



TECNILABO

TECNIPLAST GROUP

*Pharma &
Industry*

**MODULAR
CONTROLLED
ENVIRONMENT
SOLUTIONS**





**Made in
ITALY**

YOUR NEEDS OUR STANDARDS

Tecnilabo delivers, through its KW and Bioair equipment lines, custom-engineered modular controlled-environment solutions, combining temperature control, contamination management and innovation to support GMP-compliant processes across pharmaceutical and industrial applications.

By integrating different technologies into a single, coherent approach, we deliver controlled environments tailored to your specific processes.

Total reliability where control is critical: we offer engineering precision, design quality and manufacturing excellence.

Our solutions are developed and manufactured in Italy.

**GMP
compliant**

**Environmental
Care**

COMPLIANCE

Controlled environments designed to meet **GMP compliance**, ensuring all our systems provide maximum operational efficiency.

- **Stable and reproducible environments** for critical processes
- **Controlled contamination levels** across operations
- **Documented and traceable performances**, supporting regulatory expectations

VALIDATION

Through in-depth analysis, feasibility studies and regular communication with our partners, we refine every detail to ensure **maximum customer satisfaction**.

- **Streamlined validation activities**, with clear and accessible control points
- **Reliable documentation**, aligned with regulated requirements
- **Continuity of compliance** throughout the operational lifecycle



ENGINEERING

Each solution is based on an **integrated, modular design approach**, adapted to specific processes, layouts, operator needs and space constraints.

- **Design phase:** analysis of requirements and development of tailor-made solutions
- **Customised** environments, aligned with actual application needs
- **Scalability and flexibility** as requirements evolve
- **Consistent performances** for repeatability and process control

SERVICE

Support extends across all project phases, ensuring continuity from concept to long-term operation.

- Project management
- Construction management
- Implementation phase: installation, commissioning and qualification support
- Operational phase: ordinary and predictive maintenance, assistance help desk

TEMPERATURE-CONTROLLED STORAGE SOLUTIONS

A complete range from -86°C to +5°C, ensuring full protection of sensitive materials within controlled environments.

Designed for regulated contexts, the systems enable **GMP-compliant** storage conditions, supporting process consistency, documentation and traceability, while simplifying daily operations.



Key benefits

- ◇ **Support compliance** through controlled, monitored and reproducible temperature conditions
- ◇ **Protect product integrity** by ensuring stable environments and minimising deviations
- ◇ **Reduce contamination risk** with solutions compatible with classified and controlled areas
- ◇ **Ensure traceability** via continuous monitoring, alarms and data management
- ◇ **Improve operational efficiency** through flexible installation and optimised space usage

PRODUCT RANGE

Ultra-low temperature freezers (ULT) -80°C

-40°C freezers (with optional automatic defrost)

Refrigerators (single and double door)

Combined refrigerator/freezer units

Full-redundant systems with enhanced storage security



Reach-in solutions can be configured as freezers, climatic units or growth chambers, combining **temperature, humidity and lighting** control when required, to support both storage and environmental simulation applications.

REACH-IN MODULAR SOLUTIONS

High-performance temperature and climatic control in a compact, modular format, ensuring **reliable storage and testing without the infrastructure complexity of large installations**. Temperature range from -75°C to +30°C.

Key benefits

- ◇ **Protect sensitive materials** with stable and uniform temperature conditions
- ◇ **Supports GMP compliant operation**
- ◇ **Enhance process flexibility** with modular configurations
- ◇ **Reduce risks** through redundant refrigeration systems and continuous monitoring
- ◇ **Optimise available space** while maintaining high storage capacity
- ◇ Software 21 CFR Part 11 compliant, GMP Annex 11

WALK-IN MODULAR SOLUTIONS

A complete range that supports reliable storage from -40°C to +30°C, ensuring **full protection of sensitive materials within controlled environments**. Designed for regulated contexts, the systems enable **GMP-compliant** storage conditions.

Key benefits

- ◇ **Ensure environmental consistency at scale**, maintaining stable conditions across large walk-in volumes
- ◇ **Support GMP environments** through controlled parameters
- ◇ **Maximise operational efficiency** with layouts tailored to workflows, storage logic and material handling
- ◇ **Adapts to evolving needs** through modular design and scalable configurations
- ◇ Software 21 CFR Part 11 compliant, GMP Annex 11



Available as cold rooms, climatic chambers or growth chambers, these systems enable a seamless transition from storage to controlled testing environments, within a single integrated solution.



CLIMATIC CHAMBERS

Designed to provide **precise, reproducible environmental conditions**, combining temperature and humidity controls to support stability testing, environmental simulation and quality assurance processes. They enable **reliable and repeatable testing**, essential for regulated applications and long-term studies.

Key benefits

- ◇ **Ensures reliable test results** through precise control and uniform distribution of temperature and humidity
- ◇ **GMP compliant**
- ◇ **Reduces variability in long-term studies** with stable climatic conditions
- ◇ **Protects samples** through integrated safety systems and alarm management
- ◇ Temperature range +20°C/+50°C
- ◇ Relative Humidity range 30%/80%

MODULAR AIR FILTRATION SYSTEMS

Modulair systems enable the targeted creation of controlled environments, allowing clean areas to be defined according to specific process requirements rather than constrained by existing infrastructure. This approach improves **layout efficiency while supporting precise environmental control.**



Key benefits

- ◇ **Consistent performances:** stable air quality supports product integrity and repeatability
- ◇ **Process driven design:** clean zones are built exactly where required
- ◇ **Long term flexibility:** modular structure allows easy expansion or reconfiguration
- ◇ **Operational continuity:** adaptations can be made with minimal disruption

WALK-IN DOWNFLOW BOOTHS

Safebooth systems provide a **protected space for handling powders and process materials**, ensuring containment while maintaining a controlled working environment. This supports safe operations and preserves surrounding conditions during critical activities.



Key benefits

- ◇ **Enhanced operator protection** with reduced exposure to airborne particles
- ◇ **Containment of contaminants**, limiting dispersion into adjacent areas
- ◇ **Process reliability:** stable conditions reduce variability in sampling and dispensing



PASS-THROUGH TRANSFER SYSTEMS

Safethrough units are designed to ensure the **secure transfer of materials between areas** with different cleanliness levels, maintaining segregation and protecting environmental conditions throughout the process.

Key benefits

- ◇ **Maintained environmental separation:** safeguards cleanliness across adjacent areas
- ◇ **Reduced contamination risk:** prevents uncontrolled air exchange
- ◇ **Continuity of operations:** enables efficient movement of materials without process interruption
- ◇ **Adaptable integration:** configurable solutions to suit different layouts and transfer requirements

ISOMATE ISOLATION SYSTEMS

Isomate isolators provide a fully separated and controlled environment, enabling **safe and reliable handling of sterile or hazardous processes** while reducing dependency on complex facilities. By combining sealed chambers and controlled pressure regimes, they ensure high containment, process integrity and efficient material handling.

Isomate Steri - Positive Pressure

- ◇ Protects the product from external contamination
- ◇ Maintains stable sterile conditions

Isomate Cyto - Negative Pressure

- ◇ Protects operators and laboratories from hazardous substances
- ◇ Ensures secure containment during handling





Pharma & Industry

Controlled environment solutions
Engineered around your needs

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