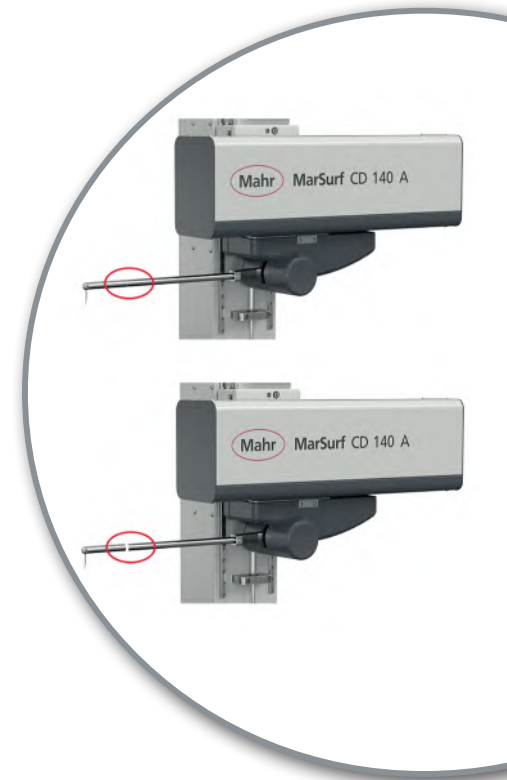


## MarSurf CD 140 AG 11: All-rounder with intelligent probe system

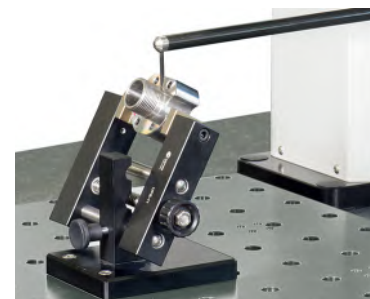
Mahr has launched a new contour measuring machine on the market – the MarSurf CD 140 AG 11. Its probe system has a measuring range of up to 70 mm and the stylus tips can be replaced quickly and without any tools – without having to recalibrate the system

The new contour measuring machine MarSurf CD 140 AG 11 enables the user to complete fast and precise measurements. Its flexible workpiece holder makes it particularly easy to handle, while users are also convinced by its extreme versatility – it can also be used to measure roughness. The intelligent probe system and magnetic stylus tip holder ensure the process to replace stylus tips without any tools is the most straightforward process to date. Operators can also choose from a comprehensive range of clamps and workpiece holders. The new MarSurf CD 140 AG 11 can be used in a static position or directly at the location of the workpiece.



### + Advantages

- Comprehensive contour measurement functions – fast and simple
- Quick adjustment of the Z-axis with handles that are simple to operate
- Replacement of the stylus tip without any tools
- Travel speed in the X-axis of up to 200 mm/s
- Simple program creation or single measurement using MarWin
- Automatic evaluation, best adjustment of contours, CAD contour comparison, and a lot more
- Flexible support plate with 50 mm bore grid for KMG workpiece holder, amongst other
- Optionally expandable with option of roughness measurements ( $R_z > 2 \mu\text{m}$ )
- Measurement with double stylus



Plug-in guide stops and a wide range of standardized clamping devices as well as workpiece holders enable flexible positioning of your testpiece.

### Manual quick adjustment

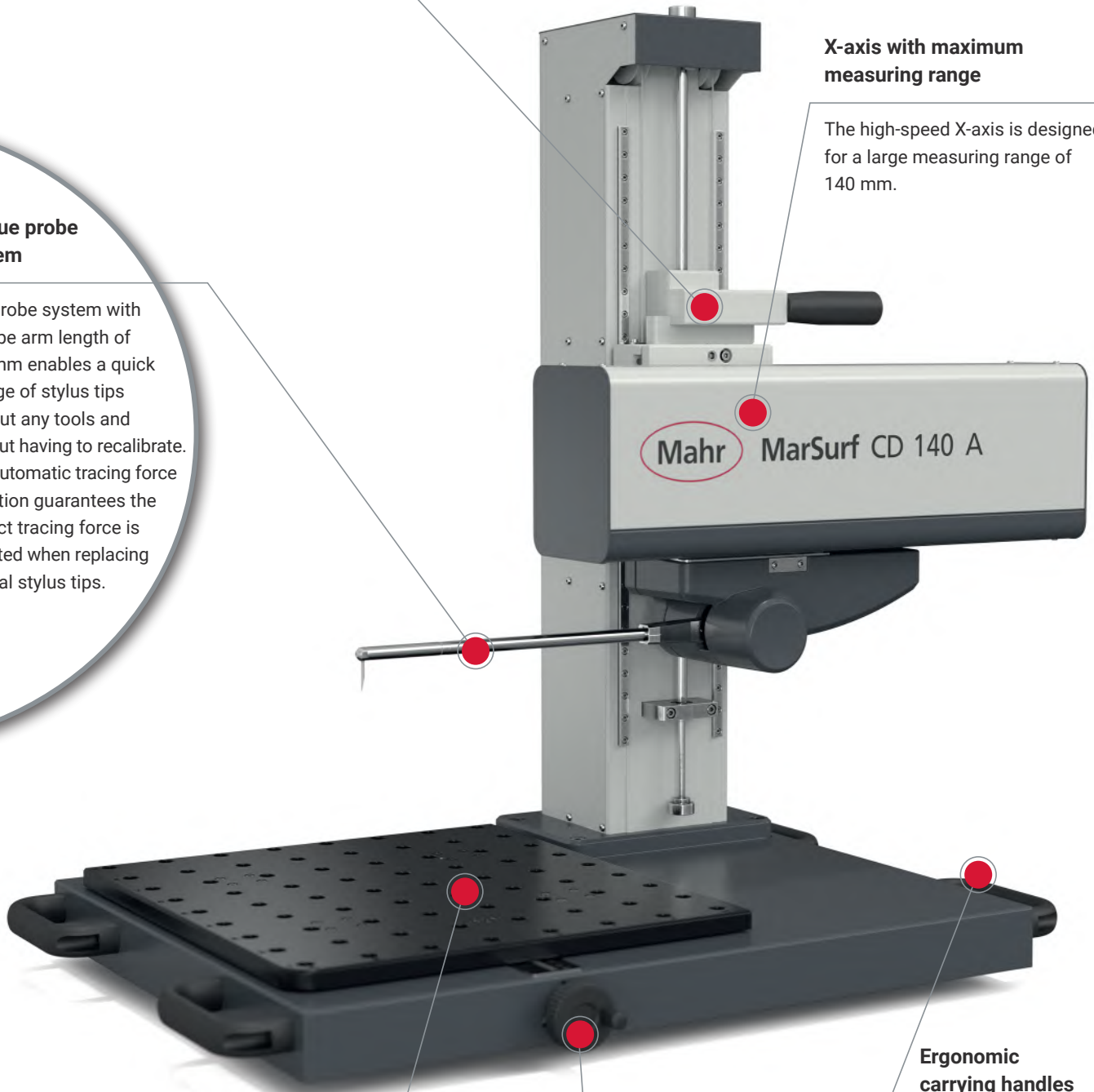
The fine adjustment is located in the Z-axis and moves the X-axis up and down.

### Unique probe system

The probe system with a probe arm length of 350 mm enables a quick change of stylus tips without any tools and without having to recalibrate. The automatic tracing force selection guarantees the correct tracing force is selected when replacing several stylus tips.

### X-axis with maximum measuring range

The high-speed X-axis is designed for a large measuring range of 140 mm.



### Support plate also for large components

The 390 mm x 450 mm large plate with 50 mm matrix of holes is also suitable for large-volume workpieces. This provides a variety of flexible clamping options.

### Generous traverse path

The Y-axis can be adjusted manually with a traverse path of 60 mm.

### Ergonomic carrying handles

The handles on the side make it easy to transport the device.

# MarSurf CD 140 AG 11

## Contour measuring station

### FEATURES

- Fast and precise measurements
- Easy to operate
- Use in a static position or directly at the location of the workpiece
- Manual fine adjustment of the drive unit in the Z-axis
- Stylus tip holder can be used without any tools
- A 390 mm x 450 mm support plate with 50 mm matrix of holes
- High-speed measuring X-axis (140 mm)
- Carrying handles for simple transport
- Quick adjustment of the Z-axis
- Unique adjustment lock secures the adjusted measuring setup
- 350 mm traverse path
- Fast change of stylus tips without tools and without having to recalibrate

#### Probe system

- Automatic measuring force selection of the correct tracing force when switching between several stylus tips
- Large measuring range – 70 mm
- Probe arm length – 350 mm
- Automated calibration routine for probe arms
- Simple calibration of standard and double probe arms possible
- Simple and repeatable calibration pattern positioning using 50 mm grid
- Magnetic probe arm holder enables probe arm change without tools
- Defined start position
- Aligned axis saving time during preparations

#### Software

- Simple and intuitive contour measurement and evaluation.
- The measuring assistant will guide you specifically to your measuring data.
- Many measuring tasks – for example for calculating radii, arc lengths, distances, angles etc. – are already pre-programmed for you.
- One particular highlight is the patented “tangential elements” function. This helps evaluate the tangential transitions between radii and straight lines easily and independently of the user.



### TECHNICAL DATA

Order no.	6269033
Product type	CD 140 AG 11
Positioning speed	0.1 - 200 mm/s (in X)
Tracing distance (in X) end	140 mm
Measuring speed	0.1 - 10 mm/s
Guide deviation	1 µm / 140 mm
Probe arm length	350 mm
Resolution	19 nm
Measuring range in Z	70 mm
Measuring force (N)	4 mN to 30 mN, in Z+ and Z-, adjustable via software
Dimensions (T x B x H)	572 x 905 x 822 mm

### APPLICATIONS

#### Mechanical engineering

- Bearings, threads, threaded rods, ball spindles, shafts, racks

#### Measurements close to production

- Semi-automatic contour measurement

#### Automotive Industry

- Steering, brake system, transmission, crankshaft, camshaft, cylinder head

#### Medical technology

- Contour of the hip and knee endoprotheses, contour on medical screws, contour on dental implant



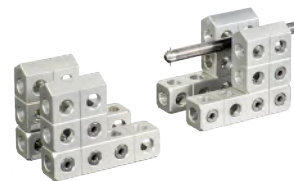
For more information, please visit our website: [www.mahr.com](http://www.mahr.com)

### ACCESSORIES

Order no.	Description	Type
6820020	DK accessory box including clamping elements	
6820022	Quick clamp swivel unit +90° / -55°	
6820023	Precision three-jaw chuck 50 mm	
6820001	Vee-block set AF 25	
6820002	Delta block set AF 25	
6820004	Screw jack set	
9059081	Precision clamp UZS 15	
6820000	Contour standard – contour B for support plate with 50 mm bore dimension	
6820010	Universal standard holder	
6820125	Contour standard KN 100	
6980110	DAkKS/DKD calibration including calibration certificate	
9964316	Mahr calibration including calibration certificate	
6820003	Retainer set AF 25	
6820005	Manual chuck set, Alufix	
6820021	Base plate for DK systems	
6820024	Precision vise 25 mm	
6820025	Vee-block 90°	
6820026	Spring compressor with attachment	
6820027	Quick clamp with 45° angle element	
6820011	Adapter plate for 50 mm	
9000250	Centric clamp with spread up to 45 mm	
9000249	Universal coupling including adapter plate	
9000248	Parallel vise with spread up to 40 mm	
9026049	Table plate 740 x 430 set	



Vee-block set AF 25



Delta block set AF 25



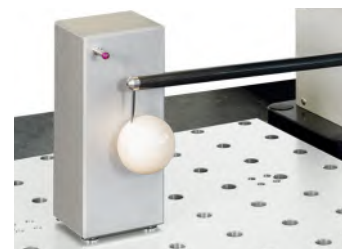
Screw jack set



Precision clamp UZS 15



Contour standard KN 100



2-sphere calibration standard



For more information, please visit our website: [www.mahr.com](http://www.mahr.com)