AUTOMATIC STAND-ALONE HARDNESS UNITS

AUTOMATIC INSTRUMENTS FOR HARDNESS MEASUREMENT. AVAILABLE HARDNESS SCALES ARE: SHORE A, SHORE D, SHORE AO, SHORE 00, IRHD (MICRO, NORMAL, HARD, LOW).
Stand-alone automatic hardness units are independent hardness measurement devices designed for the execution of hardness tests according to a specific hardness scale. Stand-Alone automatic units have been designed to meet the requirements of research labs and for production control.

Available hardness scales are:
- Shore A,
- Shore D,
- Shore AO,
- Shore 00,
- IRHD-Micro,
- IRHD-Normal,
- IRHD-Hard,
- IRHD-Low.

The solid construction of the instrument, the high quality sensors and the lifting system with ball screw make them ideal both for research purposes and for heavy-duty production control.

Each Hardness Unit is composed by the following parts: mechanical structure, Testing Unit, Sample Holder with motor-controlled rotation, motor-controlled-Lifting System with ball screw, Electronic card.

All the parts, which compose the instrument, have been specifically designed for easy interchange in case of failure.

Stand-alone hardness units can be controller both with Gibitre Hardness Software and with Gibitre Electronic Console.

In case of software control of more hardness units, each hardness unit can be connected to a standard pc using its usb cable and can be used simultaneously.

Standards the instrument complies with:
ASTM D1414; ASTM D1415; ASTM D2240; FIAT 50408; FIAT 50411; ISO 48; ISO 868; ISO 7619-1;
Accredia Calibration of the instrument

The instrument is available with ACCREDIA calibration certificate. The certificate is issued by Gibtirte ISO 17025 Accredited laboratory.

Accredia Calibration of the instrument

LAT N° 182

Signatory of EA, IAF and ILAC Mutual Recognition Agreements

Membro degli accordi di Mutuo Riconoscimento EA, IAF e ILAC

Standard Calibration service for IRHD Hardness Tester

The calibration is performed with reference to the requirements of ISO 48 standard.

The service includes:
- Ordinaly maintenance of the instrument
- Visual inspection of the Indentor.
- Calibration of the Pre-Load, of the Main Load and of the weight of the Anular foot.
- Calibration of the force application time for Pre-Load and Main-Load (NEW)
- Calibration of the displacement of the indentor in correspondence with several IRHD Hardness readings
- Pre-calibration and Post-Calibration test of the instrument with reference test samples (NEW)
- Issue and e-mail shipment of the Calibration Certificate with traceability to primary standards.

Standard Calibration service for a SHORE Hardness Tester

The calibration is performed with reference to the requirements of ISO 7619-1 standard.

The service includes:
- Ordinaly maintenance of the instrument
- Visual inspection of the Indentor.
- Calibration of the total run of the indentor (readings at 0 and 100 Shore points).
- Calibration of the displacement of the indentor and of the force applied by the indentor in correspondence with several Shore readings (20, 40, 50, 60, 80, 90 Shore).
- Calibration of the force application time (NEW)
- Issue and e-mail shipment of the Calibration Certificate with traceability to primary standards.
Modular Construction

The main parts of the instrument are: the measuring unit, the sample displacement system and the electronic card. Those parts have been developed to permit quick and independent replacement in case of failure. This characteristic ensures short recovery time and low maintenance cost.
Industry 4.0 integration

The instrument and the software have been specifically developed to optimize integration with other environments. The database in SQL format and the Gibitre_Company_Connect program allows you synchronize your company management software with Gibitre database and to speed up the identification of the tests and to use bar-code readers or similar devices. The automatic logging service permits to send alarm information to the cloud-service platform of Gibitre Instruments in order to optimize the reaction times of the Service Support.
<table>
<thead>
<tr>
<th><strong>Available hardness types</strong></th>
<th>Shore A, Shore D, Shore 00, IRHD (Normal, Hard, Low), Micro-IRHD</th>
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</thead>
<tbody>
<tr>
<td><strong>Unit control</strong></td>
<td>Control via Gibitre Hardness Check Software or via Gibitre Digital Display</td>
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<tr>
<td><strong>Test modality</strong></td>
<td>Fully automatic test in different points of the same sample</td>
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<tr>
<td><strong>Test results calculated for each test</strong></td>
<td>Shore units: Initial hardness, hardness values after set test times IRHD/micro IRHD: Hardness at 30 sec (and at set test times), Angle Coeff. of Hardness Vs Time curve, Hysteresis after load removal, Correction of hardness according to sample thickness</td>
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<tr>
<td><strong>Resolution</strong></td>
<td>0.01 Hardness point</td>
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<tr>
<td><strong>Calibration</strong></td>
<td>Electronic calibration Report with traceability to primary references ACCREDIA calibration Certificate (optional)</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>110-240 V, 50/60 Hz, 15 W, single phase</td>
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<tr>
<td><strong>Dimensions</strong></td>
<td>(W x D x H) 250 x 250 x 600 mm</td>
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<tr>
<td><strong>Weight</strong></td>
<td>30 Kg</td>
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