



Modular and robust design:
tailor and scale your laboratory setup
with ease, adapting to evolving
research demands.

Variety of applications:
customize applications to suit
specific research needs, ensuring
versatility across multiple disciplines.

**Merel
Collaborative
Laboratory System**
Furniture for
Laboratory
Automation

Accurate repeatability of methods: achieve consistent and reliable results with our system's precision in method execution.

Automated measurements recording: streamline data collection with automated recording, enhancing efficiency and accuracy.

21 CFR Record keeping: ensure compliance with FDA regulations for electronic records, providing peace of mind and integrity in documentation.



NEW!

Introducing the Merel Collaborative Laboratory System, a pioneering solution designed to automate laboratory workflows in pharmaceutical, chemical, and related industries.

The Merel Collaborative Laboratory System is designed as a collaborative workspace aimed at the partial or full automation of selected simpler work processes in pharmaceutical, chemical, and similar laboratories. The system integrates a standard laboratory workspace integrated with a collaborative robot and all necessary electronic control units, setting a new standard for laboratory operations.

Key features:

01.

Collaborative workspace

At the heart of our system is the collaborative workspace, designed for both partial and full automation of laboratory tasks. This innovative approach allows for human interaction where automation alone is not feasible or efficient, blending the best of human expertise and robotic precision.

01.

Customizable and scalable

The system's modular design ensures it can be easily customized and scaled to fit the specific needs of any laboratory. Whether expanding existing capabilities or integrating new applications, the Merel Collaborative Laboratory System grows with your research demands.

02.

Precision and reliability

With our focus on accurate repeatability of methods, the system ensures that every procedure is executed with precision, providing consistent and reliable results that you can trust.

03.

Enhanced data management

Automated measurements recording coupled with 21 CFR compliant record keeping simplifies data management, ensuring accurate and reliable documentation that meets FDA regulatory requirements.

04.

Human-robot collaboration

The inclusion of a collaborative robot in the workspace not only facilitates autonomous automation but also supports partial automation involving human intervention. This flexibility allows for operations where human involvement enhances efficiency and effectiveness, creating a truly collaborative environment.

Applications

The Merel Collaborative Laboratory System is versatile, supporting a wide range of applications in pharmaceutical, chemical, and related fields. From routine analytical tasks to more complex experimental setups, our system provides a robust platform for innovation and discovery.

Application case studies

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2.



1.



3.



4.



5.

1. Ultrasonic bath sample exchanger:

Revolutionizes sample preparation by providing an automated, efficient, and precise method for cleaning and exchanging samples within an ultrasonic bath, reducing manual handling and improving throughput.

2. Solution mixing system for API Reactor:

Facilitates the automated mixing of solutions in API reactors, ensuring consistent and homogeneous mixing critical for pharmaceutical manufacturing processes.

3. Flask shaker:

Offers automated shaking capabilities for flasks, improving the mixing or incubation processes of various solutions with adjustable speed and duration settings to meet specific experimental requirements.

4. Inficon Contura S400 Automation:

Integrates with the Contura S400 system to automate leak detection in packaging, ensuring product integrity and compliance with industry standards without manual intervention.

5. UV/Vis 3-Port Autosampler:

Automates the sampling process for UV/Visible spectroscopy analyses, allowing for high-throughput testing and efficient sample management with minimal manual input.

Key Project Success Factors

The success of the Merel Collaborative Laboratory System is driven by several key factors that underscore its innovation and value to laboratories:

Complete automation solution: provides a comprehensive automation framework that transforms laboratory operations, enabling higher productivity, precision, and repeatability across a wide range of applications.

21CFR11 Compliant software: ensures that electronic records and signatures are managed in compliance with FDA regulations, offering a secure and audit-ready system for laboratories in regulated environments.

Standard piece of laboratory furniture: designed to seamlessly integrate into existing laboratory spaces without the need for extensive modifications, making it an adaptable solution for any laboratory setting.

Fume hood integration for hazardous applications: offers compatibility with fume hoods to safely automate processes involving volatile or hazardous substances, ensuring operator safety and environmental protection.

Upgradable, easy to expand, safe: engineered with safety and scalability in mind, the system is easily upgradable and expandable to adapt to future laboratory needs, ensuring a long-term solution that grows with your research.

Special Feature

Digestory integration with the Merel Collaborative Laboratory System

One of the standout capabilities of the Merel Collaborative Laboratory System is its integration with laboratory digestories, enhancing safety and efficiency in handling and processing hazardous materials. This special feature is designed to ensure that laboratories dealing with volatile or dangerous substances can do so in a controlled, automated, and secure environment.

By focusing on these applications and success factors, the Merel Collaborative Laboratory System stands as a cutting-edge solution for modern laboratories, driving efficiency, compliance, and innovation in research processes.

