

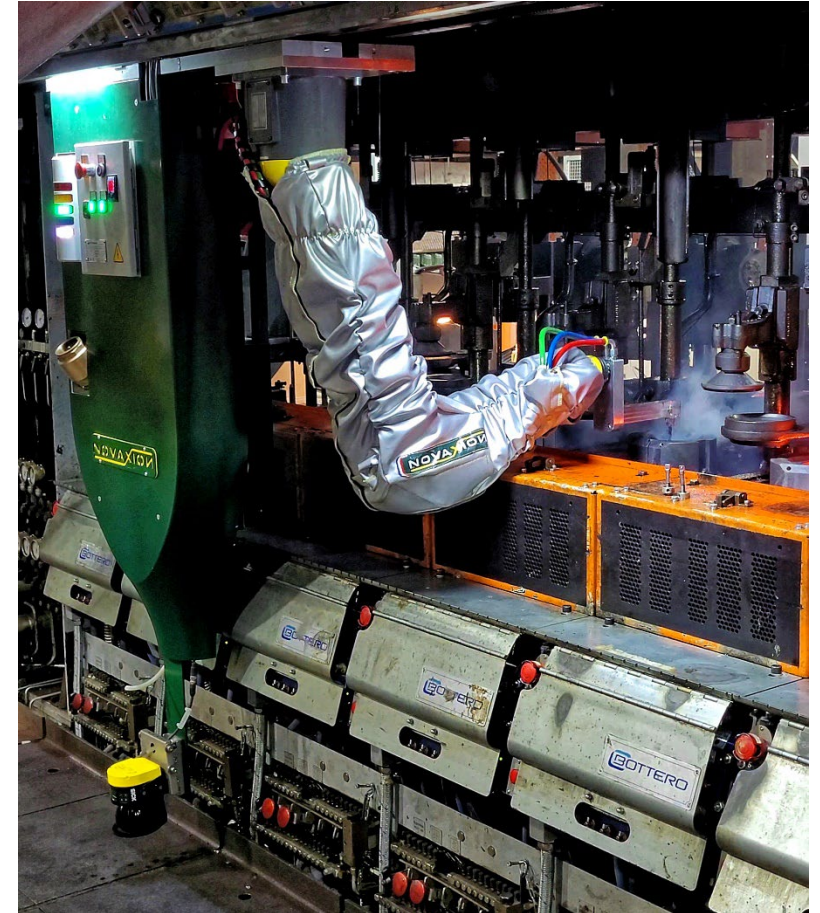


## Novaxion General overview and Sales presentation

# Agenda - Content

## General Overview

- [Rondot Group](#)
- [18 years of Experience, Unique solutions](#)
- [Principle of operation](#)
- [Solutions and Lay-outs for installation](#)
- [Solutions of swabbing](#)
- [Novaxion Unique Benefits](#)
- [Services](#)





United Kingdom

**GRAPHOIDAL**



United Kingdom

Italy



gr<sup>2</sup>

Germany

GRAPHOIDAL RADON RONDOT

Iberica / Spain



China

USA



Thailand

USA & South America



USA



United Kingdom

France



France



India



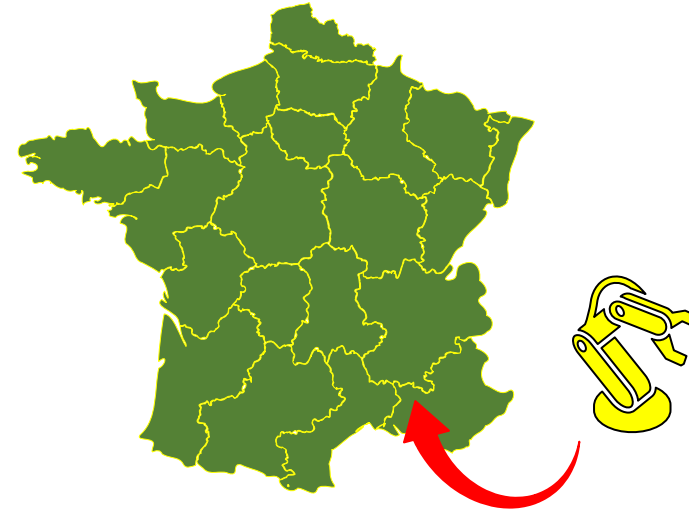
# 18 Years of Experience

- **The history of NOVAXION started back in 2005**
- NOVAXION started in the Industry offering gathering robots for the handcraft and semi-automatic production of glass ware.
- One year later in **2006**, NOVAXION launched an advanced solution and a high-performance Swabbing Robot to apply a specially engineered swabbing-spray to the moulds.
- The NOVAXION company is specialized in robotics technologies for the glass industry and in **2019** became a full member of the Rondot Group.
- NOVAXION continues to offer a unique solution for automatic swabbing of blank moulds and neck rings on IS Machines
- **More than 130 units have been shipped worldwide**



# *Novaxion your Supplier*

Novaxion has relocated in March 2020 in a new facility in Saint Rémy de Provence





# *Novaxion your Supplier*



■ Age group ■ 20-25 ■ 25-30 ■ 30-35 ■ 35-40 ■ 40-50

Novaxion is a young and innovative company with an average employee age of just over 30. Currently, 15 full-time employees work at Novaxion.

# The Novaxion story

- The history of NOVAXION started back in 2005



NOVAXION started in the Industry offering gathering robots for the handcraft and semi-automatic production of glass ware.

**This product is still available on request  
About 30 units have been supplied.**





# Novaxion swabbing robot solutions

- Novaxion offers 3 versions of swabbing Robot

- **Valve Block** supporting Robot

This solution fits all machines which electro pneumatic valve blocks (EPVB's) can be used as support for the mounting rail



- **Suspended** supporting Robot

On Emhart Manufactured machines it is called FlexRobot® (available through BEG only)

On other machines, Novaxion studies the installation at the request of the Customer



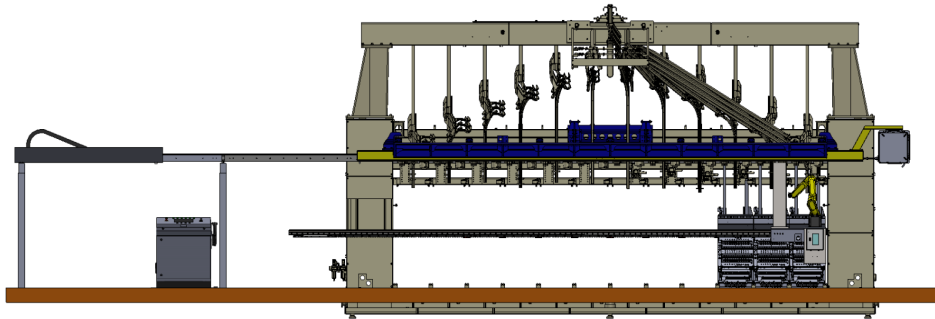
**No downtime stop machine for swabbing robot installation**



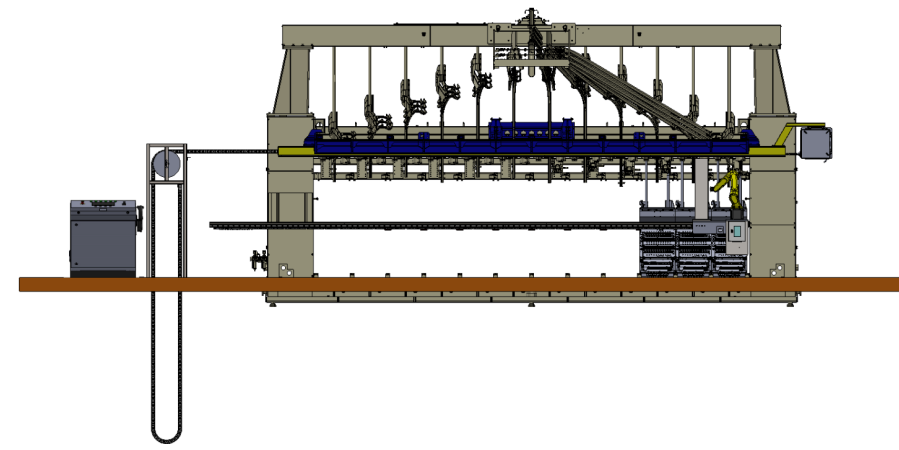


# Lay out for installation

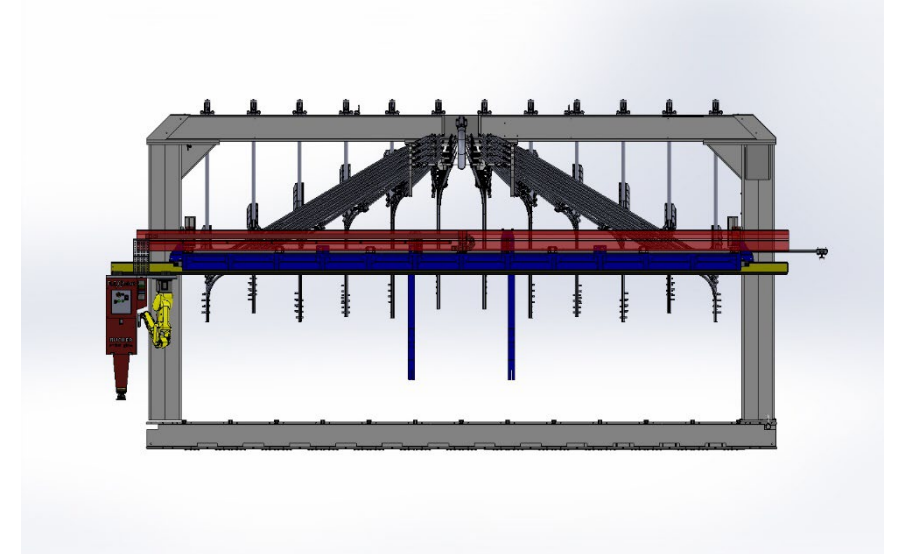
Independent from the solution (EPVB or suspended) the important topic is the cable chain management.



Different types of installations can be offered.  
The most popular and convenient is the cable chain going towards the lehr.



When possible, the cable chain can also be routed through the factory floor down to the basement, which may offer additional floor space to the operators.



Or a solution with the Cable chain fully integrated into the machine

# Unique solutions by Novaxion

1- Novaxion is the unique supplier to provide **AUTOMATIC , Blank Mould & Neck ring swabbing.**

(All other approaches "carbon sooting" or " swabbing tool management" requires a manual swab to the neck ring.)

2- Novaxion is the unique supplier to provide **MOULD CLOSED swabbing**

Which means: a "smart lubrication" not a blind spray into the open moulds (and around..)

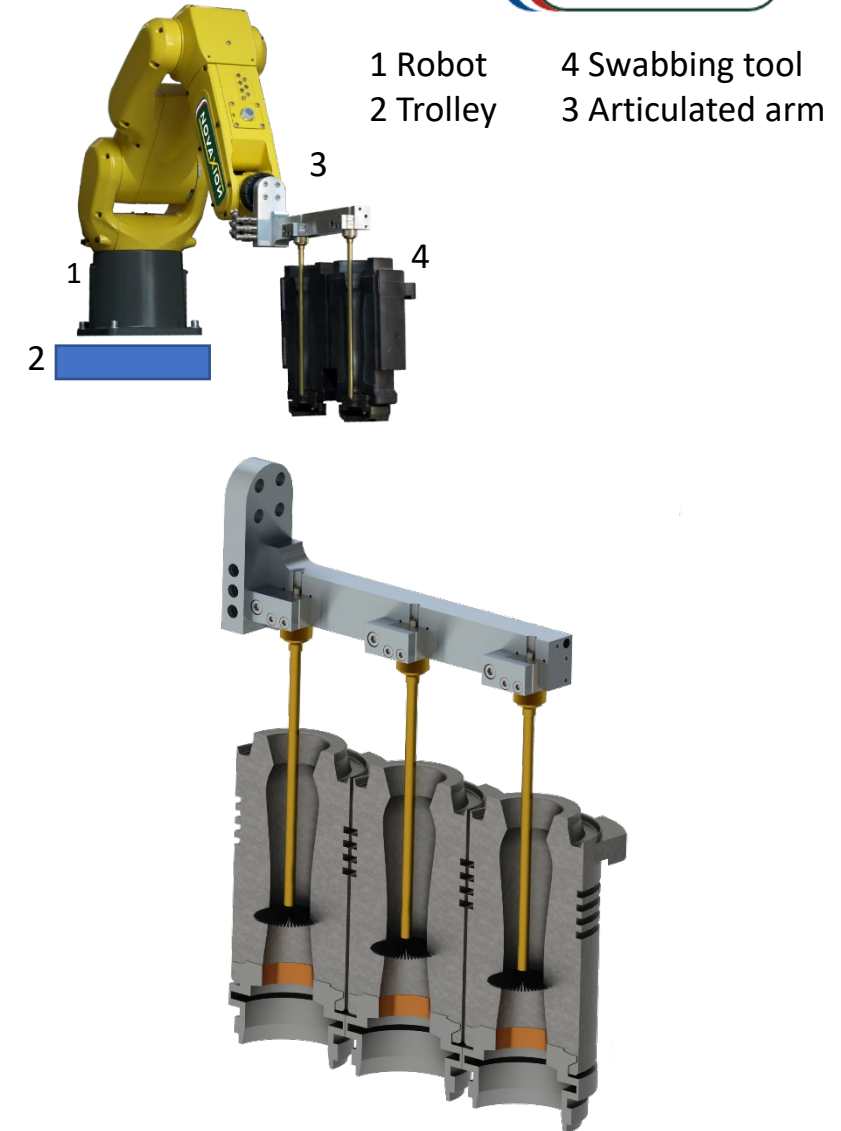
3- Novaxion is the unique supplier to offer **mould close on the fly swabbing**  
Which means: no reject, no cycle loss





# Principle of Operation

- A robot (1) equipped with an articulated arm (3) travels along the blank side of the forming machine and stops in front of each section to reach the blank moulds for swabbing.
- The articulated arm is terminated by a spray tool which moves into the closed blank moulds to spray a film of lubricant along the walls of the moulds halves, as well as in the neck-rings if requested.



# Patented Process solutions for swabbing





# Possible solutions for swabbing

Alternate swabbing:

During alternate swabbing the blank moulds are lubricated in closed position.

Additionally, the neckring is lubricated after the blanks open.

By Customers experience the number of reject is limited to 1 cycle after neck ring swab.



The swabbing efficiency remains the same independently of the mould height.

# Possible solutions for swabbing

On the fly **BLANK** swabbing:

Novaxion offers on the fly Blank swabbing up to 18 cycles /mn

On the fly means NO section stop and NO reject after swabbing.

On the fly blank swabbing: Only the blank moulds are lubricated on moulds closed position

On the fly blank swabbing lubricate ALL the moulds within ONE unique cycle.





# Possible solutions for swabbing

On the fly **NECKRING** swabbing:

Novaxion offers on the fly Neck Ring swabbing up to 11 cycles /mn

On the fly means NO section stop and NO reject after swabbing.

On the fly Neckring swabbing: Only the neckrings are lubricated before the gob loading.

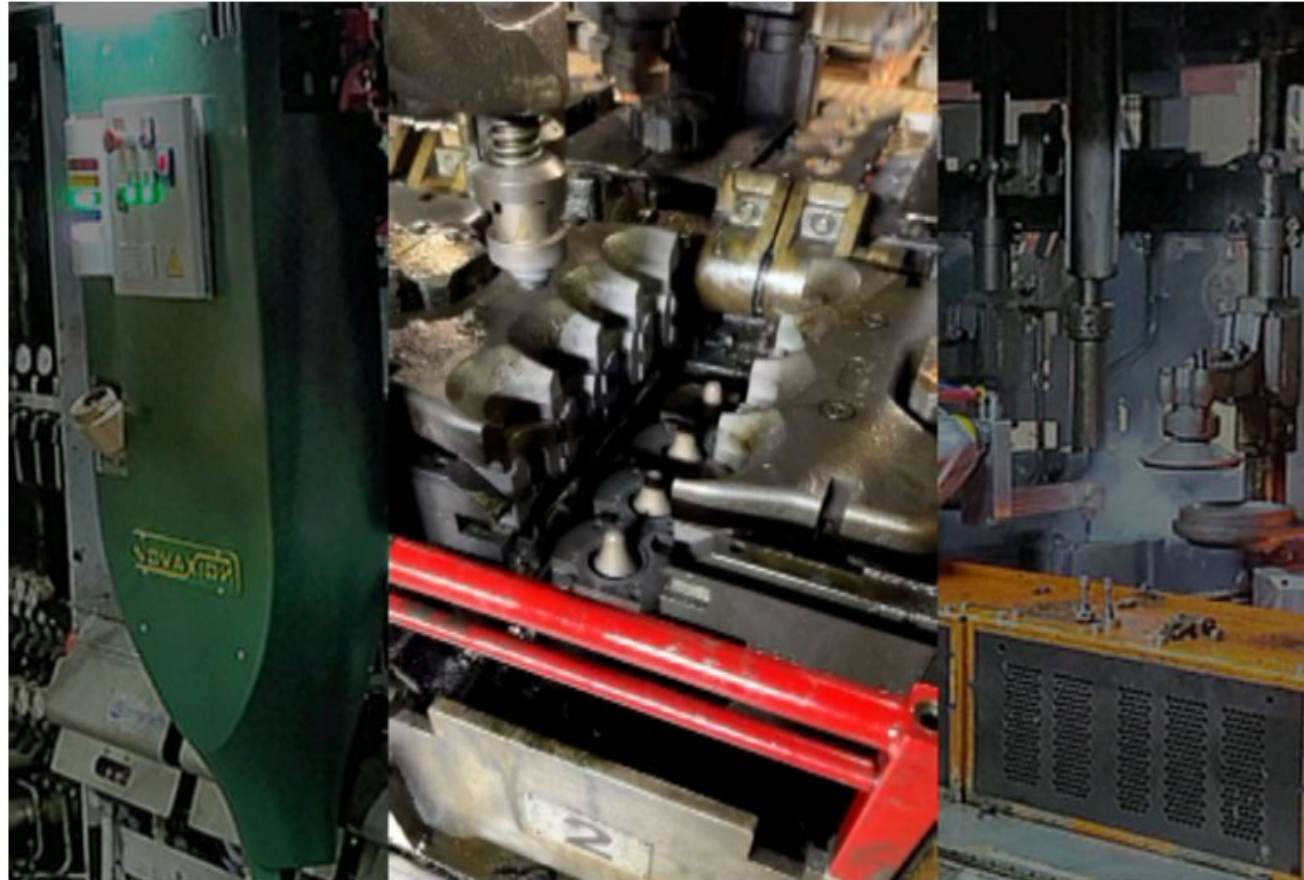
On the fly Neckring swabbing lubricate ALL the Neckrings within ONE unique cycle.



# Possible solutions for swabbing

Wide mouth **NECK RING** swabbing, PRESS & BLOW process.

With our special design of the nozzles, different Angle spray able for swab the wide mouth neck ring without plunger contamination.

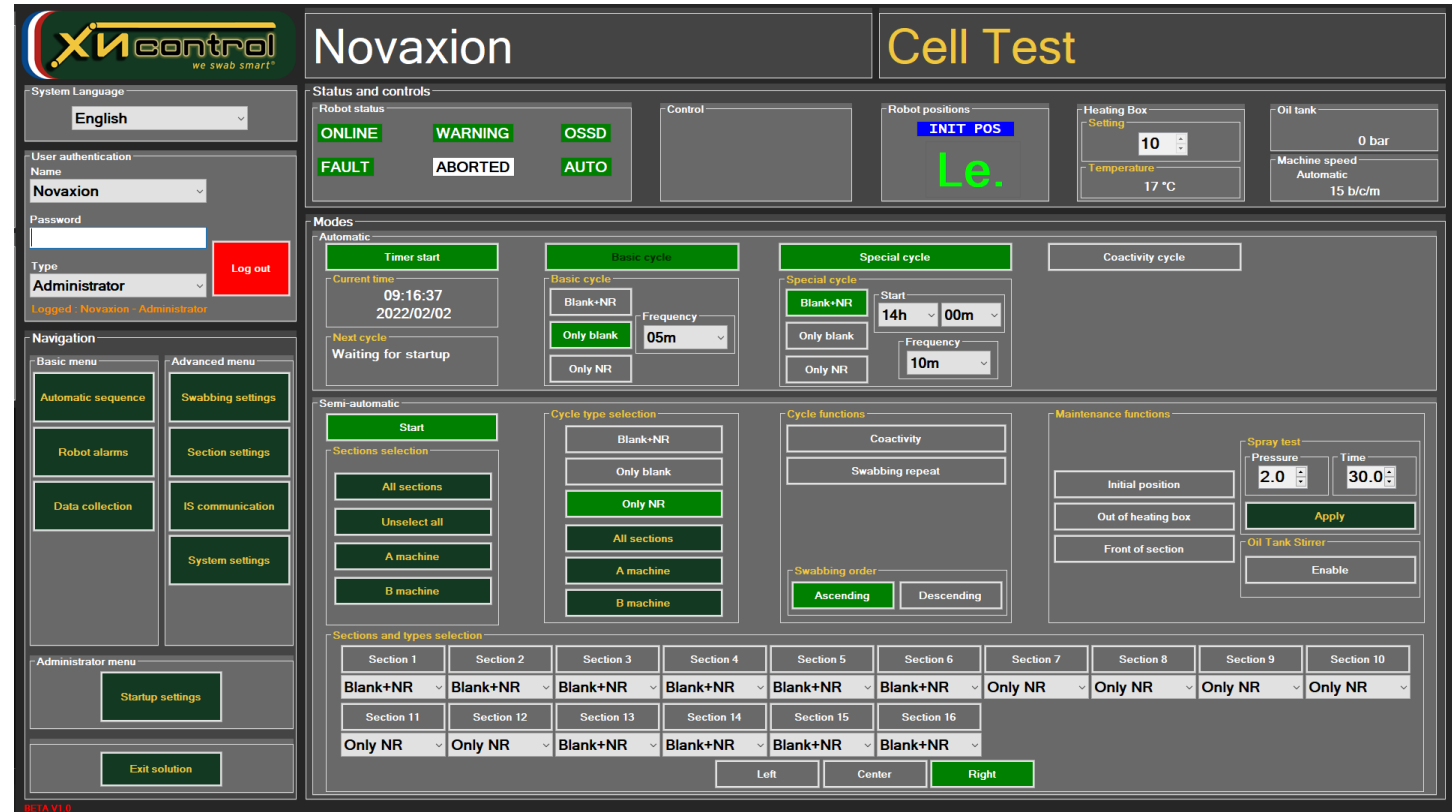




# Principle of Operation

A special Software dedicated to the swabbing robot was internally developed by NOVAXION.

The  Software is a **user-friendly interface**, in order to control the robot in an easy way without robotics knowledge.

The screenshot displays the Novaxion Cell Test software interface. The top bar shows the 'Novaxion' logo and the title 'Cell Test'. The interface is divided into several functional areas:

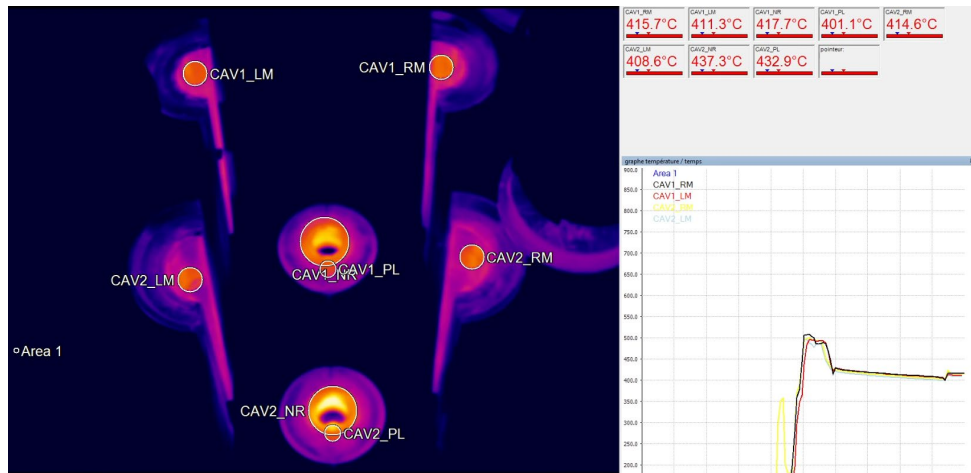
- User Authentication:** Includes fields for System Language (English), User Name (Novaxion), Password, and Type (Administrator), with a 'Log out' button.
- Status and controls:** Displays robot status (ONLINE, WARNING, OSSD, FAULT, ABORTED, AUTO) and control buttons (INIT POS, Le.).
- Modes:** Includes 'Automatic' mode with 'Timer start' (Current time: 09:16:37, 2022/02/02), 'Basic cycle' (Blank+NR, Only blank, Only NR, Frequency: 05m), and 'Special cycle' (Blank+NR, Only blank, Only NR, Start: 14h 00m, Frequency: 10m).
- Semi-automatic:** Includes 'Start' button, 'Cycle type selection' (Blank+NR, Only blank, Only NR, All sections, A machine, B machine), 'Cycle functions' (Coactivity, Swabbing repeat, Swabbing order: Ascending, Descending), and 'Maintenance functions' (Spray test: Pressure 2.0, Time 30.0, Initial position, Out of heating box, Front of section, Oil Tank Stirrer: Enable).
- Sections and types selection:** A grid showing 16 sections (Section 1 to Section 16) with dropdown menus for cycle types (e.g., Blank+NR, Only NR).
- Navigation:** Includes 'Basic menu' (Automatic sequence, Robot alarms, Data collection) and 'Advanced menu' (Swabbing settings, Section settings, IS communication, System settings).
- Administrator menu:** Includes 'Startup settings' and 'Exit solution' buttons.

The bottom left corner of the interface shows the version '06/1A V1.0'.

# Principle of Operation

Thermal Camera for :

- Blanks Temperature
- Neck Rings Temperature
- Plunger Temperature

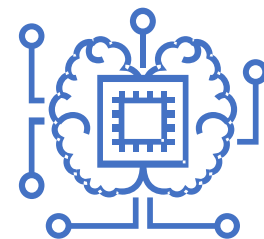




# Principle of Operation

Full data collection exchange, available with new options, oil flow sensor for follow the oil consumption, thermal camera for blanks, rings and plunger.

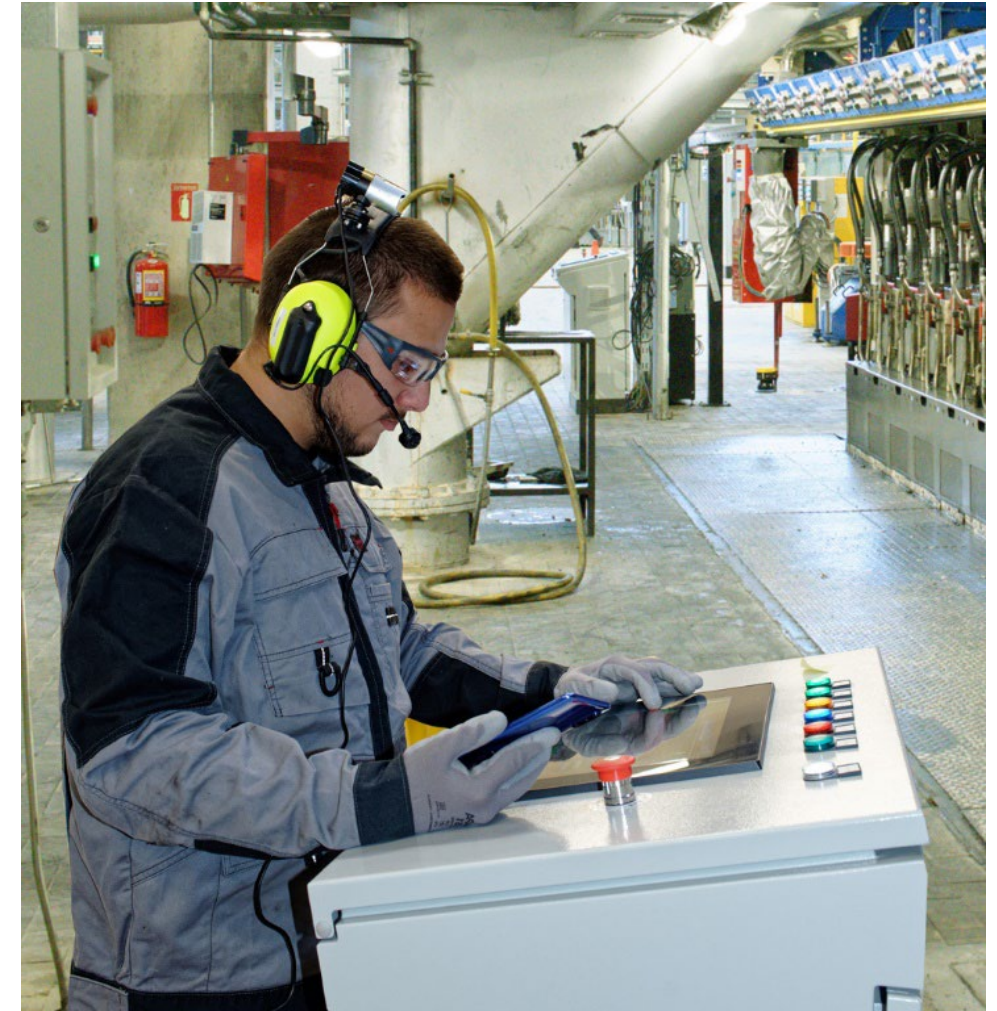
New network structure with server for data collection and remotely services.



*Artificial Intelligence*

# Services

- The robots are equipped with accessibility for remote diagnosis and remote support.
- Training is offered to be conducted at the customer's factory and in the training room at Novaxion.
- Maintenance contracts and follow-up training contracts are available.
- Lubricants can be qualified at Novaxion for suitability for use with the robot.



*Services is our priority*

**NOVAXION**

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731 avenue de la Massane  
13210 SAINT-REMY-DE-PROVENCE  
SAS au capital de 15 000€  
SIRET 478 076 505 000 25  
Code APE 2899B



# Customer References





Thank you



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<https://www.novaxion.fr/worldwide-presence/>