MarSurf XP 20 CNC. Technical Data

Axes	Axis type	Distance/angle	Vmax
Tx	Linear axis	± 150 mm (5.91 in)	120 mm/s (4.72 in/s)
Ty	Linear axis	± 150 mm (5.91 in)	120 mm/s (4.72 in/s)
Hz	ST 750 CNC Special	± 375 mm (14.76 in	60 mm/s (2.36 in/s)
Ta	Rotary axis	± 190°	80 °/s
Tb	Swivel axis	± 135°	20 °/s
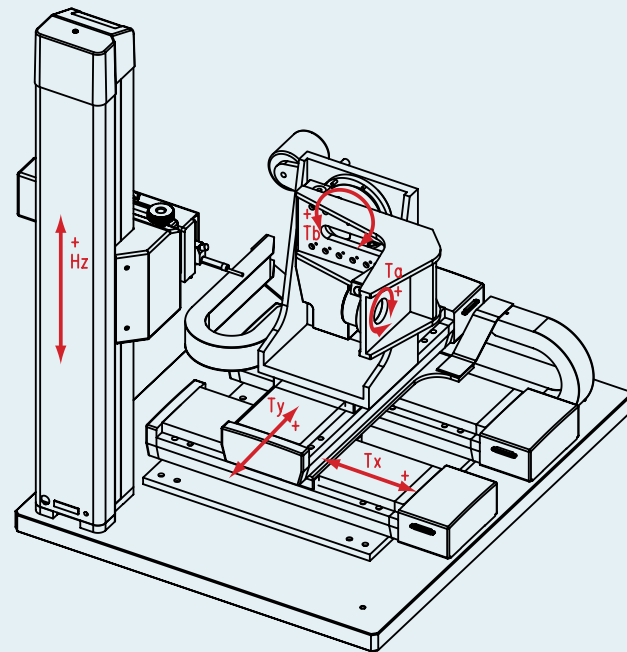
Measuring setup

Measuring and evaluation system	MarSurf XP 20 CNC
Measuring stand	ST 750 CNC Special
Drive unit	GD 120 CNC
Tracing system	MFW 250
5-channel control	
X/Y table function	
Tx + Ty travel and positioning axes	
1 rotary axis (Ta)	
1 swivel axis (Tb)	
1 measuring booth	

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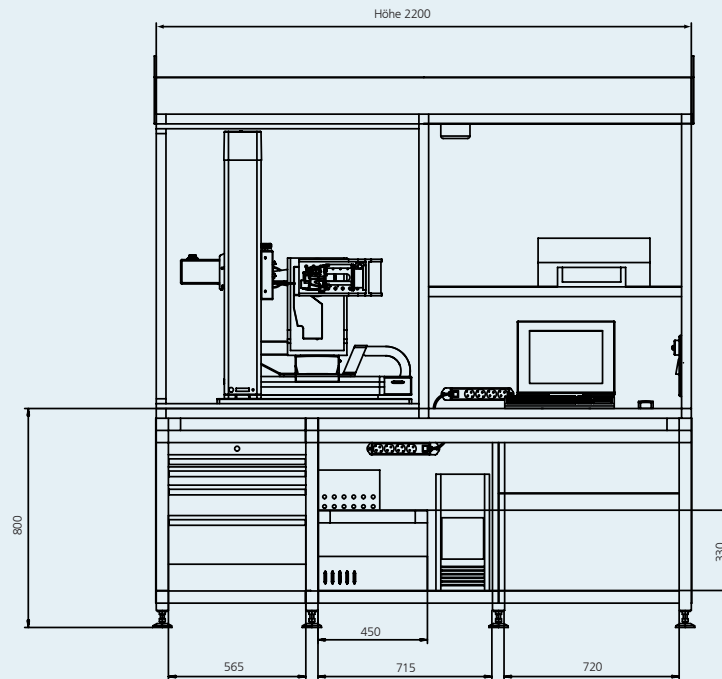
MarSurf XP 20 CNC
Automation in Surface Metrology

Mahr

EXACTLY

► I Metrology is being used increasingly in the manufacturing sector. Process supervision in or close to the production line is particularly important in order to be able to quickly correct any deviations that are encountered or even to stop the production process if necessary.

Automatic monitoring of roughness and surface quality on components that are relevant for correct operation is increasing steadily.

MarSurf XP 20 facilitates professional access to automated Surface Metrology.

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MarSurf XP 20 CNC. Automated Surface Metrology
FOR APPLICATIONS IN THE PRODUCTION LINE

MarSurf XP 20 CNC

devices are used in addition to the standard components. In this example, up to 17 measuring points can be evaluated for measuring a pump housing.

The mount, equipped with a positioning system with tx-axis, ty-axis, a rotary axis and a swivel axis, ensures that the measuring strategy is put into practice quickly and reliably.

All the usual surface parameters (e.g. Ra, Rmax, Rz, Pt) and characteristic curves can be evaluated and documented.

High axis travel and positioning speeds of up to 120 mm/s (4.72 in/s), coupled with optimum measuring strategies, ensure short measuring times that leave you time for your other work.

All positioning axes can be traveled simultaneously.

The system has a comprehensive security concept:
- Reliable measuring results, thanks to the quality of Mahr components and software and the straightforward user interface.
- Security for your system and operators thanks to the inclusion of all relevant guidelines.

The measuring station is safeguarded by a protective booth. This provides extensive protection against unauthorized access and reduces interference.
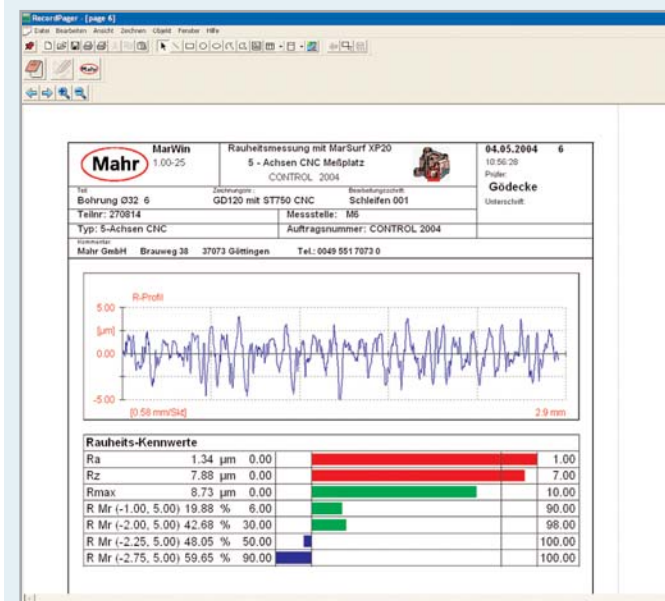
MarSurf XP 20 CNC. Description

Automation in surface metrology, using the example of a five-axis measuring station for pump housings.

The new Mahr software platform **"MarWin"** incorporates a modular control and evaluation system that offers the operator significant benefits.

This software platform extends across numerous Mahr products, providing the user with a standardized base and, consequently, reliable control and operation - a key factor particularly in automated processes.

The many standards include **MarTalk** for the interface between software and machine, **MarScript** for the measuring language, and control systems such as the **Midrange control**.

Fast and simple configuration is achieved through the use of standardized mechanical and electronic measuring station components.

The **MarSurf ST 750 CNC** measuring stand holds the drive unit with the pick-up and can be controlled and positioned in the vertical axis.

Drive unit **GD 120 CNC** with pick-up **MFW 250** is connected for this measuring task.

An integrated rotary encoder is used for precise control on the horizontal axis.

Depending on the measuring task, additional axes and workholding

MarSurf XP 20 CNC. Applications