

MarSurf XC 2 with CD 120

Contour Measuring Station

DESCRIPTION

Your entry into precision contour measurement

The quick, simple and inexpensive 2D contour measuring system satisfies all demands in terms of accuracy and range of evaluation criteria

Consistently delivers safe and reliable results

- Parameters that are dependent on datum elements are recalculated as soon as a datum element is changed
- Password protected user access prevents improper use
- Outstanding calibration processes including geometry calibration, measuring force calibration, bend compensation, etc.
- Sturdy, rigid probes
- Smooth running, sturdy and accurate drive unit
- Automatic lowering and raising of the probe arm at individually adjustable speeds
- Patented probe arm attachment for collision protection

Supplied with:

- MarSurf XC 2 including PC, MidRange Standard, MarSurf XC 2 software, Mahr license key
- TFT monitor
- MarSurf CD 120 drive unit
- MarSurf ST 500 measuring stand (including holder)
- Calibration set
- MCP 23 manual control panel
- CT 120 XY table including rotary adjustment



TECHNICAL DATA

XC 2	
Measuring range	(in Z) 50 mm
Traversing lengths	0.2 mm to 120 mm
Measuring force	1 mN to 120 mN
Sampling angle	On smooth surfaces, depending on deflection: trailing edges up to 88°, leading edges up to 77°
Contacting speed (in Z)	0.1 to 1 mm/s
Resolution	In Z, relative to stylus tip: 0.38 µm (350 mm probe arm) / 0.19 µm (175 mm probe arm) In Z, relative to measuring system: 0.04 µm
Guide deviation	< 1 µm (over 120 mm)
Measuring speed	0.2 mm/s to 4 mm/s
Positioning speed	In X and return speed: 0.2 to 8 mm/s In Z: 0.2 to 10 mm/s
Probe arm length	175 mm, 350 mm
Tip radius	25

APPLICATIONS

Machine building

- Bearings, threads, threaded rods, ball screws, shafts, racks
- Measurement close to the production area
Contour measurement in semi-automated operation

Automotive industry

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

Medicine

- Contour measurement for hip and knee endoprostheses
- Contour measurement for medical screws
- Contour measurement for dental implants

ACCESSORIES

Optional

- Parallel vise, vee-block
- Equipment table

Software options

- DXF import option
- Tangential elements option
- QS-STAT / QS-STAT Plus option



For more information, please visit our website: www.mahr.com

MarSurf CD 140 / CD 280

Contour Measuring Station

DESCRIPTION

Contour measuring in a new dimension

The new MarSurf CD series from Mahr sets new standards when it comes to contour testing. With the new MarSurf CD series, manufacturing companies are entering a new dimension in order to reliably secure and improve the manufacturing quality of workpieces in the measuring room or close to production.

The new measuring station concept combines speed, reliability and flexibility. The aim is to increase the profitability of the system for your company.



Innovative technologies:

- Fast axes
- Positioning speeds up to 200 mm/s in X
- 25x faster than the predecessors MarSurf PCV and MarSurf CD 120
- All measuring stations of this series have a fully CNC-capable Z-axis
- The Z-axis is approx. twice as fast as previous Mahr Z-axes
- Up to 5x faster than the X-axes usually found on the market

Highly dynamic, intelligent probe system

- Probe arm recognition via integrated chip
- Standard measuring range up to 70 mm; max. 100 mm with 490 mm probe arms
- Magnetic probe arm mount, probe arm change without tools
- The probe system combines robustness with dynamics
- Optional: Expansion for roughness evaluation

Innovative workpiece clamping system

- Mounting plate 390 x 430 mm with bore size 50 mm
- Integrated 60 mm TY adjustment
- The combination of mounting plate and integrated TY adjustment omits the needs for an additional XY table
- Low workpiece set-up leads to an advantageously short measuring circuit, which positively affects the measuring results

TECHNICAL DATA

MarSurf CD 140 / 280	
Measuring range	70 mm (in Z with 350 mm probe arm) max. 100 mm (with 490 mm probe arm)
Measuring force	4 mN to 30 mN, in Z+ and Z-, adjustable via software
Resolution	max. 6 nm (with 210 mm probe arm)
Guide deviation	0.350 µm / 60 mm 0.400 µm / 140 mm 0.750 µm / 280 mm
Measuring speed	0.02 – 10 mm/s
Positioning speed	0.02 – 200 mm/s (in X)
Probe arm length	210 mm; 350 mm; 490 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 endoprostheses, contour on medical screws, contour on dental implants

ACCESSORIES

Optional

- Manual control panel with joystick and display
- Motor-driven TY axis
- Parallel vice
- Prism block
- Equipment table
- Vibration damping system

General software options

- Option - ContourPlus
- Option - MeasurementPlus
- Option - Roughness in Contour view
- Option - EasyRoughness
- Option - QS-STAT / QS-STAT Plus
- Option - Profile processing
- Option - Topography



For more information, please visit our website: www.mahr.com