$6,499.00</b>	<b>\$7,499.00</b>	<b>\$11,999.00</b>

\* At 20° C in conjunction with a base plate in accordance to DIN 876/0 and a standard probe K6/51

## Digimar. Height Measuring Instrument Digimar 817 CLM Quick Height

### Easy to operate . . .

. . . all functions can be operated via the speed keys



*Operating and display unit with back-lit display*

### Measuring program . . .

. . . for repetitive measurements / serial components



### Perpendicularity (with optional probes\*) . . .

. . . and straightness measurements

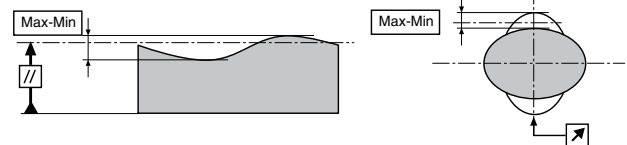


\* Check with Mahr Federal Inc. for available electronic probe options

### Dynamic measuring functions



Determine MAX, MIN, MAX-MIN with just one measurement



• Parallel deviation

• Roundness deviation

## Digimar. Probe Accessory Sets for 817 CLM / 816 CL

### Probe Set 817 ts1

consists of:

		Shaft length mm	Mount dia. mm
817 h2	Carrier for probes	100	—
S15/31,2	Disc probe	31.2	6
Z10/31,2	Cylindrical probe	31.2	6
MKe 30	Taper probe	38.2	6
TMT 120	Depth probe incl. carrier	120	—
KM 2	Probe for M2 incl. probe 800 ts	31.7	6
817 h4	Carrier for probes	—	8
K4/30	Spherical probe	31	8
K6/40	Spherical probe	31	8
K10/60	Spherical probe	62	8
K10/100	Spherical probe	103	8

### Probe Set 817 ts2

consists of:

		Shaft length mm	Mount dia. mm
817 h2	Carrier for probes	100	—
S15/31,2	Disc probe	31.2	6
Z10/31,2	Cylindrical probe	31.2	6
MKe 30	Taper probe	38.2	6
TMT 120	Depth probe incl. carrier	120	—
KM 2	Probe for M2 incl. probe 800 ts	31.7	6



817 ts1



For further detailed information see:

[www.mahr.com](http://www.mahr.com)

WebCode 12369-8298

Probe Set	Order no.	Price
817 ts1	4429019P	\$1,520.00
817 ts2	4429018P	\$1,040.00

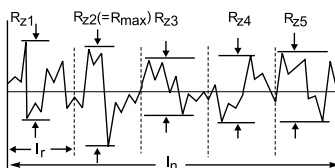
## Pocket Surf® The portable surface roughness gage

List Price from  
**\$2,230.00**

Promo Price from  
**\$1,899.00**



- Pocket-sized economically priced, completely portable instrument
- Solidly built, with a durable cast aluminum housing, to provide years of accurate, reliable surface finish gaging
- Can be used to measure any one of four, switch-selectable, parameters:  $R_a$ ,  $R_{max}/R_y$ ,  $R_z$
- Selectable traverse length 1, 3 or 5 cut-offs of 0.8 mm/.030"
- Operates in any position – horizontal, vertical, and upside down
- Four switchable probe positions – axial (folded) or at 90°, 180° or 270°
- Even difficult-to-reach surfaces such as inside and outside diameters are accessible
- Integrated data output for SPC-processing
- Easy-to-read LCD readout presents the measured roughness value, in microinches or micrometers



### Technical Data

#### Probing and Traverse Lengths

Parameters	Traverse Length (Nominal)	Evaluation Length	Number of Cutoffs/ Switch Position
$R_a/R_y$	2.0 mm/ .075" 3.5 mm/ .135"	0.8 mm/ .030" 2.4 mm/ .090"	1 3
$R_a/R_z/R_{max}$	5.0 mm/ .195"	4.0 mm/ .150"	5
Traverse Speed	5.08 mm/ .2" per second		
Cutoff	.08 mm/ .030" ASME 2 RC-filter		
Probe Type	Piezoelectric		
Maximum Stylus Force	15.0 mN / 1500 mgf		
Power	Consumer-type alkaline battery, 9 Volt		
Battery Capacity	Approx. 2500 measurements, depending on frequency of use and output option		
Operating Temperature	10° to 45°C / 50° to 113° F		
Storage Temperature	-20° to 65°C / -4° to 149° F		

**Made in USA**  
Available for fast delivery

#### Pocket Surf Sets

Order no.			List Price	Promo price
<b>EMD-1500-311+CAL</b>	<b>EGH-1019</b>	Probe, 90°, 10 µm radius, PMD-90101 Certified Specimen, incl. Test Certificate	\$2,310.00	<b>\$1,975.00</b>
<b>EMD-1500-312+CAL</b>	<b>EGH-1019</b>	Probe, 90°, 10 µm radius, EMD-90010 Precision Specimen	\$2,230.00	<b>\$1,899.00</b>
<b>EMD-1500-321+CAL</b>	<b>EGH-1026</b>	Probe, 90°, 5 µm radius, PMD-90101 Certified Specimen, incl. Test Certificate	\$2,310.00	<b>\$1,975.00</b>
<b>EMD-1500-322+CAL</b>	<b>EGH-1026</b>	Probe, 90°, 5 µm radius, EMD-90010 Precision Specimen	\$2,230.00	<b>\$1,899.00</b>

A Pocket Surf kit is furnished complete in a fitted case, and includes a Pocket Surf unit with a General Purpose Probe\*\*, and a 3.2 µm/125 µinch (nominal) Reference Specimen\*\*, 9 Volt battery, Riser Plate and screwdriver.

\*\* Part Numbers listed in table above.

## Pocket Surf® PS1 The portable surface roughness measuring instrument



**ree**  
**16 ER Caliper**

**Large display**  
All the information you need at a glance

**Directly selectable parameters**  
 $R_a$ ,  $R_z$

**Freely selectable button**  
Direct access to one parameter of your choice out of 24

**USB interface**  
PS1 is detected without a driver (similar to a flash drive)

**Integrated calibration standard**  
No external calibration standard required (patent pending)

**Flexibility thanks to 4 internal threaded bores**  
for clamping your own special accessories

**Pick-up with removable pick-up protection**  
Measurement in compliance with standards  
Measuring force 0.7mN

**Drive Unit**  
Can be rotated and moved in longitudinal direction

**Start button on the right and on the left**  
Easy operation no matter if you are left or right handed

### Your Benefits

#### Saves you time and money

Ease of operation means:

- No training: save time
- Switch on and measure
- 3 parameters directly at the press of a button

#### Reliable Measurement

- With integrated calibration standard
- Error free operation thanks to **standards compliance settings**
- Automatic cut-off selection
- Evaluation possible using **MarSurf XR 20** evaluation software or **MarSurf XR 20** unit

## Pocket Surf® PS1 Standard

The Pocket Surf PS1 comes in a complete set. Thanks to the carrying case, you always have your surface roughness measuring instrument with you as you pass through the production floor. Quick and reliable on-the-spot measurements ensure your quality requirements are met during the production process or incoming goods inspection.

- **Pocket Surf PS1** base unit
- Drive unit
- 1 standard pick-up, conforms to standards
- Integrated battery
- Roughness standard integrated into casing
- Height adjustment accessory
- Pick-up protection
- Charger / mains adapter
- Operating instructions
- Carrying case with shoulder strap and belt attachment
- USB cable
- Mahr Calibration Certificate

Order no.

Price

6910214+CAL

\$2,640.00

#### Optional accessories

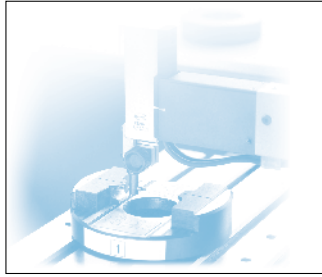
80mm (3.15in) pick-up extension, pick-ups from 3mm (0.118in) dia. measurements in bores, offset pick-up, groove pick-up, gear flank pick-up, adapter for transverse tracing, **MSP2** printer with connection cable (**MarConnect**), vee-block for measurements on end faces, mounting device for measuring stand  
**ST-D / ST-F / ST-G. PC-Software PS1 Explorer** for documentation and records.



▶ | **DIMENSIONAL METROLOGY**



**Precision Gages**



**Precimar.**  
Precision Length Metrology



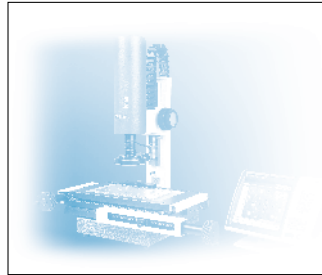
**MarSurf.**  
Surface Metrology



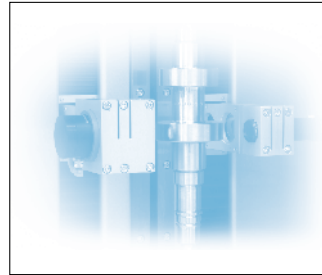
**MarForm.**  
Form Metrology



**MarGear.**  
Gear Metrology



**MarVision.**  
Optical Metrology



**MarShaft.**  
Shaft Metrology



**Services**

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E V O L U T I O