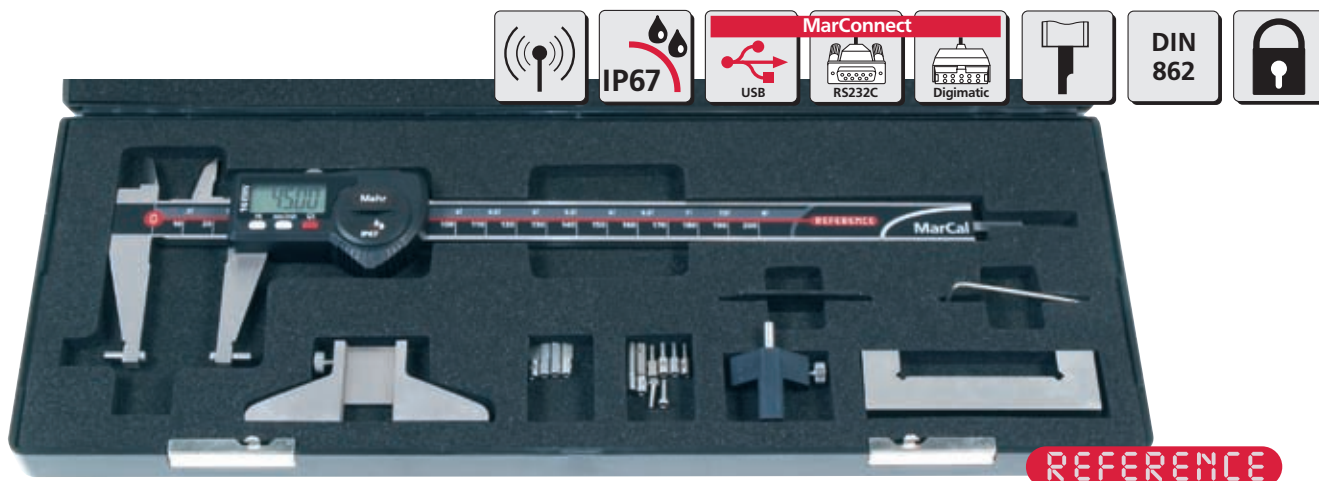


Universal Digital Caliper MarCal 16 EWW in set



Applications

- The 16 EWW can also be used as a standard caliper (4 types of measurement).

When used in conjunction with the standard accessories; it is possible to measure recesses, grooves, etc.

In conjunction with the additional accessories; threads, bores, serrations, etc. can be measured.

Features

Functions:

- ON/OFF
- RESET (Set display to zero)
- mm/inch
- Reference-Lock/Unlock
- PRESET (for entering a numerical value)
- 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
- Dirt wipers are integrated in the slide
- Life of the battery up to 3 years
- Max measuring speed 2.5 m/s (100"/s)
- High contrast LCD with 8.5 mm high digits

- Lapped guide way
- Slide and beam made of hardened stainless steel
- Measuring blades for inside measurement
- Step measuring function
- Locking screw
- Supplied with: Case, battery, operating instructions

Technical Data

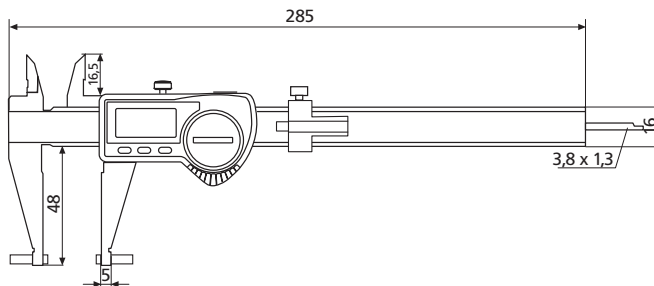
Measuring range*		Resolution	Error limit G	Order no.
mm	(inch)	mm / inch	mm	
200	(8")	0.01 / .0005"	0.03	4118807**
200	(8")	0.01 / .0005"	0.03	4118808***

* in conjunction with accessories the measuring range may change ** includes standard accessories *** excludes standard accessories

Accessories

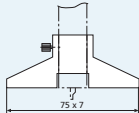
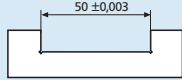
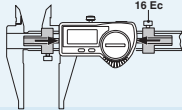
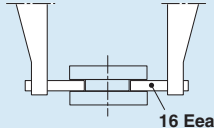
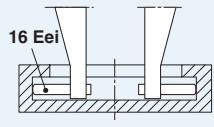
	Order no.
Battery 3V, Type CR 2032	4102520
Data Connection Cable USB (2 m)	16 EXu 4102357
Data Connection Cable Opto RS232C (2 m), with SUB-D jack 9-pin	16 EXr 4102410
Data Connection Cable Digimatic (2 m), Flat plug 10-pin	16 EXd 4102411

Accessories for Data Processing see Chapter 11

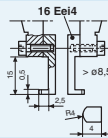
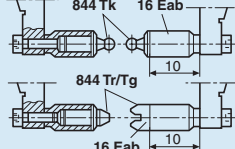


Universal Digital Caliper MarCal 16 EWW in set

Standard Accessories are included in the set

Catalog no.	Description	Order no.	Required quantity	Remarks
16 Em	Depth Measuring Bridge	4102020	1	
16 Eel	Setting Gage for inside measurement	4118817	1	
16 Ec	Measuring Force Device	4118818	1	
16 Eea 1	Anvils for outside measurements	4118810	2	
16 Eea 2	Anvils for outside measurements	4118811	2	
16 Eea 3	Anvils for outside measurements	4118812	2	
16 Eei 1	Anvils for inside measurement	4118813	2	
16 Eei 2	Anvils for inside measurement	4118814	2	
16 Eei 3	Anvils for inside measurement	4118815	2	
Screws M2 x 8		4879602	2	

Additional Accessories

Catalog no.	Description	Order no.	Required quantity	Remarks
16 Eei 4	Anvils for inside measurement	4118816	2	 from dia. 8.5 mm
16 Eab	Mounting Attachment for 844Tg/Tr and 844 Tk	4118819	2	
844 Tk	Ball Anvils		2	
844 Tg/Tr	Thread Anvils		1 + 1	

see Page 10-10

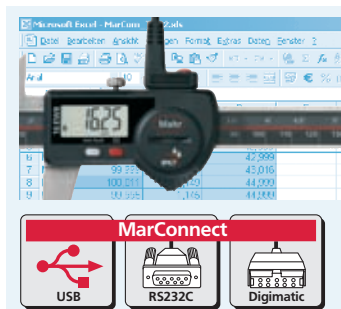
see Pages 10-12/10-14

MarCal. The new Generation with the Reference-System

WATERPROOF CALIPERS

► | The water-proof digital caliper **MarCal** 16 EWR, with protection class IP67 and the Reference Lock-Function, ensures both accurate and reliable results even in the most toughest workshop conditions. | ◀

The high-contrast display with 8.5 mm high digits enables accurate, fatigue free reading of the measurement results.



Universal SPC-interface (optional). You have a choice of **MarConnect** data outputs, select either **USB**, **Digimatic** or **Mahr Opto RS232**

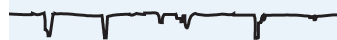


The **Reference-Lock-Function** prevents operating error caused by accidental usage of the operating buttons.



MarCal calipers have **lapped guide way surfaces**, these guarantee an even and sensitive run of the slide.

Surface of the guide way

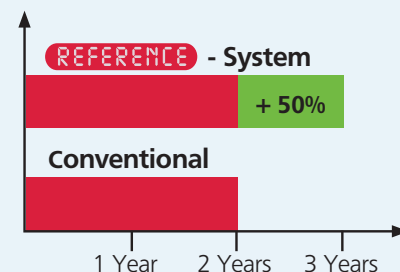


Mahr

Lapped guide way

Lapped measuring faces for accurate measurement.

The new Reference system is extremely energy efficient as when the caliper is in standby mode; almost no power is required, thus **extending the life of the battery to up to 50%.**



Code Initials	IP	International Protection
First digit	6	Dust-tight
Second digit	7	Protected against temporary immersion in water



Protection class **IP67** in accordance to IEC 60529, the water proof measuring system **FPS** (Fluid Protected measuring System) with a sealed housing.

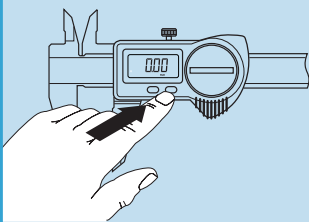
MarCal - The innovative Reference-System

Just set once to zero

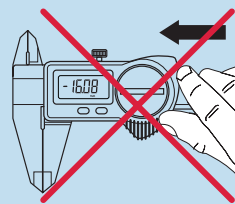
All Mahr digital calipers with this logo **REFERENCE** are equipped with the innovative Reference-System. The zero position just has to be set once: after setting the zero position, the zero remains stored for all further measurements. Therefore, once the caliper is switched ON or the slide is moved the caliper is immediately ready for measurement. The need to reset to zero with a conventional caliper once the caliper is switched on has now become obsolete.

Conventional

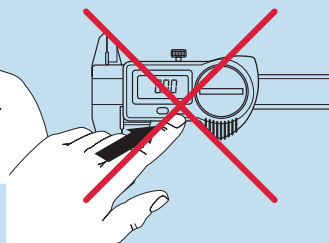
① Switch ON



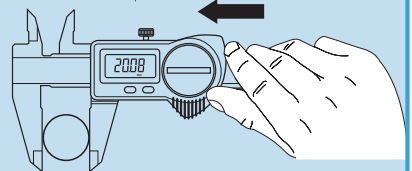
② Close the measuring jaws



③ Set to zero

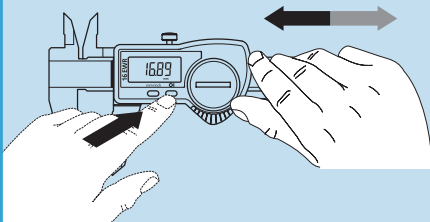


④ Results of measurement



REFERENCE - System

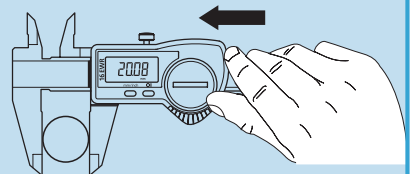
① Switch ON



Press the ON key or move the slide

REFERENCE

② Results of measurement



IP-Protection classes

First digit is the degree of protection according to IEC 60529

Protection against particles, contaminants and dust

0	Not protected
1	Particles > 50.0 mm
2	Particles > 12.5 mm
3	Particles > 2.5 mm
4	Particles > 1.0 mm
5	Dust protected
6	Dust tight

Second digit is the degree of protection according to IEC 60529 (approximate)

Protection against wet conditions (fluids)

0	Not protected
1	Falling water drops - vertical
2	Falling water drops - tilted < 15°
3	Spray water < 60°
4	Water splashing from all directions
5	Water jets from all directions
6	Powerful water jets
7	Temporary immersion in water
8	Continuous immersion in water



Example:
IP67 means that the product is "Dust tight" and is protected against "Temporary immersion in water".