

Hardness testers – Measuring quality

XM70 D3



THE AUTOMATION OF SPEED

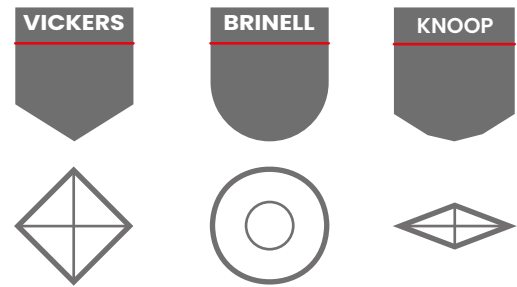
The operation of the instrument is still automatic but faster than the D1 version. **Thanks to the multiple tests performed automatically by the software and the XY table**, productivity and user comfort will be your great allies.

The acquisition time for scanning a 30mm diameter sample is only 30 seconds!

In full compliance with the international reference standards, including **ISO 6506, ISO 6507, ISO 4545, ASTM E10, ASTM E92, ASTM E384.**

Fields of applications

for single and multiple Micro/Macro Vickers, Knoop and Brinell tests on small to medium-sized objects (ferrous and non-ferrous) with particularly thin thicknesses and complex geometries.



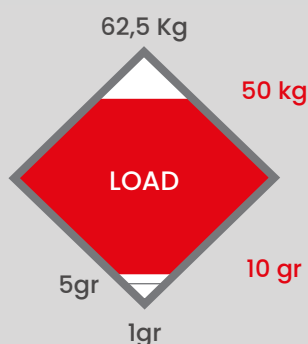
Motorised Z axis

the vertical movement of the head is sensitive, fast-slow, and electronically controlled.



XY table with a pitch accuracy of $\pm 1 \mu\text{m}$

the origin of the patterns can be positioned exactly where required. The XY table with a 100x60 range of motion allows test cycles with multiple indentations and multiple paths, respecting the relative distances and positions. **Ideal for performing multiple tests on small to medium-sized objects at the click of a button.**



Unparalleled accuracy even at very low loads

thanks to the management of the forces (available from **10gf to 50kgf** but customisable on request) through **load cells with Closed Loop control** and high sampling rate (20 bits at 1 kHz).

Turret with 6-position automatic changeover

designed to ensure **fast use** of the various high-quality optical lenses, which thanks to **energy-saving LED lighting** guarantee a natural colour view of the indentations.



4 lenses
applied



1 indenter
included



1 Dynamic collision avoidance system

system that ensures a **safe assisted emergency stop** to prevent damage to the machine and the operators.

2 Design that ensures ergonomics and comfort of use

- Indenters and lenses are on a **"retractable" system** that moves them inside the measurement head for their protection.
- The instrument has been designed to allow an all-round view of the test sample.

3 Reliability in any situation

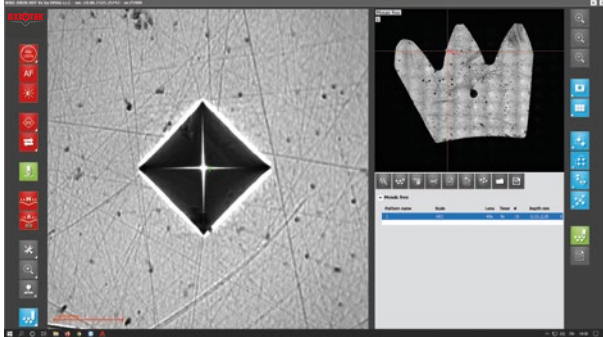
thanks to the load cell system, XM70-D3 guarantees **extreme reproducibility and repeatability in any test condition**.



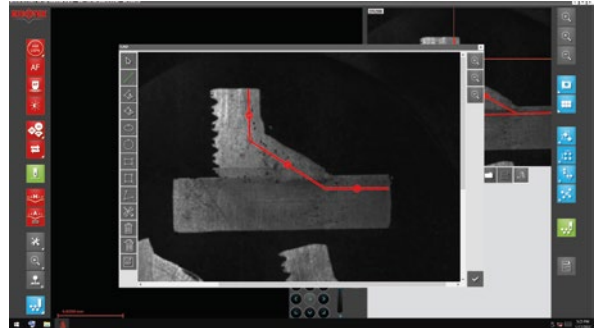
Software and connectivity

thanks to the processing of the image based on an **algorithm developed entirely by Axiotek**, the specific XM70 line software allows fast and accurate optical analysis **even on test samples with less than optimal surface finish**.

- ◉ **Automatic test surface scanning:** ideal for hardness calculations on samples with complex geometries;



- ◉ **CAD system:** Free drawing on the test surface, allowing the creation of indentation execution and reading orientation geometries (on request);

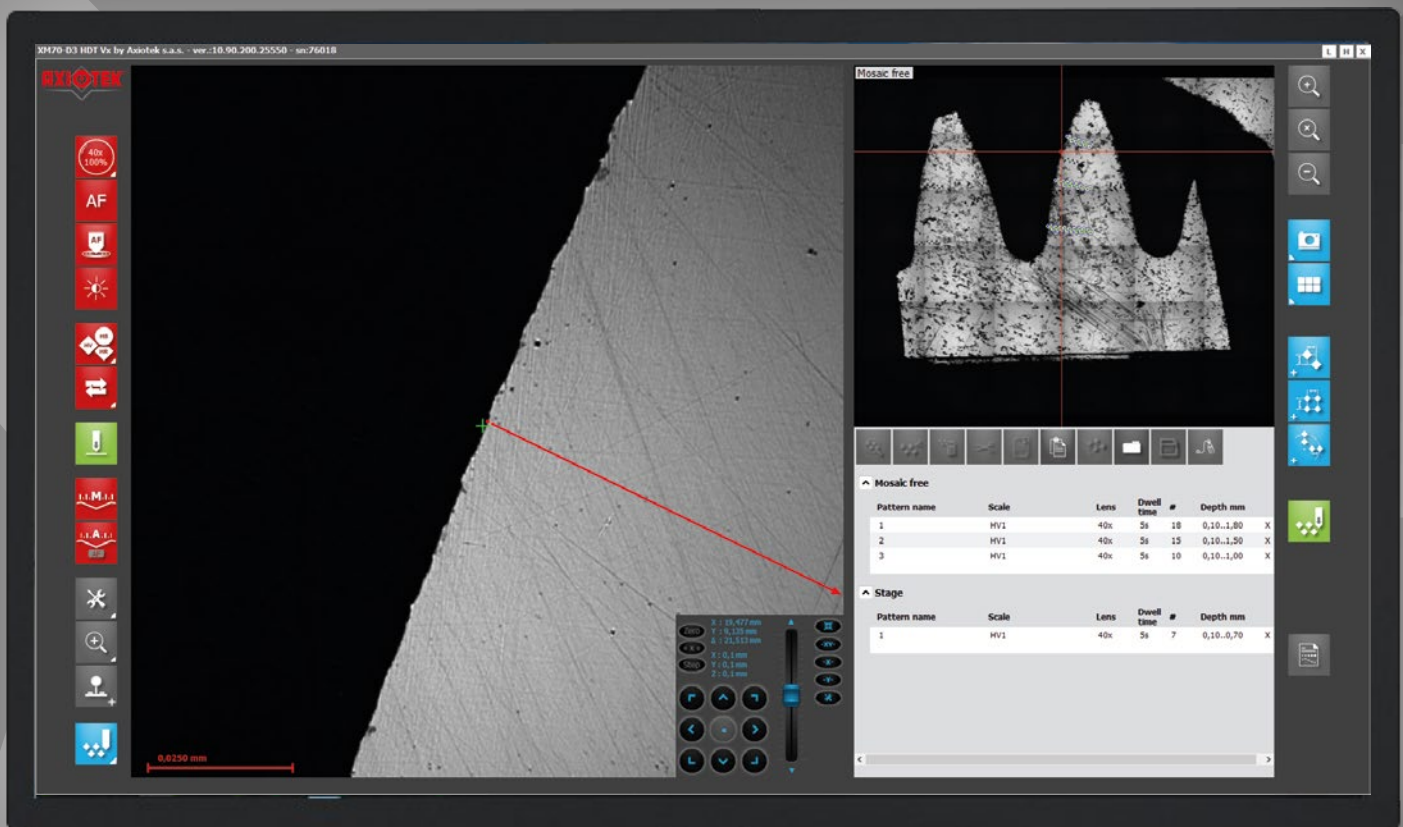


- ◉ **Autofocus** irrespective of the position of the measurement head, ensuring maximum functionality and minimum error;
- ◉ **Automatic reading** of the indentation;
- ◉ **Setting of patterns at the click of a button:** just move the mouse and we'll take care of the rest;

- ◉ **Quiet operation** ensured by recirculating ball bearing movement technology;
- ◉ **Change of the test method** with one click;
- ◉ **Dynamic zoom** with high definition view;
- ◉ **Integrated conversion tables.**

◀ 24" Full HD screen

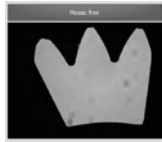
◀ high definition display



A few simple steps to carry out a test cycle:

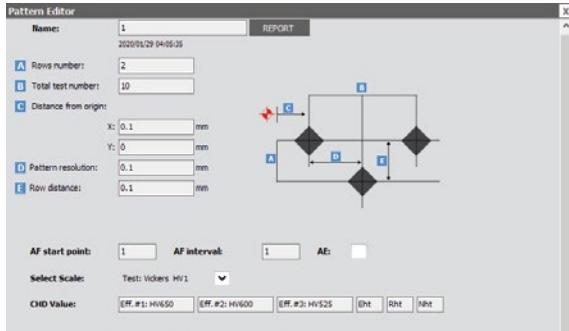
1 frame the area

obtain a fast, high-resolution, detailed and bright frame of the entire sample holder.



2 Set the patterns

copy and paste or create and save new patterns. Position and rotate them with a simple click.



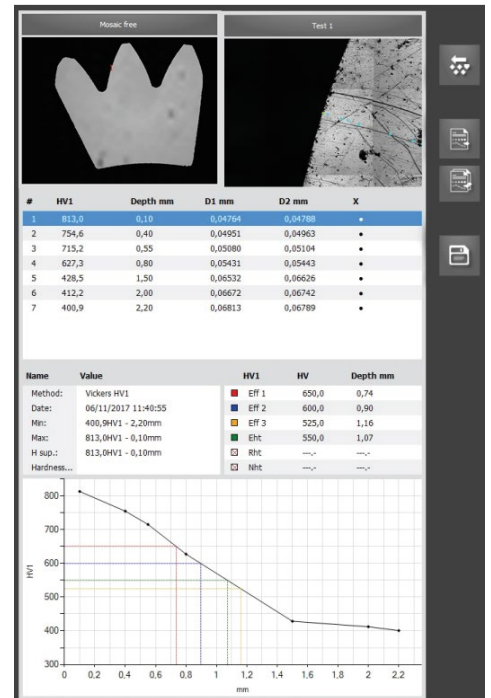
3 Press START

the test starts and the reading is fully automatic



4 Obtain the results

obtain statistically relevant results and compare them on tables or charts.



Statistical export/printing of data

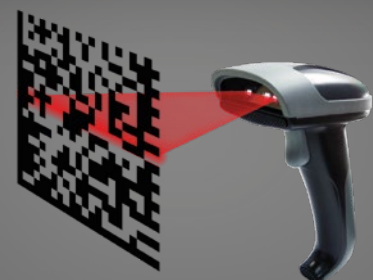
Basic and advanced statistical processing/printing functions with the possibility of direct interface to administration or processing software (such as company ERP) for data export/backup. (on request)

Data output: USB, Ethernet



Barcode scanner:

possibility of combining a barcode scanner (optional) to scan the barcodes found on the individual samples, making all the product details immediately accessible while the test is being carried out



TECHNICAL DATA

TEST FORCES:

Vickers:
0,098 - 0,147 - 0,196 - 0,245 - 0,980 - 1,961 - 2,942 - 4,903 - 9,807 - 19,61 - 29,42 - 49,03 - 98,07 - 196,1 - 294,2 - 490,3 N
(0,01 - 0,015 - 0,02 - 0,025 - 0,1 - 0,2 - 0,3 - 0,5 - 1 - 2 - 3 - 5 - 10 - 20 - 30 - 50 Kgf)

Knoop:
0,098 - 0,196 - 0,254 - 0,490 - 0,980 - 1,961 - 2,942 - 4,903 - 9,81 N
(0,01 - 0,02 - 0,025 - 0,05 - 0,1 - 0,2 - 0,3 - 0,5 - 1 Kgf)

Brinell:
9,81 - 24,52 - 49,03 - 98,07 - 294,2 - 306,5 N
(1 - 2,5 - 5 - 10 - 30 - 31,25 Kgf)

POSSIBLE TESTS:

Vickers:
HV0,01 - HV0,015 - HV0,02 - HV0,025 - HV 0,1 - HV 0,2 - HV 0,3 - HV 0,5 - HV 1 - HV 2 - HV 3 - HV 5 - HV 10 - HV 20 - HV 30 - HV50

Knoop:
HK0,01 - HK0,02 - HK0,025 - HK0,05 - HK 0,1 - HK 0,2 - HK 0,3 - HK 0,5 - HK 1

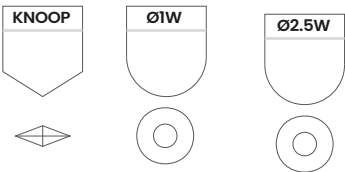
Brinell:
HBW 1/1 - HBW 1/2,5 - HBW 1/5 - HBW 1/10 - HBW 1/30 - HBW 2,5/31,25

OPTIONAL ACCESSORIES AND CUSTOMISATIONS

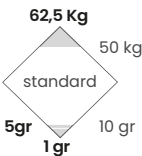
Lens available to replace the standard ones: 20X



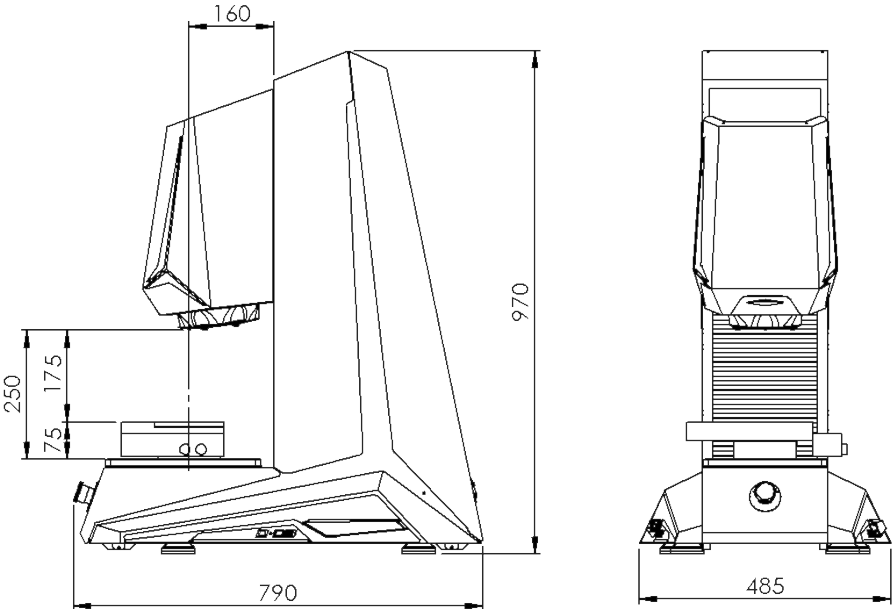
Indenter of your choice available to replace the standard one:
Knoop; Ø1W; Ø2.5W



Range of customisable forces:
up to 1gf; 5gf or 62,5kgf



OVERALL DIMENSIONS





download the data sheet
at the bottom of the page



Service & Maintenance

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

Our highly strategic geographical position allows us to support you in the maintenance of your instrument, offering you completely made in Italy spare parts.

Why choose us?

- ◉ We guarantee **100% Italian quality**.
- ◉ We believe in **true innovation**: listening to your needs and making an hardness tester that can meet them.
- ◉ We promote an **empathic design**, which ensures functionality and harmony in the interaction with measuring instruments.
- ◉ **We are pragmatic and result-oriented**: what we design and produce is the result of years of study, research and experimentation.
- ◉ **We love to accompany you step by step**, listening and advising you what better embraces your needs



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