



# AUTOMATIC HARDNESS CHECK - DRIVE

**AUTOMATIC INSTRUMENTS FOR SHORE HARDNESS OR IRHD MEASUREMENTS WITH INTERCHANGEABLE MEASURING HEADS**

**STANDARDS:** ASTM D1414; ASTM D1415; ASTM D2240; EN 681-1; FIAT 50408; FIAT 50411; ISO 868; ISO 48-2; ISO 48-4; ISO I2046; VDA 675-202;

**NOTE:** COMPLIANCE WITH SOME STANDARDS MAY REQUIRE OPTIONAL ACCESSORIES OR SETUPS.



Automatic hardness tester with interchangeable measuring heads consisting of a motorized holder equipped with a digital display for stand-alone use. The instrument can be configured as needed by applying measuring heads for different hardness scales, the control software, and different sample holders for testing specific products. The measuring heads that can be applied to the automatic hardness tester are Shore (A, D, 00, Micro) and IRHD (Micro, N, L, H) and are fully compliant with the requirements of international standards.

The measuring heads are quickly interchangeable, allowing the user to configure the instrument in seconds for the required scale. The stand for applying the heads is motorized and allows for automatic multiple tests at different points on the specimen. The Digital Display and Soft-touch Control Keypad built into the instrument allow it to be used in stand-alone mode by displaying results on the display. For a more sophisticated control of the instrument and to ensure traceability of all the results produced,

Gibitre Hardness Check software is available in version 10 cha allows identification and archiving of results and curves, production of reports and labels, verification of compliance with tolerance limits and statistical analysis. ACCREDIA calibration can be carried out either at the site by Gibitre's Accredited laboratory or on site.

### Accessories

- Centering devices for O-rings
- Centering device for rubber hoses.

**Available hardness types:** Shore: (A, D, 00, M) ; IRHD: (Micro, Normal, Hard, Low)

**Resolution:** 0.01 Hardness point

**Maximum Sample Thickness:** 100 mm

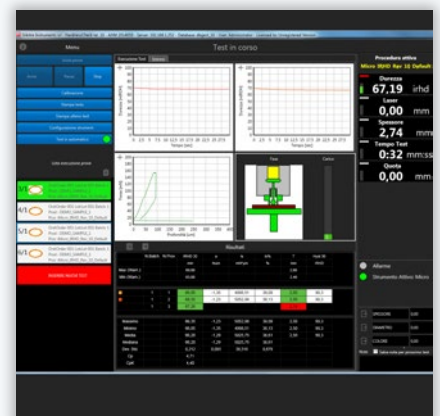
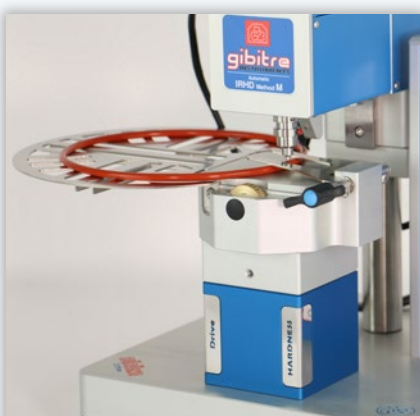
**Integrated Digital Display:** Allows complete control of the instrument and display of results

**Optional Software:** Software for the complete control of the instrument compatible with Windows 10 and 11.

**Test modality:** Fully automatic test in different points of the same sample

**Test results calculated for each test:** 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.

**Personal Computer (optional):** Minimum Setup: Windows 10 or 11, Intel Core i5, 5GB RAM





# SWITCHABLE HARDNESS MEASURING HEADS

SHORE AND IRHD MEASURING HEADS FOR HARDNESS TESTER AUTOMATIC HARDNESS CHECK - DRIVE



The measuring heads (Shore and IRHD) can be replaced in seconds on the motorized stand by means of a solid quick-connect system that ensures their perfect perpendicularity.

### Switchable Units

Replacing the measuring heads is the ideal solution for laboratories with the need to measure against numerous measurement scales or for companies that

predominantly use a specific measurement scale and need to perform occasional checks against other scales.

### Contemporary use of Hardness Units

For companies that need to carry out systematic production checks against several different measurement scales (e.g., Shore A and Micro-IRHD) and that need to have the durometers be always ready

to measure in the required scale, it may be more convenient to have several complete durometers connected to the same PC with a single software license. In this way the instruments can be used simultaneously and by several operators without any interruption.

### Type of Hardness units:

**Shore A:** Standards: ISO 48-4, ASTM D2240; ; Application: Soft Rubber, Plastics, Elastomers; ; Sample standard thickness: 6 mm

**Shore D:** Standards: ISO 48-4, ASTM D2240, ISO 868; ; Application: Hard Rubber, Thermoplastics; ; Sample standard thickness: 6 mm

**Shore A0:** Standards: ISO 48-4; ; Application: Light Foams, Sponge Rubber, Gels, Human Tissue; ; Sample thickness: 6 mm

**Shore 00:** Standards: ASTM D2240; ; Application: Light Foams, Sponge Rubber, Gels, Human Tissue; ; Sample thickness: 6 mm

**Shore AM:** Standards: ISO 48-4, ASTM D2240; ; Application: Small Technical

Articles, O-rings; ; Sample thickness: 1.5-6 mm

### IRHD UNITS:

**IRHD-M (MICRO):** Standards: ISO 48-2, ASTM D1415; ; Application: Small Technical Articles, O-rings; ; Sample thickness: 1-5 mm

**IRHD-N (NORMAL):** Standards: ISO 48-2, ASTM D1415; ; Application: Rubber Parts with Hardness >30 irhd; ; Sample thickness: 8-10 mm

**IRHD-H (HIGH HARDNESS):** Standards: ISO 48-2, ASTM D1415; ; Application: Hard Rubber Parts with Hardness >85 irhd; ; Sample thickness: 8-10 mm

**IRHD-L (LOW HARDNESS):** Standards: ISO 48-2, ASTM D1415; ; Application: Soft Rubber Parts with Hardness <35 irhd; ; Sample thickness: 8-10 mm





# CERTIFIED SAMPLES

GIBITRE INSTRUMENTS PROVIDES CERTIFIED SAMPLES FOR SHORE AND IRHD HARDNESS VERIFICATION



Certified samples for the periodic verification of the conformity of the measurements made by your durometers.

### Overview

Specimens are available for Shore A, Shore D, Shore M, IRHD-N and IRHD-Micro hardness scales. Certified Specimens are a quick and effective tool for systematic verification of compliance of measurements in the period between two calibrations.

### Characteristics of the product

The hardness of elastomeric products is strongly influenced by the temperature. For this reason, the samples produced by Gibitre have a shape that permits easy handling without transmitting the heat of the hand to the testing area. The samples are provided with calibration Certificate with traceability to the certified hardness tester used for the measurements. The samples are provided with an insulated protec-

tion case that permits the protection of the samples from temperature variations and from the light.

### Available Configurations

- Complete box including 5 samples with different hardness within the selected hardness scale (approximately 40 - 50 - 60 - 80 - 90)
- Box containing one single sample with one of the available hardness

**Available Scales:** Shore: A, D, M; IRHD: M, N

**Shape of the samples:** The shape of the samples has been developed to permit easy handling without heat transmission to the test area

**Protection Box:** The wooden box ensures protection against light and temperature variations

**Sample identification:** The samples have unique identification code to permit

the traceability of the calibration

**Calibration Report:** The calibration report is issued by Gibitre Instruments and includes the traceability to the officially-calibrated hardness tester used for the measures

**Calibration uncertainty:** ± 2 Hardness Points

**Suggested re-calibration :** 12 months





# ACCREDIA CALIBRATION SERVICE

GIBITRE INSTRUMENTS IS OFFICIAL ACCREDIA CALIBRATION LABORATORY N° 182 ACCORDING TO ISO 17025 STANDARD AND PROVIDES CALIBRATION SERVICE FOR SHORE AND IRHD HARDNESS TESTERS.



## LAT N° 182

### Signatory of EA, IAF and ILAC Mutual Recognition Agreements

### Membro degli accordi di Mutuo Riconoscimento EA, IAF e ILAC



Gibitre Instruments' metrological laboratory is **official ACCREDIA calibration laboratory** for the calibration of:

- Shore A, Shore D, tester according to ISO 48-4 and ISO 868 standards
- IRHD Micro, IRHD-Normal, IRHD-Hard, and IRHD-Low hardness testers according to ISO 48-2 standard.

Calibrations are performed in the metrology room of

Gibitre Instruments, with controlled environmental conditions.

#### Key Features

- Gibitre performs Accredia calibration of IRHD and Shore testers produced by all the major world producers
- Gibitre has a solid experience regarding the manipulation and calibration of hardness testers and performs **more than 300 calibrations per year**

• Recording of pre-calibration and post-calibration measures are provided together with the Calibration certificate

• Delivery date of the instrument can be agreed in order to have back-shipment **within 24 hours from delivery**

• Instruments that do not meet the Accredia calibration requirements are returned without charging calibration service.

