

Material Testing

The background features a series of overlapping, wavy, light gray bands that create a sense of depth and movement. Two horizontal halftone patterns are positioned above and below the main title. The upper pattern consists of small, light gray dots, while the lower pattern consists of larger, orange dots. A solid orange horizontal line is located directly beneath the title text.

GALDABINI
1890



GALDABINI
1880

QUASAR 600

GALD

High Quality and Performances

in material testing machines





Ballscrew detail and crosshead alignment monitor

Our Technology

For over 130 years, we have been designing materials testing machines with passion and dedication, in compliance with International Standards and specific procedures. Our instruments are housed in laboratories and quality control departments, ensuring and qualifying production with accurate and repeatable results.

Our range of machines allows for a wide variety of tests, from almost invisible nylon wire to hot-forged pieces typical of steel mills.

We produce two different models: the electromechanical testing machines QUASAR, also known as Universal Testing Machines or UTM, and IMPACT pendulum testers.

The **testing machines** are designed for tension, compression, bending, folding, cyclic, constant load, high temperature, and many other tests. They provide a flexible solution for testing a wide variety of materials and components for any application sector.

The **impact pendulums**, on the other hand, allow for resilience tests on metals, both for Charpy and Izod method tests at different temperatures.

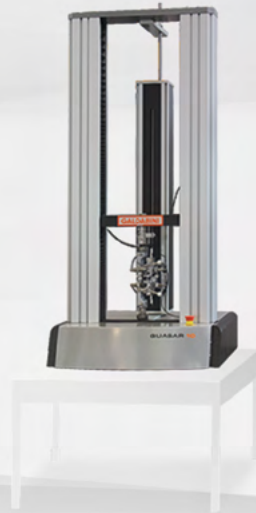
The beating heart of each machine is our **LABTEST** software, fully developed in Galdabini and integrated with various types of instruments and applications, thus ensuring ideal testing conditions through data processing, with intuitive and smart operation.

We are continuously searching for solutions to improve ease of use and accuracy in conducting material test trials, a continuous development reinforced by our centuries of experience and the trust placed in us by our customers.

Inside the core of Efficiency



Quasar 2.5 kN



Quasar 5, 10, 25, 50 and 100 kN



The **Quasar series** is divided, depending on the load, into table-top and floor-standing testing machines.

The smallest in size and dimension is the **Quasar 2.5** with a capacity of up to 2.5 kN.

A single-column machine for testing small loads commonly used for microelectronics, wires, small components, fabrics, plastic films, and rubber. **Table-top double-**

column machines, on the other hand, have capacities up to 100 kN with greater use in the automotive and aerospace industries and applications at variable temperatures; metal, plastic, wood, composites, technical fabrics.

Heavy-duty comes into play with **floor-standing machines which, with capacities up to 2000 kN, can withstand high loads.** The rigid structure makes them suitable



Quasar 250, 400, 600, 1000 and 1200 kN

Quasar 2000 kN

for complex applications for the high-strength metals and alloys industry, complex components for the automotive and aerospace industries, fastening systems, special bolts and steel laminate.

Our testing machines have a **digital drive system equipped with a brushless motor**. The motor is connected via Ethercat and has an integrated encoder.

Simultaneous and parallel data acquisition allows the testing machine to be controlled in accordance with International Standards.

The machine allows sampling and data acquisition from various instruments as load cells and extensometers.

MOTOR

FREQUENCY

DATA



Safety barrier with sliding door



Safety & Control

Some tests and applications require integration with safety barriers.

We design and build polycarbonate barriers that surround the instrument both at the front and rear. They are **transparent and resistant to the impacts** from the continuous series of tests.

An **interlock function is provided** that prevents the test from being carried out if the safety door is not perfectly closed, thus reducing the risk of accidents.

The crosshead is considered intelligent, always recognizing its current position.

Safety hardware and software limit switches are configurable differently for each individual test.

The machine's state is constantly monitored, both in the case where the crosshead is moved with the safety barriers open, and in the case where the pendulum doors are opened (for example when adjusting the gripping position or inserting or retrieving specimens).

Various types of safety barriers with different **Performance Level ratings are available**, depending on the application.

Versatility First

Every equipment within our testing machines, especially for **QUASAR** UTM, is designed for proper functioning in combination with various components.

Load cells, of various types, easily adapt to various types of grips, which also have different shapes and capacities.

Safety and functionality are the basis of the adapters and grips present in the testing instruments we design.

Mechanical modularity allows for expansion and adaptation of the machine using available testing accessories, ensuring overall flexibility.

Our testing machines are defined as **universal** because they accommodate different materials, shapes, and tests.

LOAD CELLS

ADAPTERS

GRIPS



Tensile testing on fabric

Material-GENERIC

User: SU



PLASTIC



METAL



FINISHED PRODUCTS



BUILDING



BIO MEDICAL / FOOD



PACKAGING



TEXTILE

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1974

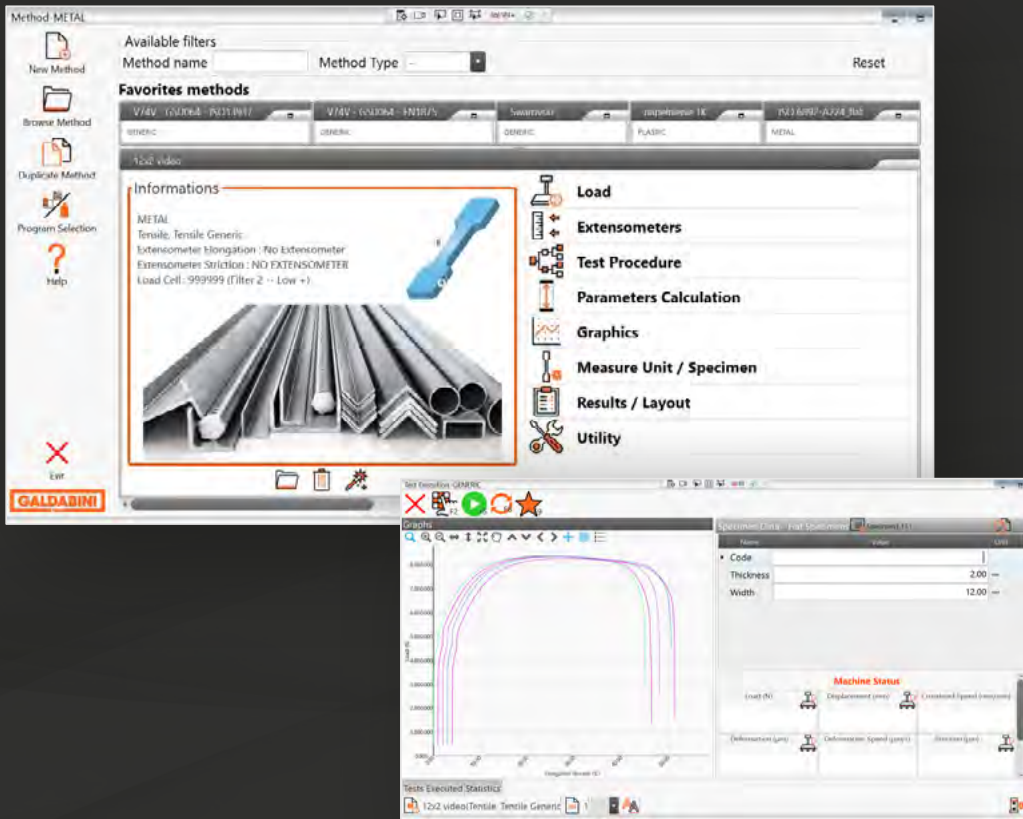




The FULL version contains all 7 industrial sectors, from metal to biomedical, allowing tests to be conducted with pre-configured methods in terms of Standards, specimen shapes, and dedicated extensometer use.



Our **testing software** is an extremely intuitive, wizard-guided solution based on Windows. It allows users to set up the method, configure and run tests, view results with the ability to print certificates.



Ease of configuring each testing method

3 minutes to configure a testing method

Easy-to-create and analyze statistics

5 steps to create a custom statistic

Uninjured security

Various types of safety barriers (level PL c/d)

Integrate tools

Sample size can be read and acquired by electronic calipers, and the specimen name by a barcode reader



Testing for controlling syringes in the biomedical field



Tensile test on rigid plastic with MicronXT extensometer according to ISO 527-1 Standard



Accuracy & Reliability

It is possible to create and export test reports in various formats, as PDF, Microsoft Word, Excel, and XML.

Report elements, graphs, and results can be organized and customized according to individual needs, including font, color, borders, and logos.

The LABTEST software is also capable of rearranging data in the transfer file.

Data management is even more reliable through user control, which allows automatic data transfer according to access type, establishing each user's functional limits.

Extensometers



The importance of precise measurements is essential for every material test.

We design and manufacture extensometers capable of accurately determining elastic and elongation properties, regardless of the machine frame in use.

The use of extensometers is always highly recommended, particularly in video, automatic, and semi-automatic versions. The use of only the crosshead stroke could affect measurements and their repeatability. For more information: sales@galdabini.it

VIDEO

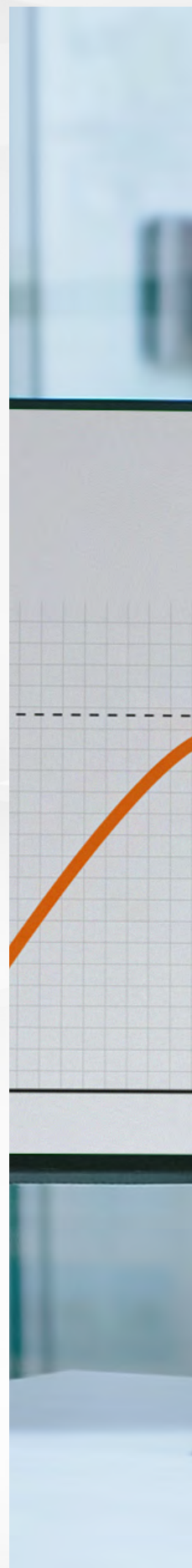
AUTO/MOTO

SEMIAUTO

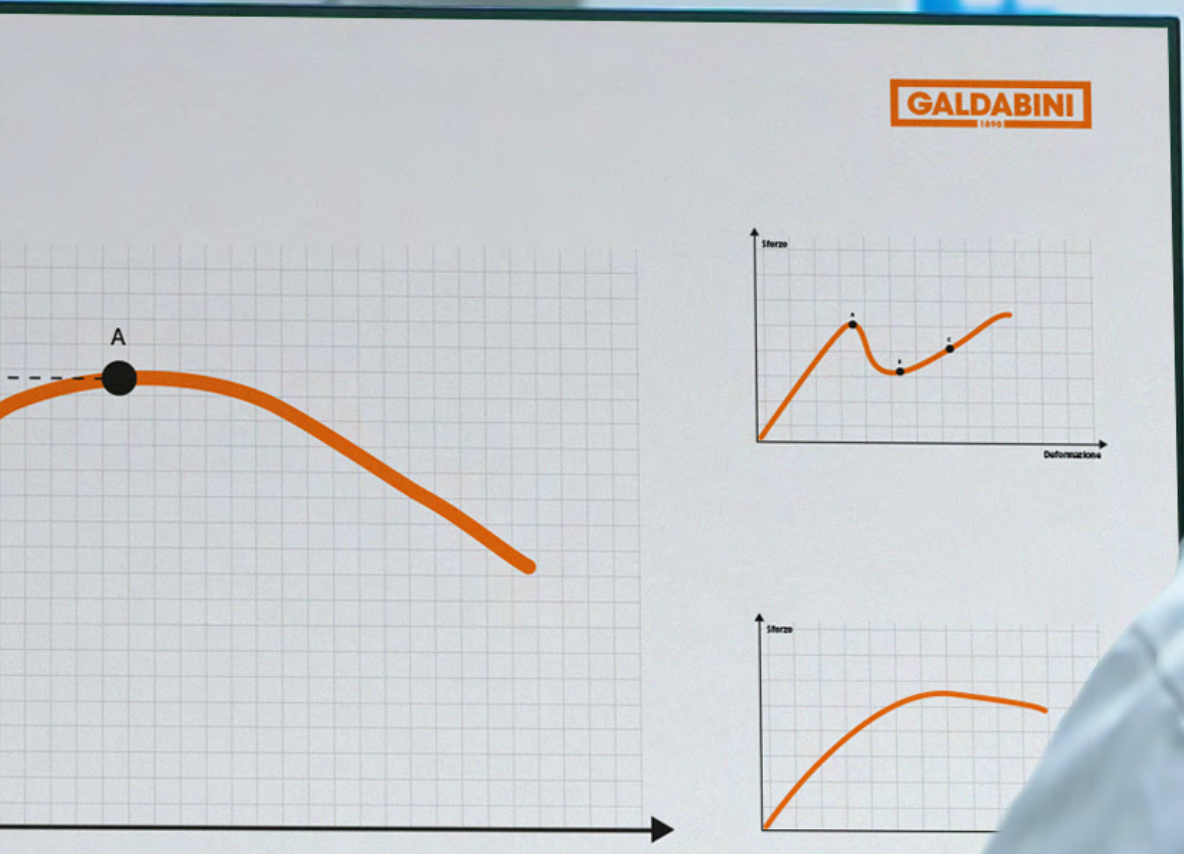
MANUAL



ISO 9513
Class 0,5



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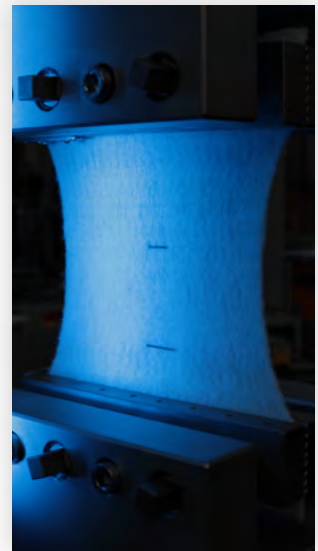
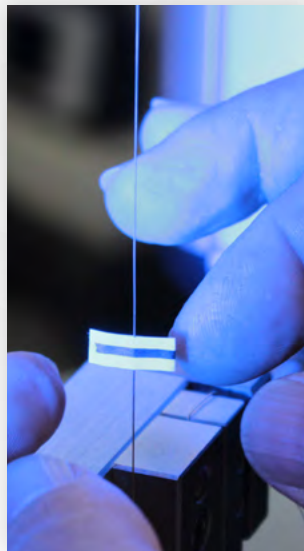




Video XT

High-precision, non-contact extensometer that measures sample deformation from acquired images.

It can measure virtually any material, from wires to films and under non-ambient temperature conditions, to which a contact extensometer cannot be directly connected.



Tensile test on geotextile

ISO 9513
Class 0,5



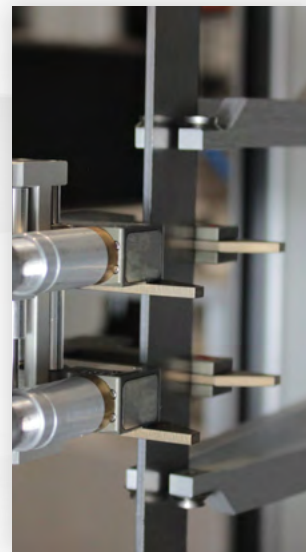
Micron Motor MFX

Operation is **fully automatic** and can be used for a variety of materials, even within thermal chambers.

Integrated with automatic extensometers for transverse strain detection.

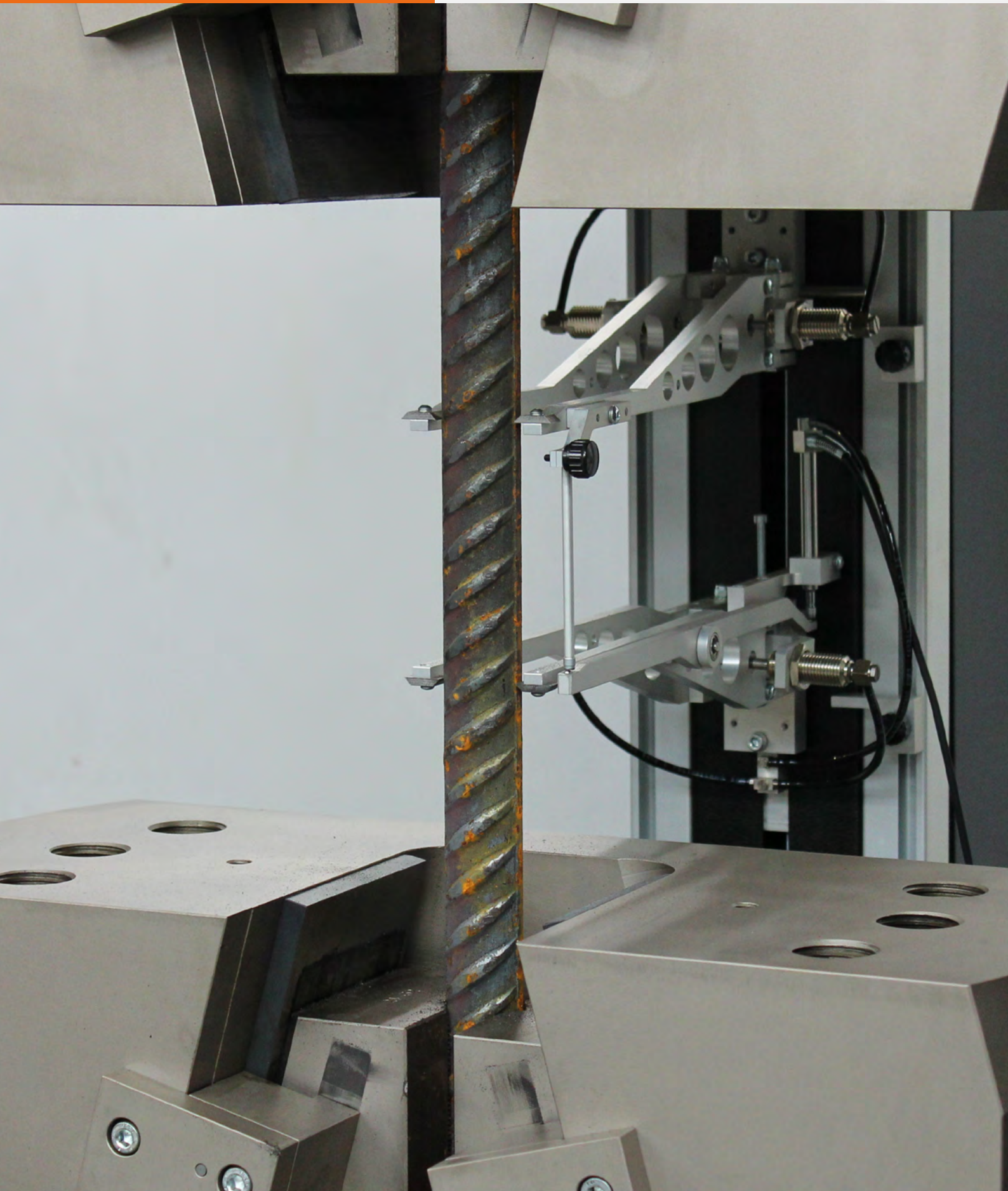


Micron Motor MFX
extensometer input for hot
tests with thermal chamber
integration



Integration with MFQ strain
gauge for necking calculation
(r+n)





Micron XT

Semi-automatic extensometer capable of measuring from the elastic modulus to elongation at break. Integrated with manual extensometers for transverse strain detection.



Extensometer knives suitable for plastic specimens



Grips for small-sized specimens



ISO 9513
Class 0,5

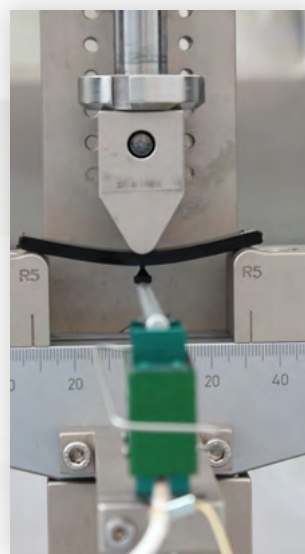
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Elast, EAN & Clip ON

These strain gauges are **manual** and accommodate various needs in compliance with ISO, ASTM, and other International Standards according to reference lengths and tests under high-temperature conditions.

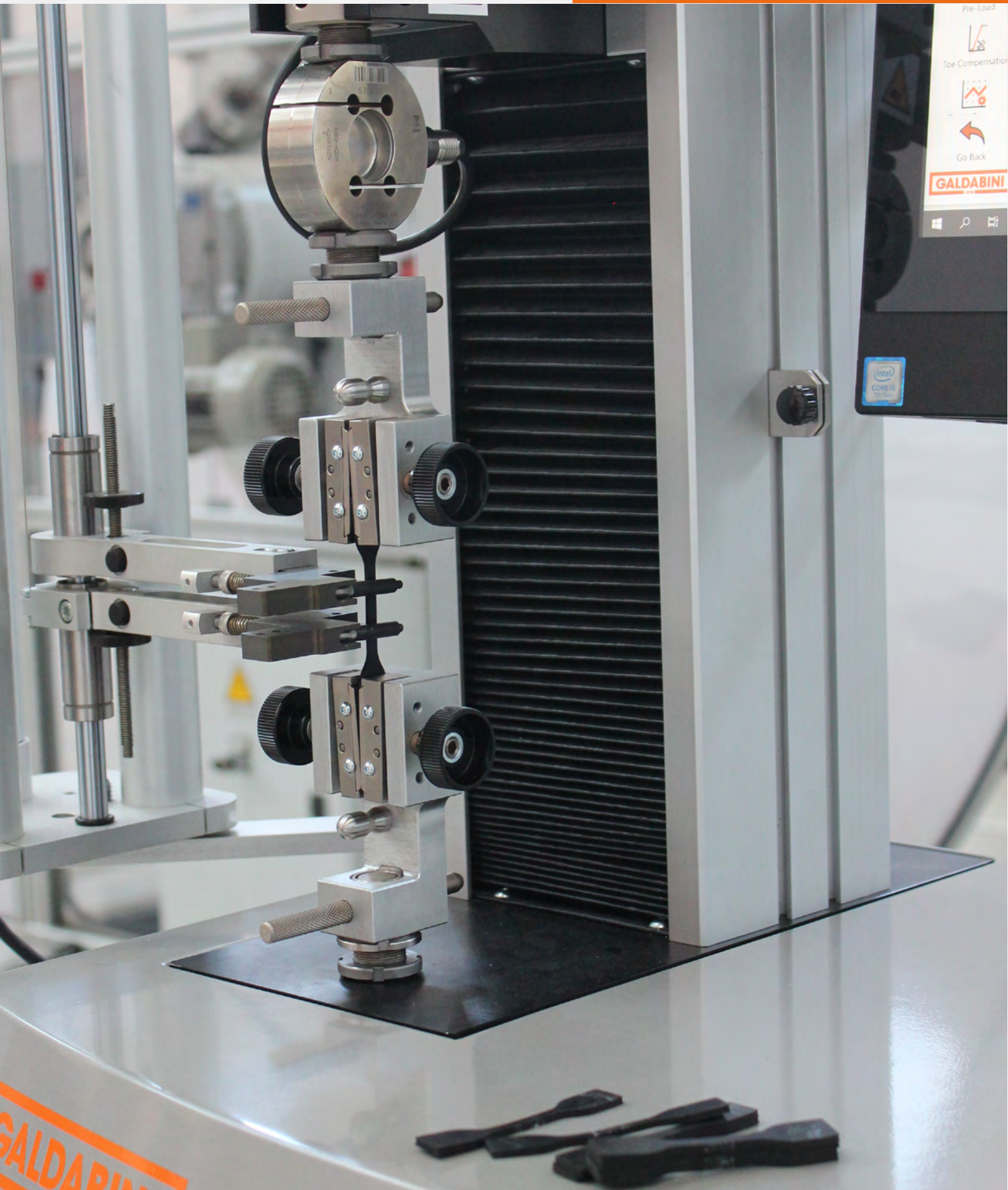


Extensometer for testing strands

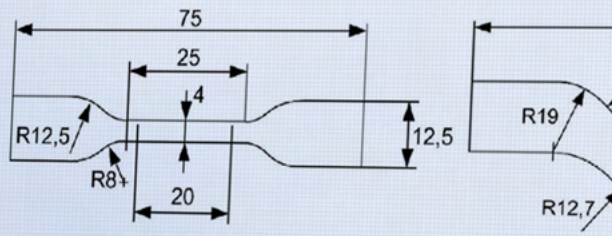


ISO 5893
Class A

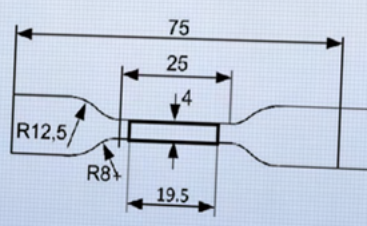
ISO 9513
Class 0,5



Tensile test on elastomer with ELAST extensometer



(a)



(c)

GALDABINI
1999

Improve test efficiency

Grips, Extensometers and Accessories

Our machines can be equipped, according to needs and relevant regulations, with an endless series of **grips, extensometers, thermal chambers, furnaces, and various transducers.**

Tools for **tensile, compression, flexure, bending, cycle, constant load** tests are available, performed at both ambient and non-ambient temperatures, both high and low.

The most popular grips are manual and can accommodate flat specimens as round and shaped objects. Pneumatic or hydraulic grips and automatic extensometers further reduce cycle time.

MANUAL
GRIP

HYDRAULIC WEDGE
GRIPS

WEDGE
GRIPS

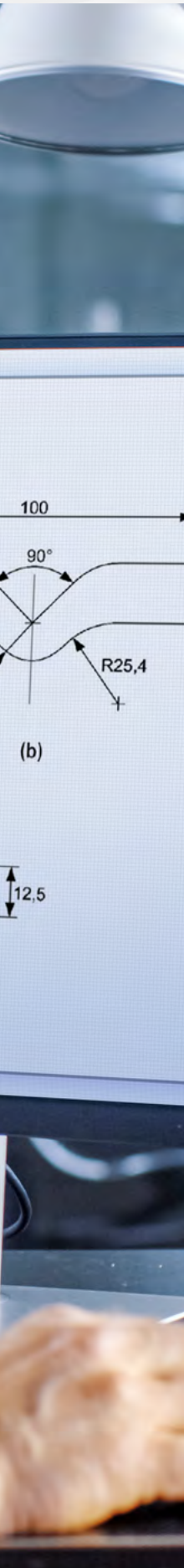
NON-SHIFT
HYDRAULIC GRIPS

PARALLEL
GRIPS

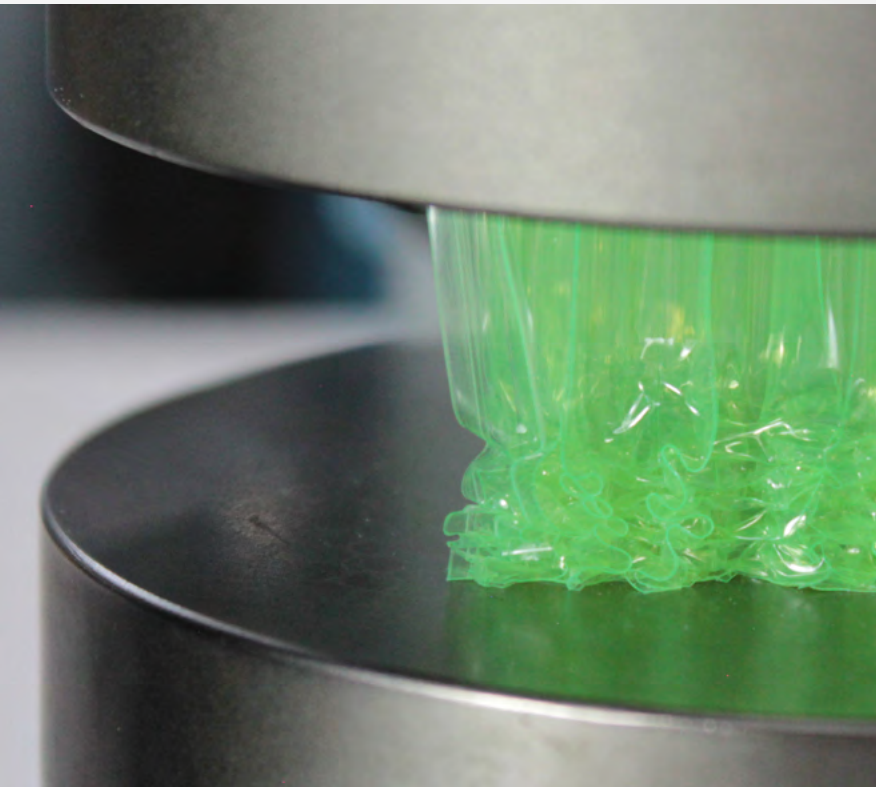
PARALLEL
HYDRAULIC GRIPS

FURNACES

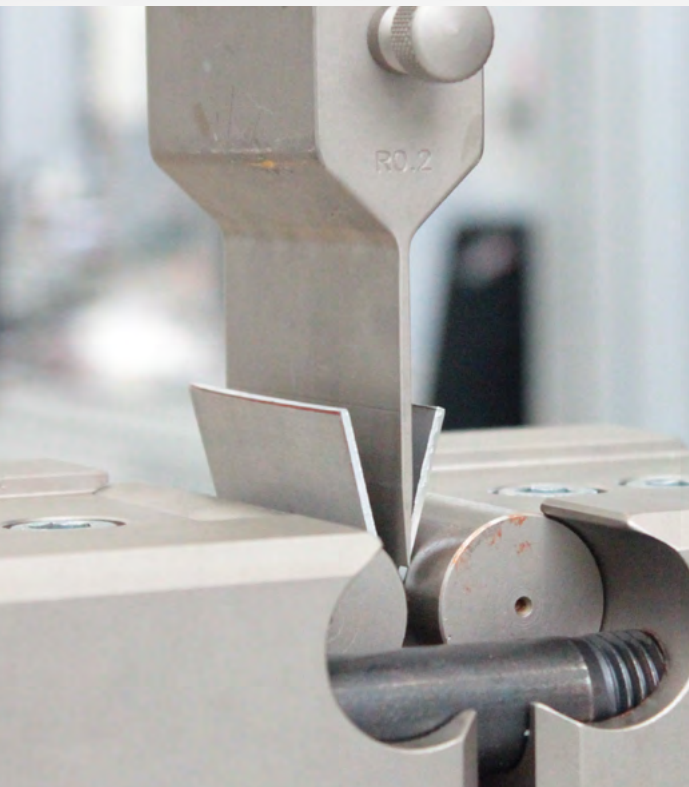
THERMOSTATIC
CHAMBERS



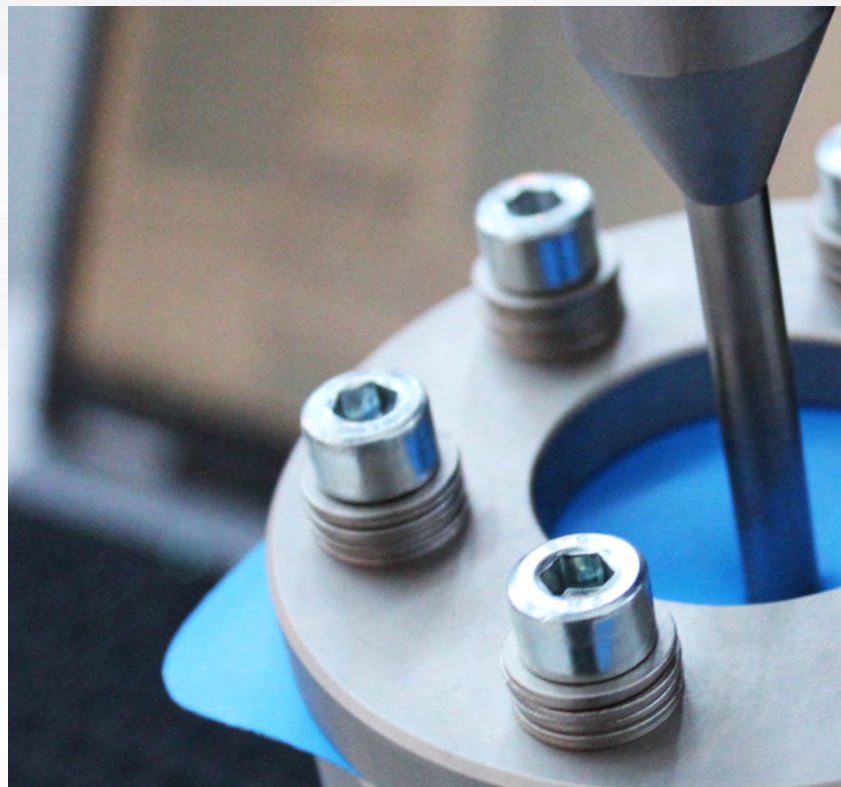
Compression test on cellular plastic sample



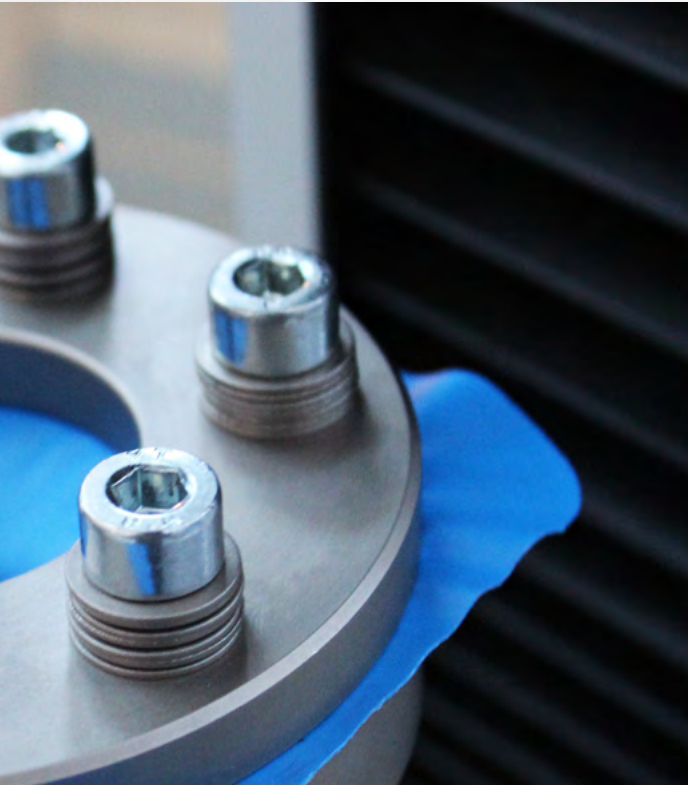
Peel test



Bending test on metal sample according to VDA 238-100



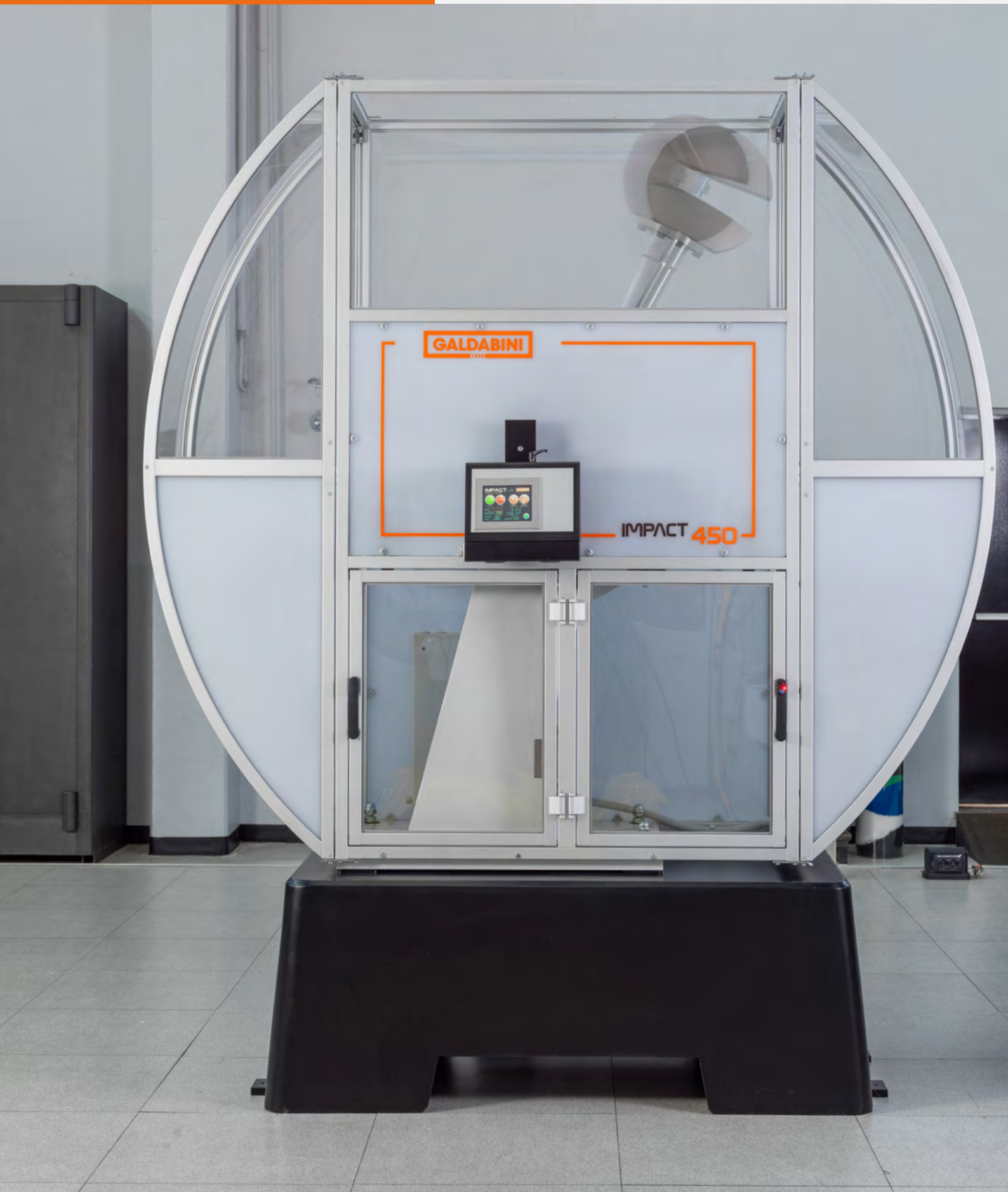
Bend test on composite material



Resistance to puncture of flexible film according to ASTM F1306



Hot temperature test with furnace according to ISO 6892-2



IMPACT Pendulum with loadable plinth and open doors suitable for testing according to ISO 148, ASTM E23, ASTM A370, ISO 14556 and ASTM E2298

Impact tests

The specimen is hit in the center by an oscillating hammer. The impact generated inspired us to name our pendulum, **IMPACT**.

Our IMPACT pendulum tool is designed for maximum safety, with features that exceed regulatory requirements, including a metal bar that mechanically separates the operator from the area where the specimen is manually loaded.

Transparent polycarbonate panels allow the operator to always observe the impact test.

The tool includes a motorized return of the hammer to the release point, eliminating any uncomfortable and potentially dangerous manual lifting.

LABTEST IMPACT software manages the entire test, allows for statistical analysis, and batch testing with just a few clicks.

Robotic systems can be projected by integrating tools for cold testing, as cryostats, or six-axis robots for automatic loading of each specimen.



Smart Controller

The **UTM controller** features a simple panel for quick response. It is **extremely easy to use** because it is designed with only useful and intuitive buttons for managing the machine and conducting the test in just a few steps.

Touch screen and PC ALL IN ONE



Smart Opening

Two doors. Two different functions.

Our impact pendulum has been designed based on the needs of operators who require **consecutive test execution speed** and immediate recovery of broken specimens.



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Tensile test with carbon specimen on Quasar 250 equipped with wedge grips and VideoXT



R&D for new and eco applications

according to ISO, ASTM, and other International Standards

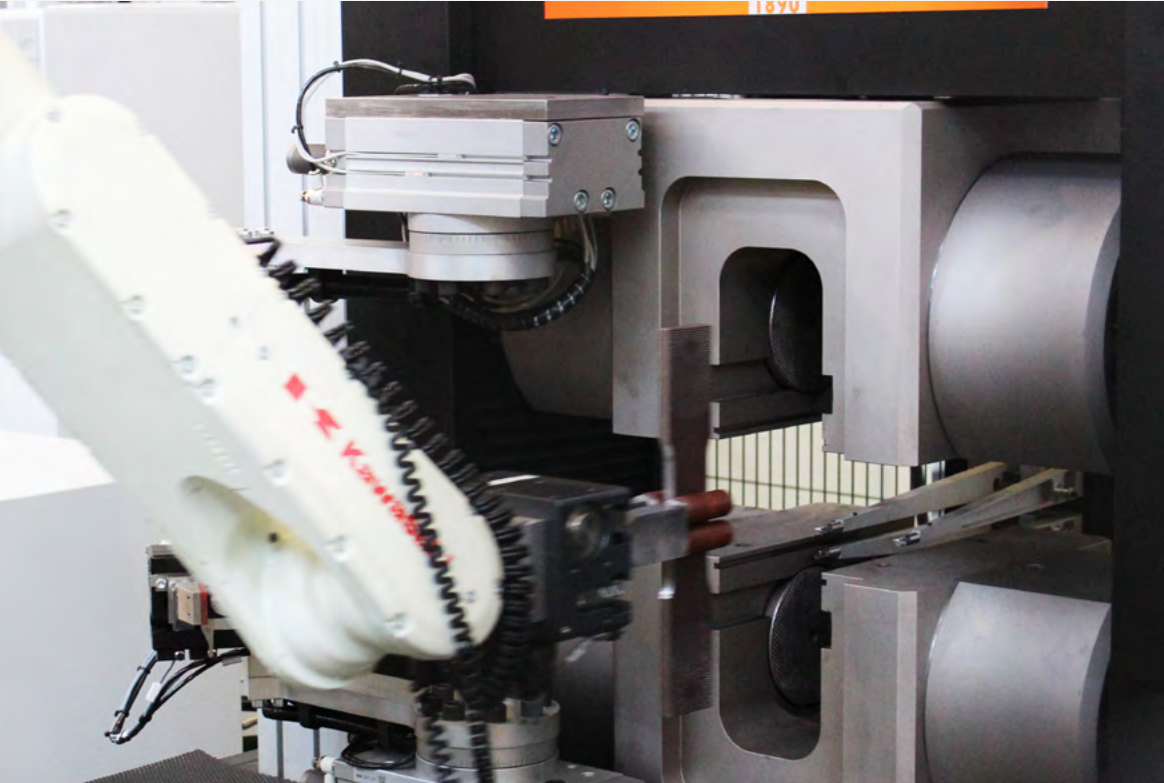
In the field of new material development, composites are a trend topic and, given the complexity of the material, specific tests are necessary to evaluate adhesion strength and resistance reduction between different types of materials.

Our range includes **equipment compliant with ISO, ASTM, as well as DIN and JIS Standards**. We also offer tools specifically designed for testing various shaped and natured specimens.

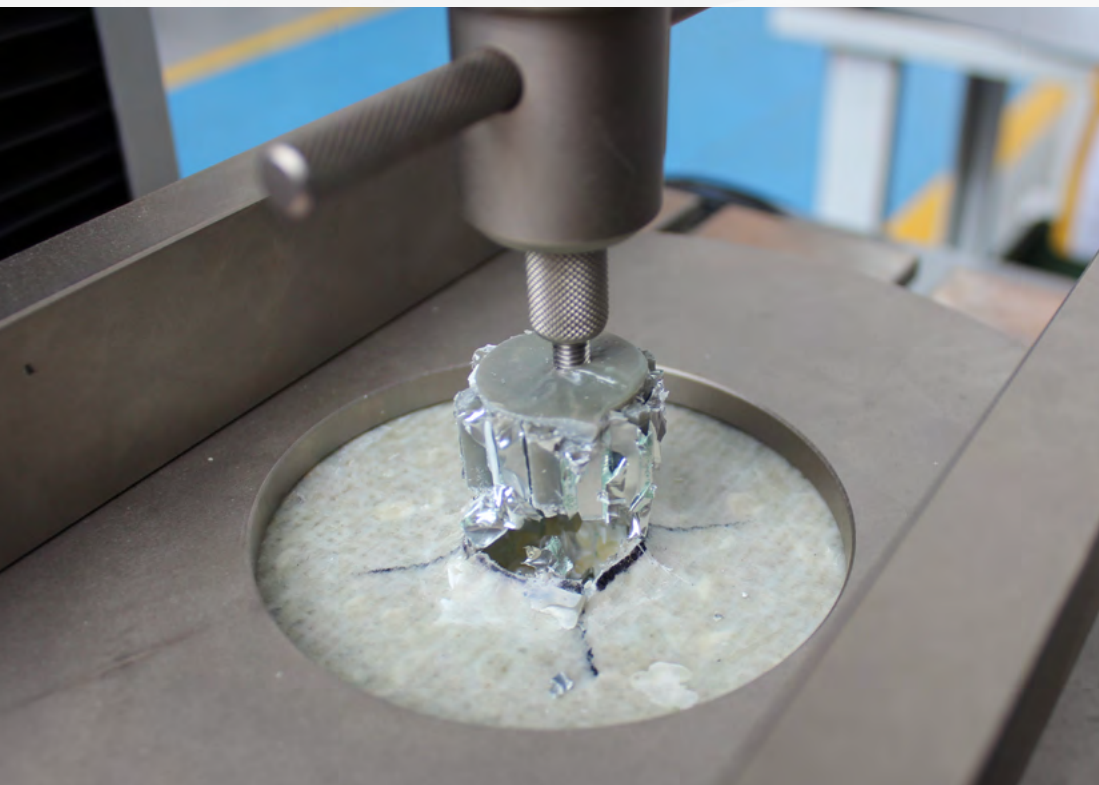
Our R&D team is constantly looking for smarter, more practical, and accurate solutions to adapt our testing machines, grips, and extensometers to all materials in use, from classical to eco-friendly innovations.

Something Special

Robotized system for continuous testing on metal specimens according to ISO 6892-1

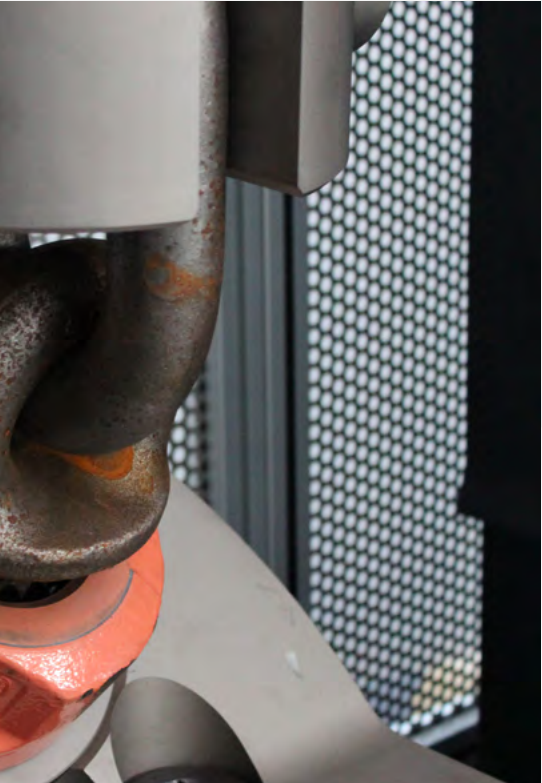


Tensile test on eye-bolt

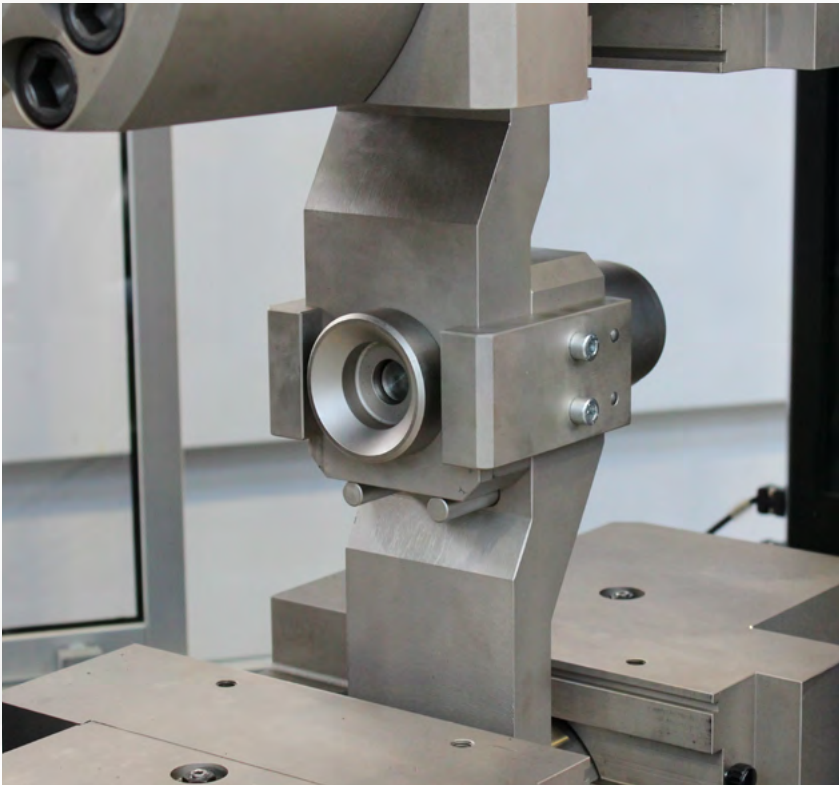


Tensile test on composite material

Compression test on wheels



Compression test on tire



Screw shear test

Service, Maintenance & Packages

Our testing instruments are periodically revised and, if necessary, calibrated. Maintenance, repair, and assistance activities guarantee maximum reliability over time.

For more information on retrofitting, maintenance contracts, and calibration, scan the dedicated QR CODES:

RETROFIT



MAINTENANCE

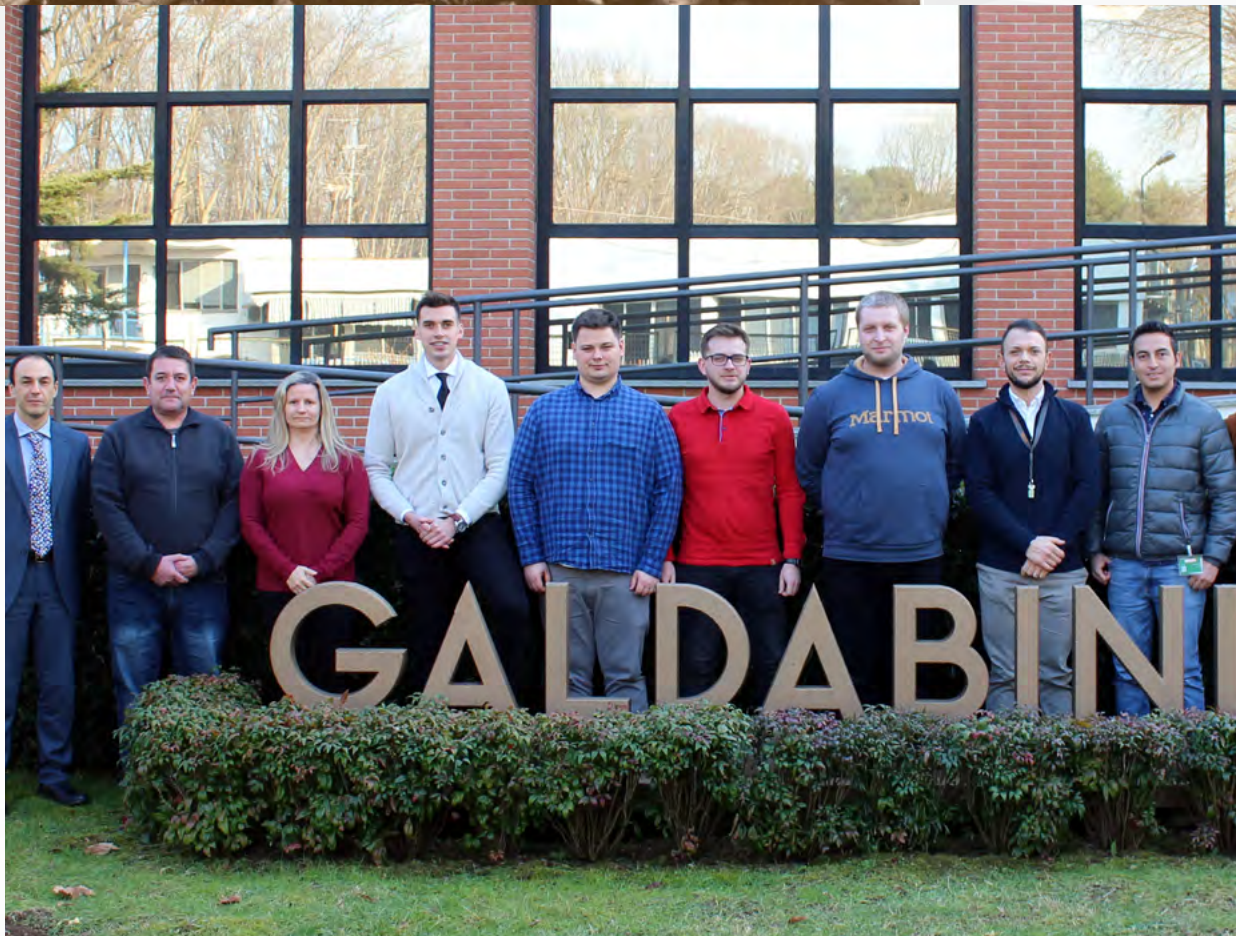


CALIBRATION





Employers in the years of the foundation dated 1890.
Presumably around the early twentieth century, where it all started



Event dedicated to the training of agents and distributors

Who we are

A crowded **network of partners, distributed across all continents**, guarantees commercial, technical, and assistance support worldwide.

Every year, agents and distributors are trained through in-person and/or remote training, both on general topics that bound all our products, as a software release or the development of a new gripping solution, and on training sections

dedicated to a specific need of the territory, the assisted customer, or a new entry into the organization.

They are all extremely interesting realities, valid and structured people who passionately assist all our customers to the best service.

Our esteem and appreciation reside in all of them.



To learn more, visit our website: galdabini.it or scan the QR CODE



Artist: Diego (13y)



Artist: Manuel (10y)



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