whitelab
MATERIALS

BUSINESS UNIT PROFILE

whitelab
MATERIALS

AM
AGIOMETRIX

TESTING
TEST ENGINEERING

VETORIX

LINSET

QI Composites

CTR

LAB
MET
LAB|MET
METAL SERVICES GROUP

METAL
SERVICES
METAL SERVICES
MATERIALS TESTING
METAL SERVICES GROUP

LAMBDA CND

THE GROUP

Whitelab was created with the specific goal of establishing the **largest network of testing facilities in Italy**.

Starting from a widespread network of laboratories across the territory, a new **leading group** was created for testing and compliance and services in various sectors of the industry.

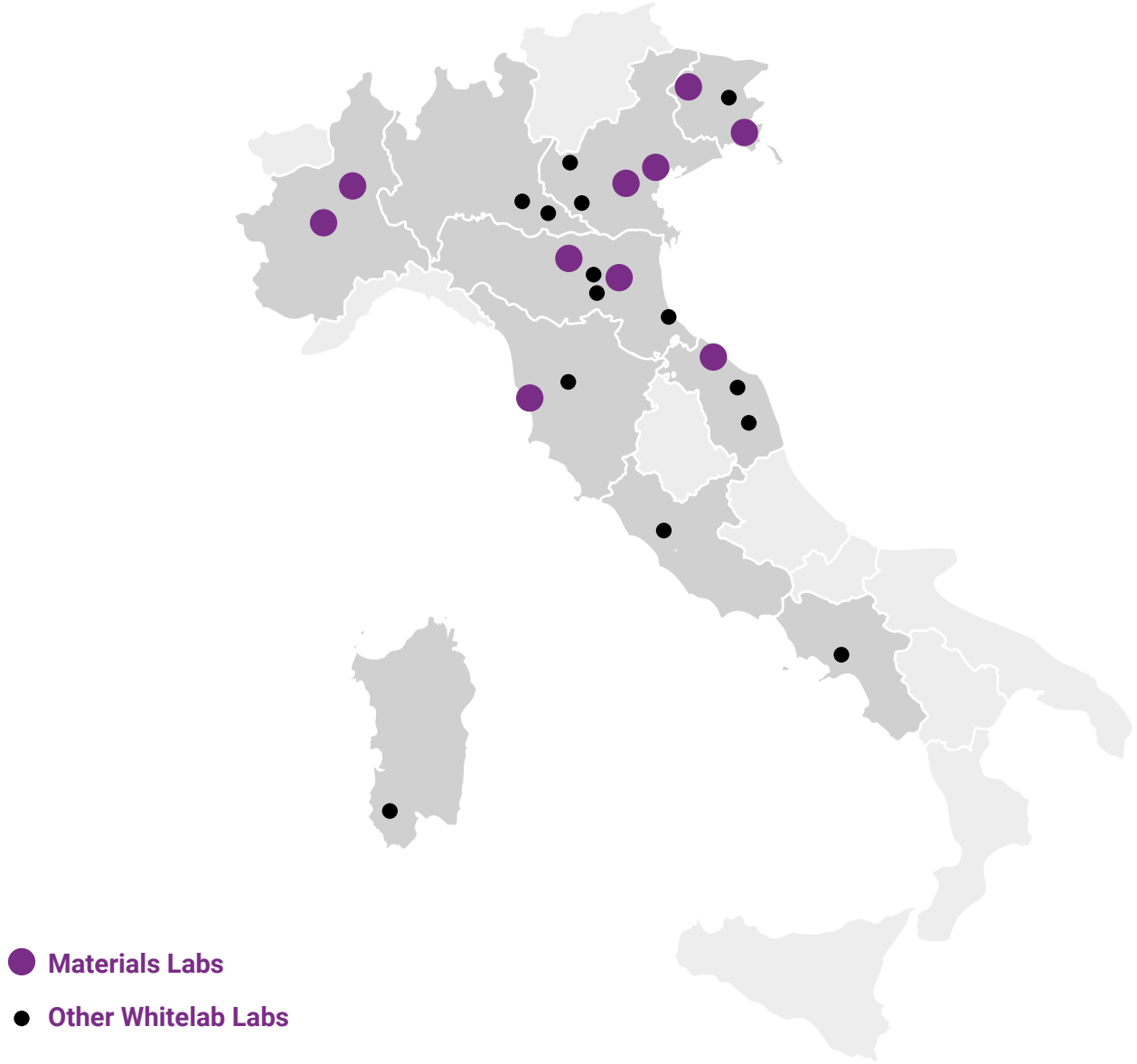
Our laboratories deliver high-performance services that meet global quality standards, typical of a large corporation, while maintaining a **customer-centric approach** reminiscent of a local business. This way, each lab within the group combines **top-tier expertise** and know-how, capable of tackling even the most complex challenges in every industry.

whitelab
TESTING & COMPLIANCE

THE GROUP NUMBERS

+20	+600	+65	+500k
OPERATING SITES	EMPLOYEES	MILIONS OF REVENUE	REPORT PER YEAR

THE MAP



WHERE WE OPERATE

We operate **globally** offering our expertise and services to clients around the world. Our **international presence** enables us to provide **customized solutions**, ensuring quality and innovation in every project, regardless of location.

We meet the demands of various industries, maintaining **high standards** of efficiency and performance on a global scale.

THE BUSINESS UNITS

To better serve our target industries, Whitelab has structured its operations into **4 specialized Business Units**, each dedicated to specific market sectors.

- Whitelab **Environmental**
- Whitelab **Materials**
- Whitelab **Life Science**
- Whitelab **HSE & Training**

This strategic division enhances efficiency, expertise and market focus, allowing us to provide **tailored solutions** and **cutting-edge services** across different industries.

OUR B.U. NUMBERS

9	+250	+50	+3k
OPERATING SITES	TESTING EQUIPMENTS	TECHNICIANS ON FIELD	TESTING METHODS

THE GROUP SECTORS

AEROSPACE & DEFENCE

AUTOMOTIVE

MARINE

INDUSTRIAL

MEDICAL DEVICES

CONSUMER GOODS

WHAT WE DO

NDT

NON-DESTRUCTIVE TEST

DT

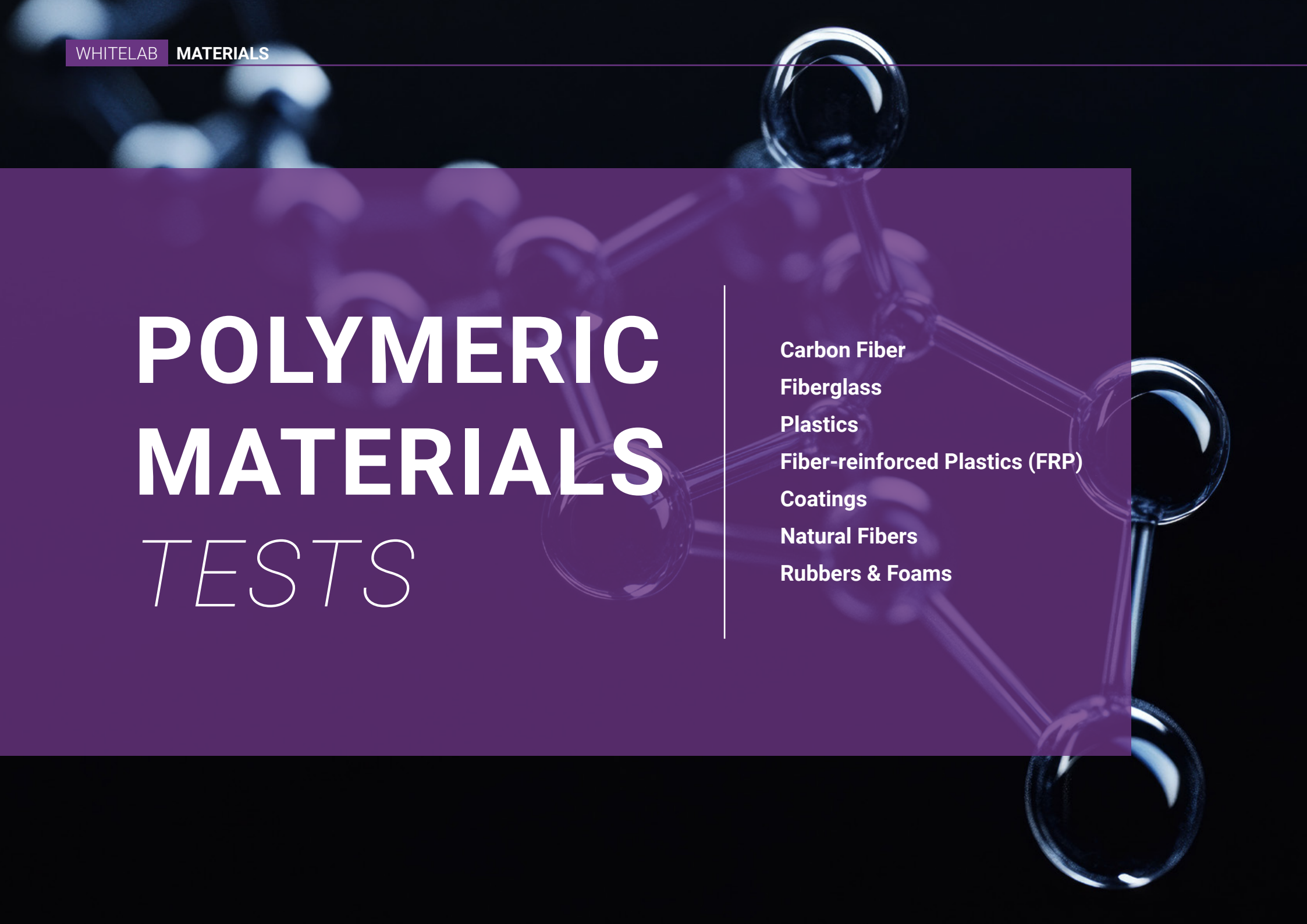
DESTRUCTIVE TEST

MC

MATERIAL CHARACTERIZATION

ENG

ENGINEERING



POLYMERIC MATERIALS *TESTS*

- **Carbon Fiber**
- **Fiberglass**
- **Plastics**
- **Fiber-reinforced Plastics (FRP)**
- **Coatings**
- **Natural Fibers**
- **Rubbers & Foams**

POLYMERIC MATERIALS TESTS

MECHANICAL TEST

Tensile, Compression, Flexibility, Resilience, Hardness, Impact, Pull-off Adhesion Test

CHEMICAL / PHYSICAL TEST

DSC, DMA, VICAT, FT-IR, Density, SEM

MICROGRAPHY

Thicknesses, Porosity

CHEMICAL HAZARDS RESISTANCE

Evaluation of materials behaviour upon Chemical exposure

ENGINEERING SUPPORT

Project Management, Production Planning, Fixture Development & Construction, Feasability Analysis, Production Optimisation, Quality Planning, Reverse Engineering

CORROSION TEST

CASS, NSS, Corrosion cycles, Humidity

POLYMERIC MATERIALS TESTS

VISUAL / AESTHETICS ANALYSIS

Colour, Gloss, Structure, Wave Scan

VIBRATION TEST

Random Control, SoR, RoR, Swept sine Control, RSTD, Multi-sine, Sine Oscillator, Classical Shock Control, TTH, SRS Synthesis, Transient Random Control, Earthquake Testing Control, Time Waveform Replication, Combined Environmental Testing

ENVIRONMENTAL SIMULATION

Temperature and humidity cycles test, Fixpoint aging, solar box in controlled environment (hot, humid, cold, dry)

FAILURE ANALYSIS

Tests over criticism noticed on products and processes

EMISSION TEST

Characterization of substances emitted by materials

CUSTOM TEST

Tailored tests following specific requirements from customers

POLYMERIC MATERIALS TESTS

COMPUTED TOMOGRAPHY

Cone beam and Gantry CT.
Mini/Micro/Nano Focus. From 140kV to 600 kV, up to 1500W power.
From high resolution detection to oversize objects scan

ULTRASONIC TEST

Conventional P/E and advanced Phased Array (PA) equipment.
PA permits B-scan (side view) and C-scan (top View), also using the Wheel Probe useful to get a quick scan of wide surfaces

THERMOGRAPHY

Passive and Active Thermography.
Active Transient T. useful to detect any relamination or disbonding on wide CFRP panels or complex geometry shaped components.
Optimized to enhance any defect on sandwich structures

DIGITAL IMAGE CORRELATION (D.I.C)

Non-contact measurement technique for measuring motion and deformation using digital images of an object in High Resolution or High Speed configuration

OPTICAL ACQUISITION AND 3D DIGITAL SCAN

Contactless 3D - 2D metrology of objects from a few millimetres to several hundreds meters. Cutting-edge optical and laser sensors to match the most demanding accuracy requirements

ADVANCED NON-DESTRUCTIVE TEST

Combined NDT techniques such as PHASEOGRAPHY or THERMOSONICS to ensure a better PoD (Probability of Detection) getting the best sensitivity from each single testing technique

METALLIC MATERIALS *TESTS*

- **Carbon Steels**
- **Alloy Steels**
- **Stainless Steels**
- **Superalloys (Nickel-based / Duplex)**
- **Light Alloys**
- **Tool Steels**
- **Welds**
- **Brazed Joints**

METALLIC MATERIALS TESTS

CHEMICAL ANALYSIS

Optical Emission Spectrometry,
ICP Plasma Analysis, XRF,
C/S Determination, N/O/H Determination,
On site Chemical Analysis at Customer
(PMI)

MECHANICAL TEST

Tensile Test (rT – 1000°C),
Impact Test (+200°C / -196°C),
Hardness Measurements,
Creep and Stress Rupture Tests,
Fracture Mechanics

METALLOGRAPHY

Micrographic Examination,
Determination of the inclusions content,
Grain Size, Microhardness
and measurements of thickness,
Macrographic Examinations

SEM ANALYSIS

Sem Micrographic Examinations
Sem Microfractographic Examinations
EDX Analysis

SIMULATION TEST

Neutral Salt Spray (NSS) Salt Acetic
Fog (AASS), Cupro-Saline Fog (CASS)
Humidistatic Test, Kesternich Test (EN
ISO 6988, DIN 50018), SWAAT Test,
Salt spray modified with sulphur
dioxide (ASTM G85 Method A4)

CORROSION TEST

ASTM A262, ASTM A923, ASTM G34,
ASTM G48, Streicher corrosion,
SOHIC According to NACE TM 0103,
SSC/HIC According to NACE,
Customer-specific climate chamber tests

METALLIC MATERIALS TESTS

WELDING TEST

We are able to perform all destructive tests and non-destructive controls aimed at qualifying welding procedures (WPS and WPQR) and related professional figures (welders, brazers and welding operators)

MACHINING

Years of experience in testing have led to the development of the Mechanical Machining section, which today supplies both the Laboratory departments and customers who request it

HEAT TREATMENTS

Thermal Treatments within its own facilities to support Laboratory activities or on request for specific Customer activities: TT of welding stresses, TT for simulation of production cycle phases.

NON-DESTRUCTIVE TEST

VT (Visual Testing)
PT (Penetrant Testing)
MT (Magnetic Particle Testing)
UT (Ultraonic Testing)
Performed in-house and on-site

CONSULTANCY

Metallurgical consultancy aimed at satisfying the needs of technical and QC offices of companies in the metallurgical and manufacturing sector. Assistance in drafting procedures and documentation

FAILURE ANALYSIS AND LEGAL TECHNICAL CONSULTING

Field and in house investigations, using advanced analytical techniques.
Techinical Support in Legal Disputes

METALLIC MATERIALS TESTS

RESIDUAL AUSTENITE DETERMINATION

Determination of retained Austenite volume fraction using XRD technique

RESIDUAL STRESS MEASUREMENT

Residual Stress measurement by Hole Drilling Method

TRIBOLOGY AND WEAR TEST

Universal tribometer for wear testing equipped with integrated 3D profilometer

PHASED ARRAY AND TOFD

New technologies for ultrasonic testing are increasingly gaining ground in global industry, gradually replacing conventional technology and radiographic methods

TESTING ON MATERIALS FOR CIVIL ENGINEERING

Laboratory and on-site testing of materials and products, in compliance with the authorization of the Ministry of Infrastructure and Trasport according to Law 1086/71 and Circular 7617/STC

METALLOGRAPHIC REPLICAS

Microstructural examination by replication performed on site or in the laboratory. Replications can be observed under an optical or electronic microscope

OUR UNIQUE TOOLS

Our laboratories are equipped with some of the **most advanced** and **unique testing machinery** available on the market.

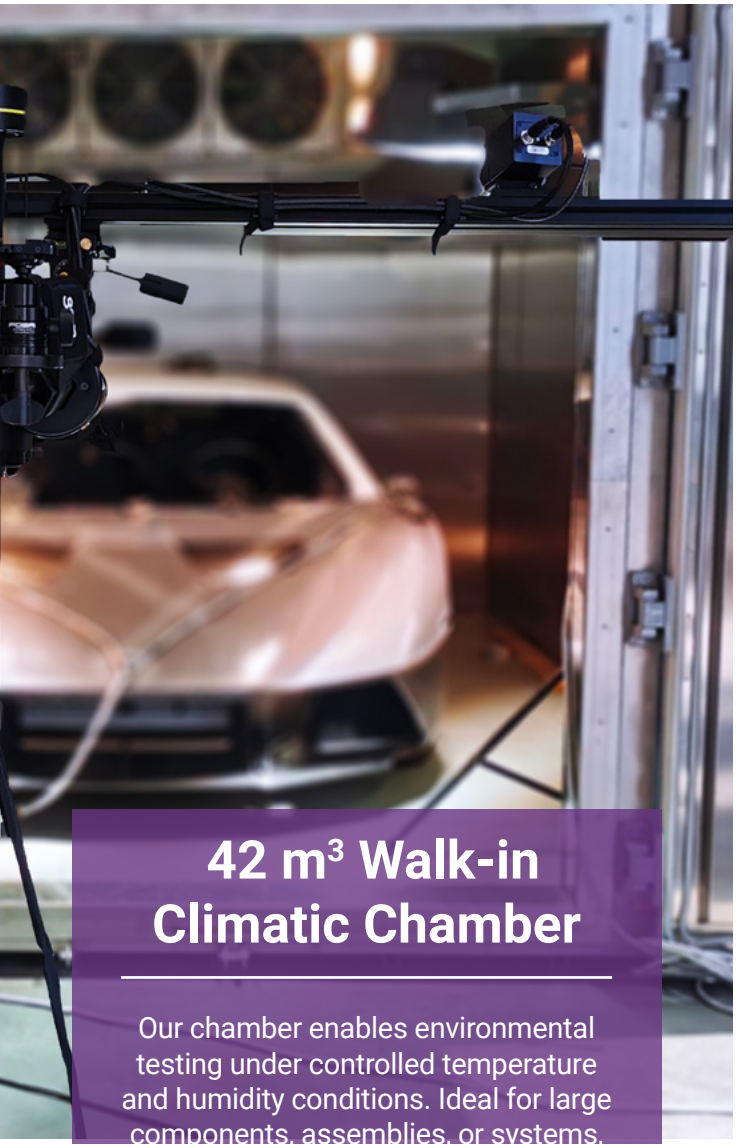
We perform both destructive and non-destructive tests on components ranging from micro-scale to extra-large, pushing materials and compounds to their absolute limits.

Our cutting-edge technology allows us to scan even the most complex geometries with the highest resolution, ensuring unparalleled accuracy and reliability.

We are not just a testing facility, but a **strategic partner** in innovation and quality assurance.

Digital Image Correlation Systems

Non-contact technique for capturing motion and deformation through digital image analysis. 3D measurement field with dynamic acquisition at 12 MP and high-speed capture up to 12.000 Hz



42 m³ Walk-in Climatic Chamber

Our chamber enables environmental testing under controlled temperature and humidity conditions. Ideal for large components, assemblies, or systems, it ensures accurate simulation of real-world climatic stresses

CT V Tomex L

Double gun CT system for big samples size D1600 x H3000 mm High Resolution up to 70 µm on the whole volume. Advanced algorithms and tools to grant best-in-class probability of detection even on serial inspection

CT STG-One 225 HR

The most innovative gantry system ever built for tomographic application. Inner ring diameter 1,5 mt for a lenght of about 10 mt proved capability to get the scan of an entire America's Cup foil ARM or a full F1 chassis

OUR UNIQUE TESTS

RESIDUAL AUSTENITE MEASUREMENT USING X-RAY DIFFRACTOMETER

The **residual Austenite measurement** through X-ray diffraction is one of the most unique test we can perform.

This technique, standardized by **ASTM E-975**, is currently the fastest and most accurate method available for microstructural analysis.

We are the **only laboratory in Italy** offering this service, providing our clients with an exclusive advantage in terms of speed, accuracy, and competitiveness.

OUR CERTIFICATIONS

We ensure a certified level of excellence, with **ISO/IEC 17025 accreditation covering over 100 types of tests**, and a quality management system compliant with **AS/EN 9100**, the standard specifically developed for the aerospace, defense, and aviation industries.

These certifications reflect our continuous commitment to **quality standards**, full **traceability** and **process reliability**, positioning us as a technically qualified partner aligned with the highest **international standards**.

Furthermore, we are **authorized by the Italian Ministry of Infrastructure, pursuant to Law 1086/71, to perform all mandatory testing required for the structural validation of civil and industrial works**. We deliver technical support to site supervisors and design teams, ensuring the structural integrity and compliance of each project.

OUR SKILLS

ALL-AROUND SUPPORT

We possess the capabilities, infrastructure, expertise, man power and advanced technologies to **perform any type of testing**, both **destructive** and **non-destructive** ones in addition to **engineering** and **product development** support. We can provide comprehensive consulting services to solve a wide range of industrial production challenges.

SINGLE POINT OF CONTACT

We autonomously manage the logistics of every project, providing the client with a **single point of contact throughout the process**. Regardless of the laboratory where the tests are performed, we handle everything and deliver a detailed report to the client. Is not just about performing a test, is about **supporting your business in the most efficient way**, cutting out all downtime and logistical inefficiencies.

EXPERTISE

The combined wealth of our **experience and know-how** grants us the access to an extensive database and a collection of case histories. This invaluable knowledge base allows us to deliver insights and solutions that are difficult for any competitor to match, ensuring that our clients benefit from **the most comprehensive and advanced testing methodologies available in the industry**.

FURTHER, FASTER, EASIER

Over the years, each of our laboratories has built deep expertise in highly competitive sectors, thanks to our close collaboration with clients throughout the entire engineering process. Our shared mission—to **bring real added value** to the R&D phase—is the driving force behind this joint venture.

From day one, we have embraced this philosophy, and today, we offer the market something truly unprecedented: a **unique synergy** among some of the country's top testing laboratories. By combining our expertise, we have significantly elevated the quality and technical depth of our services. Our extensive case history gives us access to a vast database, setting us apart and enhancing the value of our consultancy.

OUR PARTNERSHIP, YOUR SUCCESS.

CONTATTI

www.agiometrix.com

www.vetorixndi.com

www.stg-one.com

www.testingsrl.it

www.qicomposites.com

www.linset.it

www.metalservices.it

www.lambdacnd.com

whitelab
MATERIALS

www.whitelab.it