

MAHR SPOTLIGHTS



WINTER PROMOTION
PROMOTION PRICES
EFFECTIVE THROUGH 4/30/2015



- 0 +



EXACTLY



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How to Receive Your Free Caliper

▶ I 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** 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.



Free
16 ER Caliper

List Price: \$160.00

MarCal Digital Caliper 16 EWR with Reference System, Protection Class IP67, no output



List Price
\$185.00
Promo Price
\$149.00

Available for fast delivery

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

WebCode 13526-11250

	Measuring range		Resolution mm / inch	Error Limit G mm	Depth rod		Friction Wheel	Order no.	List price	Promo price
	mm	(inch)								
16 EWR	150	(6")	0.01 / 0.0005"	0.03	●			4103060P	\$185.00	\$149.00
16 EWR	150	(6")	0.01 / 0.0005"	0.03		●		4103062P	\$185.00	\$149.00
16 EWR	150	(6")	0.01 / 0.0005"	0.03	●		●	4103061P	\$185.00	\$149.00
16 EWR	150	(6")	0.01 / 0.0005"	0.03		●	●	4103063P	\$185.00	\$149.00

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



List Price From
\$221.00
Promo Price From
\$179.00



REFERENCE

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
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	\$221.00	\$179.00
16 EWR	150	(6")	0.01 / 0.0005"	0.03 / 0.001"	—	●	—	4103066P	\$221.00	\$179.00
16 EWR	150	(6")	0.01 / 0.0005"	0.03 / 0.001"	●	—	●	4103065P	\$221.00	\$179.00
16 EWR	150	(6")	0.01 / 0.0005"	0.03 / 0.001"	—	●	●	4103067P	\$221.00	\$179.00
16 EWR	200	(8")	0.01 / 0.0005"	0.03 / 0.001"	—	●	—	4103068P	\$256.00	\$199.00
16 EWR	200	(8")	0.01 / 0.0005"	0.03 / 0.001"	—	●	●	4103069P	\$256.00	\$199.00
16 EWR	300	(12")	0.01 / 0.0005"	0.04 / 0.0015"	—	—	—	4103070P	\$383.00	\$279.00
16 EWR	300	(12")	0.01 / 0.0005"	0.04 / 0.0015"	—	—	●	4103071P	\$383.00	\$279.00

MarCal. Digital Caliper 16 ER with Reference system and output



List Price From
\$160.00
Promo Price From
\$125.00

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
WebCode 2184

	Measuring range		Resolution	Error limit G	Depth Rod		Order no.	List price	Promo price
	mm	(inch)			mm / inch	mm / inch			
16 ER	150	(6")	0.01 / 0.0005"	0.03 / 0.001"	●	●	4103002P	\$160.00	\$125.00
16 ER	150	(6")	0.01 / 0.0005"	0.03 / 0.001"	—	●	4103003P	\$160.00	\$125.00
16 ER	200	(8")	0.01 / 0.0005"	0.03 / 0.001"	●	—	4103004P	\$217.00	\$159.00
16 ER	300	(12")	0.01 / 0.0005"	0.04 / 0.0015"	—	—	4103005P	\$340.00	\$229.00

Digital Caliper MarCal 16 EWRi with integrated wireless data transmission



REFERENCE



No External Transmitter

List Price From
\$214.00
Promo Price From
\$199.00



Large high-contrast display.



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Features

Functions:

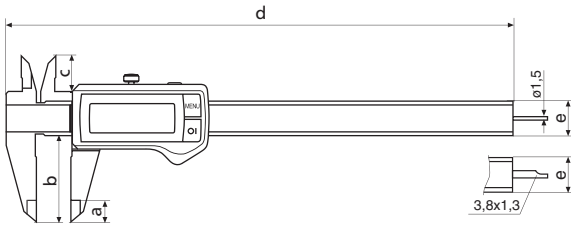
ON/OFF
RESET (Set display to zero)
mm/inch
Reference Lock/Unlock
Auto-ON/OFF
Hold
DATA

- Integrated Wireless data transmission
- Life of the battery up to 3 years
- Measuring blades for inside measurement
- Immediate measurement due to the Reference system
- Max measuring speed 2.5 m/s (100"/s)
- Step measuring function
- Excellent resistance against dust, coolants and lubricants, protection class IP67
- High contrast LCD with 11 mm high digits
- Locking screw
- Dirt wipers are integrated in the slide
- Lapped guideway
- Supplied with: Case, battery, operating instructions
- Slide and beam made of hardened stainless steel

Technical Data

Measuring range	Resolution	Error limit	Depth rod				Friction wheel	Order no.	List price	Promo price
			mm	inch	DIN 862	ISO 215				
150 (6")	0.01 / .0005"	0.03 / .001"	•	•	•	•	4103400P	\$214.00	\$199.00	
150 (6")	0.01 / .0005"	0.03 / .001"	•	•	•	•	4103401P	\$214.00	\$199.00	
150 (6")	0.01 / .0005"	0.03 / .001"	•	•	•	•	4103402P	\$214.00	\$199.00	
150 (6")	0.01 / .0005"	0.03 / .001"	•	•	•	•	4103403P	\$214.00	\$199.00	
200 (8")	0.01 / .0005"	0.03 / .001"	•	•	•	•	4103404P	\$248.00	\$225.00	
200 (8")	0.01 / .0005"	0.03 / .001"	•	•	•	•	4103405P	\$248.00	\$225.00	
300 (12")	0.01 / .0005"	0.04 / .0015"	•	•	•	•	4103406P	\$371.00	\$349.00	
300 (12")	0.01 / .0005"	0.04 / .0015"	•	•	•	•	4103407P	\$371.00	\$349.00	



Technical Data



Dimensions

mm	a	b	c	d	e
150	10	40	16	235	16 x 3
200	10	50	19	285	16 x 3.5
300	14	64	19	388	16 x 4

Accessories for Creating your Wireless Data Collection System

	Order no.	List price	Promo price
 <p>i-Stick wireless receiver with MarCom Standard Allows for 8 wireless devices per stick and 68 wired devices when used with Marcom Professional</p>	4102220P	\$154.00	\$125.00
 <p>Software MarCom Professional 4.0 Allows for up to 4 i-Sticks per computer</p>	4102552P	\$394.00	\$350.00
<p>Software MarCom Standard 3.1</p>	4102551P	\$115.00	\$99.00

Create Your Personal Data Collection Network

Basic - MarCom Standard



Advanced - MarCom Professional



Digital Micrometer Micromar 40 EWR



REFERENCE



List Price From
\$258.00
Promo Price From
\$220.00



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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	—	4151721P	\$258.00	\$220.00
40 EWR	0 - 25	(0 - 1")	0.001 / 0.00005"	2	0.635	•	4151705P	\$284.00	\$230.00
40 EWR	25 - 50	(1 - 2")	0.001 / 0.00005"	2	0.635	•	4151706P	\$294.00	\$265.00
40 EWR	50 - 75	(2 - 3")	0.001 / 0.00005"	3	0.635	•	4151707P	\$350.00	\$300.00
40 EWR	75 - 100	(3 - 4")	0.001 / 0.00005"	3	0.635	•	4151708P	\$400.00	\$350.00


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

Dial Comparators

Models

List Price From
\$240.00
Promo Price From
\$185.00



Inch	1002 Z	1003 Z	1004 Z*	1010 Z*
Measuring range	± .0010"	± .0020"	± .0050"	± .0100"
Readings	.00002"	.00005"	.0001"	.0005"
Dial style	.001-0-.001	.002-0-.002	.005-0-.005	.01-0-.01
Accuracy*	Factory standard	Factory standard	Factory standard	Factory standard
G_{ges}	.000025"	.00006"	.00012"	.0004"
Order no. Standard	4335900P	4334900P	4333900P	4332900P
Order no. Waterproof 	4335905P	4334905P	4333905P	4332905P

* Accuracy of 1004, 1010, 1010 Z exceeds DIN 879-1

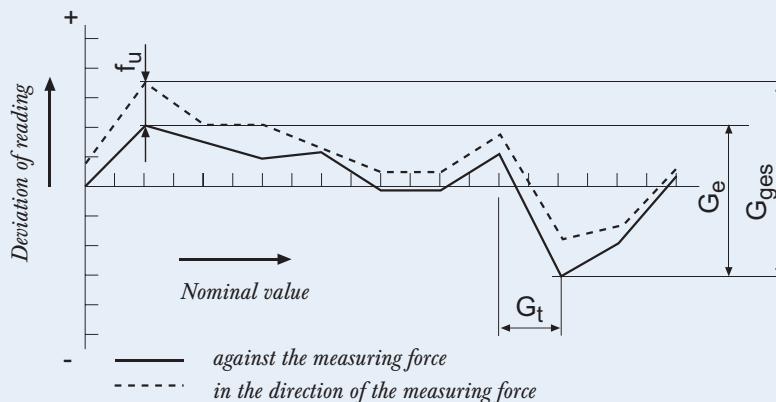
Technical Data

	Measuring range	Readings	Over-travel	Measuring force	Order no. Standard*	Order no. Waterproof**	List price	Promo price
1002 Z	± .0010"	.00002"	.11"	1 N	4335900P	-	\$534.00	\$475.00
1002 Z	± .0010"	.00002"	.11"	1 N	-	4335905P	\$586.00	\$500.00
1003 Z	± .0020"	.00005"	.11"	1 N	-	4334905P	\$356.00	\$275.00
1003 Z	± .0020"	.00005"	.11"	1 N	4334900P	-	\$275.00	\$240.00
1004 Z	± .0050"	.0001"	.10"	1 N	-	4333905P	\$356.00	\$275.00
1004 Z	± .0050"	.0001"	.10"	1 N	4333900P	-	\$275.00	\$240.00
1010 Z	± .0100"	.0005"	.10"	1 N	4332900P	-	\$240.00	\$185.00
1010 Z	± .0100"	.0005"	.10"	1 N	-	4332905P	\$275.00	\$200.00

* Incl. Plastic Case; Adapter 940 (for inch instruments only)

** IP54, Incl. Plastic Case, Splash Guard Cover 957, Rubber Bellows (only for 1002/1003/1004); Adapter 940 (for inch instruments only)

Metrological characteristics



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Digital Indicators MarCator 1087 Ri with analog display and integrated wireless data transmission



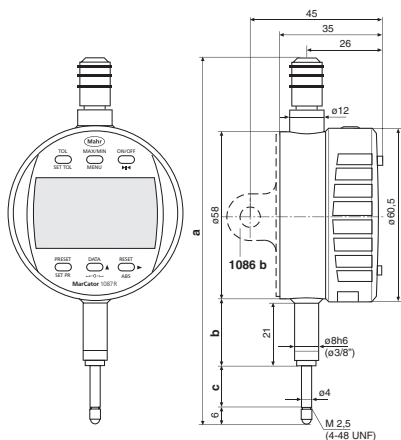
List Price From
\$823.00
Promo Price From
\$650.00

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REFERENCE

OVER 15% SAVINGS



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
 - Integrated Wireless
- Operating temperature 10 - 40°C
- Class of protection IP42 in accordance to IEC 60529

Supplied with:
Battery,
Operating instructions

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

Dimensions

Meas. range	a	b	c
mm (inch)	mm	mm	mm
12.5 (.5")	126.3	23	13.5

Technical Data

Measuring range	Resolution	Span of error*	MarConnect	Measuring force	Weight	Mounting shank	Order no.	List Price	Promo Price
mm (inch)	mm / inch	mm		N	g				
12.5 (.5")	0.001 / .00005"	0.005	●	0.65 - 0.90	140	8h6	4337163P	\$823.00	\$650.00
12.5 (.5")	0.001 / .00005"	0.005	●	0.65 - 0.90	140	8h6	4337164P	\$875.00	\$725.00
25 (1")	0.001 / .00005"	0.005	●	0.65 - 1.15	150	8h6	4337165P	\$879.00	\$725.00

* in any zero point

Self-Centering Measuring Pistol Micromar 844 A



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List Price From
\$2,970.00
Promo Price From
\$2,500.00

Self Centering Bore Gage Set includes 1086 R digital indicator

Applications

- For measuring:
- Through holes
 - Blind holes
 - Centering shoulders

Mahr Federal's 844A Self Centering Pistol style bore gages offer long measuring range with fixed anvils. The pistol grip incorporates a constant measuring pressure for locking onto the bore diameter with no operator influence.

Features include:

- Kits below are supplied with Digital Indicator 1086 R having 0.001mm/50u" resolution
- Large easy to read display
- Self centering measuring heads consists of three laterally positioned anvils, each are offset at 120° intervals
- Measuring heads larger than 12.5mm/0.5" are carbide tipped
- Measuring heads from 40mm/1.6" are made from aluminum to reduce weight
- Marcom output
- Optional Digital indicators are interchangeable for economical upgrade and maintenance



Self Centering bore gage kits

Mahr Federal's 844 A Self Centering Pistol style bore gage in kit form provides a versatile set for measuring many of your high precision bore gage applications.

Self-centering measuring head consists of 3 laterally positioned anvils, each are offset at intervals of 120°.

- Anvils from 12.5 mm are carbide tipped
- From 12.5 mm, anvils can be used to measure to the base of a bore
- From 40 mm all measuring heads are made from aluminum to reduce weight

Technical Data

Measuring range		Number of Measuring Heads	Ring Gages	Order no. with digital indicator 1086 R	List price	Promo Price
mm	(inch)					
6 - 12	(0.25 - 0.4725")	3	8 / 10	4487760P	\$2,970.00	\$2,500.00
12 - 20	(0.4725 - 0.775")	2	16	4487761P	\$2,970.00	\$2,500.00
20 - 50	(0.775 - 2")	4	25 / 40	4487762P	\$3,670.00	\$3,000.00
50 - 100	(2 - 4")	4	60 / 85	4487763P	\$3,940.00	\$3,700.00

- Supplied with:
1 Basic Instrument 844 Ag, Measuring Heads 44 Ak, case and ring gages

* Indicator is not taken into consideration, over the full length of the anvils

** With the extension 44 Av

*** Excludes indicator

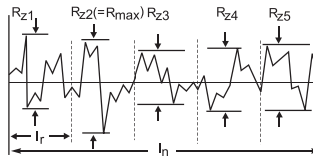
Pocket Surf® The portable surface roughness gage

List Price From
\$2,310.00

Promo Price From
\$2,200.00



- 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
EMD-1500-311P	EGH-1019 Probe, 90°, 10 µm radius, PMD-90101 Certified Specimen, incl. Test Certificate	\$2,310.00	\$2,200.00
EMD-1500-321P	EGH-1026 Probe, 90°, 5 µm radius, PMD-90101 Certified Specimen, incl. Test Certificate	\$2,310.00	\$2,200.00

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.

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Surface Plate Layout System for General Dimensional Measurement

**830 Complete Kit
(Granite base not included)**



The 2121597P electronic height gage system using the 830 bench amplifier is a general purpose measuring system typically used for comparative measurements on surface plates. The system consists of:

- 2400 Height Stand with 18"/457mm post
- 212421 - 830 Amplifier
- EHE 2056 Lever gage head adjustable back
- 5323014 P2004 Cartridge gage head
- AAD-66 Bracket for cartridge gage head

List Price
\$5,153.00
Promo Price
\$4,125.00

**2400
Stand**



**EHE-2056
Lever Type Gage
Assy**



**212421
830F Amplifier**



**5323014
P2004 Inductive
Probe**



Ranges	Resolutions
±100 μm / ±0.04"	5 μm / 200 μ"
±20 μm / ±0.001"	1 μm / 50 μ"
±10 μm / ±0.0002"	0.5 μm / 10 μ"

Part no.	Description	List price	Promo Price
830 Complete Kit contents:			
EHE-2056	Lever type gage assembly with fine adjustment mounting bracket		
5323014	P2004F inductive probe +/- 0.079" (2.0 mm)		
AAD-66	Mounting adaptor, L-Bracket with 0.375" diameter		
2121421	830F Amplifier, 120V		
2400	Height Stand		
2121597P	830 Complete Kit	\$5,153.00	\$4,125.00

μDimensionair®. Air Gages

Features

- Affordable • Versatile • Innovative • Rugged

No other air gaging system offers so much – in the palm of your hand – mounted to the workbench or even right to the machine tool. μDimensionair is rated IP-54, so, it can be used on the shop floor – and, the air tooling cleans dirt from the part for high performance measurements – fast and easy!

- Air gage readout is right in front of you – simple and clear
- Fixed resolution and balanced air system makes the gage stable and reliable for your manufacturing environment

Contact Mahr Federal Technical Support for selecting air tooling



List Price
\$1,683.00
Promo Price
\$1,450.00



The μDimensionair II is the ultimate of portability and versatility – in your hand or at the workbench or machine tool. Shown with optional 2239307 Bench Kit



Air tooling not included

Versatility

The ultimate in configuration – interchangeable handle allows for pistol grip or normal end-mount for easy application of the plug to the part. For large, heavy plugs, mount the handle between the tooling and the display – assures a well-balanced, ergonomic measuring system. Can also be mounted to a bench stand when parts are brought to the gage.

Technical Data

Measuring Range mm/inch	Digital Resolution mm/inch	Tooling I.D. Number
± 0.080/ ± 0.003"	0.001/ 0.00005"	60
± 0.040/ ± 0.0016"	0.0005/ 0.00002"	50
± 0.020/ ± 0.00076"	0.0005/ 0.00002"	20

Operating Temperature	5 - 35° C / 41 - 95° F
Storage Temperature	0 - 60° C / 32 - 140° F
Repeatability	± 1 digit
Calibration Accuracy	± 1 digit
Response Time	Approximately 1 second
Thermal Stability	0.1% of full scale/F
Data Output	ASCII/Digimatic
Weight	25 kg / 5lbs.

Auto Power Off	15 minutes of non-use
Power Requirements	3 volt lithium battery coin cell, 2 per unit – CR-2450

Air Supply	2.10 ± .01 bar / 30.4 ± .15 psi
Display	Rotates through 270 degrees

Ordering

Description	Order no.	List Price	Promo Price
μDimensionair complete with handle, adaptor and hose	2103200+CAL		
Pressure Regulator with filter (required)	2238020		
Bench Kit with adaptor\	2239307		
Complete Kit	2106960P	\$1,683.00	\$1,450.00

Scan for more information



Digimar Height Measuring Instrument 816 CL 1D

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



List Price
\$5,610.00
Promo Price
\$4,995.00
Order no. 4429030+Cal

List Price
\$6,030.00
Promo Price
\$5,495.00
Order no. 4429031+Cal

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



816 CL 0 - 350 mm

Scan for more information



816 CL 0 - 600 mm




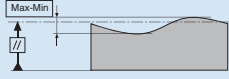
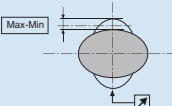



For further detailed information see:
www.mahr.com
WebCode 13461

Measuring range	mm / inch	0-350 / 14"	0-600 / 24"
Application range	mm / inch	520 / 20.47"	770 / 30.31"
Resolution	mm / inch		0.01 / 0.001 (0.0001"/0.00005")
Measuring error*	µm		(2.8+L/300), L in mm
1-D		•	•
Motorized measuring carriage		•	•
Bore diameter		•	•
Max-Min		•	•
Measuring program	PROG	1	1
Temperature compensation		•	•
Air bearings, 3-point air cushion		•	•
Data interface			Opto RS232 / USB

Order no.	4429030+CAL	4429031+CAL
List price	\$5,610.00	\$6,030.00
Promo price	\$4,995.00	\$5,495.00

* 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 816 CL 1D

Robust	Versatile	Program
<p>Robust design</p> <ul style="list-style-type: none"> 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 <p>Measuring results independent of the user</p> <ul style="list-style-type: none"> The motorized measuring carriage minimizes the influence caused by the operator and simplifies the measuring procedures  <p>Probe contact due to the motorized measuring carriage eliminates user error and increases accuracy</p>	<p>The Height Measuring Instrument Digimar 816 CL offers numerous practical measuring and evaluation functions:</p> <ul style="list-style-type: none"> Convenient standard measuring functions Dynamic measuring functions  <p>Parallel deviation</p>  <p>Roundness deviation</p> <ul style="list-style-type: none"> Wide range of options for data evaluation 	<p>The measuring program is essential for repetitive part measurement</p>   <ul style="list-style-type: none"> Repetitive measuring procedures can easily be automated Simply create a measuring program with the Teach-In-mode Complex procedures can be started by just pressing one key

Digimar Probe Accessory sets for CLM / 816CL

Probe Set 817 ts1	consists of:	Shaft length	Mount
		mm	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
	Carrying case		

Probe Set 817 ts2	consists of:	Shaft length	Mount
		mm	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
	Carrying case		

From \$972.00



817 ts1

For further detailed information see:
www.mahr.com
WebCode 12369-8298

Probe Set	Order no.	List Price	Promo Price
817 ts1	4429019P	\$1,610.00	\$1,413.00
817 ts2	4429018P	\$1,110.00	\$972.00

Long Range Indicator Calibrator

Features

Model OPTIMAR 25

- A precision, benchtop instrument, providing a convenient means for calibrating a wide variety of precision measuring instruments including dial and digital indicators, dial and digital comparators, dial and digital test indicators, electronic probes and gageheads, Air Probes® and jet probes, or any other devices that magnify the linear displacement of a contact point or measuring spindle
- MarCheck, large clearly readable LCD monochrome digital display (240x160 pixels) with background illumination with 13mm/0.512" high digits
- User selectable for either inch or metric
- Output:
 - USB interface maxed at 3GB USB thumb drive
 - USB interface for PC
 - Selectable RS232 interface
 - **Includes certification of calibration**



Order No.

2062722+CAL

Price

\$8,060.00



Price
\$8,060.00
Order no. 2062722+Cal

Technical Data

	Range	Resolution	Accuracy
Inch	1.00"	0.000005, 0.00001, 0.00005, 0.0001, 0.0005, 0.001	±10µ"
Metric	25mm	0.0001, 0.0005, 0.001, 0.005, 0.01, 0.1	±0.2µm

Description	Values
Display Power	110V - 60Hz, 240V - 50Hz
Dimensions Calibrator (approx)	18"H x 6"W x 8"D 460mm x 153mm x 204mm
Readout	10"H x 7"W x 2.0"D 260mm x 180mm 50mm
Weight - Calibrator	37 lbs. / 17 kg
Weight - MarCheck	3 lbs. / 1.4 kg

Normally furnished:

- Martest mounting shaft 3/8" diameter
- Adapter Bushing (8mm to .375") diameter
- MarCheck angle display stand

Order no.

- 4305875
- BU-197
- 5350403

Also available:

- Universal centering support 800b
- Martest dovetail mounting shaft 4mm diameter
- Foot switch for data transfer
- RS232 Null Modem cable 10 feet long
- Dial indicator inspection software QMSOFT®

Order no.

- 4305893
- 4305885
- 5360322
- 7024634
- 5350196



Test indicators



Dial comparator

Scan for more information



MarVision. Stereo-Zoom Microscope SM 150/SM 160



SM 150

NEW



SM 160



Optional CamSet
(Call for Details)

- High quality optics for light intensive and sharp three-dimensional images
- Continuously variable magnification with adjustable zoom lens
- Focusing with an ergonomic hand wheel, mounted either side, ideal for either a left or right handed operator
- Prism head tilted to 45° and rotatable through 360°; with the dioptic adjustment
- Integrated incident and transmitted illumination, continuously variable (only with SM 150 / SM 151)
- Includes packaging

Technical Data

	SM 150	SM 160
Base dimensions mm	260 x 200	230 x 230
Order no.	4245061+ CAL	4245063+CAL
Introductory price	\$869.00	\$1,375.00



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MarVision MM 200. Measuring Microscope

Features

Measuring Microscope

- High quality optics for light intensive and sharp three-dimensional images
- Zoom lenses with continuous variable magnification and/or fixed lenses
- Focusing with an ergonomic hand wheel, mounted either side, ideal for either a left or right handed operator
- Prism head tilted to 45°; with dioptic adjustment
- LED ring light, dimmable
- LED transmitted light, dimmable
- Robust cast stand
- Stable XY table precision mounted
- Supplied with: Microscope, variable zoom (8-40x) ocular 10x with cross line reticules, 2 digital micrometer heads, 50mm (2"), illumination box, with test certificate, operating instructions



Digital Micrometer Head

Functions:

Zero setting, PRESET (enter a numerical value), mm/inch, Absolute/Relative measurement

- High contrast LCD with 6mm (0.23") high digits
- Bezel can be rotated through 270°
- Data output via RS232C or USB

Note: Also available without Micrometer Heads

Technical Data

Measuring range X / Y	mm/in	50 / 50 / 2" / 2"
Measuring table dimensions	mm/in	150 x 150 / 3" x 3"
Illumination		LED Incident and transmitted light, individually adjustable
Interfaces		USB or Opto RS232
Dimensions* H x W x D	mm/in	535 x 410 x 470 / 21" x 16" x 18.5"

Order no. 4246006+CAL

Introductory price \$7,975.00

* Measuring table is centered



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MarVision. Workshop Measuring Microscope MM 320 with image processing

Manual 2D-Measuring Microscope with either fixed, zoom or motorized zoom lens and an automatic edge recognition for simple and precise measurements of bores, angles and distances. Ideal for use on the production line.

List Price
\$28,991.00

Promo Price
\$27,499.00

Order no. 2121590+CAL

4 quadrant LED ring lights

Stabile Z column, adjustable range 200 mm (optional extended by 200 mm)

Height adjustment (fine / coarse; on both sides) for precise focusing

LED-transmitted light

Stable granite base, max. load 20 kg

Quick setting for fast bridging over large distances

Fine setting for more accurate positioning

MM 320

M3-Software with Touchscreen-PC
Similar to illustration

Objective / lens		Zoom
Magnification		0.7x - 4.5x
Measuring range X/Y	mm	200 / 100
Z travel	mm	200
Measuring table dimensions	mm	370 x 210
Max. table load (max)	kg	20
Measuring system:	LED Incident and transmitted light individually adjustable	
- Resolution	mm	0.001
- MPE E ₁ X / Y in µm (L in mm)		1.9 +(L/100)
- MPE E ₂ XY in µm (L in mm)		2.9 +(L/100)
Working distance	mm	85
Max. height of test piece	mm	90
Illumination	built-in incremental measuring scale	
Dimensions H x W x D	mm	700 x 650 x 550
Order no.	2121590+Cal	
List price	\$28,991.00	
Promo Price	\$27,499.00	

Features

M3-Software with Touchscreen-PC

- 23" Touchscreen with keyboard and mouse
- Operated via the Multi-Touch on the monitor or via mouse/keyboard
- Large video image
- Customizable printouts
- Automatic edge detection even with low contrast parts

Additional options:

- Telecentric LED back light (Order no 4247050)
- Incident light (Order no. 4245300)
- Calibration standard incl. calibration certificate (Order no. 4246901)
- Extension of the Z-Axis, 200 mm (Order no. 4246051)
- Measuring system for Z-Axis
- Wide range of accessories
- **DXF file integration**
- Training
- Calibration and repair service

Scan for more information



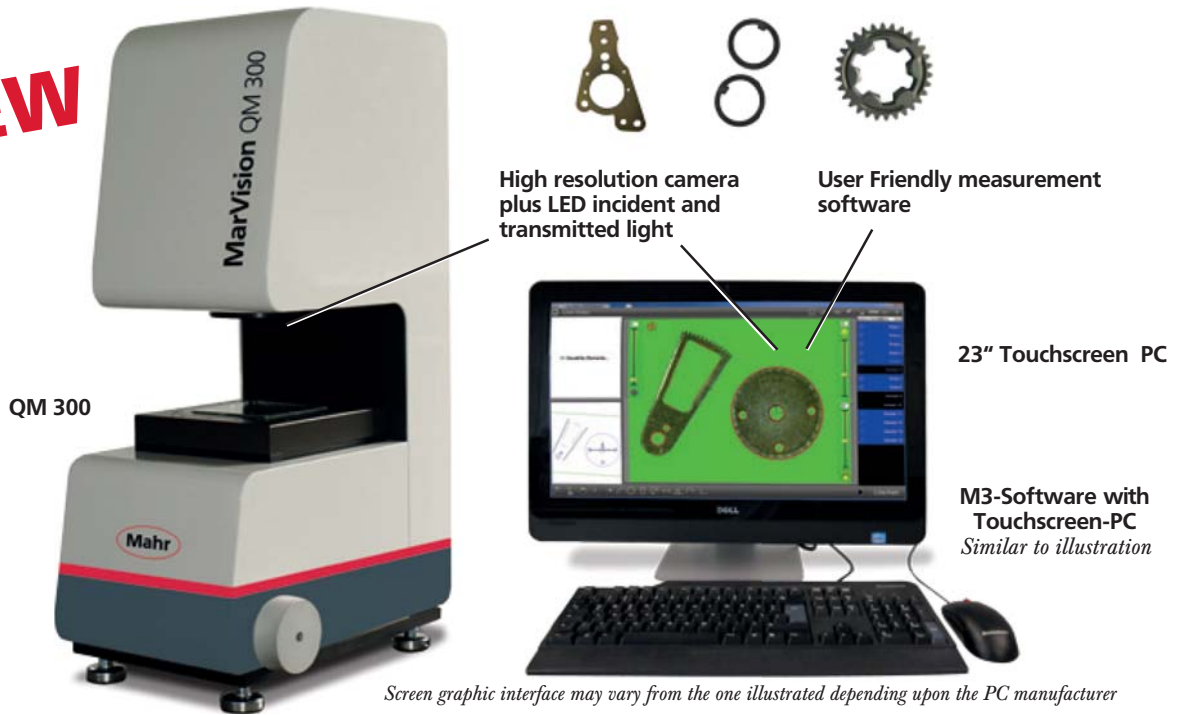
- Graphical presentation including dimensions
- Evaluation of nominal and actual values with tolerance specifications
- Creation and downloading DXF data
- Consigning tolerance limits
- Generate Overlays
- Summary of GO and NO GO

Further measuring ranges:

- 100 x 100 mm
- 250 x 170 mm
- 400 x 250 mm (Incl. Z-axis extensions)

MarVision. Video Workshop Measuring Microscope MarVision QM 300 with M3 Software and touchscreen PC

NEW



Screen graphic interface may vary from the one illustrated depending upon the PC manufacturer

Applications

- For measuring and / or the determination of geometric elements (points, lines, circles, distances, intersection etc.) via automatic edge detection. For example: punched and flexible parts, plastic components and electronic circuit boards.
- See Industrial branch based solutions, from page 30.

Features

- Telecentric fixed lens
- Integrated USB color camera
- LED ring light: dimmable
- LED transmitted light
- Height adjustable measuring table
- Large, high contrast backlit color LCD display
- Automatic edge detection
- Automatic measurement of all features of a component within the image field
- Depth of focus approximately 10mm (0.4")
- DXF function: compares measurement with the CAD drawing
- Measurement and evaluation functions for points, lines, circles, angles, distances and intersecting straight lines. "Magic" function is a time saving feature which automatically recognizes the geometric pattern of data points
- Simply create a measuring program with the Teach-In mode
- Easy program sequence with on screen graphic guidance
- Lighting controls
- Operator prompts are available in several languages
- USB printer port
- USB port
- Updates can be obtained via a USB stick
- Supplied with: Measuring Microscope, operating instructions in a PDF file, test certificate and a dust cover

Scan for more information



Technical Data

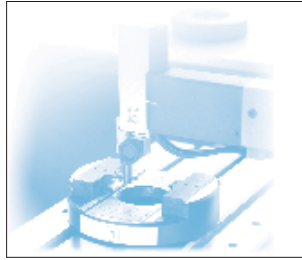
Measuring range / image field	mm / in	32 x 24 / 1.25" x 1"	57 x 42 / 2.3" x 1.6"	96 x 72 / 3.8" x 2.8"
Height adjustment	mm / in	30		
Measurement error E ₂		4.0+L/50 (L in mm (1.96"))	4.5+L/50 (L in mm (1.96"))	7.5+L/50 (L in mm (1.96"))
Camera system		5 Megapixel USB 3		
Incident light		LED ring light		
Transmitted light		LED telecentric		
Dimensions QM 300, D x W x H	mm / in	330 x 230 x 580 / 13" x 9" x 23"	330 x 240 x 720 / 13" x 9.5" x 28.4"	340 x 250 x 820 / 13.4" x 10" x 32.3"
Order no.		4247803P	4247804P	4247805P
List price		\$27,000.00	\$34,760.00	\$38,970.00
Promo price		\$24,995.00	\$32,995.00	\$35,995.00

Inch conversions are rounded

▶ | **DIMENSIONAL METROLOGY**



Precision Gages



Precimar.
Precision Length Metrology



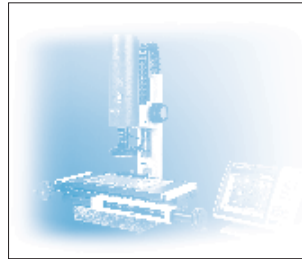
MarSurf.
Surface Metrology



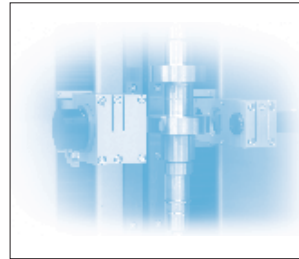
MarForm.
Form Metrology



MarGear.
Gear Metrology



MarVision.
Optical Metrology



MarShaft.
Shaft Metrology



Services

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