SCREENING EAGLE

All You need to know about the ISO/IEC 17025 accredited calibration.

ISO/IEC 17025 infosheet.

Current challenge

When purchasing hardness testing equipment, the customers must rely on producers' competences such as appropriate training of the staff, correct methodology, accuracy of the tools used to calibrate the device, compliance of the test methods, statistics computation according to selected standards and many other critical factors. Furthermore, very often the purchased equipment is calibrated according to the standard, which does not take into account equipment repeatability (also referred to as precision), hence the user is exposed to the risk of purchasing an accurate but not precise device.

Our solution

Through a rigorous process of ISO/IEC 17025 accreditation and auditing, we assure our customers that all key components relating to the calibration and service are checked, validated and confirmed by an independent third-party of international standing. Furthermore, all Equotip probes as well as Leeb hardness test blocks receive an accredited calibration according to the world's most precision-demanding standards: DIN EN ISO 16859-2 and DIN 50159-2.

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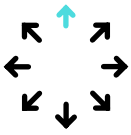
Third-party assurance of correct product calibration according to the most demanding standards.



Methods, accuracy of the tools and parameter computation are correct according to the calibration standard.

Dual signature certificate issuance supports the enhanced quality assurance of the calibration.

Competences of staff are assessed by external auditors based on industry standards and best practices.

All processes are regularly audited by a third-party of an international standing for unbiased assessment.

Continuous improvement cycles with monitoring and evaluation to elevate the excellence as far as humanly possible.

Calibrations are conducted independently by the laboratory for accurate and trustworthy test results.

Precision-demanding calibration standards enable users to deliver much higher quality of products and services.

Full transparency is fostered by the ISE/IEC 17025 calibration for effective communication and decision making.

DIN EN ISO 16859-2 and DIN 50159-2 calibrations standards foster precision.

Most of the producers calibrate their equipment to ASTM standards that control accuracy only, but do not check for the equipment's repeatability - also known as precision. In contrast to them, all Equotip probes are calibrated to world's most precision-demanding standard that verifies the precision, as well as the demanding measurement deviation values, thus fostering much higher measurement reliability. This ensures that your equipment is top-notch, and enables you to offer best-in-class quality assurance.

All Equotip hardness testers are issued with ISO/IEC 17025 accredited calibrations by default. The following tables illustrate comparison between the maximum tolerances of measurement deviation and repeatability for devices complying to DIN EN ISO 16859-2 and ASTM A956, and DIN 50159-2, GB/T34205 and ASTM A1038.

Scale / Range	Max. measurement deviation (E) in % DIN 50159, ASTM A1038, and GB/T 34205								Repeatability (R) / %			
	DIN & GB/T	ASTM	DIN & GB/T	ASTM	DIN & GB/T	ASTM	DIN & GB/T	ASTM	DIN & GB/T	ASTM	DIN & GB/T	ASTM
	<250 HV		250 -500 HV		500 – 800 HV		>800 HV		≤ 250 HV		> 250 HV	
HV 0.1	5	6	6	7	7	8	8	9	8	Not required	6	Not required
HV 0.3	5	6	6	7	7	8	8	9	8		6	
HV 0.8	4	6	4	7	5	8	6	9	8		6	
HV 1	4	5	4	5	5	7	6	7	8		6	
HV 5	4	5	4	5	4	7	4	7	5		5	
HV 10	4	5	4	5	4	7	4	7	5		5	

Table 1. The summary of maximum tolerable errors for measurement deviation and repeatability from DIN 50157-2, ASTM A1038 and GB/T 34205.

Probe type	Max. measurement deviation (E) and repeatability values in DIN EN ISO 16859-2 and ASTM A956 depending on the probe type and hardness level					
	ISO	ASTM	ISO	ASTM	ISO	ASTM
D, DC	<500 HLx		500-700 HLx		>700 HLx	
DL, S	<700 HLx		700-850 HLx		>850 HLx	
C, E	<600 HLx		600-750 HLx		>750 HLx	
G	<450 HLx		450-600 HLx		>600 HLx	
Max. measurement deviation (E)	4%	± 6 HLx	3%	± 6 HLx	2%	± 6 HLx
Max. repeatability (R) / %	2.5%	Not required	2%	Not required	1.5%	Not required

Table 2. The summary of maximum tolerable errors for measurement deviation and repeatability DIN EN ISO 16859-2 and ASTM A956. Note: x represents D, DC, DL, S, C, E, G for the respective probe.

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Scan this QR code or visit the www.screeningeagle.com/en/service/calibration-lab to learn more about the ISO/IEC17025 Equotip calibration, service offering, and accuracy and repeatability of hardness testers.