



SONO S

Guided UCI Measuring Probes for Reliable Everyday Hardness Testing



WIRED LEEB PROBES

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Guided Measurements. Reliable Results.

The SONO S guided UCI measuring probes are designed for fast, repeatable hardness testing in everyday industrial applications. Their integrated probe guide supports precise positioning and consistent force application, reducing operator influence and improving measurement reproducibility.

The robust aluminium housing is ergonomically designed for comfortable handling while protecting the sensitive probe technology in demanding production environments.

The probes are compatible with both the portable SONODUR 3 and the SONODUR R, making them suitable for manual measurements as well as automated production systems.

The intelligent measuring system covers the complete hardness range of the classic Vickers scale and is suitable for metals, industrial ceramics and, with certain limitations, heterogeneous materials such as nodular cast iron. Thanks to interchangeable probe shoes, the probes are ideal for flat surfaces, tubes, pipes, wires, round stock and curved components. Custom probe shoes can also be supplied for application-specific geometries.

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 directly converted 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

Guided measurements for maximum repeatability: The integrated probe guide minimizes operator influence and ensures highly reproducible hardness measurements.

Precise positioning on curved surfaces: Interchangeable probe shoes enable centered and repeatable measurements on tubes, round stock and other curved components.

Reliable results in everyday operation: Ergonomic handling and robust construction support consistent measurements in industrial environments.

Fast measurement within seconds: Short measuring times enable efficient testing and rapid decision-making.

Versatile application: Suitable for flat surfaces, tubes, pipes, wires, round materials and application-specific geometries.

Robust industrial design: The solid aluminium housing protects the probe technology and ensures long-term reliability.

NORMS

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.

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

TECHNICAL INFORMATION

TEST METHOD:	UCI method, complies with DIN 50159 1.2-2021, ASTM A1038 2019
PROBE HOUSING MATERIAL:	Aluminium
PROBE HOUSING DIMENSIONS:	38.5 mm × 169 mm
PROBE TIP MATERIAL:	Vickers Diamond
DIAMETER MEASURING TIP:	3.4 mm
TIP ANGLE MEASURING TIP:	136°
CONNECTION:	Wired via Lemo connector



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