

# Digimar 816 CL

▶ | The new Height Measuring Instrument **Digimar 816 CL**.

You want to obtain highly accurate measurement results without any complicated procedures? With the Digimar 816 CL you have the perfect partner for simple and accurate measurements both in the workshop or on the production line, just as you expect from Mahr! | ◀

## User-friendly operation. . .

. . . due to the

- Clearly displayed measured values
- Self-explanatory operator guidance

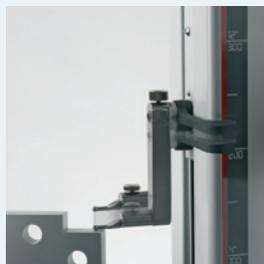


The operating and display unit has a background illuminated display.

## Precise measuring results. . .

. . . on the production line

- Robust design
- Measuring results independent of the user
- Reliable results even outside of the inspection room



Probe contact with the motorized measuring carriage.



- Temperature compensation with an integrated temperature sensor

## Versatile

The Height Measuring Instrument Digimar 816 CL offers numerous practical measuring and evaluation functions:

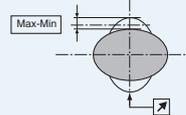
- Convenient standard measuring functions



- Dynamic measuring functions



Parallel deviation



Roundness deviation

- Wide range of options for data evaluation



## The measuring program. . .

. . . is essential for repetitive part measurement



- 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

## Height Measuring Instrument Digimar 816 CL



### Features

#### Measuring system

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

#### Operating and display unit

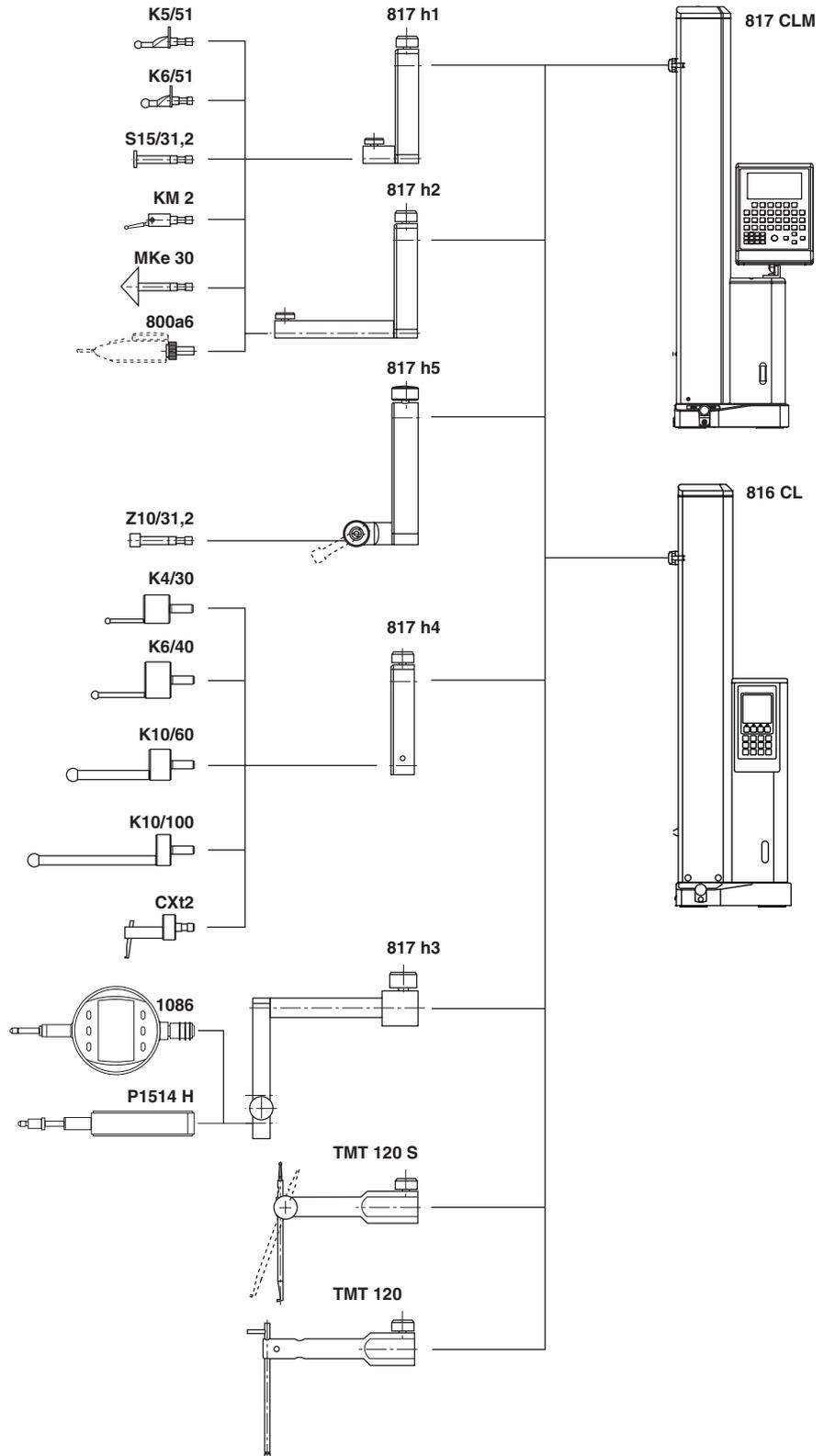
- Easy to read background lit graphic LCD-Display
- Large and clearly defined function keys
- Operator guidance with self-explanatory icons / pictograms
- Possible to set additional zero points on a work piece
- Memory can store up to 99 measured values
- MarConnect data output, select either:
  - USB
  - OPTO RS232C
- Supplied with:
  - Height Measuring Instrument incl. operating and display unit, Carrier 817h1,
  - Probe K6/51,
  - Setting block 817 eb,
  - Operating instructions,
  - Mains power adapter

### Technical Data

Measuring range	mm / inch	350 / 14"	600 / 24"
Range of application	mm / inch	540 / 21.26"	770 / 30.31"
Resolution	mm (inch)	0.01 / 0.001 (.0001" / .00005")	
Measuring error*	µm	(2.8+L/300), L in mm	
Repeatability	µm	2 (plane) 3 (bore)	
Perpendicularity error (mech.)	µm	frontal ≤15	frontal ≤20
Operating time of rechargeable battery	h	up to 14	
Measuring force	N	1.0 ± 0.2	
Permissible relative air humidity	%	65 (non condensed)	
Working temperature	°C / °F	20 ±1 / 68 ±33.8	
Operating temperature	°C / °F	10 ... 40 / 50 ... 104	
3-point air cushion, height	µm	ca. 9	
Measuring system		incremental scale with optical reading	
Total height	mm / inch	741 / 29.17"	985 / 38.78"
Base area (L x W)	mm / inch	240 x 250 / 9.45" x 9.84"	
Weight	kg / lbs	25 / 55.15	30 / 66.14
<b>Order no.</b>		<b>4429030</b>	<b>4429031</b>

\* 20°C with surface base plate according to DIN 876/0 and standard probe K6/51

## Overview of carriers and probes for Digimar 817 CLM / 816 CL



## Height Measuring Instruments Digimar 817 CLM / 816 CL

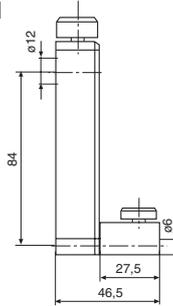
### Accessories

#### Carrier for probes with mount dia. 6 mm

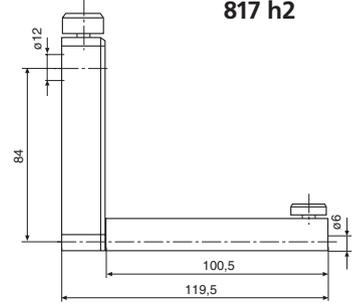
Catalog no.	Description	Shaft length mm	Order no.
<b>817 h1</b>	Carrier for a probe	27.5	<b>4429154*</b>
<b>817 h2</b>	Carrier for a probe	100	<b>4429219</b>
<b>817 h5</b>	Carrier with a joint for a probe	35	<b>4429454</b>

\* Supplied with standard accessories

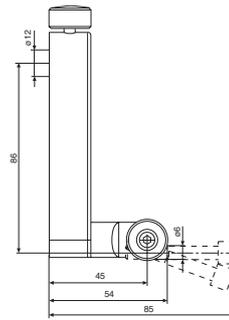
**817 h1**



**817 h2**



**817 h5**

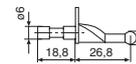


#### Probes with mount dia. 6 mm

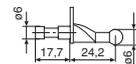
Catalog no.	Description	Order no.
<b>K5/51</b>	Spherical probe	<b>4429158</b>
<b>K6/51</b>	Spherical probe	<b>4429254*</b>
<b>S15/31,2</b>	Disc probe	<b>4429226</b>
<b>Z10/31,2</b>	Cylindrical probe	<b>4429227</b>
<b>MKe 30</b>	Taper probe	<b>4429228</b>
<b>KM 2</b>	Probe M2 incl. styli 800 ts dia. 2 mm	<b>4429256</b>
<b>800 a6</b>	Mounting shaft 800 a6 for MarTest	<b>4301865</b>

\* Supplied with standard accessories

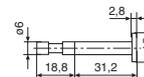
**K 5/51**



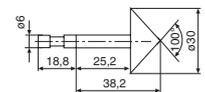
**K 6/51**



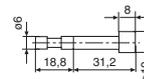
**S 15/31,2**



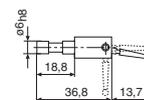
**MKe 30**



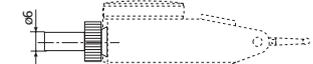
**Z 10/31,2**



**KM 2**



**800 a6**



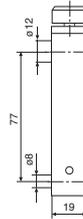
## Height Measuring Instruments Digimar 817 CLM / 816 CL

### Accessories

#### Carrier for probes with mount dia. 8 mm

Catalog no.	Description	Order no.
817 h4	Carrier for probes	4429220

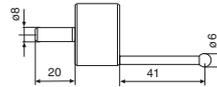
817 h4



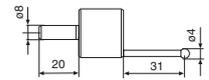
#### Probes with mount dia. 8 mm

Catalog no.	Ball dia. D mm	Order no.
K4/30	4	7023813
K6/40	6	7023816
K10/60	10	7023810
K10/100	10	7023615

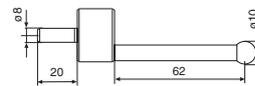
K 6/40



K 4/30



K 10/60



K 10/100

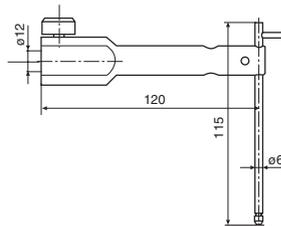


Universal probe set CXt2 see page 2-14

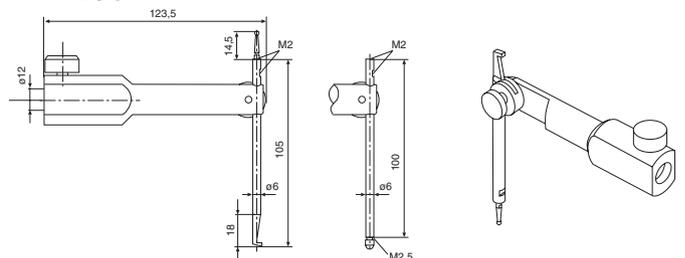
### Depth probes

Catalog no.	Description	Order no.
TMT 120	Depth probe incl. carrier	4429221
TMT 120 S	2 depth probes incl. carrier	4429421

TMT 120



TMT 120 S

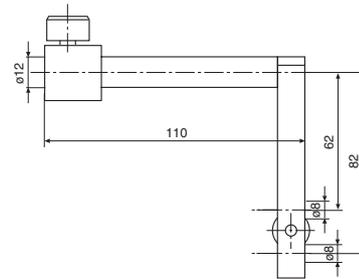


## Height Measuring Instruments Digimar 817 CLM / 816 CL

### Accessories for checking perpendicularity

#### Carrier for probes

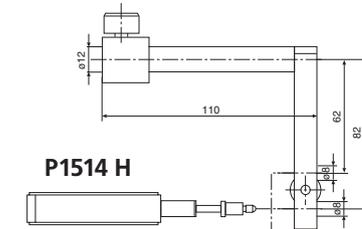
Catalog no.	Description	Order no.	817 h3
817 h3	Carrier for transducers	4429206	



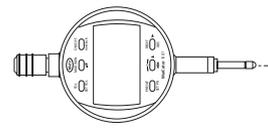
#### Transducers for checking perpendicularity

Catalog no.	Description	Order no.
P1514 H	Incremental probe, 12 mm incl. cable	4426810*
1086	Digital indicator, 12.5 mm Resolution 0.001 / .00005"	4337020
16 EXr	Data cable for digital indicator 1086	4102410*

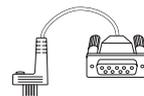
817 h3



P1514 H



1086



16 EXr

\* Only for Digimar 817 CLM

### Accessories

#### Setting blocks

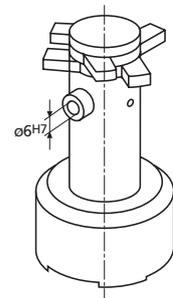
Catalog no.	Description	Order no.	817 eb	EB I
817 eb	Setting block	4429168*		
EB I	Setting block for a taper probe, includes a calibration certificate	7023827		

\* Supplied with standard accessories



817 eb

EB I

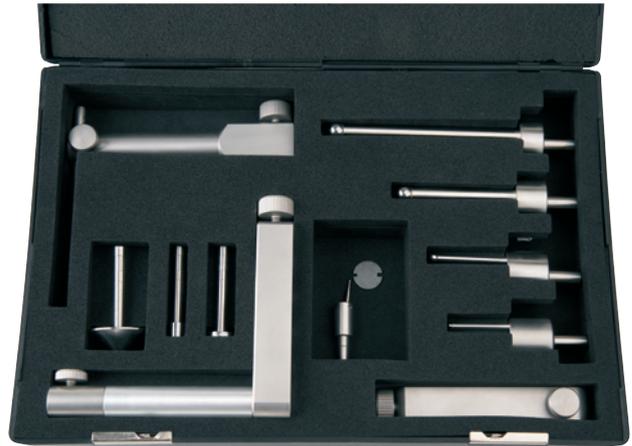


## Height Measuring Instruments Digimar 817 CLM / 816 CL

### Accessory sets for probes

**Probe set 817 ts1 consists of:** **4429019**

	Carrying case for accessories	<b>4429020</b>
<b>817 h2</b>	Carrier for probes	<b>4429219</b>
<b>S15/31,2</b>	Disc probe	<b>4429226</b>
<b>Z10/31,2</b>	Cylindrical probe	<b>4429227</b>
<b>MKe 30</b>	Taper probe	<b>4429228</b>
<b>TMT 120</b>	Depth probe incl. carrier	<b>4429221</b>
<b>KM 2</b>	Probe for MarTest styli M2	<b>4429256</b>
<b>817 h4</b>	Carrier for probes	<b>4429220</b>
<b>K4/30</b>	Spherical probe	<b>7023813</b>
<b>K6/40</b>	Spherical probe	<b>7023816</b>
<b>K10/60</b>	Spherical probe	<b>7023810</b>
<b>K10/100</b>	Spherical probe	<b>7023615</b>



817 ts1

**Probe set 817 ts2 consists of:** **4429018**

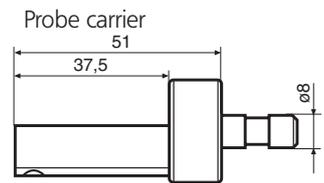
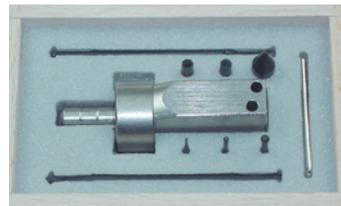
	Carrying case for accessories	<b>4429020</b>
<b>817 h2</b>	Carrier for probes	<b>4429219</b>
<b>S15/31,2</b>	Disc probe	<b>4429226</b>
<b>Z10/31,2</b>	Cylindrical probe	<b>4429227</b>
<b>MKe 30</b>	Taper probe	<b>4429228</b>
<b>TMT 120</b>	Depth probe incl. carrier	<b>4429221</b>
<b>KM 2</b>	Probe for MarTest styli M2	<b>4429256</b>



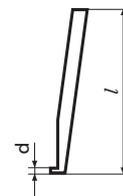
817 ts2

**Universal probe set CXt2 consists of:** **7034000**

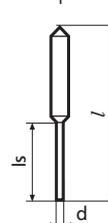
Case		<b>3015925</b>	
Probe carrier		<b>3015917</b>	
Measuring crook	Dimension: d = 0.5 mm	Shaft length: l = 78 mm	<b>3015918</b>
Probe pin /tip:	Dimension: dia. d = 1.2 mm	Shaft length: l = 75 mm	<b>3015919</b>
		Shaft length: l <sub>s</sub> = 15.5 mm	
Taper probe	Dimension: dia. d = 0–7.5 mm	Shaft length: l = 24 mm	<b>3015920</b>
Spherical probe	Dimension: TC dia. dk = 3 mm	Shaft length: l = 24 mm	<b>3022000</b>
Spherical probe	Dimension: TC dia. dk = 2 mm	Shaft length: l = 24 mm	<b>3022001</b>
Spherical probe	Dimension: TC dia. dk = 1 mm	Shaft length: l = 24 mm	<b>3022002</b>
Extension M3 – M3	Dimension: d = 4 mm	Shaft length: l = 20 mm	<b>3015921</b>
Extension M3 – M2.5	Dimension: d = 4 mm	Shaft length: l = 20 mm	<b>3015888</b>



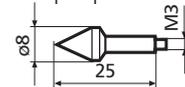
Measuring crook



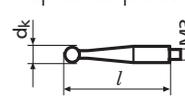
Pin probe



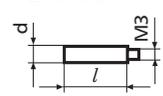
Taper probe



Spherical probe



Extension



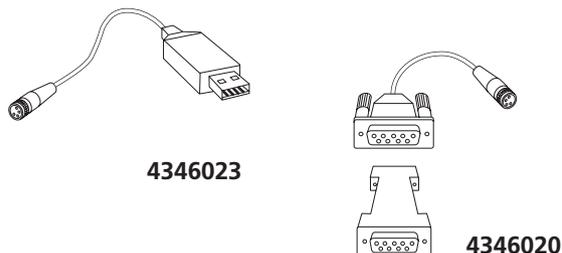
## Height Measuring Instruments Digimar 817 CLM / 816 CL

### Accessories for data transmission for 816 CL

#### Data connection cable

	Order no.
<b>Data connection cable</b> incl. MarCom Standard, USB (2 m)	<b>2000 usb 4346023</b>
<b>Data connection cable</b> Opto RS232C (2 m), with SUB-D jack 9-pin	<b>2000 r 4346020</b>

Accessories for Data Processing see Chapter 11

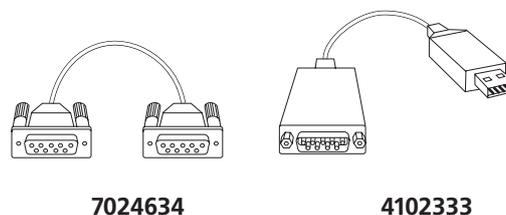


### Accessories for data transmission for 817 CLM

#### Data connection cable

	Order no.
<b>Data cable</b> 817 CLM to MSP 2 / PC	<b>7024634</b>
<b>Adapter cable</b> RS232-USB for Digimar 817 CLM incl. MarCom Standard	<b>4102333</b>

Accessories for Data Processing see Chapter 11



### Statistics printer MSP 2 for 816 CL and 817 CLM

- Can be connected via a RS232C interface
- Two-line display for a simple dialog mode
- 3 types of print protocols: statistics, statistics with a histogram and sample charts
- Retrieve at any time from the memory a list of measured values
- Individual values can be selected and deleted as required.
- Alternative power sources include: mains adapter (100 - 240 V), batteries or NIMH-accumulator, type AA
- Languages can be selected, German, English and French
- Supplied with:  
Mains adapter, paper rolls



	Order no.
<b>MSP2 Statistics printer</b>	<b>4102040</b>

### Printer for 817 CLM

#### HP Ink jet printer

- Standard connectivity: USB - compatible with USB 2.0 specifications, PictBridge
- Compatible operating systems: Microsoft® Windows® 98 SE, Me, 2000, XP (Home and Professional)
- Standard printer languages HP PCL 3

*Similar to illustration*



	Order no.
<b>HP Ink jet printer</b>	<b>4429015</b>