AXIOTEK®

Hardness Testers - Measuring Quality

PORTABLE SHORE HARDNESS TESTERS

3 different solutions designed to meet specific needs

ANALOGUE SHORE

Fields of application

To perform Shore hardness tests in compliance with the relevant standards, including ASTM D2240, ISO 48-4, ISO 868 and ISO 21509.

The Axiotek analogue Shore hardness tester comes with a **tungsten carbide indenter** and a high visibility **analogue dial, for immediate reading of the measured values.**

Adatto a tutti i polimeri, elastomeri, gomme e materiali simil-gel (come **plastica, gomma, articoli medicali, carte e spugne**), anche dalle **geometrie complesse o cave.**

Possible shore scales

Ideal for measuring all Shore hardness scales

A B C D DO E AO
O OO OOO OOO-S

SHORE	REFERENCE MATERIALS	RECOMMENDED FIELD OF MEASUREMENT
A	Soft rubber, elastomers, natural rubber products, neoprene, coloured resin, polyester, soft PVC, leather etc.	20 - 90
B	Medium-hard rubber materials, thermoplastic elastomers, paper products and fibrous materials	10 - 90
C	Medium-hard rubber, thermoplastic elastomers, semi-rigid plastics and thermoplastics	10 - 90
D	Rigid and hard materials, synthetic materials, acrylics, plexiglass, wood, thermoplastics, printing rolls, etc.	20 - 90
DO	Plastics and semi-hard rubbers	10-90
E	Foams, soft elastic materials, expanded materials	20-90
AO	Foams, soft elastic materials, expanded materials	20-90
O	Soft elastic materials, nylon, textiles etc.	10 - 90
OO	Spongy rubber, foam rubber, silicone, etc.	20 - 90
OOO	Spongy rubber, foam rubber, silicone, etc.	20 - 90
OOO-S	Spongy rubber, foam rubber, silicone, etc.	20 - 90

Why choose an Axiotek Analogue Shore?

1 **Robust, reliable and easy to use:** we have adapted its design and technical performance to ensure **maximum accuracy and minimum margin of error.**
This is why it is also **ideal for intensive production facilities.**

2 **It's 100% Made in Italy:** we build it entirely oursel ves, so that we can handle **any customisations that best meet your needs.**

3 It ensures high-performance **repeatability and reproducibility,** even under extreme conditions, thanks to its fully mechanical operation.

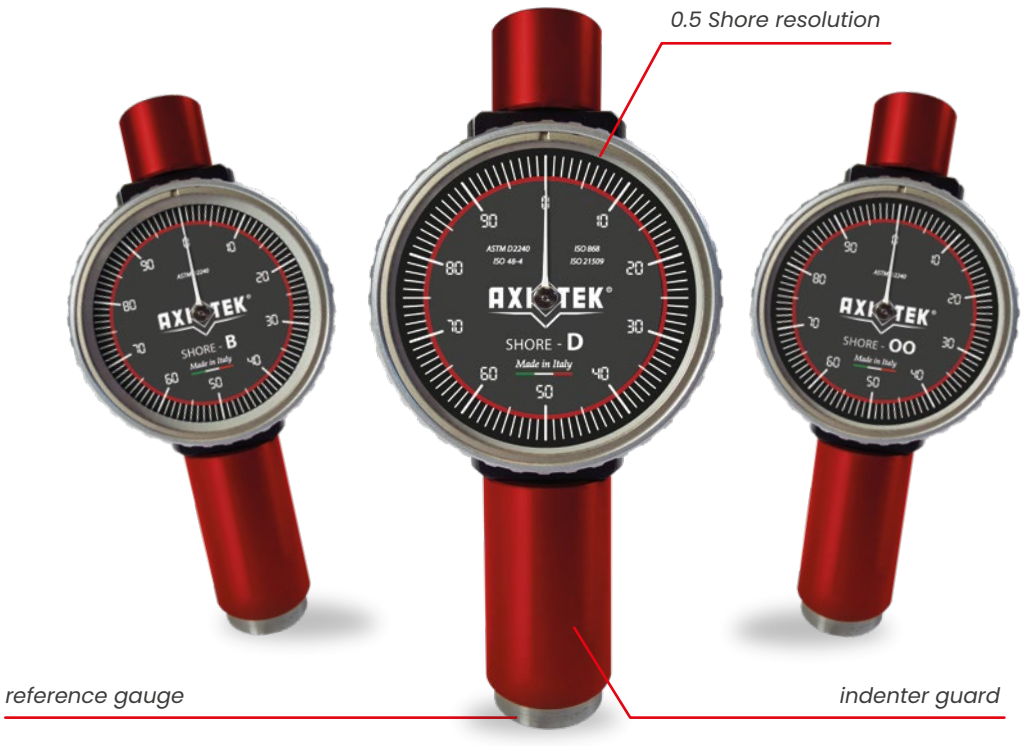
Tested at high altitude!

Margherita Monte Rosa hut:
extreme instrument
test at 4556 m

Find the video on YouTube

Supplied with:

- Use and maintenance manual
- Calibration certificate issued by the manufacturer with Accredia instrumentation
- Indenter guard with reference gauge for instrument calibration



ELECTRONIC SHORE

Fields of application

To perform Shore hardness tests in compliance with the relevant standards, including ASTM D2240, ISO 48-4, ISO 868 and ISO 21509.

The Axiotek Electronic Shore hardness tester comes with a **tungsten carbide indenter** and a true 0.1 Shore resolution display, for immediate reading of the measured values.

Suitable for all polymers, elastomers, rubbers and gel-like materials (such as **plastics, rubber, medical items, paper and foams**), even with complex or hollow geometries.

Possible shore scales

Ideal for measuring all Shore hardness scales

A B C D DO E AO
O OO OOO OOO-S

SHORE	REFERENCE MATERIALS	RECOMMENDED FIELD OF MEASUREMENT
A	Soft rubber, elastomers, natural rubber products, neoprene, coloured resin, polyester, soft PVC, leather etc.	20 - 90
B	Medium-hard rubber materials, thermoplastic elastomers, paper products and fibrous materials.	10 - 90
C	Medium-hard rubber, thermoplastic elastomers, semi-rigid plastics and thermoplastics	10 - 90
D	Rigid and hard materials, synthetic materials, acrylics, plexiglass, wood, thermoplastics, printing rolls, etc.	20 - 90
DO	Plastics and semi-hard rubbers	10-90
E	Foams, soft elastic materials, expanded materials	20-90
AO	Foams, soft elastic materials, expanded materials	20-90
O	Soft elastic materials, nylon, textiles etc.	10 - 90
OO	Spongy rubber, foam rubber, silicone, etc.	20 - 90
OOO	Spongy rubber, foam rubber, silicone, etc.	20 - 90
OOO-S	Spongy rubber, foam rubber, silicone, etc.	20 - 90

Why choose an Axiotek Digital Shore?

1. Carry out individual tests and produce **customisable statistical reports that can be exported and printed as desired.**
2. It allows to **set automatic tolerances** that will be followed in each test
3. It allows **measurements in different modes** (peak, continuous and with timer).
4. **It realizes several Shore hardness scales,** whilst maintaining the same electronic console: it is in fact possible to **install several hardness probes on the same console, with automatic self-recognition.**

Supplied with:

- Use and maintenance manual
- Calibration certificate issued by the manufacturer with Accredia instrumentation
- Indenter guard with reference gauge for instrument calibration

0.1 Shore resolution

Dot matrix LCD display with high visibility of characters in all lighting conditions

Possibility of connecting up to 4 different measuring probes to the same electronic box

CX DIGITAL SHORE

Fields of application

To perform Shore hardness tests on plastic materials with minimum thickness of 6 mm, in compliance with the relevant standards, including ASTM D2240, ISO 48-4, ISO 868 and ISO 21509.

One step ahead of the standard digital shores on the market:

improved connectivity: thanks to wireless data sharing, a single value or the entire statistic processing can be shared via Bluetooth to any device of your choice.

improved operation and interaction with the instrument thanks to the large high definition 60X45 mm digital display.

improved execution of the test cycle in portable mode: the same accuracy level as if using the instrument on a benchtop support, which stabilises and controls the applied load.

Possible shore scales

Ideal for measuring all Shore hardness scales:

A AM B C D O DO E M

SHORE	REFERENCE MATERIALS	RECOMMENDED FIELD OF MEASUREMENT
A	Soft rubber, elastomers, natural rubber products, neoprene, coloured resin, polyester, soft PVC, leather etc.	20 - 90
AM	Thin and irregularly shaped rubber, silicones, thermoplastic elastomers and plastic test specimens	10 - 90
B	Medium-hard rubber materials, thermoplastic elastomers, paper products and fibrous materials.	10 - 90
C	Medium-hard rubber, thermoplastic elastomers, semi-rigid plastics and thermoplastics	10 - 90
D	Rigid and hard materials, synthetic materials, acrylics, plexiglass, wood, thermoplastics, printing rolls, etc.	20 - 90
DO	Plastics and semi-hard rubbers	10-90
E	Foams, soft elastic materials, expanded materials	20-90
M	Thin and irregularly shaped rubber, silicones, thermoplastic elastomers and plastic test specimens. Usable as per ASTM D2240 standard only with bench stand	10-90
O	Soft elastic materials, nylon, textiles etc.	10 - 90

Why choose an Axiotek CX Digital Shore?

1 CONNECT IT TO YOUR SMARTPHONE

The CX Digital Shore can also be managed using the **proprietary AXIOSTAT APP,** which can be conveniently downloaded **to your tablet, PC or smartphone.**

The AXIOSTAT APP allows to:

- Associate and use several portable instruments at the same time
- **Create personal hierarchical access profiles** with different levels of authority depending on the type of user
- **Set in advance the test cycle parameters,** such as test limits and tolerances
- Export data and manage **statistical test reports**
- Calculate statistical process control indices
- Calculate **minimum and maximum control values**
- Calculate **standard deviations**
- Calculate temperature

2 CONTROL THE APPLIED LOAD FORCE

in this way, you will always be certain of the exact force required to execute the scale. Otherwise, you will never be certain that you have fulfilled one of the essential conditions for ensuring the truthfulness of the hardness value obtained.

3 RETURNS 3 DIFFERENT HARDNESS VALUES

- Peak hardness value: peak value detected during the measurement stages
- Average hardness value: calculated average of all tests performed
- Continuous hardness value: the instantaneous hardness value is shown

OPTIONAL MATCHING **BENCH TOP STANDS**

DX 136
Manual support

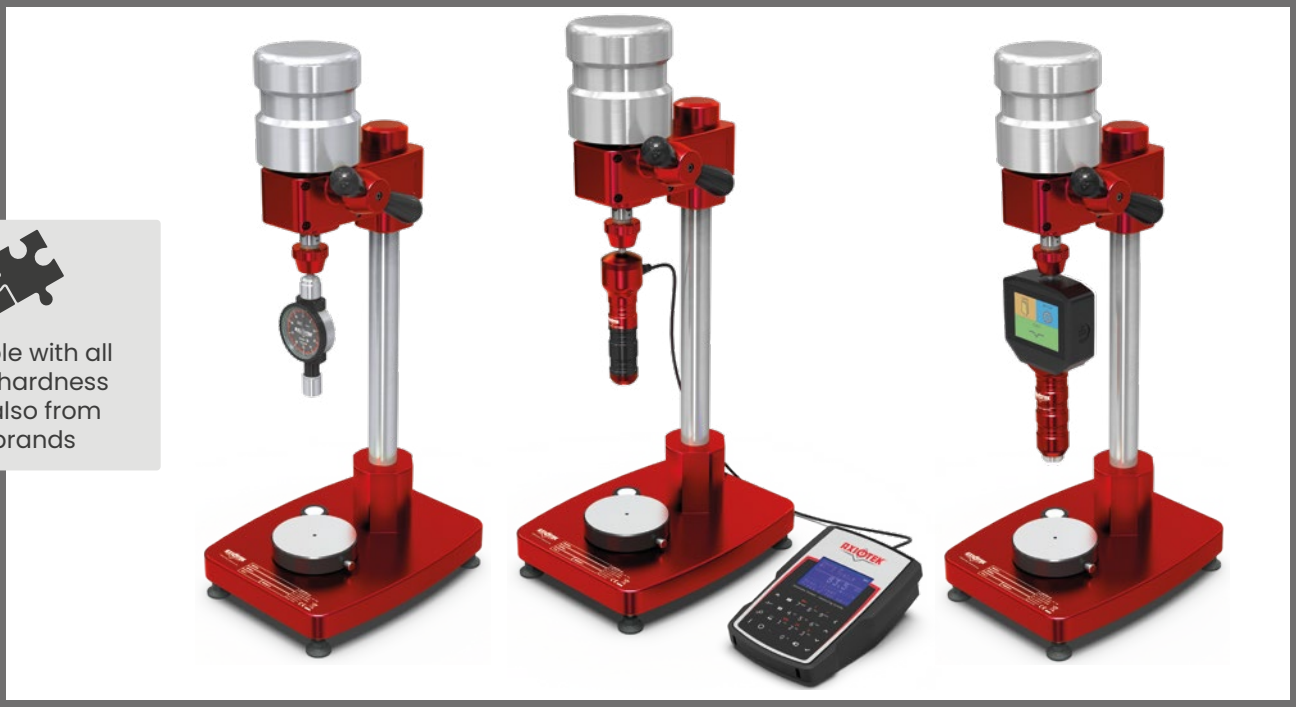
Universal mechanical operation bench top stand: simply manually operate the lever to carry out the test and determine the hardness value

Immediate benefits:

- **Eliminates human influence** during the execution of the test.
- **All Shore scales are readily available in a single instrument:** thanks to the kit of additional calibrated masses, DX 136 realizes all Shore scales from D to OOO in accordance with the relevant international reference standards.
- **Possibility of removing the Shore instrument** for use in portable mode

1. *Practical lever to bring the indenter closer to the sample being tested.*
2. *Height-adjustable rod to accommodate larger samples.*
3. *Interchangeable support with a dedicated accessory kit (optional) for small samples with complex geometries*

compatible with all portable hardness testers, also from other brands



DX 835
Motorised stand

Universal bench top stand with electronic operation: simply press the button to complete the test, determining the hardness value.

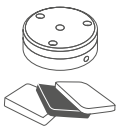
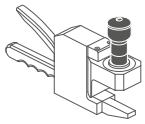
Immediate benefits:

- **Eliminates human influence during** he execution of the test.
- **It maximises the reproducibility of measurements,** thanks to the electronic control of the probe descent speed.
- **All Shore scales are readily available in a single instrument:** thanks to the kit of additional calibrated masses, DX 835 realizes all Shore scales from D to OOO in accordance with the relevant international reference standards.
- **Possibility of removing the Shore instrument** for use in portable mode

1. *Button to automatically bring the indenter closer to the 1 sample being tested.*
2. *Interchangeable support with a dedicated accessory kit (optional) for small samples with complex geometries.*
3. *Motorised measurement head with a programmable descent speed from 0.5mm/s to 16mm/s.*

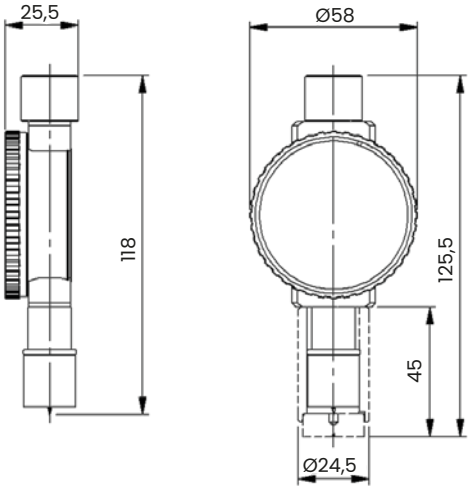
Supports supplied with: centring device, operation and maintenance manual, additional masses for special scales (optional)

ACCESSORIES AND SERVICES AVAILABLE ON REQUEST

		ANALOGUE SHORE	ELECTRONIC SHORE	CX DIGITAL SHORE
	Instrument calibration and maintenance with ACCREDIA-certified samples	✓	✓	✓
	Certified test samples (available in rubber and metal)	✓	✓	✓
	Flat or radiused presser for centred and constant pressure on any type of sample (even on curved surfaces).	✓	–	–
	Peak hand for storing the maximum measured value.	✓	–	–
	Set of accessories for the testing of samples with complex geometries or small sizes. such as O-rings.	✓	✓	✓
	Portable clamp holder for electronic and analogue probes.	✓	✓	✓
	Possibility of customisations.	✓	✓	✓
	Calibration Specimen Kit	✓	✓	✓

ANALOGUE SHORE | TECHNICAL DATA AND OVERALL DIMENSIONS

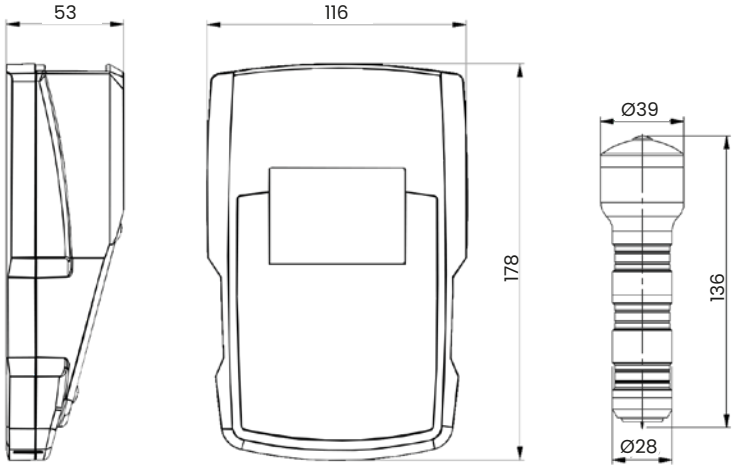
Reference standards	ISO 48-4, ASTM D2240, ISO 868 and ISO 21509
Weight	160gr
Risolution	0,5 Shore



Watch the demo video for the instrument!

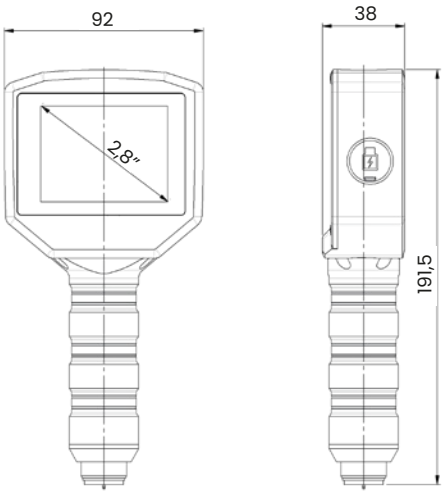
ELECTRONIC SHORE | TECHNICAL DATA AND OVERALL DIMENSIONS

Reference standards	ASTM D2240, ISO 48-4, ISO 868 e ISO 21509
Weight	800gr (considering both console and the probe)
Risolution	0,1 Shore
Backlit display size	60x42 mm
Power supply	7,2V cc – 250mA
Battery	Up to 8 hours of use
Data output	Integrated RS 232 for immediate connection to printers or computers



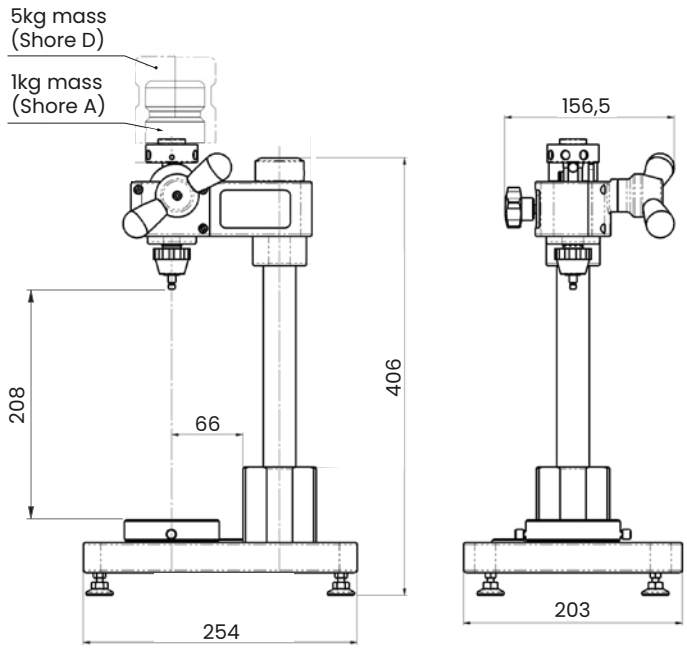
CX DIGITAL SHORE | TECHNICAL DATA AND OVERALL DIMENSIONS

Reference standards	ASTM D2240, ISO 48-4, ISO 868 and ISO 21509
Weight	400gr
Risolution	0,1 Shore
Backlit display size	60x45 mm
Power supply	100÷240v - 60Hz
Battery	3.7v - Up to 8 hours of use
Data output	Bluetooth



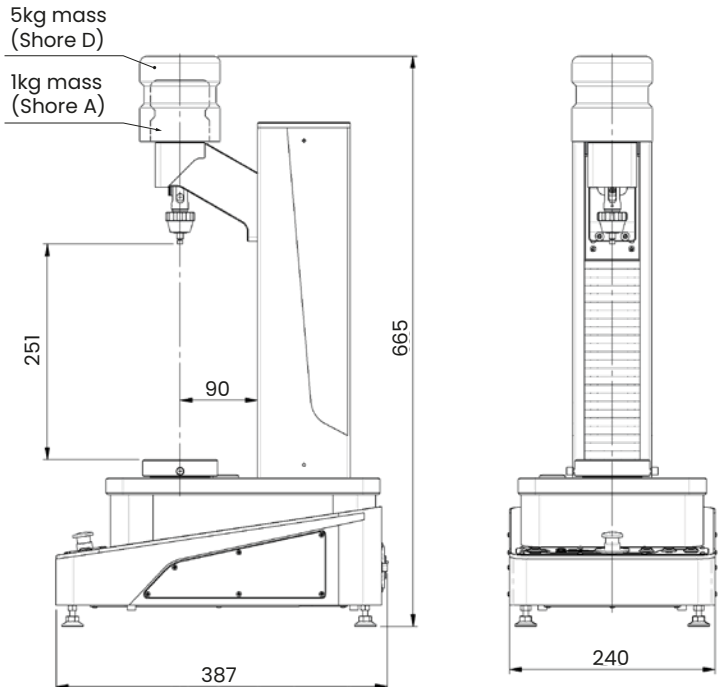
DX 136 STAND | TECHNICAL DATA AND OVERALL DIMENSIONS

Reference standards	ASTM D2240, ISO 48-4, ISO 868 and ISO 21509
Weight	9 Kg
Head movement	208 mm
Useful depth	66 mm



DX 835 STAND | TECHNICAL DATA AND OVERALL DIMENSIONS

Reference standards	ASTM D2240, ISO 48-4, ISO 868 and ISO 21509
Weight	17,5 Kg
Head movement	251 mm
Useful depth	90 mm
Power supply	115/230v – 50÷60Hz



INSTRUMENT TESTING, CALIBRATION AND MAINTENANCE SERVICE

Built around your needs

Our generational **experience based on more than 60 years of work** in the field allows us to answer any of your questions or concerns.

Our highly **strategic geographical location allows us to support you in the maintenance of your instrument,** offering you spare parts completely made in Italy, and therefore with prompt delivery.

Each service that you'll find is available for:

Every brand, It makes no difference to us whether you have an Axiotek hardness tester or an instrument of another brand

Every Italian Region: we offer our services in the whole Italian territory

Both Shipping and Collection: you can choose between shipping your instrument or making us collecting it

Discover all hardness testers for rubber and plastic

We offer solutions covering the entire application range of this sector, such as:

- **IRHD micro and macro tests**
- **Plastic & Carbon Test with Rockwell Method**
- **classic or customised Shore tests**

Visit our website for all the details!

LAT N° 316

Calibration center | ISO 17025
The products are not covered by accreditation

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