

Lab automation



Shake, spin, or store

your samples with confidence

Thermo Scientific Cytomat automated incubators and storage systems

Trusted reliability

Worldwide support

Environmental stability

Innovative design

Safeguarding your samples

Cytomat automated incubators and storage systems

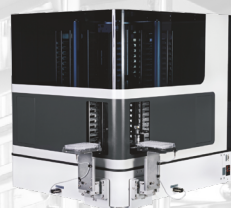
When valuable assay samples are properly stored and accessed, research laboratories can achieve a significant increase in productivity and efficiency.

Laboratory equipment manufacturers and researchers worldwide depend on highly reliable Thermo Scientific™ Cytomat™ automated incubators and microplate storage systems.

With more than 50 years of experience in CO₂ incubation technology, the robot-accessible Cytomat automated incubators and storage systems are the highly regarded in the field, offering:

- A broad range of automated incubators and storage devices
- Continuous operation with maximum sample and operator protection, conforming to:
 - DIN EN ISO 9001 certified production
 - DIN EN ISO/IEC 17025 calibration laboratory
 - CE and UKCA
 - EU Machinery Directive
 - Electromagnetic Compatibility (EMC)
 - RoHS
- Simple robotics teaching and programming for fast integration and start-up
- Superior conditions for all applications requiring precise environmental control





The range

A wide variety of Cytomat systems are available with specific storage capacities, temperatures, dry storage, gassing options and various layout configuration options, supporting their use in multiple applications.

The Thermo Scientific™ Cytomat™ SkyLine High-Throughput Microplate Storage and Sequential Delivery device

can hold up to 728 microplates in 14 stackers. Providing rapid plate access, its built-in plate sequencer safely separates and precisely centers labware for optimal transfer placement. Plates can be loaded back into the system, eliminating the need for additional ambient storage, and the optional plate lift gives up to 150 mm of transfer position range, allowing flexible placement in automation systems.

The Thermo Scientific™ Cytomat™ 2-LiN Series

is a compact system with a capacity for 42 standard microplates. This series offers several models with various temperature ranges, ambient storage (hotel), and includes features to reduce the contamination risk such as:

- Optional external water tank with controlled humidity
- ContraCon decontamination routine
- Inner chamber design
- Copper chamber option

The Thermo Scientific™ Cytomat™ 2 C-LiN series with TRUE Orbital Shaking

is based on the Cytomat 2 Automated Incubator and has a capacity of up to 32 standard microplates. The series is available with individual Tower Shaker Stacker, providing ideal conditions for cells in suspension.

The Thermo Scientific™ Cytomat™ 2 Selector Automated Shaking Incubator

for biotherapeutics workflows is designed to accelerate your biologics with stable cell line development. Scale up and simplify your workflow with the ability to automate large volumes with a large shaking diameter inside an incubator. Reduce the risk of contamination in-between runs with the built-in ContraCon decontamination routine.

The Thermo Scientific™ Cytomat™ 5 C Series

provides medium-capacity (105 SBS-standard microplates) incubation and storage while still offering all of the features of the well-established Cytomat 10 automated incubators. It also benefits from the full range of Cytomat automated incubator options and accessories, opening up an array of possibilities to suit your requirements and specific applications.

The Thermo Scientific™ Cytomat™ 10 Automated Incubator

is our most advanced, offering wide temperature range and ambient storage (hotel) units, with a mean access time below 10 seconds and capacity for 210 microplates. A fully automated decontamination routine, controlled humidity and superior temperature control help ensure dependable sample protection.

The Thermo Scientific™ Cytomat™ 24 Series

is a floorstanding device, with a capacity for 504 standard microplates and is equipped with the ContraCon decontamination routine. In addition, you can select controlled humidity and a solid copper chamber. This series is available as an incubator, a wide temperature range unit, and a dry and ambient storage (hotel) device.

Trusted reliability

Cytomat automated incubators and storage systems

Worldwide support

Our lab automation service powers Cytomat device service and support services. Like all of our services, support for our Cytomat automated incubators helps increase your productivity via increased uptime, reduced costs, and optimized system performance.

Software integration

Our experts will help your system operate seamlessly with any automated solution. We minimize and simplify robotic teaching and programming for fast implementation and start-up. Software commands are easy and intuitive.

Customized solutions

Define the configuration of your robotic system or workstation through a choice of microplate, T-flask, or petri dish handling. A wide variety of temperature ranges and gassing environment options are available to provide the right atmosphere for different applications.

Whatever your Cytomat system configuration, your customized solution is certified to DIN EN ISO 9001 and supplied with full documentation, plus a quality test certificate similar to our standard Cytomat units. As an optional service, we also offer IQ and OQ validation.

Field service

In addition to phone or email-based technical help, you can access experienced Field Service Specialists dedicated Cytomat systems. Our trained Service Engineers are available to minimize the average repair time.

If our standard solutions don't fit your requirements, our Engineering and R&D teams can design and develop customized products that meet the most demanding needs.



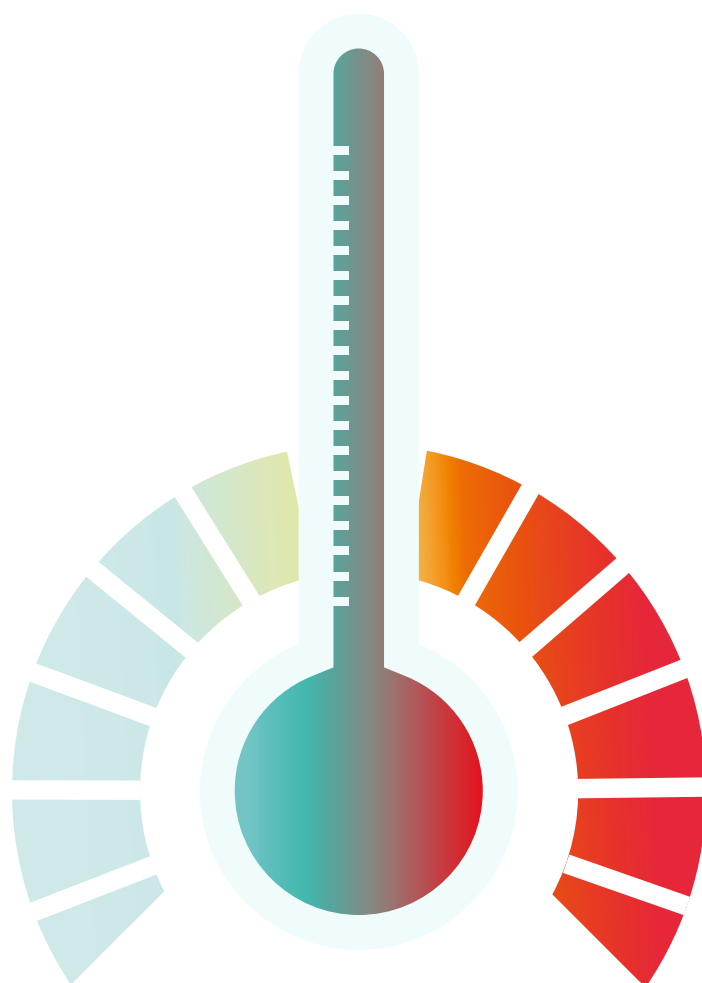


Environmental expertise

The Cytomat system accommodates all standard microplate formats and provides a choice of temperature (+4 to +70°C) and humidity ranges, as well as gaseous atmospheres.

Cytomat incubators create ideal, stable environmental conditions for cell-based assays. Cooled storage systems ensure a dry climate via inert gas, minimizing absorption of water by DMSO. In contrast, units are available that create hot and humid conditions to minimize evaporation for applications such as primer hybridization.

Advanced Cytomat automated incubator designs promote superior environmental conditions and provide risk-free incubation, assay after assay.



4 to 70°C

High performance and ease of use

Thermo Scientific Cytomat automated incubator and storage devices

Innovative design

With Cytomat devices, users benefit from advanced technology for automated storage and retrieval within a precisely-controlled environment.

The internally automated Plate Shuttle system optimizes microplate handling. It comprises a lift system, a handler for X/Y/Z movement axes, and a heated automatic access door. Plate access won't disturb inner chamber conditions as all Cytomat models are equipped with a small gate. Microplates enter and exit in seconds, significantly minimizing disruption of the controlled environment and providing dependable delivery times.

In addition, the sophisticated stacker (microplate storage) design is equipped with ventilation slots, allowing uniform temperature distribution across all plates.

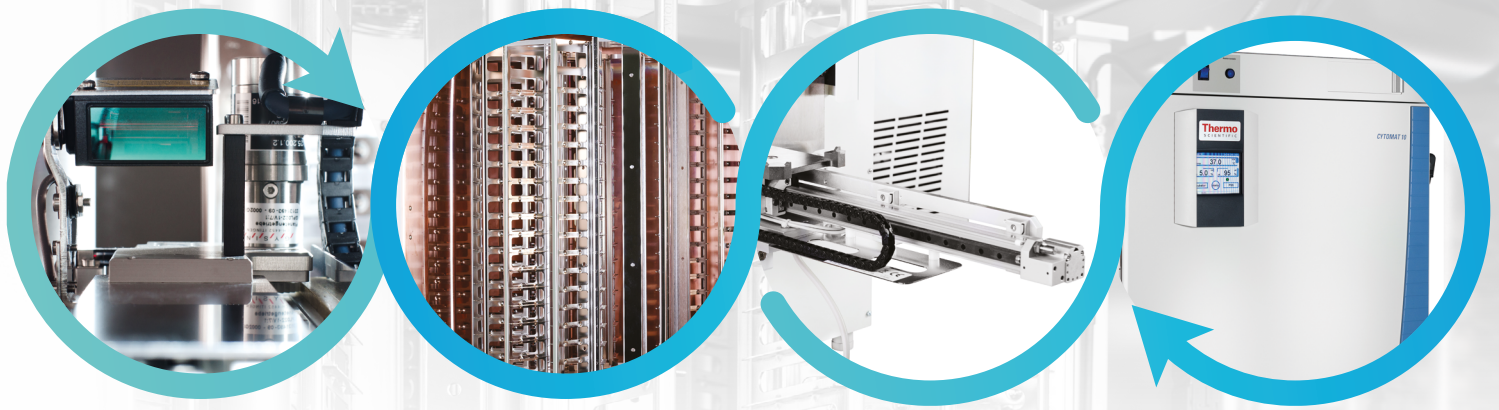
Ease of integration

The Cytomat system delivers the microplate to a single point, offering "easy-teach" integration for any automated system. A single loading and unloading point, the transfer station, makes teaching simple and cuts down the programming time, making an extremely robot-friendly design.

On system implementation, the robot needs to be taught only one position for plate pick-up.

Save significant time during installation and minute-to-minute operation with Cytomat systems.





The right options

Transfer stations

Depending on the system integration, we offer various transfer station options for plate delivery. The standard transfer station presents microplates in portrait format. Other available options include:

- 180° turnable Swap Station
- Linear transfer station with different length
- Vertical plate life for under-bench units

Stackers

The robust stainless-steel, Cytomat Stacker accommodates all standard microplates. Dedicated pitch sizes are available to optimize capacity for different types of plates. They are easily removable for manual loading and unloading and for validated decontamination processes. Stackers can also be autoclaved and dry heat sterilized.

TRUE orbital shaking

The TRUE orbital Tower Shaker Stacker allows flexible individual settings for each stacker, from 300 to 1,200 rpm. The active microplate clamping design secures both the microplate and lid during shaking. Synchronized and unique dual magnetic drive systems are located at the top and bottom to provide consistent shaking amplitude across all microplates independent from the load. The Shaker Stacker allows TRUE orbital shaking of individual microplates.

Barcode reader

The barcode reader is located on the plate handler, allowing retrieval of information on every position, even when manually loaded.

Controlled humidity

Hydra-Smart ultrasonic vaporizer technology for controlled humidity and an external water reservoir for maximum convenience and minimal contamination risk is available for all Cytomat automated incubators.

Solid copper inner chamber

The use of 100% pure copper as the chamber material minimizes contamination (introduced through door opening or sample handling) due to its inherent properties.

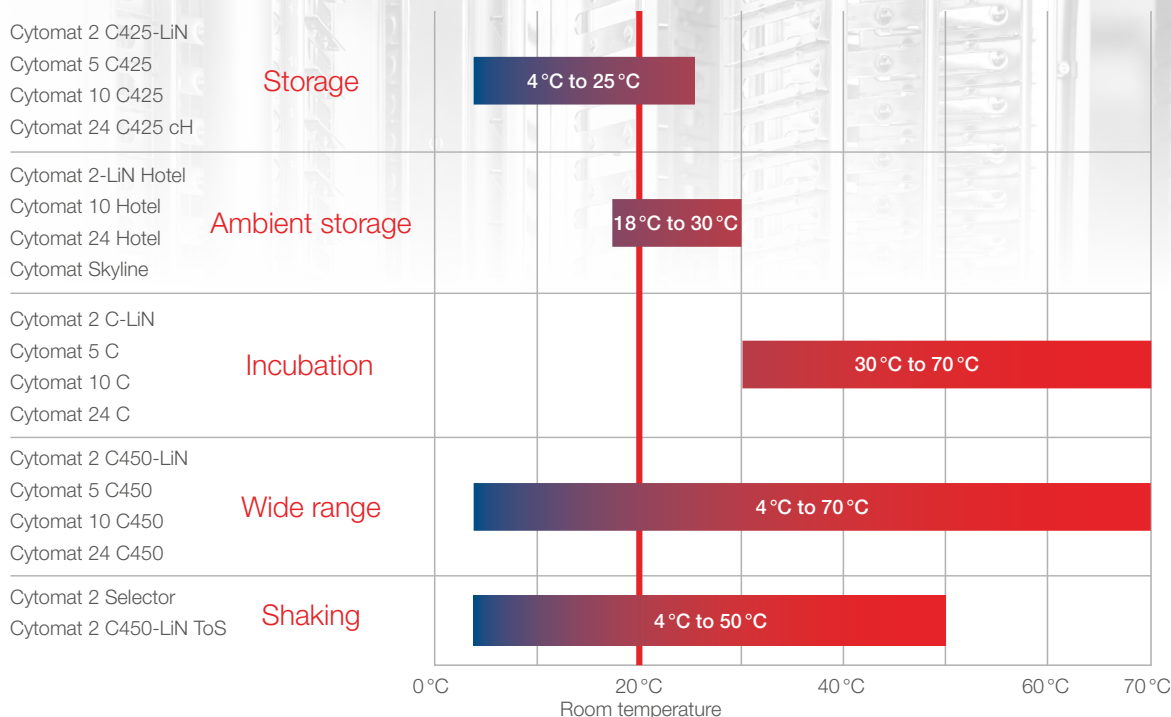
Various gate positions

Various gate positions provide flexibility for numerous layout and space requirements and restrictions.

Further options, such as hydrogen peroxide (H₂O₂) sterilization ports, O₂ control and high humidity, are also available.

Selecting the right Cytomat series model

Choose from a wide range of models to match your application requirements.



Model	No. of Stackers	Capacity*
Cytomat 2	2	42
Cytomat 5	5	105
Cytomat 10	10	210
Cytomat 24	24	504
Cytomat SkyLine	14	560

*standard microplates with max. height of 18 mm.

Options	Description
O ₂ -control	O ₂ control to regulate oxygen level with N ₂ /O ₂ supply
hH (High humidity)	High humidity for up to 98% rel. Humidity @ 37°C
GDF (H ₂ O ₂)	H ₂ O ₂ sterilization ports 1-inch glass-door connection flanges to connect an H ₂ O ₂ generator for sterilization
Gate Position	Various gate positions depending on Cytomat model

Shaking incubator	Shaking diameter	Max plate height**	Capacity
Cytomat 2 C450-ToS	2 or 3 mm	18 mm (Pitch 23)	32 plates
		22 mm (Pitch 27)	26 plates
		47 mm (Pitch 52)	14 plates
Cytomat 2 Selector	25 mm	47 mm (Pitch 52)	16 plates
		55 mm (Pitch 60)	12 plates
		52 mm (Pitch 57)	16 plates
		95 mm (Pitch 115)	8 plates

**other plate heights on request.

DL	Door left hinged
Hydra-Smart	Controlled humidity with external water tank

Accessories	Description
Stacker	Various stacker pitches for multiple microplate heights
Barcode reader	Internal bar code reader
Transfer station	Numerous transfer station options
Plate lift	Vertical moving transfer station for under-bench

Learn more at thermofisher.com/cytomat

Further options and accessories on request.