

# Automation meets precision with **BUCHER EMHART:** Reinventing swabbing

Enhancing safety, precision and efficiency, BUCHER EMHART's FlexRobot Blankside revolutionizes glass production by automating blank mould swabbing. Seamlessly-integrated into IS, AIS and NIS machines, it reduces lubricant use by 75 percent and increases output – all while extending mould life and minimising both operator strain and environmental impact.



- No need for manual swabbing
- Smart spraying on the fly with blank moulds closed
- Neck ring spraying without contamination of the plunger
- Increased container production output
- Reduced risk of potential accident

In a bold step toward streamlining one of glass production's most repetitive and risk-prone tasks, Bucher Emhart Glass has introduced a game-changing innovation: the FlexRobot Blankside. Designed to eliminate manual

swabbing of blank moulds and neck rings, this automated system represents a critical advancement in both safety and process efficiency on the hot end.

Seamlessly integrated into Bucher Emhart Glass' IS, AIS and NIS forming machines, the FlexRobot Blankside is mounted directly onto the blank side panel and operated through the intuitive FlexIS control platform. All necessary control components - including hardware and user interface—are consolidated into a single cabinet, simplifying installation and reducing the system's footprint on the factory floor.

Notably, a single FlexRobot Blankside is sufficient for tandem machine configurations, ensuring maximum efficiency with minimal hardware investment.

Together with its counterpart on the blow side, the FlexRobot family is a key pillar in Bucher Emhart Glass' broader strategy: to drive automation forward across the glass industry. The goal is clear—boost operational safety, elevate profitability and set a new benchmark for intelligent manufacturing.

### MAIN ADVANTAGES

- Consistent swabbing

A robot is perfect for repetitive tasks like swabbing moulds. It is precise, consistent, repetitive and fast, enhancing the container forming process control.

- Smart spraying

The FlexRobot Blankside sprays on the fly with blank moulds closed. The amount of lube sprayed is precisely controlled in relation to the position of the spraying tool in the blank mould. The neck ring is sprayed in the alternate cycle without contamination of the plunger.

- Less swabbing compound consumption

Smart spraying reduces the usage of lubricant by 75 percent.

- Increase the container produc-

tion output

The FlexRobot Blankside swabs the blank moulds on the fly, with less rejects, thus increasing the output from the machine.

- Increase mould lifetime

The lubricant is sprayed inside closed moulds without contact between the spray nozzles and the mould surface, reducing wear on the moulds.

- Gain time for production fine tuning

The FlexRobot Blankside frees up time for the operator that can be allocated for the process sensor systems to fine tune the container production to achieve a higher output from the machine.

- Reduced potential risk of accidents

The FlexRobot Blankside reduces the operator interaction with the machine.

- Eliminate strain injuries

The small amount of lubricant applied into closed moulds drastically reduces the contamination of the machine.

- Less environmental impact

The small amount of lubricant reduces the amount of smoke during swabbing.

- Connection to the Bucher Emhart Glass Advanced Data Interface Single point of access for all your data and increased IT security.

- Automatic signal exchange between FlexIS control and FlexRobot Control

The signal exchange, facilitated by an interface controller, eliminates the need to enter settings manually, reducing the risk of collisions due to incorrect settings. (The interface controller is compatible only with FlexIS 3 and will be available first quarter of 2025).



During an 8-hour shift on a 36-cavity machine, an operator performs over 1700 swab movements and lifts the arm to activate the manual swab cycle more than 550 times. Using a FlexRobot Blankside eliminates strain injuries caused by repetitive manual swabbing.

- Cleaner machine

- No need for manual swabbing
- Smart spraying on the fly with blank moulds closed
- Neck ring spraying without contamination of the plunger
- Increased container production output
- Reduced risk of potential accident



## ROBOTS

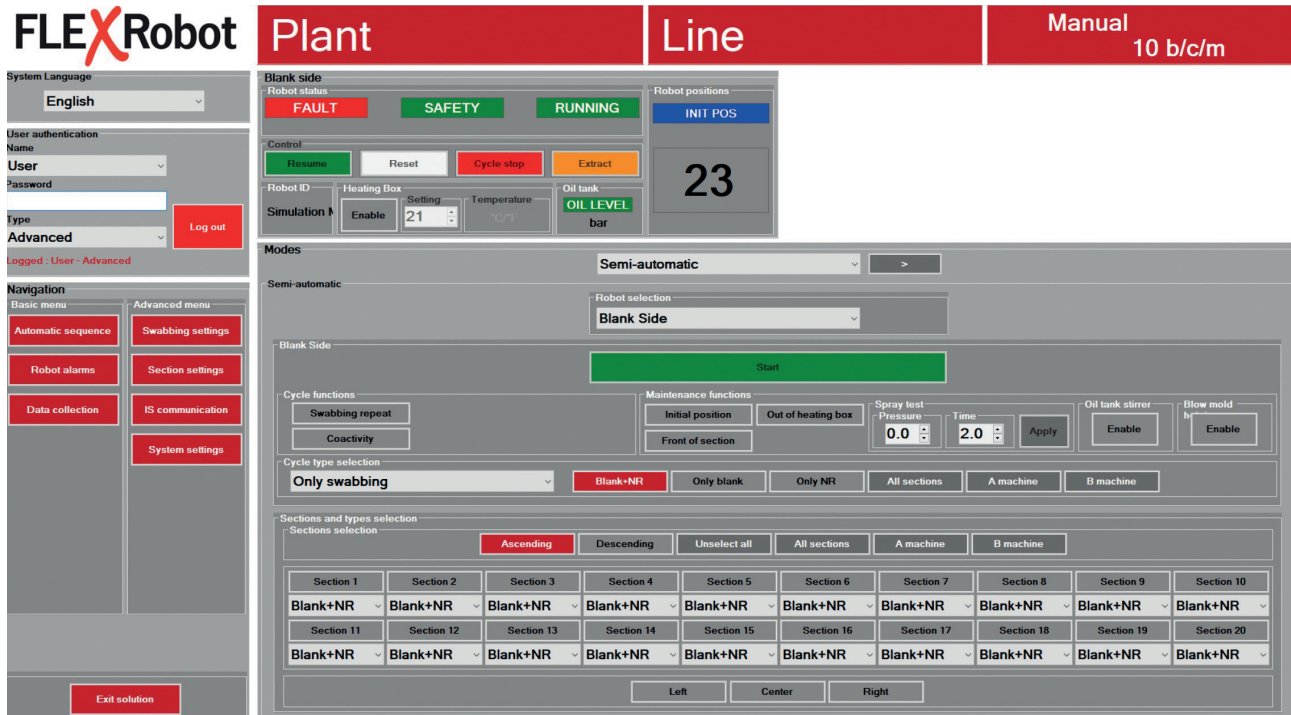
### HUMAN MACHINE INTERFACE (HMI)

Two high-resolution displays combined with smart design of the menus shows more information for a better overview of the system status.

### DATA INTERFACE

Bridging the physical and digital, the FlexRobot Blankside maintains uninterrupted communication with the FlexIS control system. This interface not only enables remote support and

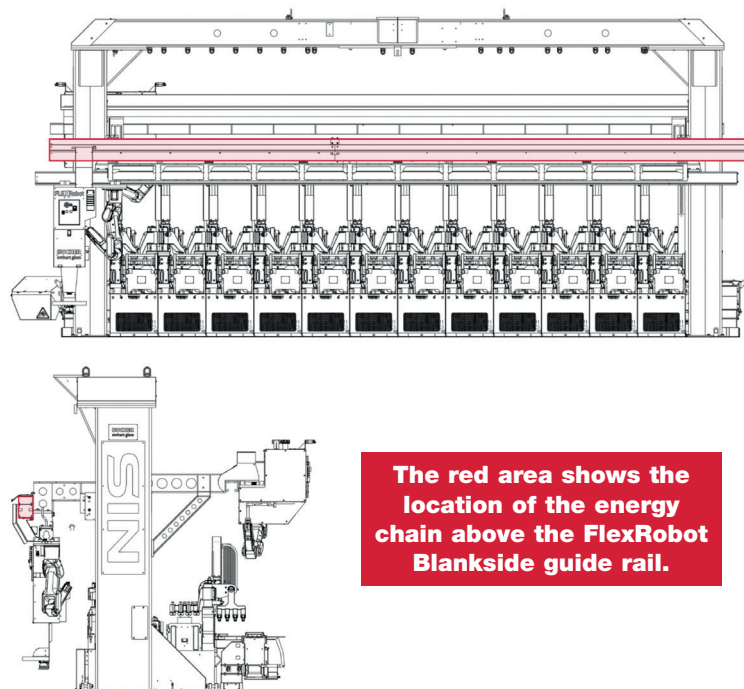
comprehensive data collection but also ensures real-time signal exchange. By automating configuration inputs, the system eliminates the risk of human error and potential collisions caused by incorrect settings. Central to



**The main display is integrated with the FlexRobot cabinet. The remote display, located near the forming machine, allows operators to easily monitor the status of the FlexRobot when working around the forming machine.**

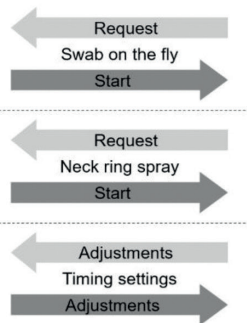
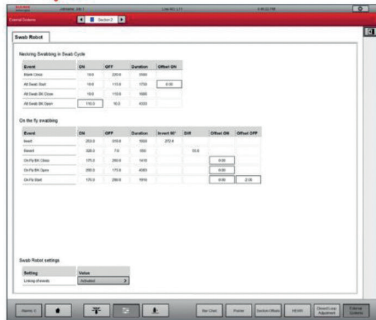
### INTEGRATION

Designed for maximum adaptability, the FlexRobot Blankside is compatible with both new and existing forming machines. As an integral component of the Bucher Emhart Glass complete machine system, it operates effortlessly in conjunction with the blank side lifting device, sensor measurement systems and blank side barrier. For streamlined installation, the energy chain is embedded on top of the blank side panel, though it can be repositioned outside the forming machine when clearance issues arise - particularly around the gob distributor platform (for installation clearance details, users are advised to contact Bucher Emhart Glass directly).

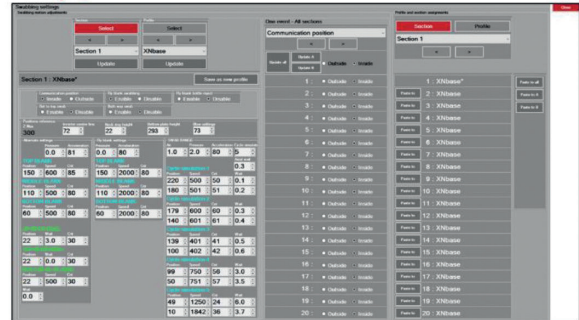


**The red area shows the location of the energy chain above the FlexRobot Blankside guide rail.**

**FLEXIS**



**FLEXRobot**



this capability is the interface controller, which is exclusively compatible with the FlexIS 3 and scheduled for release in the first quarter of 2025.

With this level of integration and intelligence, the FlexRobot

Blankside sets a new standard for precision, efficiency and safety in glass container production - offering manufacturers a future-ready solution built to elevate both performance and reliability.

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## SYSTEM COMPONENTS

The FlexRobot Blankside system consists of:

- 607-12-1
- FlexRobot 607-107-00
- Spraying tool 607-106-00
- Energy chain 607-108-00
- Energy chain support 607-109-00
- Interface kit 607-111-00
- I/O module 607-110-00
- Cable overview 607-126-00
- Electrical diagram single machine 607-131-00
- Electrical diagram tandem machine 607-133-00
- IS/AIS layout 200-1973-00
- NIS layout 400-5377-00
- Safety sensors 200-1971-00
- Spare parts 607-98-00

## INSTALLATION REQUIREMENTS

To ensure seamless integration and optimal performance, the FlexRobot Blankside requires specific installation conditions. It is compatible exclusively with Bucher Emhart Glass forming machines - specifically the IS, AIS, or NIS models. For control systems, the FlexRobot Blankside equipped with an interface controller is available only with the FlexIS 3 platform. However, versions without an interface controller are also compatible with FlexIS 1 and 2 systems. Additionally, it is essential that the FlexRobot Blankside be properly connected to the UPS system prior to startup to maintain operational stability. In terms of utilities, the required power supply ranges between 200 to 230 VAC at a frequency of 50 to 60 Hz. The unit consumes a maximum of 1.61 kVA during operation and 1.15 kVA in standby mode. Compressed air requirements include a pressure of 5 bar and a flow rate of 1000 liters per minute. The recommended operating temperature ranges from 0 to 45°C - ensuring reliable functionality within a broad industrial environment.

