Expandable automation to streamline lab processes

Thermo Scientific TCAutomation
laboratory automation solution
Efficiency and consistency in sample handling

Improved efficiency and safety of sample management together with short and consistent turnaround times are the key benefits of laboratory automation. By automating the key pre- and post-analytical steps, such as decapping, centrifugation, aliquoting, sorting, recapping, storage and retrieval, Thermo Scientific™ TCAutomation™ helps to manage the increasing workloads and improve quality in clinical laboratories.
Flexible, open and scalable system

Each installation is planned for its individual optimal efficiency delivering improved sample management.

- TCAutomation systems and solutions fit into various floor plans.
- The modular concepts are scalable to meet the changing needs.
- TCAutomation can grow from a small automation system to high volume total laboratory automation.

TCAutomation supports analyzer interfaces from various different manufactures. Workcell solutions may include two or more system combination increasing the analyzer capacity and decreasing the manual work.

- Single entry point without pre-sorting.
- One centralized user interface with sophisticated Middleware software offers integrated functionality for managing the whole workcell.
- Easy addition of pre- and post-analytical functionality.

TCAutomation provides a solution for increased throughput needs and for integration of new analyzing technologies.
Labor-intensive tasks can be automated in different combinations

ES Flex, Entry and Exit Modules - Modules for automatic or manual sample loading and unloading in user-specified racks. In ES Flex automatic retrieval for rerun and excellent sample sorting capabilities.


Centrifuge Module – Automatic and continuous centrifugation of samples.

Decapper Flex Module – Automatic cap removal from different types and sizes of sample tubes.

Recapper Module – Automatic capping of different types and sizes of primary and TCAutomation Aliquoter secondary tubes with conical caps.

Buffer Module – Area for samples waiting for validation and for storing empty carriers.

Cold Storage Module – Refrigerated storage module from which samples can be automatically retrieved back to the track for re-testing or discharged.

Perpendicular and Parallel Bypass Modules – Analyzer-specific interface modules for point-of-space system connections.

Robotic Analyzer Interfaces – Please contact Thermo Fisher Scientific for more information.
Fully featured solutions for optimized workflow

**Effective sample processing**

Samples are transported within the TCAutomation system in single tube carriers that accommodate various tube types and sizes.

- Sample tube carriers with an embedded RFID microchip enable faster and more reliable sample identification.
- Excellent real-time sample tracking possibilities.

**Centralized operation**

TCAutomation controller, based on Windows™ software, offers in a single screen an overview of the entire system.

- Controller allows users an easy way to monitor large automation configurations.
- Route definitions are simple to manage and provide flexibility when optimizing the workflow.

**Expandability step by step**

Depending on the floor plan and efficiency requirements, TCAutomation systems can be expanded step by step.

- Expand functionality with additional modules
- Increase throughput by multiple modules
- Extend analytical integration by adding analyzer interfaces

Track - dual-lane conveyors for sample transport. Available in different lengths.
Automated processes with TCAutomation systems:

- Sample log-in
- Centrifugation
- Decapping
- Aliquoting
- Labelling
- Sorting
- Recapping
- Storage
- Retrieval
- Disposal

Automate pre- and/or post-analytical processes
Integrate analytical systems into one workcell
Consolidate the pre-/post-analytical and analytical workflow

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