MANUAL DIGITAL HARDNESS CHECK

PORTABLE DIGITAL SHORE HARDNESS TESTER. AVAILABLE SCALES: SHORE A, D, A0, 00.

gibitre® INSTRUMENTS

Standards the instrument complies with:

ASTM D2240; FIAT 50411; ISO 868; ISO 48-4; ISO 12046; ISO 7267-2; VDA 675-202;

Manual Digital Hardness Check

Digital Shore tester for the performance of hardness tests that can be used manually or in combination with support.
The instrument can be used as stand-alone device or can be connected to HardnessCheck software for automatic storage of test results.

A Professional Solution for Your Lab

- High resolution sensor and frictionless mechanical construction to ensure extreme accuracy and repeatability of the measures
- Wide 25x50 mm digital display
- Long-duration Lithium rechargeable battery
- Calculation of Initial hardness and hardness after set test time
- Storage of 20 measures in the memory of the device for further transmission to the software
- Control of the approaching force applied to the instrument in manual use
- Optional Windows-based software for the direct acquisition of data and curves during the execution of the test
- Easy insertion of the instrument into the support housing hole (no fixings or adjustments are required)

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 48-4 standard**.
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

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAT N° 182

Signatory of EA, IAF and ILAC Mutual Recognition Agreements

Membro degli accordi di Mutuo Riconoscimento EA, IAF e ILAC

Manual use

For manual use, the instrument must be simply pressed against the sample.
The display shows when the correct approaching force is being applied. The test results are automatically stored at the end of the test time. A specific handle permits easy test performance on round surfaces.

Use with support stand

Simply insert the instrument in the housing hole to start using the support stand.
Adjust the top part of the support according to the thickness of the sample (max 160 mm).
The sliding weight, resting on the top of the instrument, guarantees the application of the force required by the standards.
Place the sample on the sample-holder and lift it using the handle to start the test.

Accessories

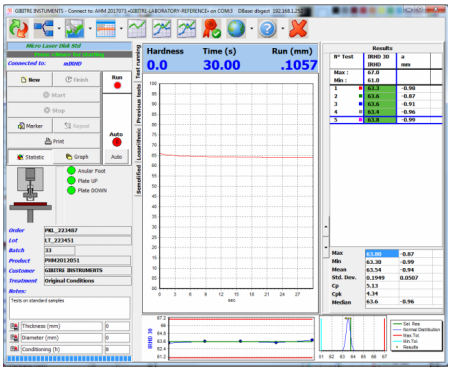
Manual holders for the testing on round surfaces

Gibitre Hardness Software

The Software Hardness-Check allows to:

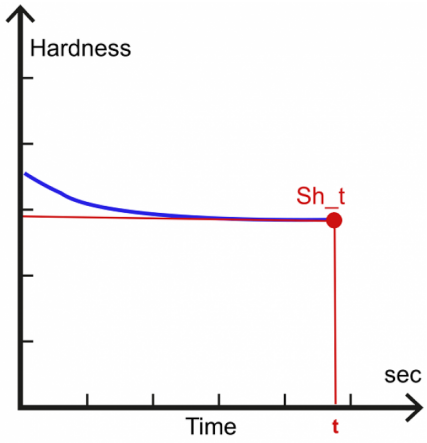
- Automatically acquire the curve and the test results when the instrument is in start
- Save all test results in the SQL database
- Compare the results with the tolerance limits
- Produce test reports

The PC control software allows multiple instruments to be used simultaneously. Each instrument is connected to the PC via the supplied USB cable.



Calculated Results: SHORE Hardness

The software allows you to prepare customized test procedures that include all the calculations required by the standards and product specifications. The dedicated page describes all the available calculations.

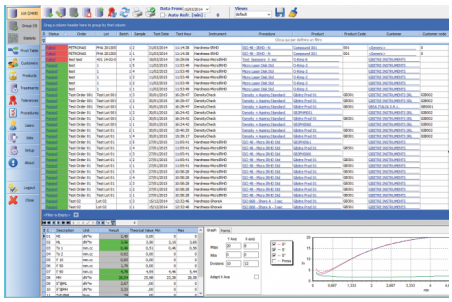


Datagest program : total Traceability

The Datagest program is the **Database Management Tool always installed in combination with all Gibitre instrument-control programs**.

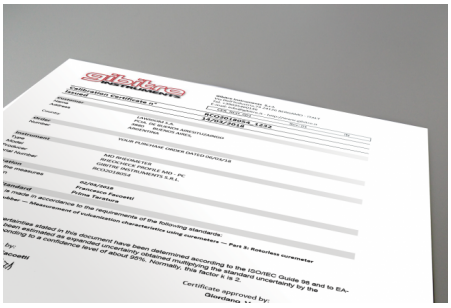
The program permits to:

- **Select, filter, print, export and analyse the test results stored** with all the instruments connected.
- **Prepare test procedures** by defining the test conditions and the results to be produced
- **Set tolerance limits** for each product by manual insertion or using the statistical analysis (mean and standard deviation) of saved results
- **Prepare multi-instrument test reports**



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.



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**.

Instrument Characteristics	
Hardness sensors available	Shore (A, D, 00, A0)
Calculated Results	Initial hardness, hardness values after customer defined test times.
Resolution	0.01 Shore points
Software	
Software (Optional)	The software permits to export the test result to store them in the SQL Gibitre database. The export starts automatically at each test start.
Safety Devices	
Labelling	CE Labelling
Calibration	
Calibration	Report with traceability to primary references ACCREDIA calibration Certificate (optional)
Technical specifications	
Instrument Weight	650 g
Instrument Dimensions	W 82 x D 42 x H 180 mm
Digital Display Dimensions	25x50 mm (128x64 Pixels)

Battery	Lithium battery for up to 8 hours continuous usage
Battery Charge	Usb cable and plug for 110/220 V 50/60Hz included
Support Stand	
Support features	Adjustable distance between hardness sensor and sample (Max 160 mm)
Support Dimensions	(W x D x H) 200 x 200 x 500 mm
Other optional accessories	
Supports for cylindrical surfaces	The instrument can be easily used for the manual testing of hardness of cylinders. Different applicators are available according to the radius of the cylinder to be tested.
Type of Hardness 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

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