

AUTONOMA

VIAL HANDLING MODULE



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VIAL HANDLING MODULE

AUTONOMA's Vial Handling Module system is a complete handling solution for oral fluid vials or similar (e.g. blood, urine, nasal swabs, etc), designed to speed up and automate the tedious task of decapping vials and moving them to instrument racks for analysis. After analysis, the instrument racks can be re-input into the machine, which will recap each vial with a fresh lid and place it into an archive rack for storage.

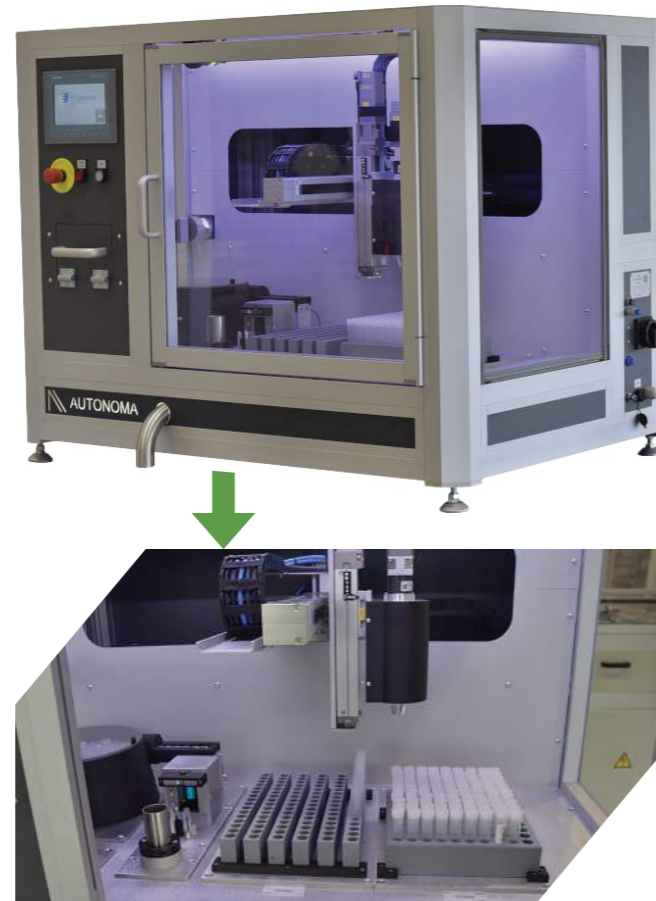
The system saves operators from the repetitive actions of uncapping and recapping hundreds of vials per day, and minimises their exposure to hazardous samples.

OVERVIEW

Samples for decapping are loaded into the system by the operator. The tray is registered and the machine commences operation. Each vial is picked up in turn and the barcode scanned to compare the sample ID to the value received from the client's LIMS (Laboratory Information Management System). If it doesn't match or the sample cannot be found, the vial is placed back into the rack and flagged for operator intervention.

If the sample is valid, the automation will cut the security seal on the vial and then remove the cap. The cap is disposed of into a waste bin, and the open vial is transferred to the corresponding position in a Tecan instrument rack. Once finished, the operator removes the uncapped vials in the Tecan racks for analysis/ further processing.

After analysis, the operator loads the Tecan racks with open vials back into the system. From here it will recap each vial with a fresh cap from the integrated cap feeder and sorter. The vial is then placed into a numbered rack for archiving.



SPECIFICATIONS

Dimensions	1100mm (L) x 800mm (W) x 930mm (H)
Mass	~200 kg
Electrical requirements	240V, 1 Φ, 50/60 Hz (can be modified upon request)
Pneumatic requirements	1 L/min, 6 – 8 bar
Interface	Ethernet optional
Daily throughput	>4,000 vials per 24h

OPTIONS

Additional modules can be added to expand its capabilities such as:

-  **AI camera for sample identification, level detection, etc**
-  **Mixers**
-  **Reagent addition**
-  **Pipettes for liquid handling**
-  **Heating blocks**
-  **Direct instrument integration (ICP, GC, etc)**

SOFTWARE

The system is linked to a networked PC, and the sample ID and position within the rack are saved to AUTONOMA's AVANTICA software which is interfaced to the client's LIMS. This allows for an individual sample to be easily found in storage and rerun if required. Otherwise, it can be operated as a standalone system through the touchscreen HMI interface without the sample ID checking functionality.

APPLICATION

This system can be used in any vial handling workflows within some of the following industries:

Pathology

Mining

Chemical

Environmental

Condition monitoring

KEY FEATURES



VIAL HANDLING



DECAPPING /
RECAPPING



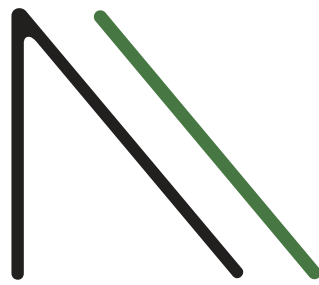
SECURITY SEAL
CUTTING



BARCODE SCANNING



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