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.



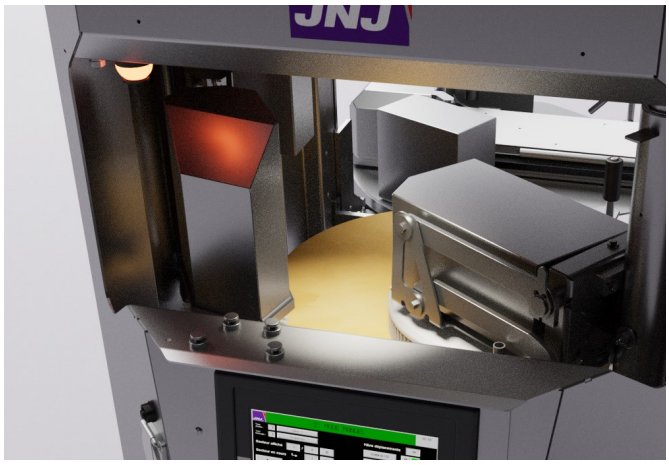
GRAB MODULE

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

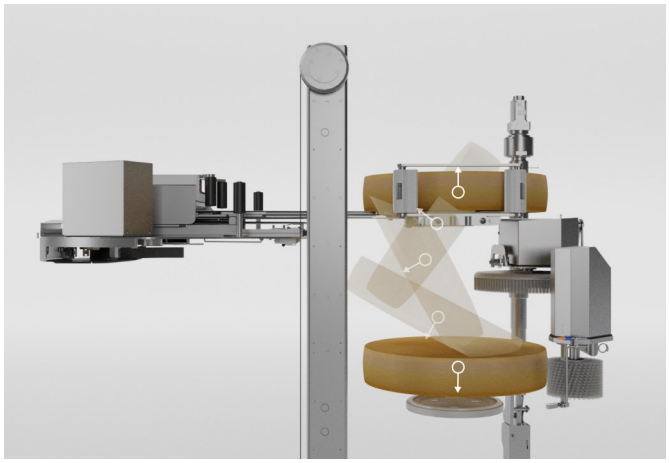
Brushes and plate can be removed without the use of special tools

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

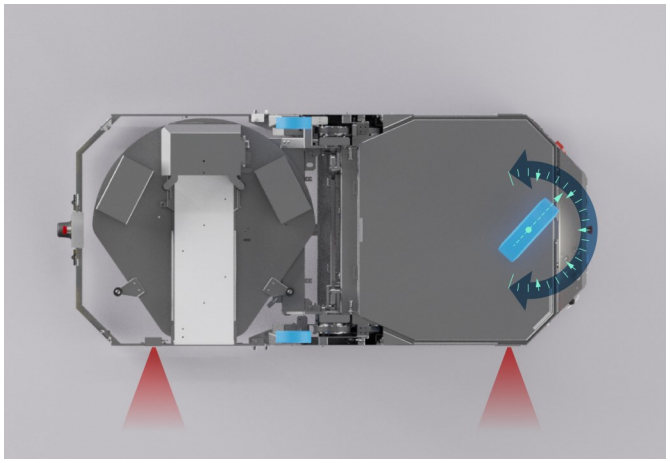
The kinematics of the turning module have been completely redesigned. Movements are now smoother. The cheese is held better in the turner's stirrups

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



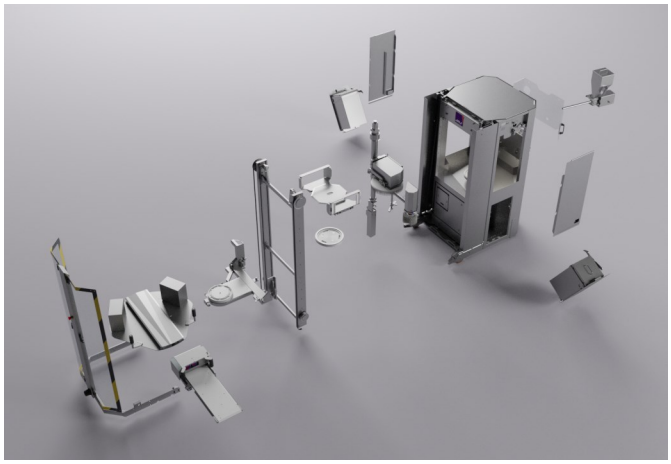
GUIDE AND MOVEMENT SYSTEM

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

This list of standard equipment and optional features is not exhaustive and not contractual. Only a commercial offer is binding.

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 ± 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

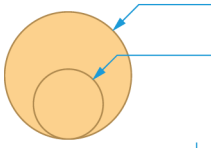
OPERATIONAL FEATURES

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

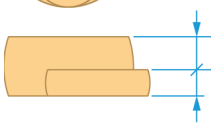
PRODUCTS FEATURES

Minimum height of the first cheese wheel 200 mm

Treatable cheese wheel diameter:



	RF11 980	RF11 1'080
Ø (max):	650 mm	750 mm
Ø (min):	250 mm	250 mm

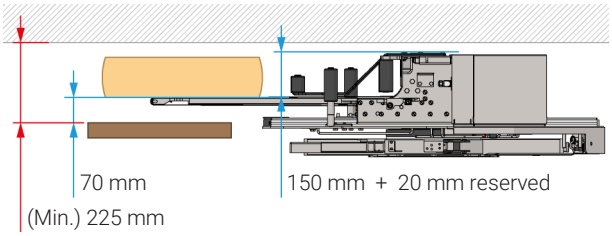


	H⚙ 2'000**	H⚙ 2'000+
Thickness (max):	130 mm	160 mm
Thickness (min):	60 mm	60 mm

** + or 160 mm if Ø < 400

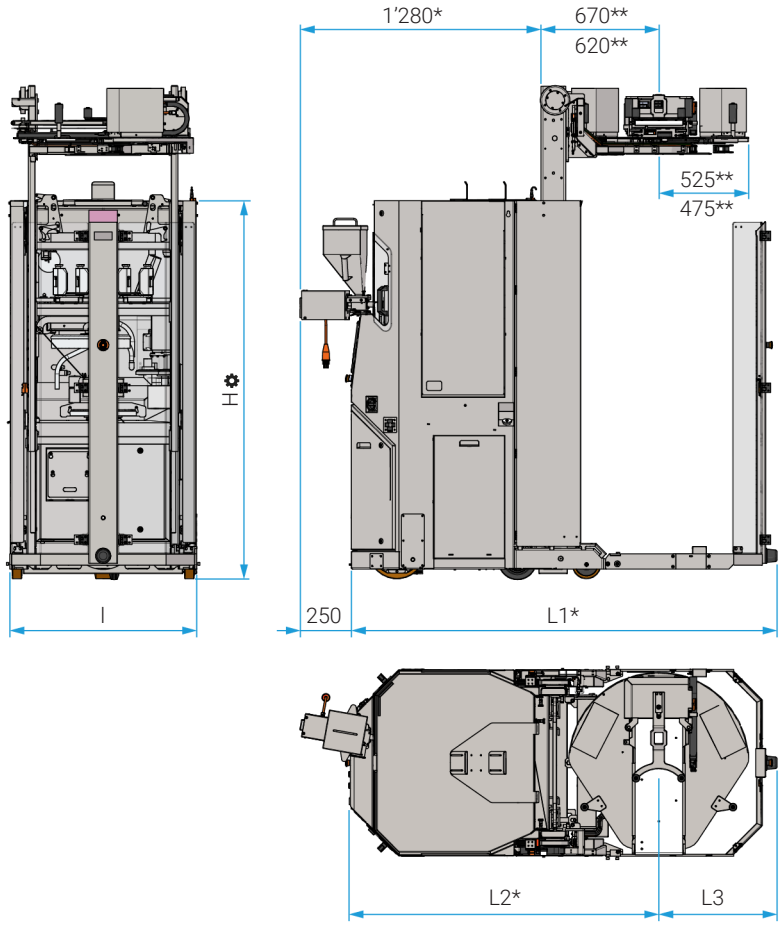
GRAB MODULE DIMENSIONS

Required clearance between top plate and ceiling



DIMENSIONS

Measures in mm



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	1st cheese height
200	210	Level centre
↓	↓	

H⚙	Treatable levels		Compatible
2,000	15	14	RF11 980 & RF11 1'080
2,200	17	16	
2,400	19	18	
2,600	21	20	RF11 1'080
2,800	23	22	
3,000	25	24	
3,200	27	26	

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