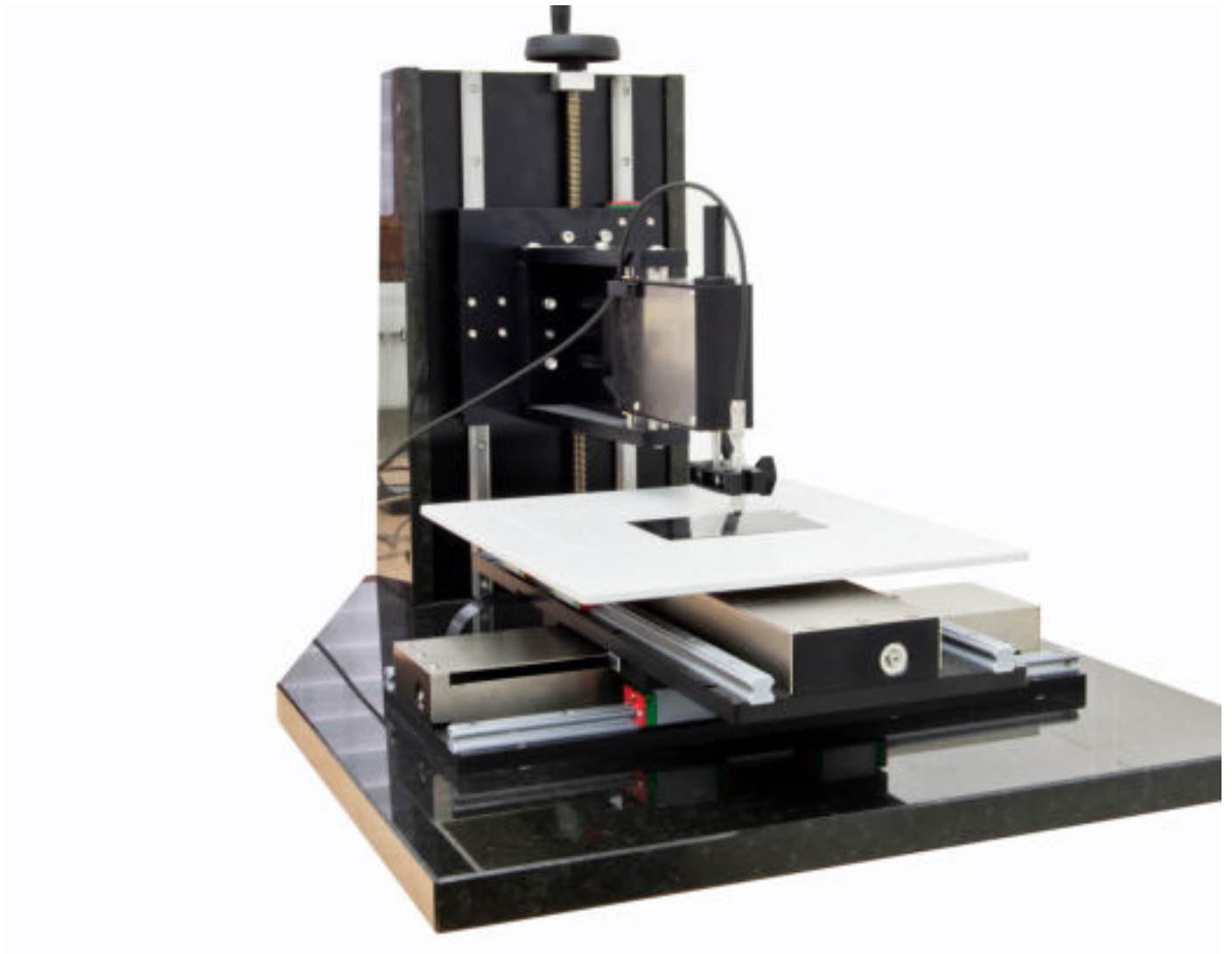


AUTOMATED MEASUREMENT TABLE

For automated coating thickness measurements with tactile probes using precise, programmable positioning



AUTOMATED MEASUREMENT TABLE

Description

The Automated Measurement Table has been especially developed for automated coating thickness measurements for various applications, e.g. to check the uniformity of a paint layer such as paint/steel or paint/aluminum or to check many single samples in a holder, e.g. coating of screws.

The well-proven tactile probes from FISCHER are used for taking the measurements. The probe is hovering over the table which can move in X- and Y-direction. As soon as the table reaches its position, the probe is lowered in a motor-driven manner and a measurement is taken.

The Automated Measurement Table is controlled by the universal Multi-Measuring System FISCHERSCOPE® MMS® PC2.



Fig.: The Multi-Measuring System FISCHERSCOPE® MMS® PC2, which controls the Automated Measurement Table

Typical fields of application:

- Automatic measurements at pre-programmed positions (as a grid or along a line) where reproducible, precise positioning of the probe is required. Hence, the uniformity of the coating can be checked.
- Automatic measurements on many samples in a holder. Hence, the manual effort is not only reduced but the measurements have also been taken in the very same way (reproducibility) which ensures accurate measurements.
- Manual measurements by moving the table to the required position using the joystick and then taking a measurement.

Design

The Automated Measurement Table is built up of the following components:

- Stable and robust granite plate
- Motorized XY stage to position the sample
- Motorized Z stand to lift/lower the probe
- Joystick
- Universal Multi-Measuring System FISCHERSCOPE® MMS® PC2
- Power supply unit

General Specification

Intended use	Automated measurements using tactile probes at free programmable positions. <ul style="list-style-type: none"> • Mapping (including 3D-representation) • Many samples in holder
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Features

Measurement	Allows measurements on reproducible positions
Positioning	Pre-programmed sequences (line scan, grid)

Measurement System

Controller	The Automated Measurement Table is controlled by the universal Multi-Measuring System FISCHERSCOPE® MMS® PC2 with the following main functions: <ul style="list-style-type: none"> • Controls XY-movement of table • Controls Z-movement of probe • Calibration/Check, easy calibration and check • Measurement evaluation • Data Export, automatic data export of the measurements and measurement results • Data storage/handling • Optional: Digital Input/Output with 24V DC signals
Probes	Tactile probes from FISCHER can be used to measure the thickness of one or two layers using the following physical principles: <ul style="list-style-type: none"> • Magnetic induction test method, Standards: ISO 2178, ASTM 7091 • Eddy current test method (amplitude sensitive), Standards: ISO 2360, ASTM 7091 • Eddy current test method (phase sensitive), Standard: ISO 21968 • Magnetic test method, Standards: ISO 2178, ASTM 7091 • Micro-resistance test method, Standard: DIN EN 14571 <p>Contact your local FISCHER representative for assistance in finding the right probe for your individual application.</p>

Sample Stage

	Standard	Option
Maximum travel	300 x 250 mm (11.8 x 9.8 in)	600 x 600 mm (23.6 x 23.6 in)
Max. travel speed XY	60 mm/s (2.4 in/s)	
Repeatability precision XY	≤ 10 µm (0.4 mils), unidirectional	

Electrical data

Power supply	AC 115 V or AC 230 V 50/60 Hz
Power consumption	< 100 W
Protection class	IP40

Dimensions

External dimensions	570 x 790 x 570 mm (22.4 x 31.1 x 22.4 in) table retracted in home position
Width x depth x height	570 x 940 x 570 mm (22.4 x 37 x 22.4 in) with maximum Y travel range
Weight	Approx. 120 kg (265 lb)

Environmental Conditions

Operating temperature	10 °C – 40 °C / 50 °F – 104 °F
Storage/Transport temperature	0 °C – 50 °C / 32 °F – 122 °F
Admissible air humidity	≤ 95 %, non-condensing

Order

AUTOMATED MEASUREMENT TABLE 604-114
Special product modification and technical consultation on request