



# RF11

## FULLY AUTOMATED CHEESE TREATMENT ROBOT

FOR SMALL TO MEDIUM-SIZED DAIRIES



## PRESENTATION

Based on the design of our RF1 robot, which was a great success for over a decade, our new RF11 robot has evolved to meet the needs of our clients.

This new generation of robots combines ruggedness and versatility. With its numerous chassis variants, its integration is suitable for almost all existing cheese cellars.

His design has been revamped to optimise its routine maintenance and thus increase its useful life. The rugged and robust construction and many optional features are what makes our solution successful, and even beyond our borders.

## A NEW GENERATION OF ROBOTS

The RF11 retains all the elements that made the RF1 such a success.

The most significant evolutions include:

- ❑ The cheese turning system has been completely redesigned. Movements are more fluid and the stirrups grab the cheese wheels better.
- ❑ An LED spotlight illuminates the treatment area. Above the chassis, there is a temporary storage area for laying down the cheese to create an offset.
- ❑ The brine tanks are made of plastic material. Improved hygiene of the pipes, which no longer comprise welds. Increased brine volume in the compact chassis.
- ❑ Improved sealing of the chassis and brushing systems. Removal of all hollow bodies and several design optimisations to make the system more hygienic.
- ❑ New generation of PLCs with increased memory for more scalability of future functions.



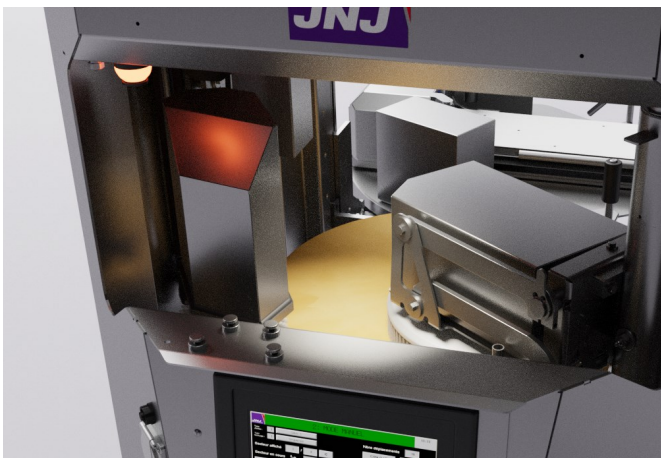
### GRAB MODULE

Optimal pick-up of cheese wheels through efficient positional detection of the plate

Belt can be removed without special tools in less than one minute

Movement of all moving parts carried out using maintenance-free, non-stretch belts

Strong plastic lift and table runners, limiting wear and reducing maintenance costs



### CARE

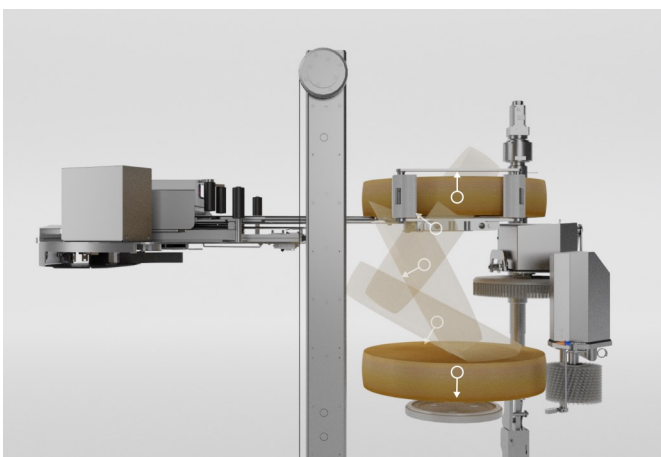
Brushes and plate can be removed without the use of special tools

Large choice of brushes available

Brine tank level detection system

A LED spotlight provides good light. It can be viewed and accessed directly from the dialogue screen

Remote brine tank selection controls for greater accessibility



### TURNING

The kinematics of the turning module have been completely redesigned. Movements are now smoother. The cheese is held better in the turner's stirrups

This new design also compacts the movement and saves space in the chassis

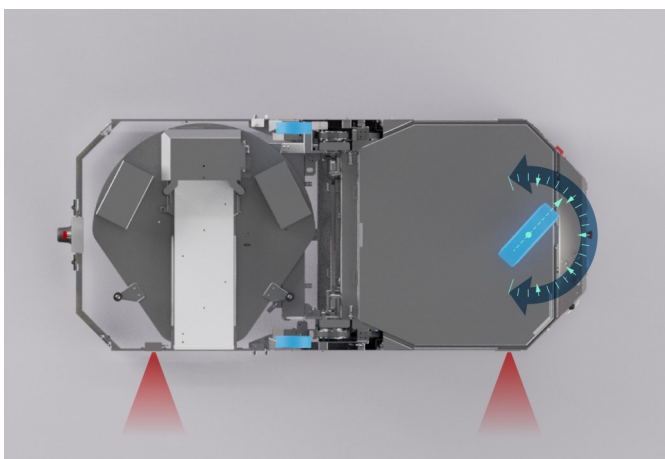


## OFFSET PROGRAMME

The offset function is now possible with moulds arranged one behind another

An area above the chassis can be used for the temporary storage of a cheese

This means the grab module can free space on the rear board of another level



## GUIDE AND MOVEMENT SYSTEM

Contactless guide system : the machine moves along an aisle, automatically correcting its course

The robot uses the existing infrastructure and is automatically fixed on the uprights of the shelves

The remote control allows the operator to position itself at the best viewing angle

The motorised steering and steering angle that is larger than 180° allows for accurate and effortless movement



## CONSTRUCTION

Single-block chassis made entirely out of mechanically welded stainless steel 1.4301

Hygienic : treatment station with smooth welding easily accessible

The sloping surface enable optimum run-off of smear liquid and rising water

Brine tanks and morge collection tanks made of plastic material, easily removable for cleaning

Strong, rugged construction

## STANDARD EQUIPEMENT

- Hard-bristled synthetic brushes
- Three-phased plug type Euro

## OPTIONS

- Pre- or post- treatment salting system (salting-only option also possible)
- Small wheel treatment (from 25 cm) placed one behind the other on shelves
- Batterie movement system
- Mobile phone alarm module (SMS)
- Module of pallettizing/depallettizing front or back
- Triple mast lift to extend travel in high cellars and/or lower the height of the machine to fit through doors
- Tracking of treatments and alarms

## TECHNICAL INFORMATION

The values shown below are indicative only and can be adapted to the customers specific needs.

### WEIGHT

Approximate mass 1,300 - 1,500 kg

### ELECTRICITY

Rated voltage (tolerance  $\pm 5\%$ ) 3x400 Vac 3LNPE  
 Rated current 13 A  
 Assigned frequency 50 Hz  
 Maximum power 6.5 kW  
 Average consumption (approx.) 1.2 kWh  
 Building residual current circuit breaker FI (DDR) 30 mA, type B, HI  
 Upstream overload cut-off 16 A/C  
 Power cable max length 28 m / 48 m\*

### WORK RATE AND CAPACITY

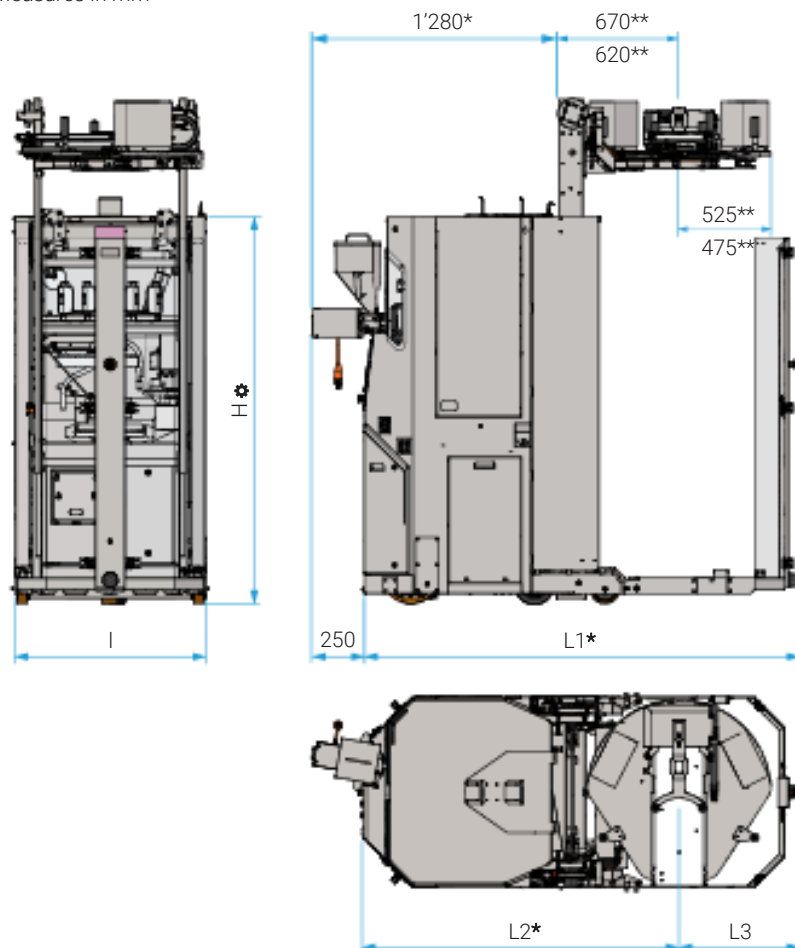
Number of cheese wheels treated (approx.) 115 / hour  
 Brine tank capacity 72 - 120 litres  
 Capacity of smear collection tank 24 - 45 litres  
 Speed 0,3 m/s

### OPERATIONAL FEATURES

Lift Telescopic mast, double or triple rails  
 Number of operators Supervisor only

## DIMENSIONS

Measures in mm



## PRODUCTS FEATURES

Minimum height of the first cheese wheel

200 mm

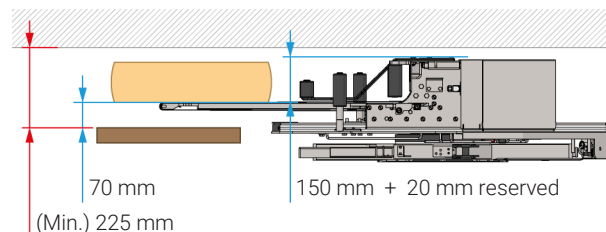
Treatable cheese wheel diameter:

|                      | RF11 980 | RF11 1'080 |
|----------------------|----------|------------|
| $\varnothing$ (max): | 650 mm   | 750 mm     |
| $\varnothing$ (min): | 250 mm   | 250 mm     |
| Thickness (max):     | 130 mm   | 160 mm     |
| Thickness (min):     | 60 mm    | 60 mm      |

\*\* + or 160 mm if  $\varnothing < 400$

## GRAB MODULE DIMENSIONS

Required clearance between top plate and ceiling



## DIMENSIONS

The dimensions of the robot vary according to the final configuration and depending on needs. The values indicated are those of a standard model.

|    | RF11 980 | RF11 1'080 |
|----|----------|------------|
| I  | 980      | 1,080      |
| L1 | 2,270    | 2,360 *    |
| L2 | 1,650    | 1,690      |
| L3 | 620      | 670        |

\* Also available in «+120»

\* Also available in «L-30»

## NUMBER OF TREATABLE LEVELS DEPENDING ON THE HEIGHT OF THE MACHINE ( $H^*$ )

|       | 300              | 300 | 1 <sup>st</sup> cheese height |
|-------|------------------|-----|-------------------------------|
|       | 200              | 210 | Level centre                  |
|       | ↓                | ↓   |                               |
| $H^*$ | Treatable levels |     | Compatible                    |
| 2,000 | 15               | 14  | RF11 980 &<br>RF11 1'080      |
| 2,200 | 17               | 16  |                               |
| 2,400 | 19               | 18  |                               |
| 2,600 | 21               | 20  |                               |
| 2,800 | 23               | 22  | RF11 1'080                    |
| 3,000 | 25               | 24  |                               |
| 3,200 | 27               | 26  |                               |



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