DS-I/O BOX®
for PUPSIT

Pre-Use Post Sterilization Integrity Testing

DS-I/O BOX®

DIGITAL

SCADA

I/O

BOX

Main Focus Point

DS-I/O BOX®

|	
Architecture	Modern and Smart UI. Fast and efficient signals transmission and optimized **Hardware and Software** design
Modularity and Flexibility	Capable to manage single and/or redundant filtration set-up. Suitable to host a wide range of filter sizes and types. Compatible with different pumps
Easy to Use	Ergonomic and compact design to ensure easy process handling and optimal working conditions from both **HW** and **SW** perspectives
Security & Data integrity	**21 CFR part 11** compliant. Full traceability on **Audit Trail** of every single operation done by a specific user (access management, batch record, batch report, batch alarms)
Connectivity	Suitable for integration/connection to any **SCADA System** and/or wide range of auxiliary instruments. The system can be used via Web Client. Data can be exported via **OPC UA** or **PDF** file via shared folder.

SIEMENS ARCHITECTURE
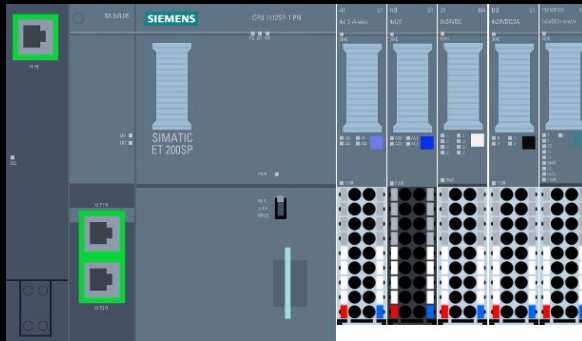
The Heart of this instrument beats thanks to the last generation PLC'S powered by Siemens

A new generation of HMI panels for a modern UI, more storage capacity and better construction quality

DS-I/O BOX®

DS-I/O BOX® for PUPSIT consists of:

1. **Automatized Stainless steel skid**

   Designed for optimal filtration process handling (correct filling of the filter capsule, air purging, minimized holdup volumes, etc…)
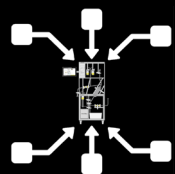
2. **DS I/O BOX® and HMI interface**

   User friendly and ergonomically easy to access for both Process operations and Service maintenance

3. **SU/RTU Filter Transfer sets**

   The System allows easy installation of consumables, and it also allows adjustments of pinch-valves and sensors positions, in order to host different filter sizes and filter types.
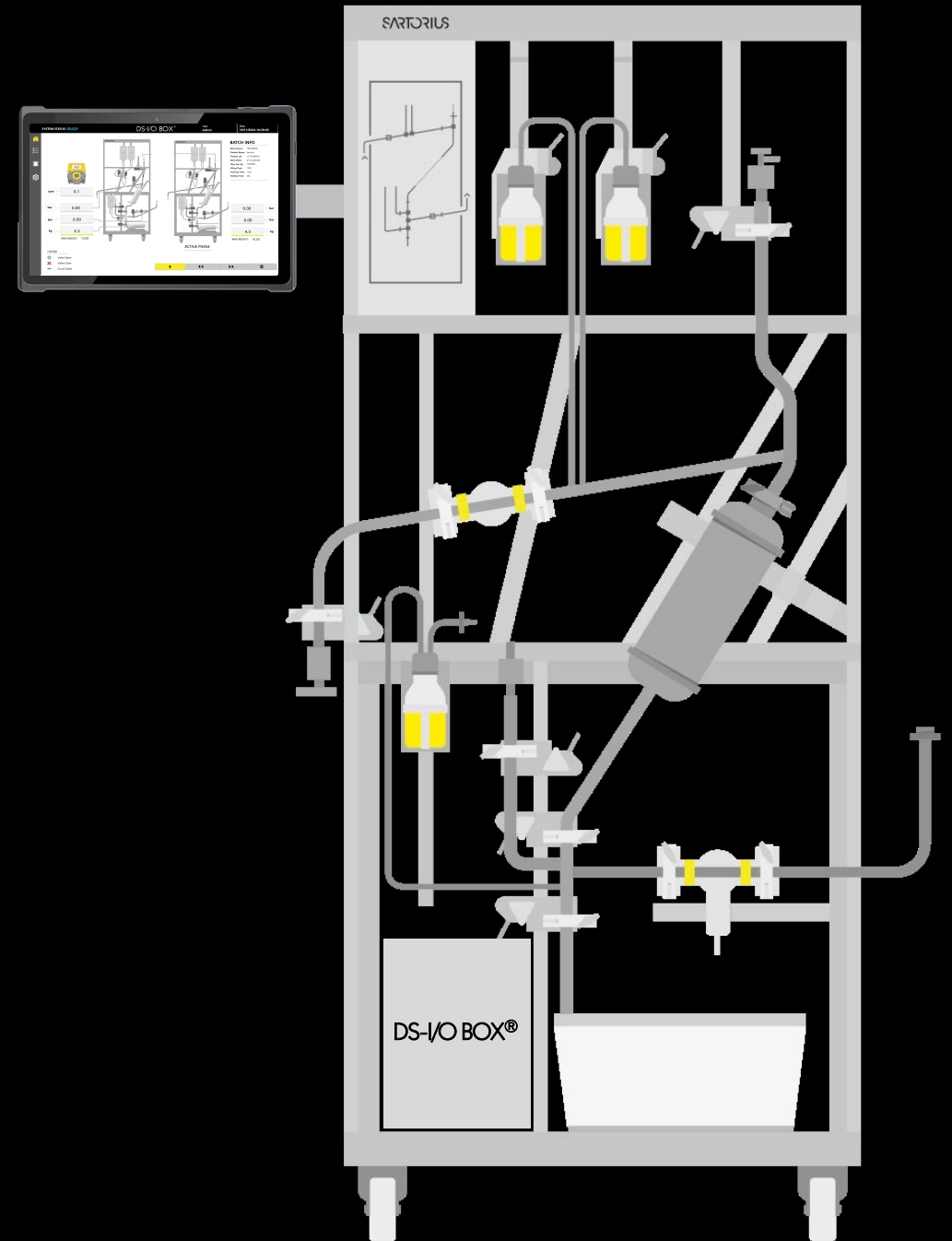
DS-I/O BOX®

MAIN EQUIPMENT

BIOPAT® Pressure Sensors
Pressure Monitoring and Recording

Sartocheck 5 Integrity Tester
The **DS-I/O BOX®** can fully control the instrument and knows when to start a test and give results

Watson Marlow Pump
Pump speed **(RPM)** is automatically adjusted by the system according to the specific recipe and phase

Automatic Pinch valves
Thanks to these the operator is not touching the system during the filtration, because the valves automatically adjust according to the specific recipie and phase

DS-I/O BOX®

DS-I/O BOX® for **PUPSIT** manages: the single and redundant filtration configuration (modular approach), automatic product sampling and via HMI, start a filter testing using the Sartocheck 5 integrity tester.
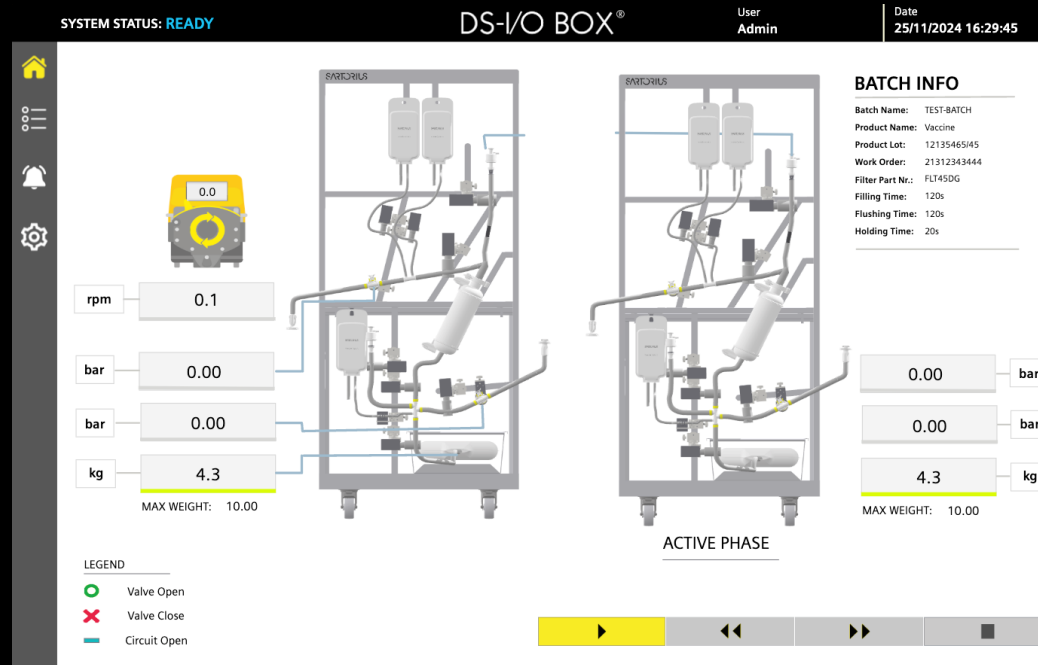
Modularity and Flexibility

DS-I/O BOX®

BATCH RECORD

DS-I/O BOX® for **PUPSIT** allows operator to start a Batch and record all the data generated during the different stages of the whole process: conditioning of the filter membrane, sampling, filter integrity test, product filtration, product recovery, etc...

DS-I/O BOX®
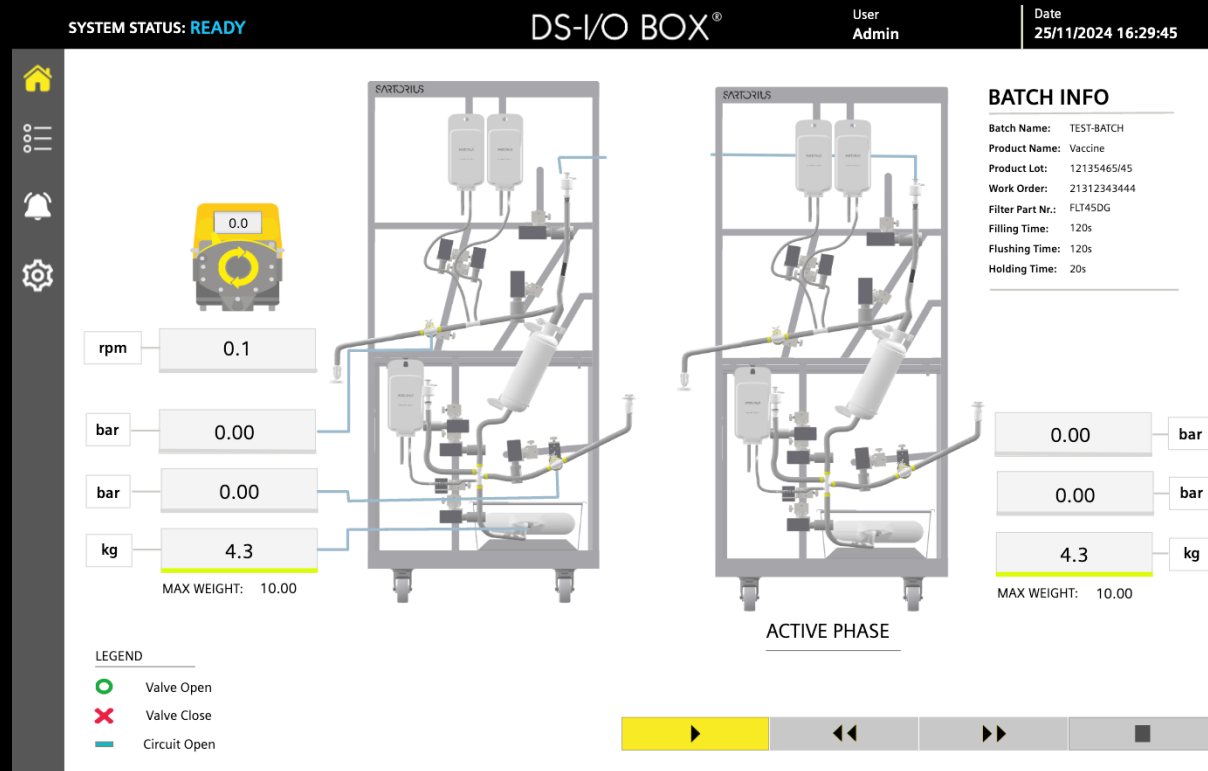
Easy to Use

BATCH REPORT

The operator can manage all the reporting of the executed batches.

Report can also be saved and exported to external USB memory, into a shared network folder.

DS-I/O BOX®

Easy to Use

BATCH ALARM

The Alarms section is designed to monitor and manage the system alerts generated by the device.

This section provides a comprehensive overview of all active and historical alarms, allowing for quick identification and resolution of problems.

Easy to Use

DS-I/O BOX®

👤 USER MANAGEMENT

DS-I/O BOX® for **PUPSIT** integrates a **User Management Module** that allows to control the credentials to get access to the system and to record all the accesses.

By default, the following users are considered :

Admin
Supervisor
Operator
Guest

Security & Data integrity

DS-I/O BOX®

AD ACTIVE DIRECTORY MODULE

When having **DS-I/O BOX®** for **PUPSIT** connected to customers network, the system can manage the accesses directly using customers company credentials and already existing users and groups.

The Administrator can also manage the groups inside the HMI.

Security &
Data integrity

DS-I/O BOX®

21 CFR PART 11

FDA
21 CFR Part 11

Every action made inside the HMI is recorded, in compliance with the 21 CFR Part 11. Within the **Audit Trail view** an authorized user can see every action performed within the HMI by each user. The Audit Trail can also be exported for auditing purposes.

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Security & Data integrity

DS-I/O BOX®

OPC UA CONNECTION

The **DS-I/O BOX®** for **PUPSIT** can support **SCADA Systems**, variables and alarms can be seen externally via **OPC UA**, with all the **OPC UA** Encryptions supported.

The **DS-I/O BOX®** for **PUPSIT** System can be compatible with:

✅ MFCS 4 or higher

✅ OSI PI (via OPC UA connector)

✅ DeltaV

Connectivity

DS-I/O BOX®

REMOTE CONTROL

It is also possible to connect remotely to the HMI, with a PC or tablet. The DS-I/O BOX® for PUPSIT utilizes the VNC protocol, that let the customers to control the DS-I/O BOX® for PUPSIT even when they are not physically there. Also, the DS-I/O BOX® for PUPSIT can be controlled remotely in GMP areas, since no internet connection is required.

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Connectivity

DS-I/O BOX® for PUPSIT

A new concept automatized Pre-Use Post Sterilisation Integrity Testing

DS-I/O BOX® for PUPSIT

The user follows the screen printing for a quick and easy assembly.

DS-I/O BOX® for PUPSIT

Also available
with glass protection for
better control of laminar
flows

DS-I/O BOX®

The industrial automation taken
to a whole new level