



SONO M

Motorized UCI Measuring Probes for Maximum Repeatability



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Consistent Test Force. Reliable Hardness Results. The SONO M motorized UCI measuring probes combine precision mechanics with intelligent control technology to deliver highly accurate, operator-independent hardness measurements. By applying the test force automatically and with high repeatability, they ensure consistent measurement conditions and outstanding reproducibility – even in demanding industrial applications.

The robust anodized aluminium housing protects the precision mechanics and is designed for reliable long-term operation in production environments. Thanks to integrated motor control, adjustable penetration time and interchangeable probe feet, the probes can be adapted to a wide range of testing tasks and operated manually, semi-automatically or fully automatically.

The SONO M probes are compatible with both the portable SONODUR 3 and the SONODUR R for fully automated production systems. Their low test forces produce only minimal indentations, making them particularly suitable for thin surface layers, coatings and sensitive components where conventional hardness testing reaches its limits.

The probes operate according to the UCI (Ultrasonic Contact Impedance) method. A Vickers diamond mounted on a vibrating rod is pressed into the material with a defined test force. The resulting frequency shift is measured and converted directly into a hardness value. Unlike conventional Vickers testing, no optical evaluation of the indentation is required, enabling fast, reliable and virtually non-destructive hardness testing directly on the component.

YOUR ADVANTAGES AT A GLANCE

Maximum measurement reproducibility: Motor-controlled force application ensures highly repeatable hardness measurements with minimal measurement scatter.

Operator-independent testing: Automated test force application minimizes user influence and provides consistent measurement conditions.

Ideal for sensitive surfaces: Low test forces create only minimal indentations, making the probes ideal for thin surface layers, coatings and finished components.

Flexible integration into your testing process: Suitable for manual, semi-automatic or fully automatic operation in laboratory, production and inline applications.

Versatile configuration: Adjustable penetration times and interchangeable probe feet enable reliable testing across a wide range of applications.

Robust industrial design: The anodized aluminium housing protects the precision mechanics and ensures long-term measurement stability in demanding environments.

NORMS

DIN 50159: Specifies a hardness testing method for metallic materials using the UCI (Ultrasonic Contact Impedance) technique.

ASTM A1038: Defines the UCI hardness testing method, in which material hardness is determined by measuring the frequency shift of a vibrating probe with a Vickers indenter.

TECHNICAL INFORMATION

TEST METHOD:	UCI-method, according to DIN 50159-1,2-2021, ASTM A1038-2019
PENETRATION TIME:	according to standard DIN EN 6607-1
PROBE HOUSING MATERIAL:	Anodized aluminium
PROBE HOUSING DIMENSIONS:	38.5 mm × 188 mm
MATERIAL MEASURING TIP:	Vickers diamond
TIP DIAMETER:	3.4 mm
TIP LENGTH:	33 mm
DIAMOND ANGLE:	136°
CONNECTION:	Wired via Lemo plug connection



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