AUTOMATIC HARDNESS CHECK - BASIC

AUTOMATIC HARDNESS TESTERS WITH DIGITAL DISPLAY: THE EASIEST SOLUTION TO START MEASURING YOUR PRODUCTS TODAY

Overview

Automatic hardness testers with digital diplay are a control solution that does not require any type of installation: simply remove the instrument from the packaging and connect it to the power supply.
The instrument allows you to:
• move the specimen automatically eliminating the influence of the operator on the measurement
• perform the tests immediately by pressing the Start button only.
At the end of the test, the measurement result is shown on the display.

These tools are ideal when testing is needed at any time and data storage is not required

Touch-Screen Display

The Display permits to set the test time and to start the execution of the test.
The hardness reading is displayed at the end of the test time.

Available Hardness Scales

Available hardness scales are:
Shore A,
Shore D,
Shore A0,
Shore 00,
IRHD-Micro,
IRHD-Normal,
IRHD-Hard,
IRHD-Low.

Accredia Calibration of the instrument

The instrument can be supplied with an ACCREDIA calibration certificate issued by the Accredia laboratory of Gibitre instruments.
The calibration is carried out according to the Technical Procedure approved by Accredia and in compliance with the requirements of the ISO 48-2 (IRHD), ISO 48-4 (Shore A) and ISO 868 (Shore D) standards.
The Calibration refers to:
• Dimensions of the Indentor and Annular foot
• Forces applied by the indentor and the annular foot
• Displacement of the indenter
• Duration of the test

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LAT N° 182

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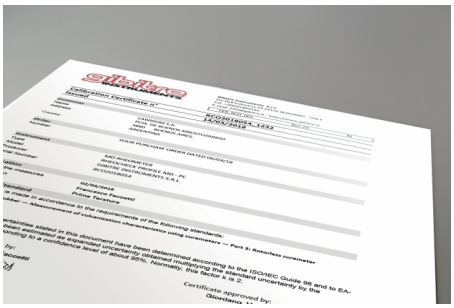
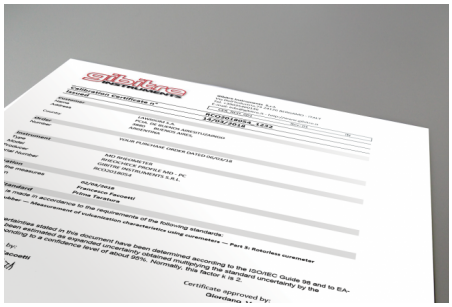
Standard Calibration service for IRHD Hardness Tester

The calibration is performed with reference to the requirements of ISO 48-2 standard.
The service includes:
• Ordinary 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.



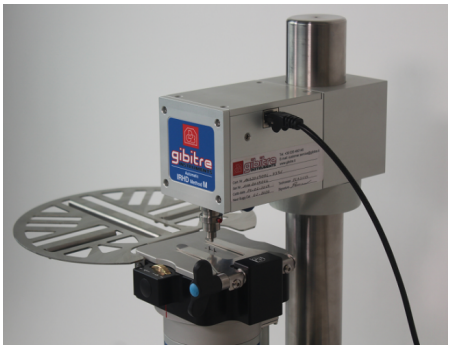
Standard Calibration service for a SHORE Hardness Tester

The calibration is performed with reference to the requirements of ISO 48-4 standard.
The service includes:
• Ordinary 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.



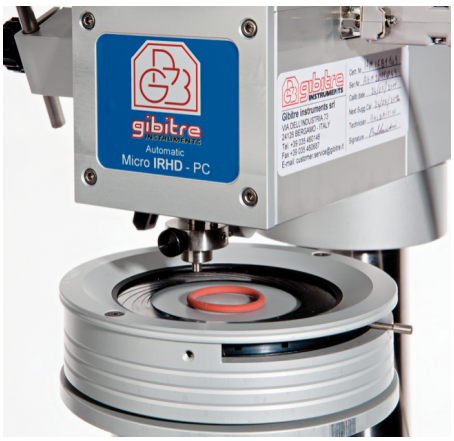
Universal Centring Device for O-Rings

The centering device allows to quickly carry out hardness tests on O-rings with rope between 1 and 11 mm and internal diameter up to 200 mm.
To carry out the test, the piece is positioned on the extension plate integrated between the two adjustment micro-cylinders.
The adjustment wheel allows you to set the distance between the cylinders according to the rope of the o-ring.
The fixing clip allows to maintain the correct positioning of curved pieces
The device is applied to the standard plate of the instrument by magnetic fixing which allows its rapid installation and removal.



Diaphragm centering device for O-rings

The device permits to perform automatic multiple tests on O-ring or round parts with external diameter between 4.5 and 75 mm. The device consist of a diaphragm to fix the external diameter of the o-ring and of a gauge-meter for the adjustment of the position of the center of the diaphragm.
The use is very simple:
1) Open the diaphragm and put the o-ring in the center of the device.
2) Close the diaphragm using the open-close leverage until the o-ring is fixed in the center of the device
3) Use the gauge-meter of adjust the position of the device according to the diameter and cross-section of the o-ring
4) Start a multiple test session to make automatically tests in different points of the sample.
To test several o-rings with the same dimensions, you only need to replace the o-ring on the device without any further regulation.



Centring Device for cylinders and Hoses

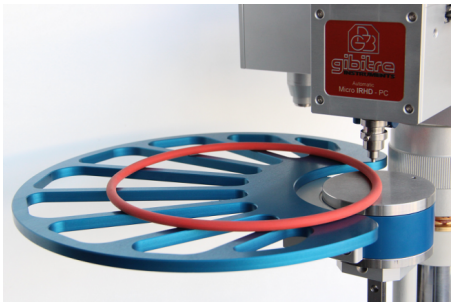
Cantering system for the measure of Micro-irhd hardness on the outer surface of rubber tubes with maximum external diameter 50 mm (other dimension on request).
No preparation of the sample to keep it flat is needed.
To perform a test, you simply need to place a piece of the hose on the device and press start.

Automatic Sample displacement

The motorized ascent and descent movement of the specimen allows the test to be carried out automatically.

Extension of sample holder

Extension of sample holder for Automatic Hardness tester with 300 mm diameter. The support, made of Aluminium, can be added to the standard sample holder to increase the bearing surface for the testing of big-size samples.



Development and production

The instrument is totally developed and produced in the plant of Gibitre Instruments in Italy.
All the mechanical parts are produced in the **company workshop using modern CNC machines**.
Components and sensors from well-known brands are selected in order to ensure the maximum reliability in the measures
Internal trained personnel takes care of all the production stages: **assembly, start-up, calibration, packing, shipment and installation**.

Available hardness types	Shore: (A, D, 00, M) IRHD: (Micro, Normal, Hard, Low)
Resolution	0.01 Hardness point
Maximum Sample Thickness	100 mm
Touch-Screen Display	
Display	Touch screen display with 320 x 240 pixel
Display Characteristics	The Touch-screen display permit to start and stop the automatic execution of the test and to display the hardness reading
Data displayed	Hardness after set test time
Safety Devices	
Labelling	CE Labelling
Calibration	
Calibration	• Calibration Report conforming to ISO 48-2 (IRHD units) or ISO 48-4 (Shore Units) with traceability to primary references • ACCREDIA calibration Certificate (optional)
Technical specifications	
Power supply	110-240 V, 50/60 Hz, 15 W, single phase
Dimensions	(W x D x H) 250 x 250 x 600 mm

Weight	30 Kg
Type of Hardness units	
SHORE UNITS	
Shore A	Standards: ISO 48-4, ASTM D2240 Application: Soft Rubber, Plastics, Elastomers Sample standard thickness: 6 mm
Shore A	Indentor Force: 8.05 N (at 100 Shore) Contact force: 1000 g Indentation: 2.5 mm Measurement Range: 0-100 Shore Resolution: 0.01 Shore
Shore D	Standards: ISO 48-4, ASTM D2240, ISO 868 Application: Hard Rubber, Thermoplastics Sample standard thickness: 6 mm
Shore D	Indentor Force: 44.5 N (at 100 Shore) Contact force: 5000 g Indentation: 2.5 mm Measurement Range: 0-100 Shore Resolution: 0.01 Shore
Shore A0	Standards: ISO 48-4 Application: Light Foams, Sponge Rubber, Gels, Human Tissue Sample thickness: 6 mm
Shore A0	Indentor Force: 8.05 N (at 100 Shore) Contact force: 1000 g Indentation: 2.5 mm Measurement Range: 0-100 Shore Resolution: 0.01 Shore
Shore 00	Standards: ASTM D2240 Application: Light Foams, Sponge Rubber, Gels, Human Tissue Sample thickness: 6 mm
Shore 00	Indentor Force: 1.111 N (at 100 Shore) Contact force: 400 g Indentation: 2.5 mm Measurement Range: 0-100 Shore Resolution: 0.01 Shore
Shore AM	

Standards: ISO 48-4, ASTM D2240

Application: Small Technical Articles, O-rings

Sample thickness: 1.5-6 mm

Shore AM	Indentor Force: 0.76 N (at 100 Shore) Contact force: 250 g Indentation: 1.25 mm Measurement Range: 0-100 Shore Resolution: 0.01 Shore
IRHD UNITS	
IRHD-M (MICRO)	Standards: ISO 48-2, ASTM D1415 Application: Small Technical Articles, O-rings Sample thickness: 1-5 mm
IRHD-M (MICRO)	Pre-Load: 8.3 mN Total Load: 153.3 mN Anular Foot: 235 mN Indentation: 0.3 mm Measurement Range: 30-100 irhd Resolution: 0.01 irhd
IRHD-N (NORMAL)	Standards: ISO 48-2, ASTM D1415 Application: Rubber Parts with Hardness >30 irhd Sample thickness: 8-10 mm
IRHD-N (NORMAL)	Indentor Diamater: 2.5 mm Pre-Load: 0.3 N Total Load: 5.7 N Anular Foot: 8.3 N Indentation: 1.8 mm Measurement Range: 30-85 irhd Resolution: 0.01 irhd
IRHD-H (HIGH HARDNESS)	Standards: ISO 48-2, ASTM D1415 Application: Hard Rubber Parts with Hardness >85 irhd Sample thickness: 8-10 mm
IRHD-H (HIGH HARDNESS)	Indentor Diamater: 1.0 mm Pre-Load: 0.3 N Total Load: 5.7 N Anular Foot: 8.3 N Indentation: 0.44 mm Measurement Range: 85-100 irhd Resolution: 0.01 irhd
IRHD-L (LOW HARDNESS)	Standards: ISO 48-2, ASTM D1415 Application: Soft Rubber Parts with Hardness <35 irhd Sample thickness: 8-10 mm

IRHD-L (LOW HARDNESS)	Indentor Diamater: 1.0 mm Pre-Load: 0.3 N Total Load: 5.7 N Anular Foot: 8.3 N Indentation: 0.09-1.1 mm Measurement Range: 10-35 irhd Resolution: 0.01 irhd

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