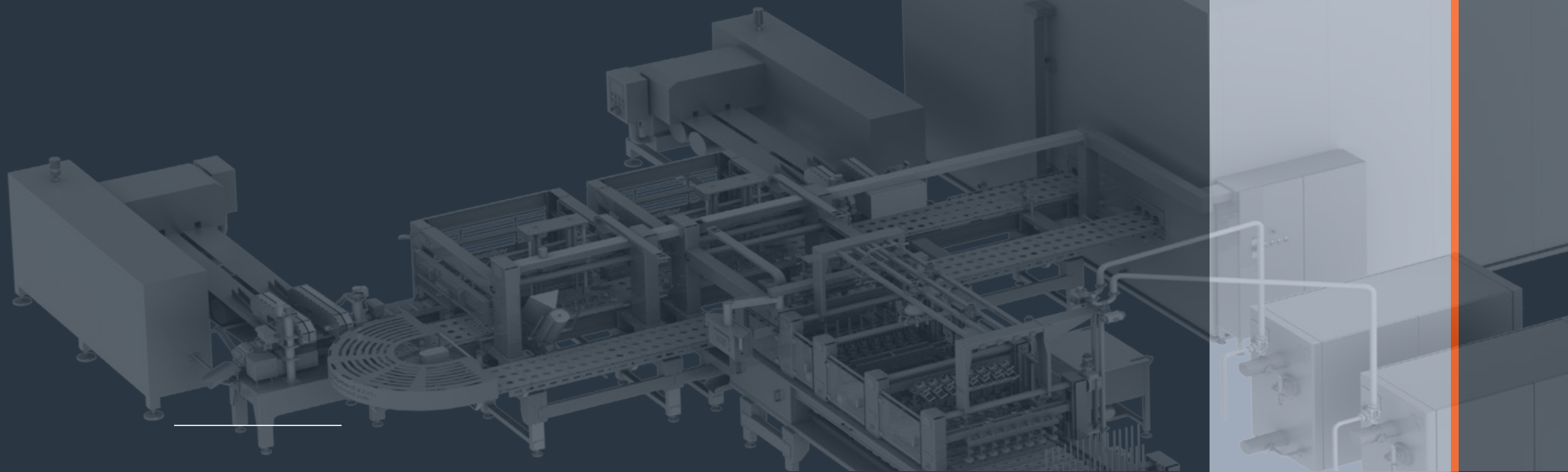


ice com

vojta ice cream
equipment

EXTRUSION LINE CX-800/8

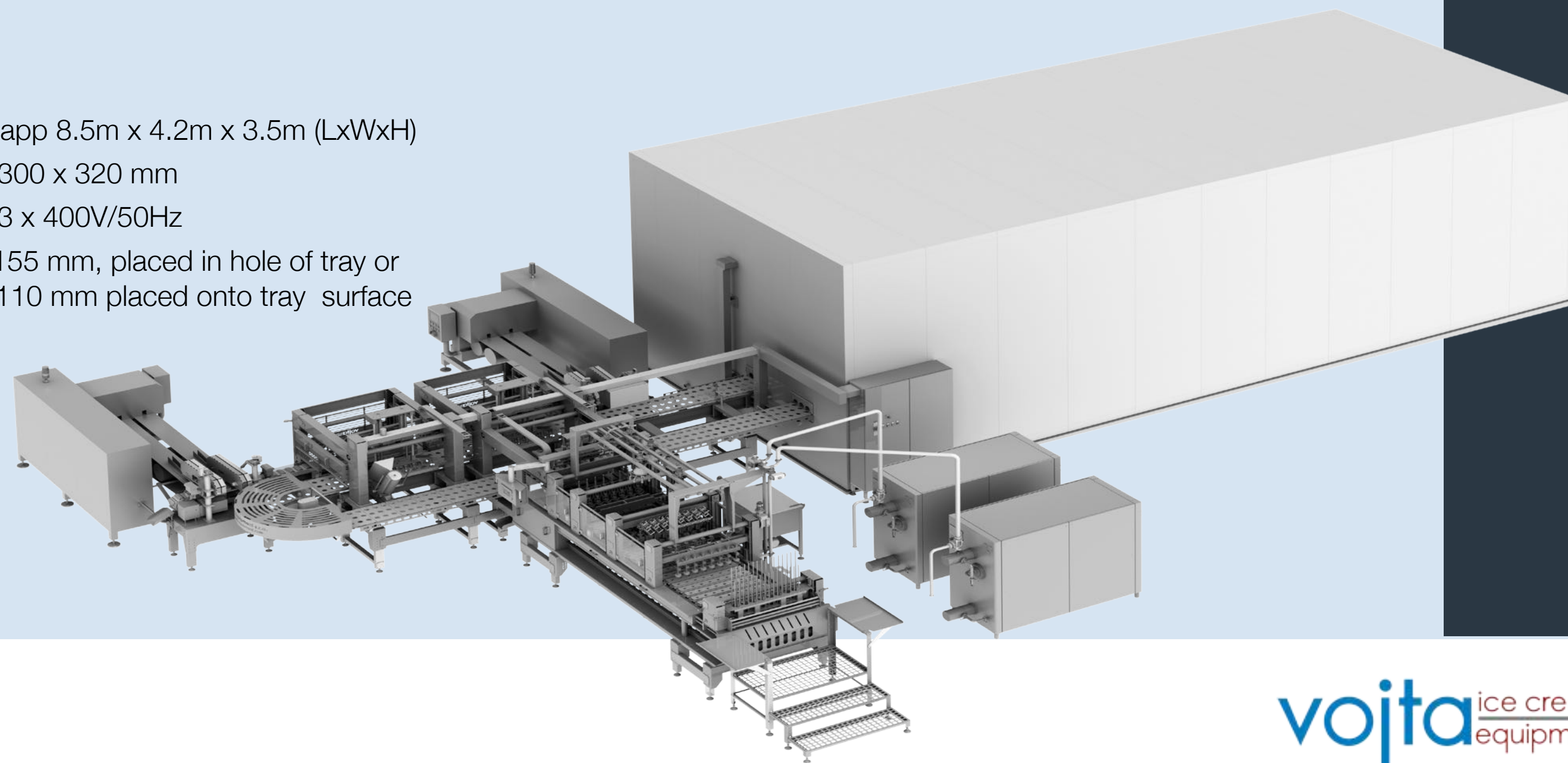


AUTOMATIC ICE CREAM EXTRUSION LINE FOR STICK/STICKLESS ICE CREAM PRODUCTION

Front execution of work table

Products: Stick, Cake, Cone
Productivity: Up to 18.000 pcs/h
Product weight: 60 gr
Hardening time: 22 min

External dimensions of the tunnel: app 8.5m x 4.2m x 3.5m (LxWxH)
Tray sizes: 300 x 320 mm
Voltage 3 x 400V/50Hz
Product height (max): 155 mm, placed in hole of tray or
110 mm placed onto tray surface

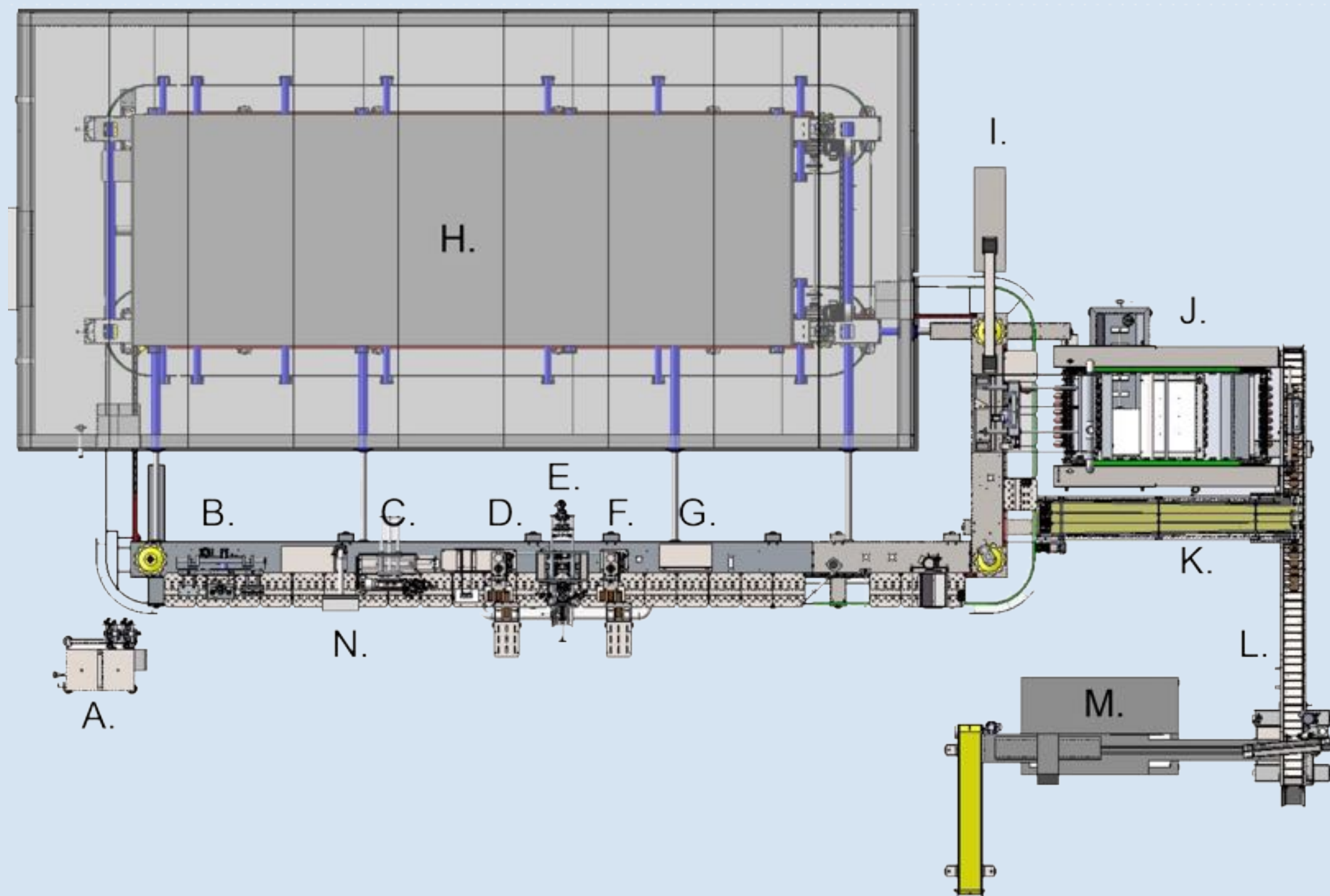


1

BASIC MACHINE

Side execution of work table

- A - Topink vat
- B - Cone filling station
- C - Log station
- D - Upper biscuit feeder
- E - Vertical extruder
- F - Lower biscuit feeder
- G - Pneumatic plant
- H - Evaporator
- I - Main el. Cabinet
- J - Lamella pick up
- K - Sandwich conveyor
- L - Pocket conveyor
- M - Wrapping machine
- N - Operator panel



1

BASIC MACHINE

- Isothermal box with sandwich panels of high-density injected polyurethane, thickness 125 mm.
- Sandwich panels with finishing Zn/Zn cladding (st.st. optional). U-value for the sandwich panels $k=0,17W/m^2K$
- Inspection door with safety handle inside, internal electrical light fittings, safety switch
- Standard prefabricated floor with water resistant fiberglass
- Inside floor is covered by stainless steel AISI 304, thickness 2 mm with anti-slip top cover, fully welded on side. Drain for cleaning water sloped to production area.



1

BASIC MACHINE

Inner mechanical robust structure, built in stainless steel AISI 304

- Central pneumatic tension station for the automatic compensation of chain's dilatation.
- Precise tension adjustment for long chain life.
- Automatic tension disconnection when machine is out of use.

Advantage: This means that you can use the chain up to 12 years without being needed to be changed. This is a big benefit on spare parts costs.



1 BASIC MACHINE



Air pillow made by FESTO



Easy tense system for precise and equal chain tension during life time

1

BASIC MACHINE

Stainless steel **lubrication-free chain** (chain pitch 76,2 mm), carrying the trays.

Lubrication free chain ensure **highest hygiene standards** of production. It avoids the contamination of the ice cream with small drops of lubrication.

The chain is driven by motor-reducer assembly placed inside the tunnel. Electronic control and synchronization via **frequency converter**.

Adjustable safety brakes and **overload control** to stop the chain whenever the stress limit is exceeded.



Chain with teflon sliding elements

1

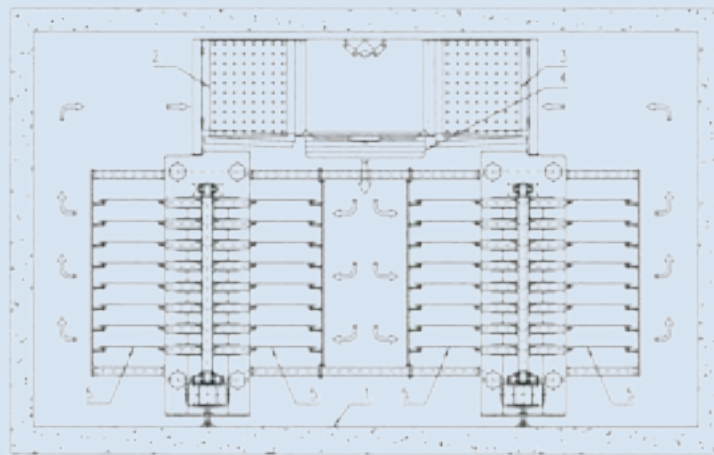
BASIC MACHINE

Refrigeration system with Freon evaporator with 6 to 8 high speed fans for the air circulation, all mounted inside the box on the upper part of the tunnel.

The ventilators are placed on the top of the tunnel in order to create turbulence - the air is not blown from the side like in the classic tunnels.

The velocity of the air is increased and the result is a rapid and uniform hardening.

In this way the cost of the electricity is kept low and the tunnel has a small footprint making the extrusion line more compact.



1

BASIC MACHINE

Wheel with steel bearing inside and lubrication free chain.



Inner view oft the tunnel with trays and extruded product on stick

2 EXTERNAL WORKTABLE

The worktable prepared for mounting of working stations. All exterior surfaces and components from stainless steel or stainless materials. Open design for easy sanitation and maintenance.



Worktable execution = FRONT WORKTABLE

- Main electric control panel, built according the international safety regulations
- PLC control unit for synchronization of all parts of the line. Preset values for 10 products (30 products possible). Alarm and error messages for easy follow up.
- Diagnostics, enhanced help screens. The PLC is made in Japan by OMRON.
- Main operator panel is 10" UNI OP graphic touch screen. Screens and labels in English and on request in local language.
- Secondary functions activated by compressed air or frequency-controlled motors and synchronized with the main drive by means of PLC control.

2

EXTERNAL WORKTABLE.



Cleaning and drying device for trays consists of following operations:

- Pre – spraying with clean water
- Rotating brush cleaning. Detergent hopper above brush
- Tray surface rinsing with clean water
- Two compressed air drying stations
- Hammer mechanism to detach hardened products from tray surface (lower position)
- Product remover arm – for products not picked up by pincers

3

EQUIPMENT FOR PRODUCTION OF ICE CREAM ON A STICK

Ice cream on stick «Magnum»

Product design: M-0014-110

Product volume: 110 ml

Ice cream on stick «Mini-Magnum»

Product design: M-0002-50

Product volume: 50 ml

Two devices to extrude, cut and drop the products on tray in pre-set number and position, consisting of:

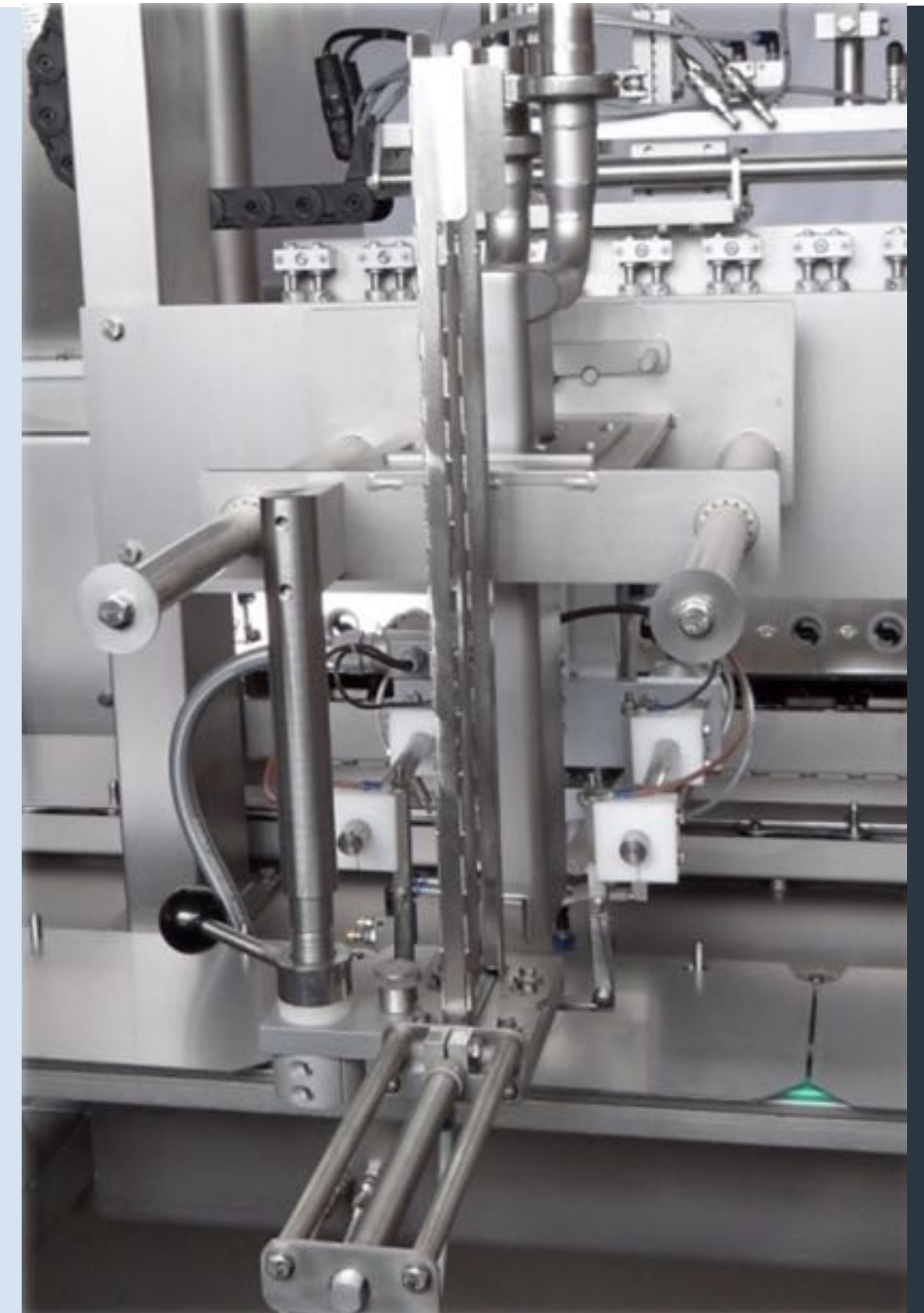
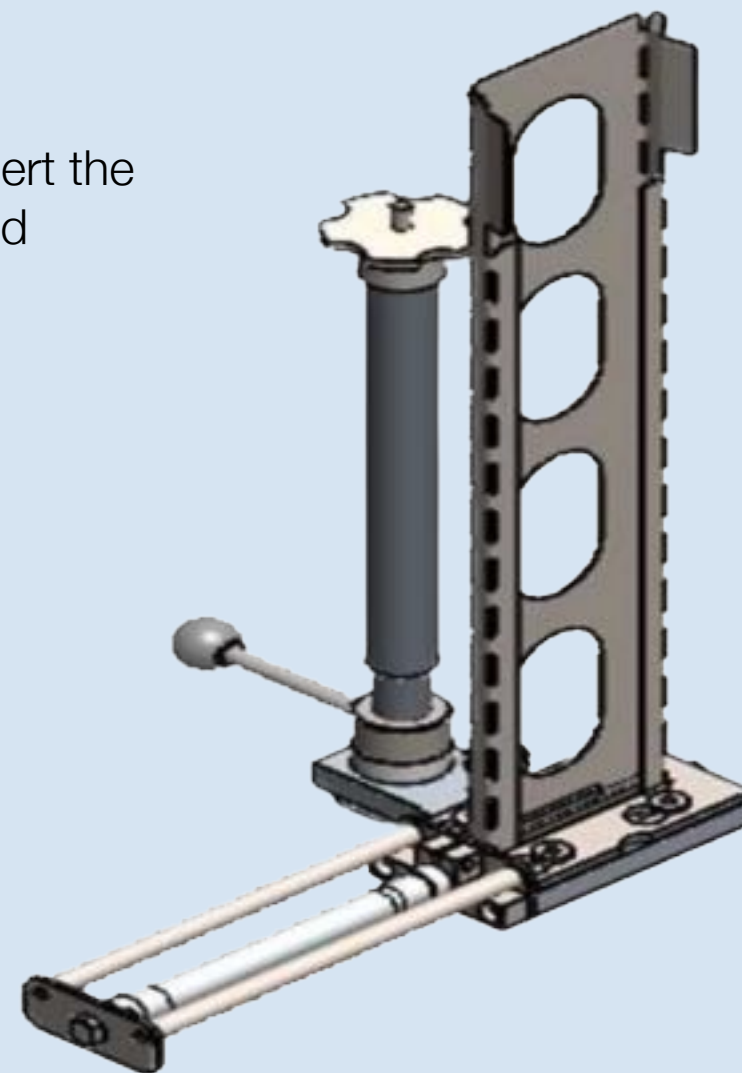
- Vertical extrusion system is servo driven and working in synchronization with cutting unit and tray
- Horizontal cutting system with single or double heated, adjustable wire



3

EQUIPMENT FOR PRODUCTION OF ICE CREAM ON A STICK

- Cutting 8 products per tray (product pitch 76,2 mm)
- One set of 780 flat stainless-steel trays, dim 300 x 320 mm, AISI 304
- 2 x single stick inserter, pneumatically operated, with magazine to insert the wooden stick one by one into the ice cream slice while being extruded



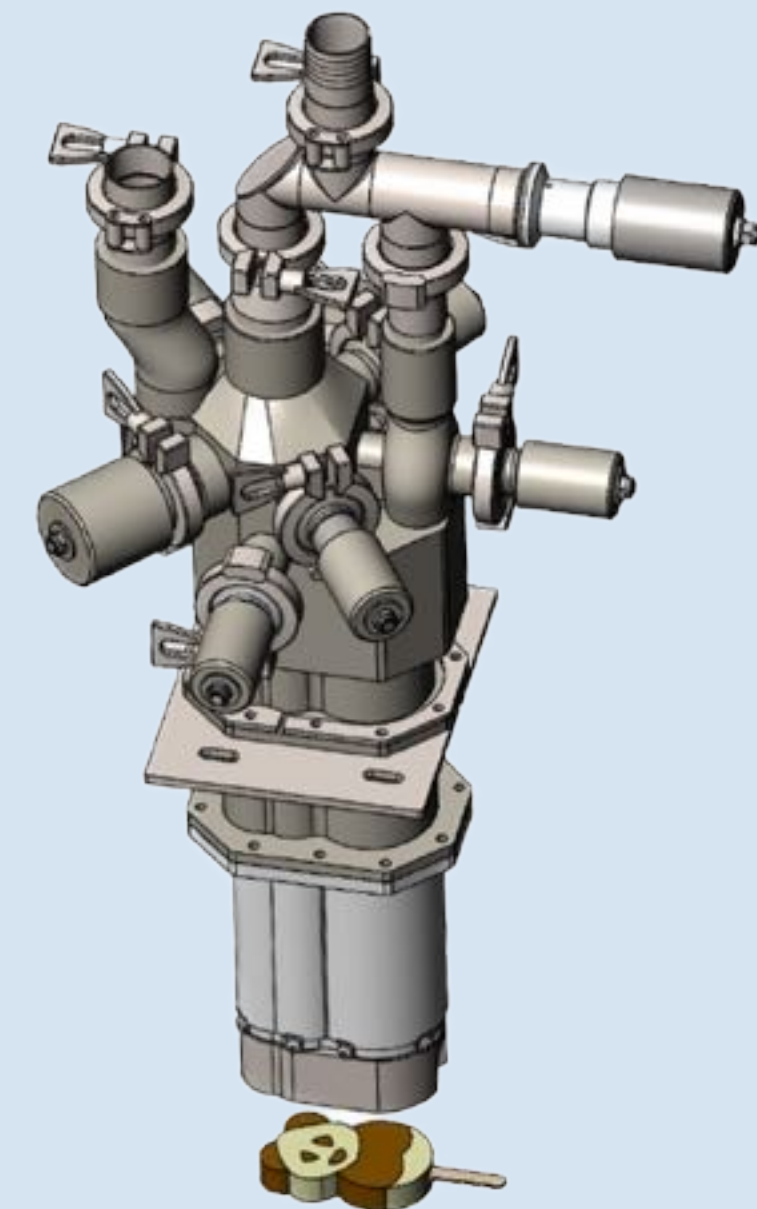
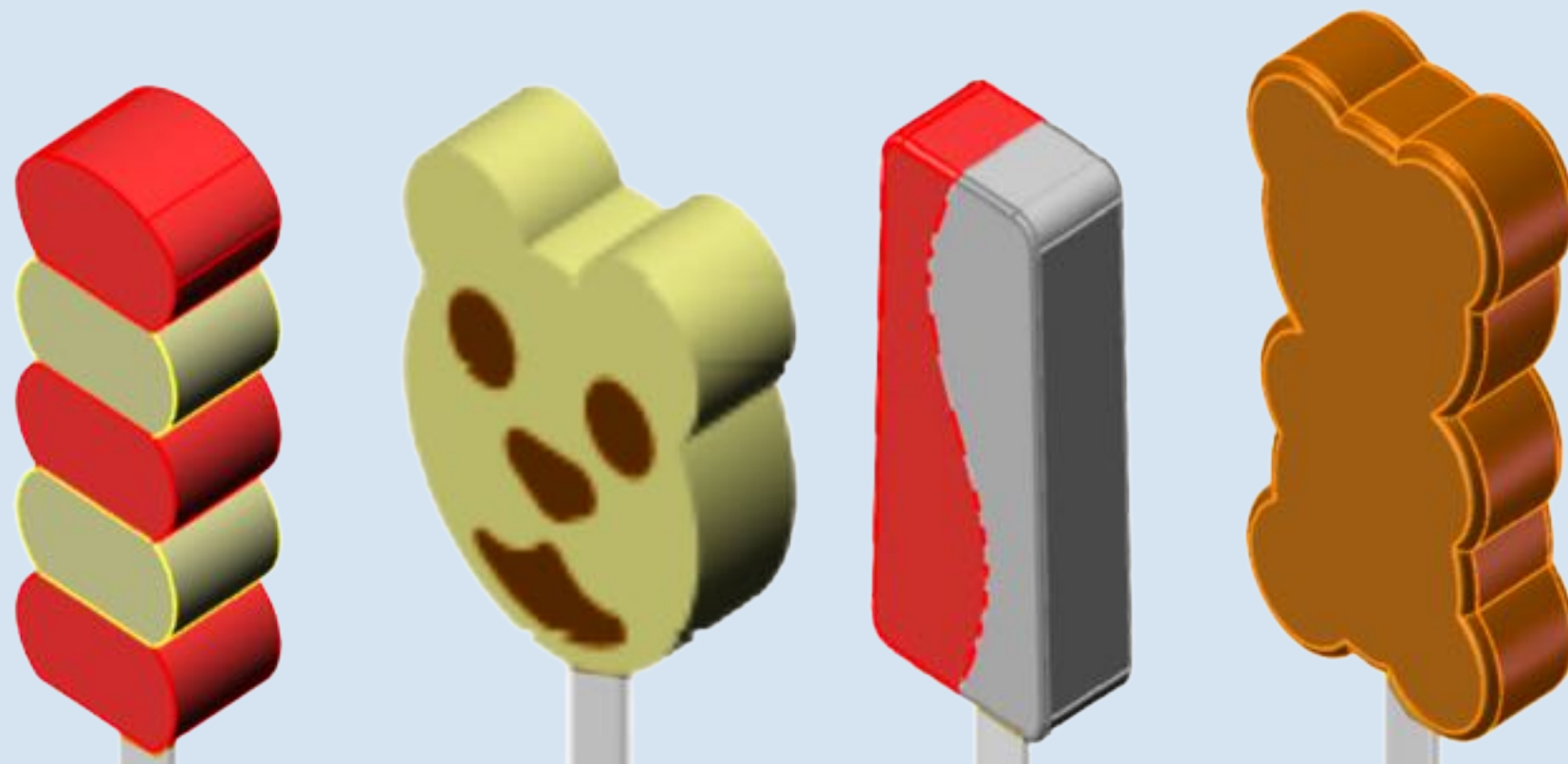
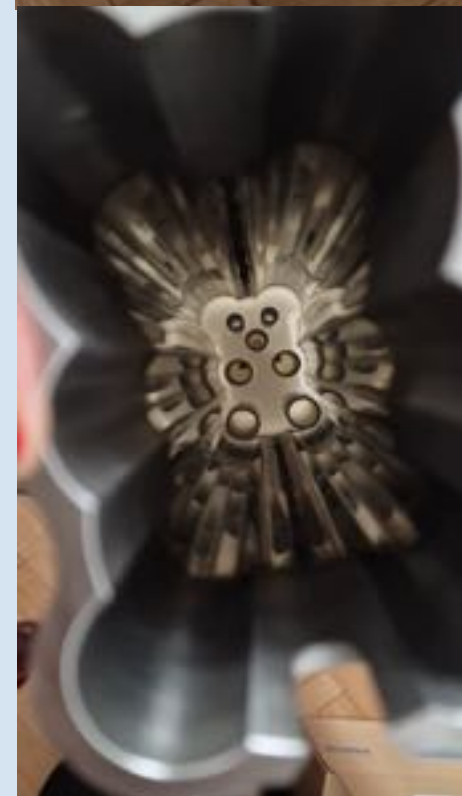
3

EQUIPMENT FOR PRODUCTION OF ICE CREAM ON A STICK

Two stick magazines interchangeable for stick dimensions

BONE STICK (Magnum) 94 x 16 x 2 mm
STANDARD STICK 93 x 10 x 2 mm

Other possible types of products by changing the extruder head.
 Details in the Ice cream catalog and on request.



Example of the extruder for Panda Ice cream (product on request)

4

ACCESSORY FOR W2 WORKTABLE FOR HORIZONTAL EXTRUSION

Additional equipment for horizontal extrusion

Ice cream bar «TWISTER»

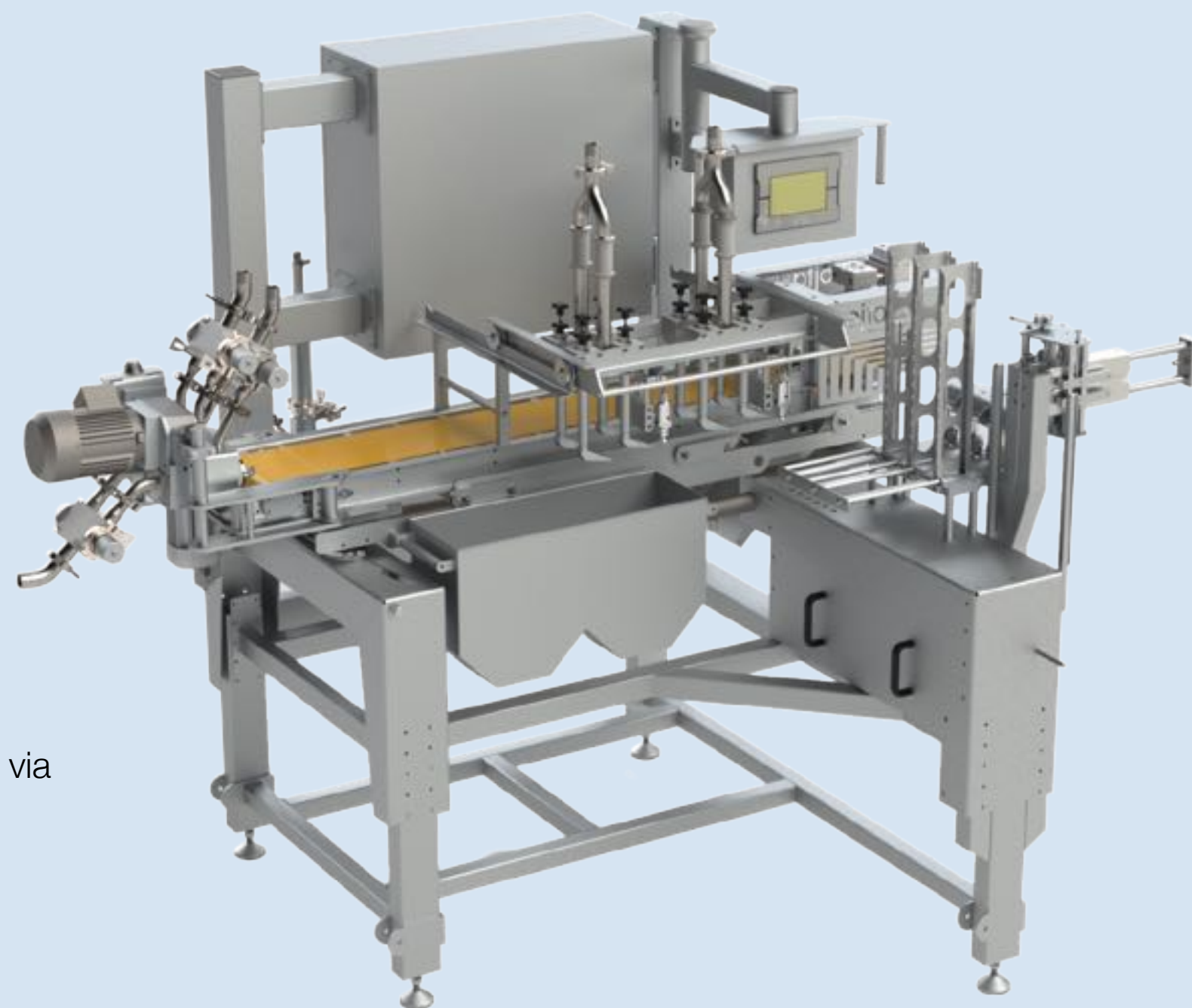
Type: SP-0001-100

Capacity: up to 6.000 pcs/h – 2 lanes of products



Consist of:

- Stainless steel frame
- Conveyor 1200 x 250 with belt speed regulation (adjustable length of product)
- Product transfer unit, pneumatically operated, synchronized via PLC with the extrusion line
- Cutting station, heated, temperature controlled
- PLC control of the line independent, encoder for synchronization with extrusion line
- Operator interface on operator screen of the line



4

ACCESSORY FOR HORIZONTAL EXTRUSION WITH TRACKING TABLE



Device to extrude, cut and deposit the products on trays in pre-set number and position, consisting of:

- Horizontal extrusion system working in synchronisation with cutting unit and tray chain
- Caramel/nougat top layer decoration nozzle
- Cutting system with single heated wire, adjustable wire temperature
- Nut distributor, with feeding belt servo driven, adjustable nut dosage by curtain.

4 ACCESSORY FOR W2 WORKTABLE FOR HORIZONTAL EXTRUSION

Stick inserter following trays

Static part:

- Stainless steel frame with adjustable legs
- Quadruple sticking unit, with pneumatic pistons and four stick magazines
- Execution for stick 93 x 10 x 2 mm (other stick dimensions on request)

Moving part:

- Racking table, to be installed on existing extrusion line
- Movement by servo - variable speed of the line. Synchronisation of the movement by PLC of W2 table.
- Set of 3 grippers to receive sticks from magazine and gently insert them into products lying on tray.
- Twister in three colors



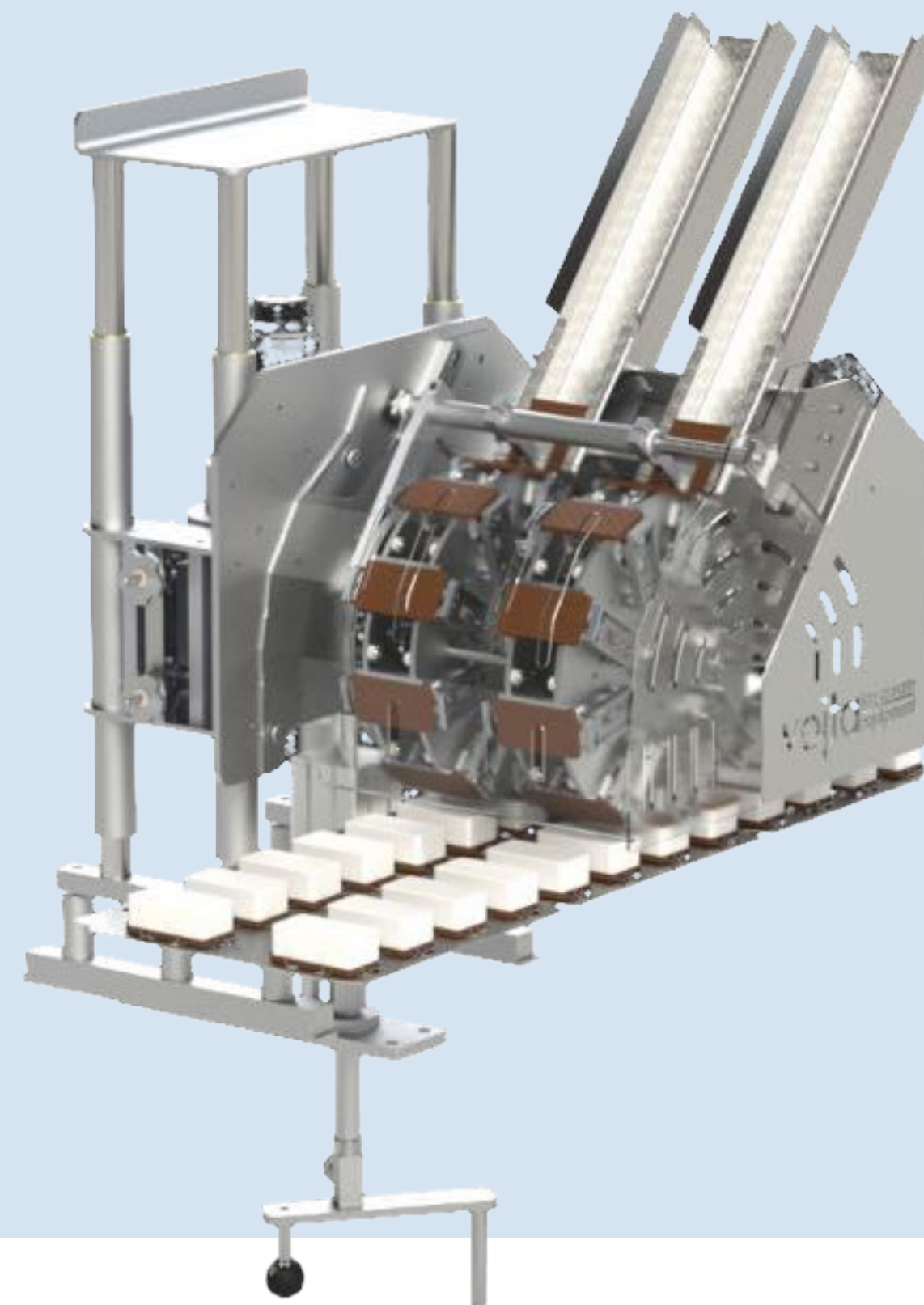
5 DEVICE FOR SANDWICH ICE-CREAM

Products: FULL SANDWICH
HALF SANDWICH

Capacity: Up to 8.000 pcs/h for each lane

Complete with:

- Set of flat stainless steel trays, execution sandwich
- Lower biscuit feeder with wafer magazine, placed at worktable of extrusion line
- Upper biscuit feeder with wafer magazine, placed at worktable of extrusion line
- Extrusion nozzle rectangular shape
- Upper biscuit pressing device



6

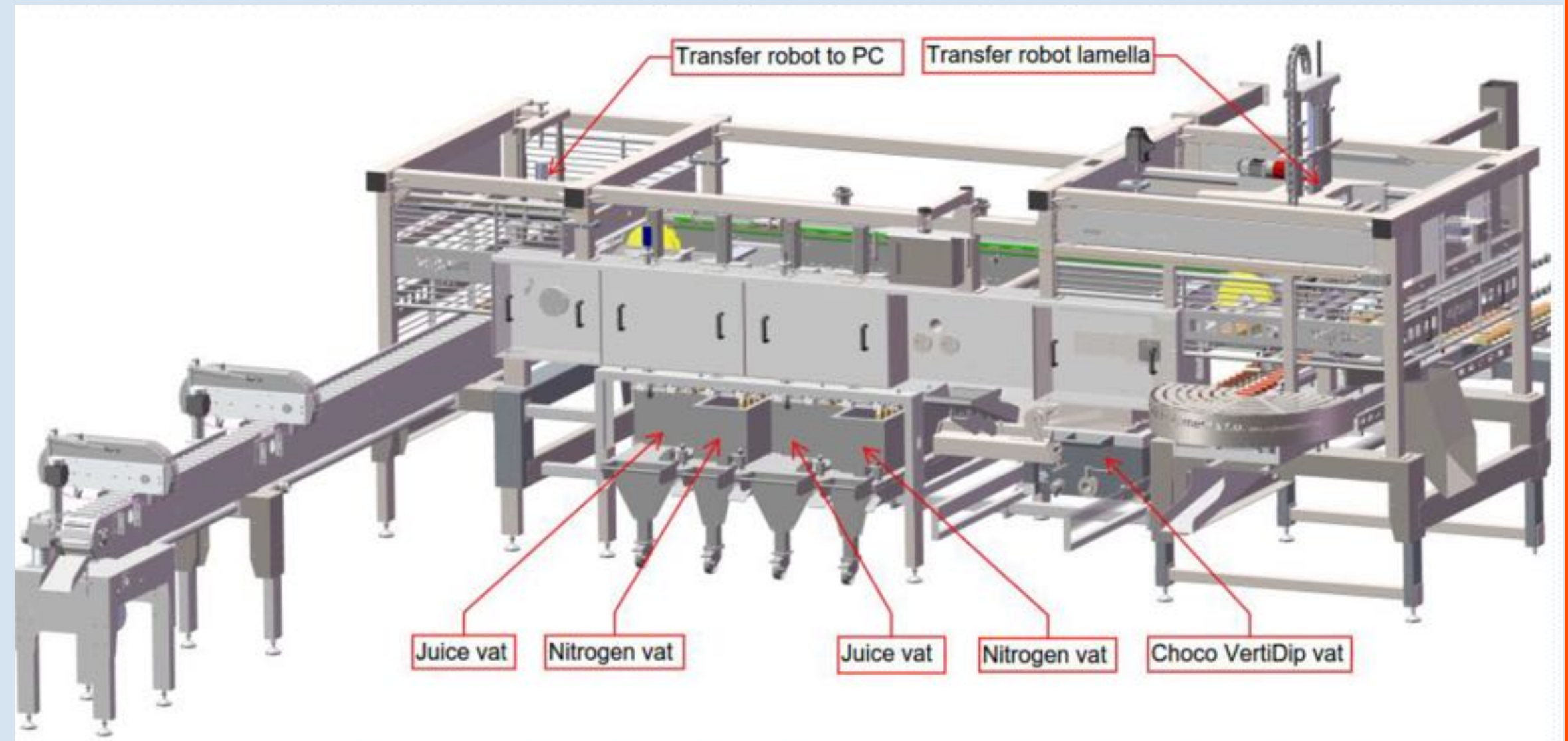
NITROGEN DIPPING FOR DOUBLE COATING



Solero



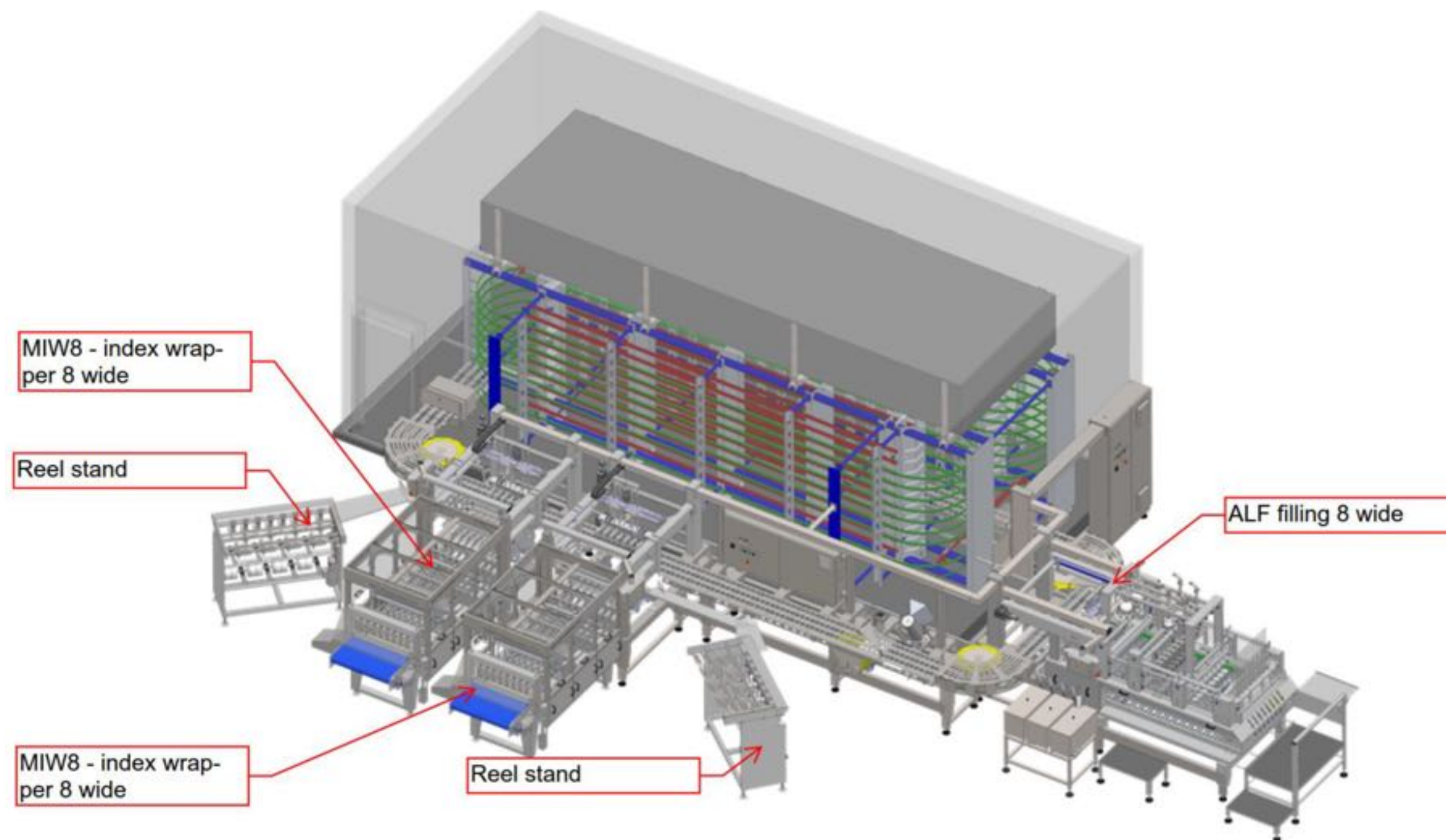
Double chocolate



7

FILLED PRODUCT EXTERNAL TABLE

Cup or cone filling with side
execution of work table

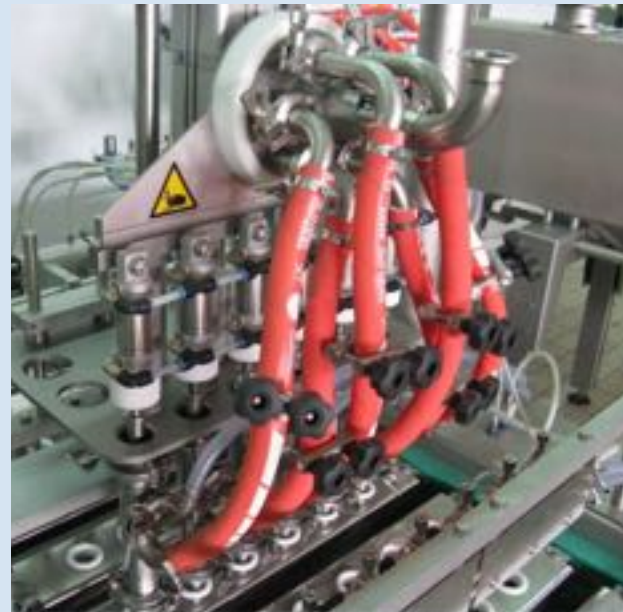


7

FILLED PRODUCT TRACKING TABLE

Filling station mounted on servodriven tracking table

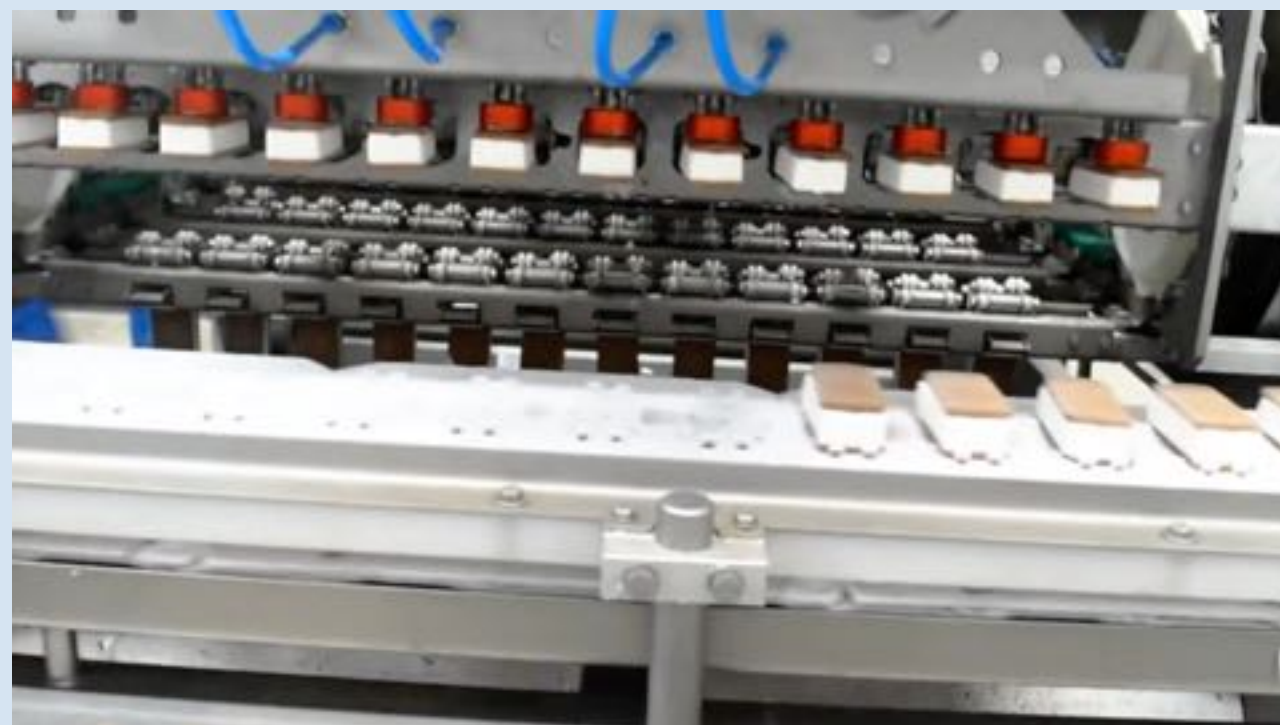
- Time-elapse filling valves
 - Ice cream distributor for even feeding of each valve
 - Vertical movement servo operated
 - All parameters easy adjustable from operator screen
-
- 1 or 2 color filling
 - Rotation of 2 colors (swirl)
 - Pencil filler



8

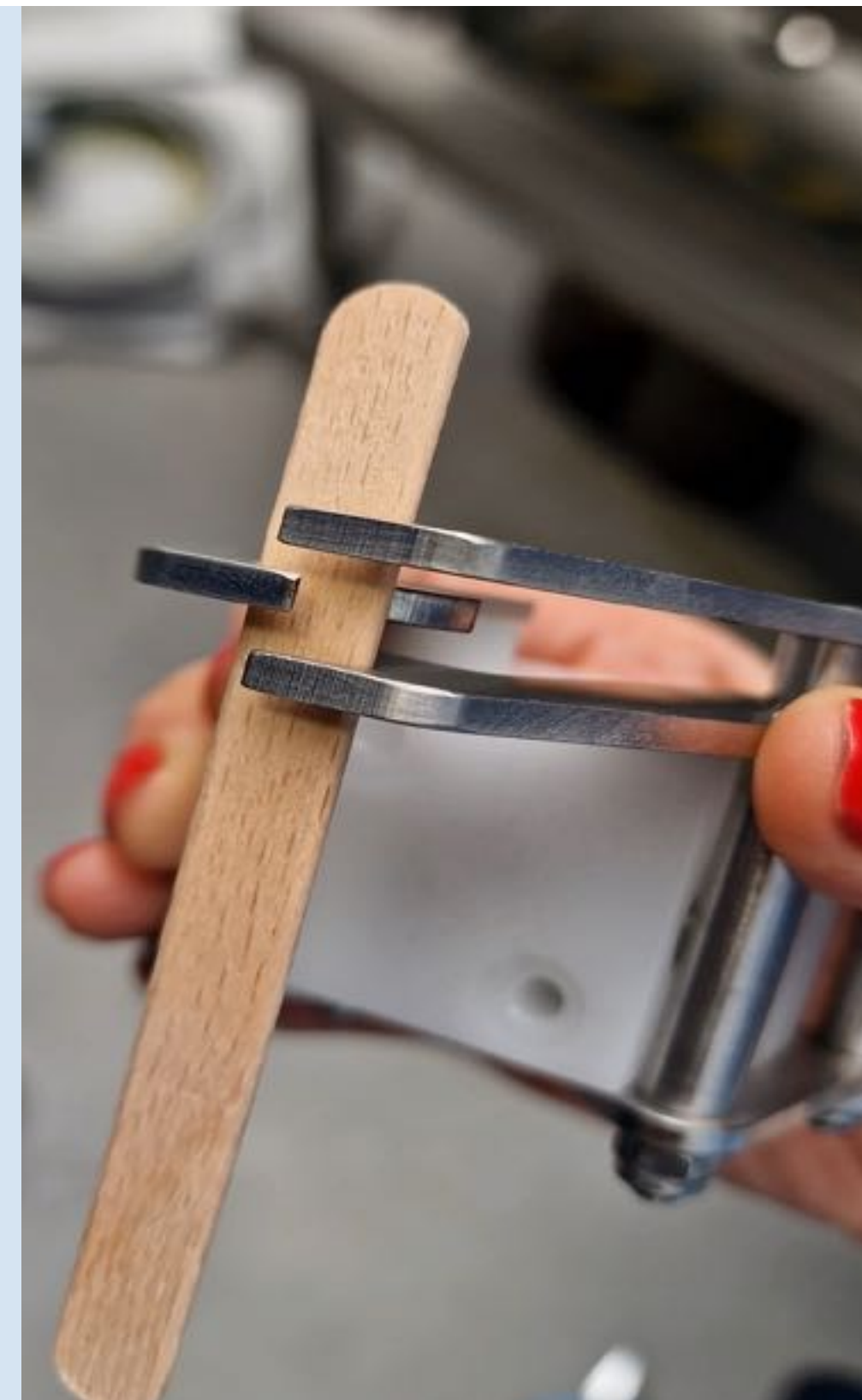
MLPH – MULTI LANE PRODUCT HANDLING SYSTEM.

Pitch between products:	76,2 mm
Products per lamella:	16
Pick and place	½ lanes
Total numbers of lamella:	32
Pitch between lamellas:	126 mm
Active dipping station:	1



Process description:

- The „Pick-and-Place“ system is consisting of rows of grippers, follows the product plates which are continuously moving forward.
- When the „Pick-and-Place“ system is in place, the grippers grab the products and transfer them to the lamellas.
- The lamellas move forward stepwise, powered by pneumatic drive.
- The products are dipped into chocolate.
- Finally a „Pick-and-Place“-system grabs the products from the lamellas and transfers them to the wrapper.



8 _____

MLPH – MULTI LANE PRODUCT HANDLING SYSTEM:

- One chocolate dipping station. Independent pneumatic cylinders move the dipping station up, in order to cover the products with chocolate. Adjustable level of coating.
- One stainless steel buffer chocolate tank. The tank is equipped with double jacket walls with hot water circulation. The dipping tank consists of one chamber for dipping into one colour.
- Water heated drip tray.
- System to handle solids in chocolate (e.g. roasted peanuts) with dimension 3-5 mm.



8

MLPH – MULTI LANE PRODUCT HANDLING SYSTEM.

Equipment description:

Strong stainless-steel mainframe with adjustable legs to hold all groups of equipment.
Pick and place robot №1, mounted on tracking table (servo driven), for transporting the products from the tray to lamellas

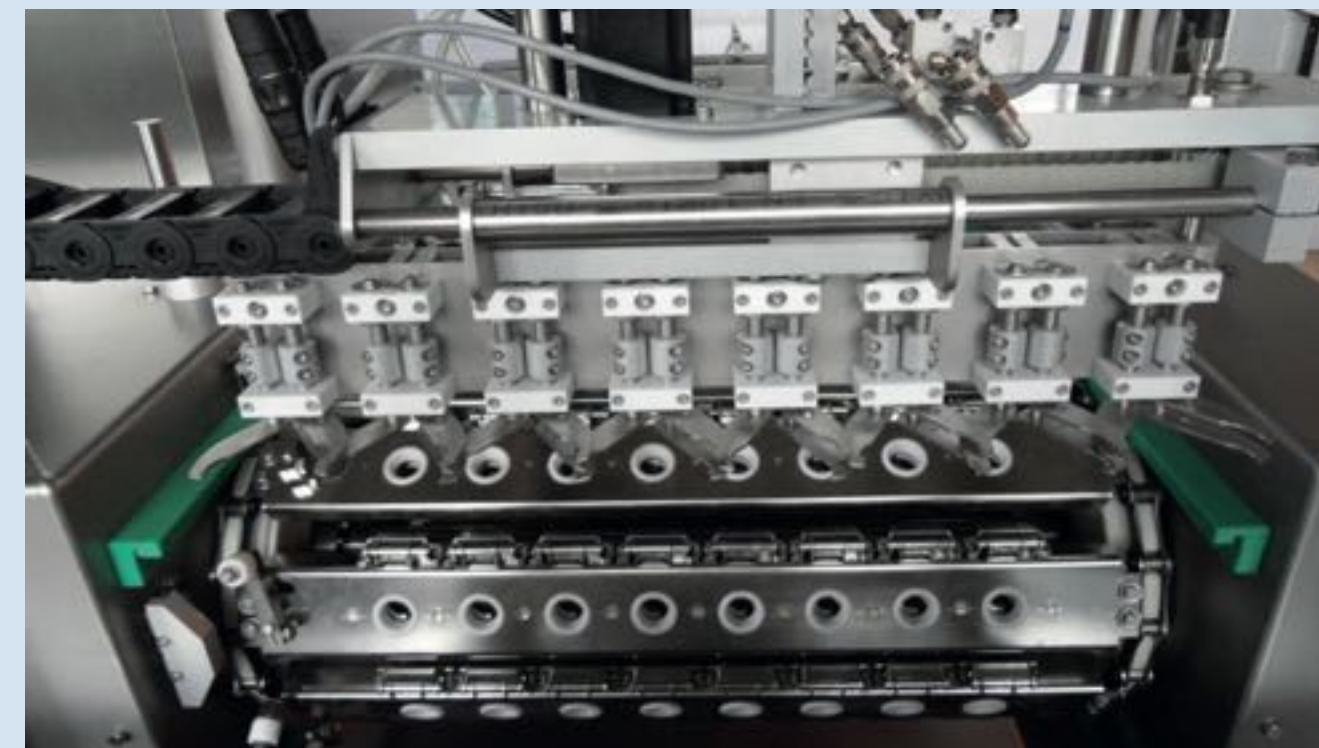
GRIPPERS TRAYS - LAMELLA:

Row of 1 x 16 grippers with STICK
Pick and place robot №2 for moving of the products from the lamellas to the wrapping machine.

GRIPPERS LAMELLA – POCKET CONVEYOR

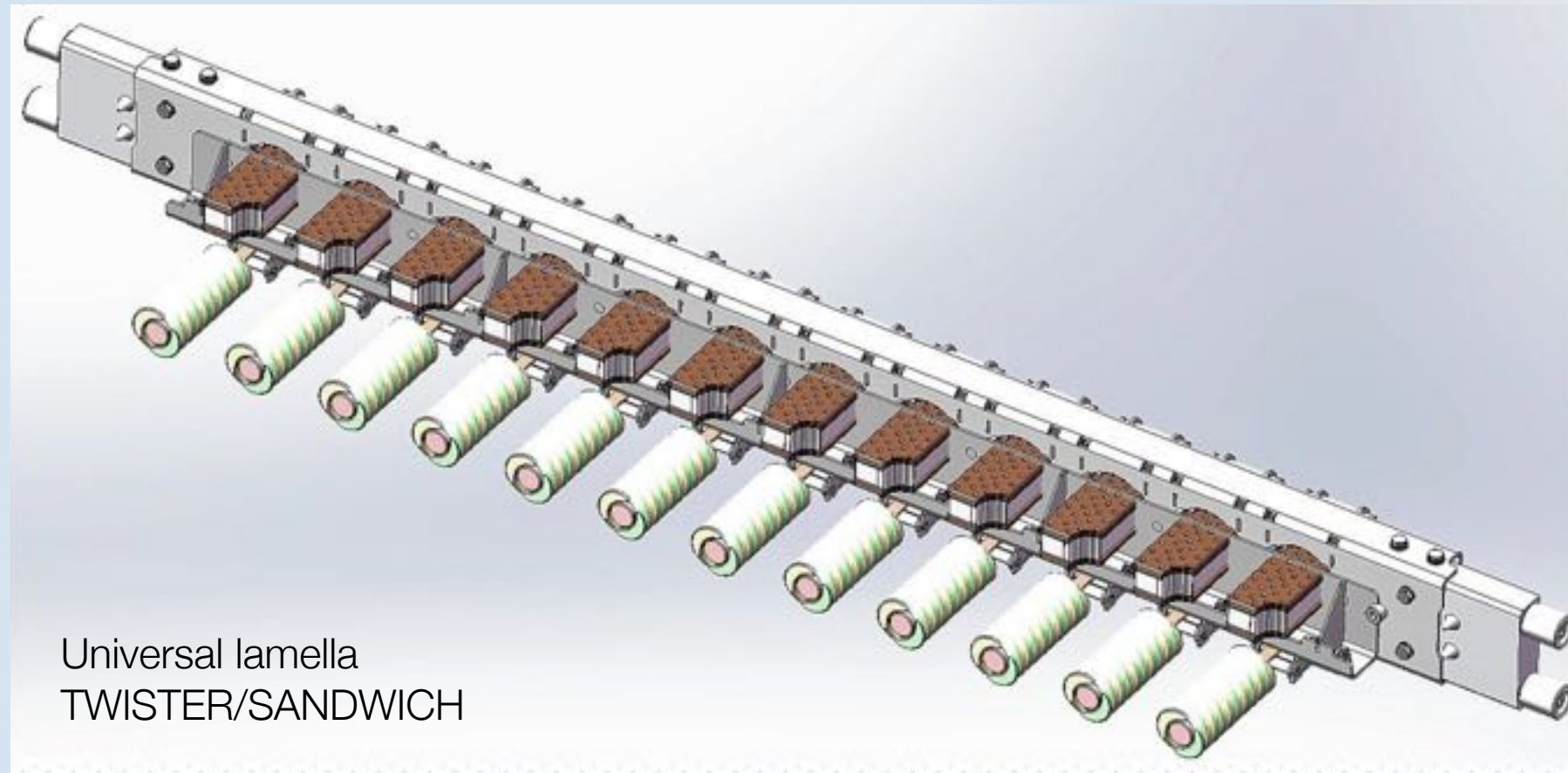
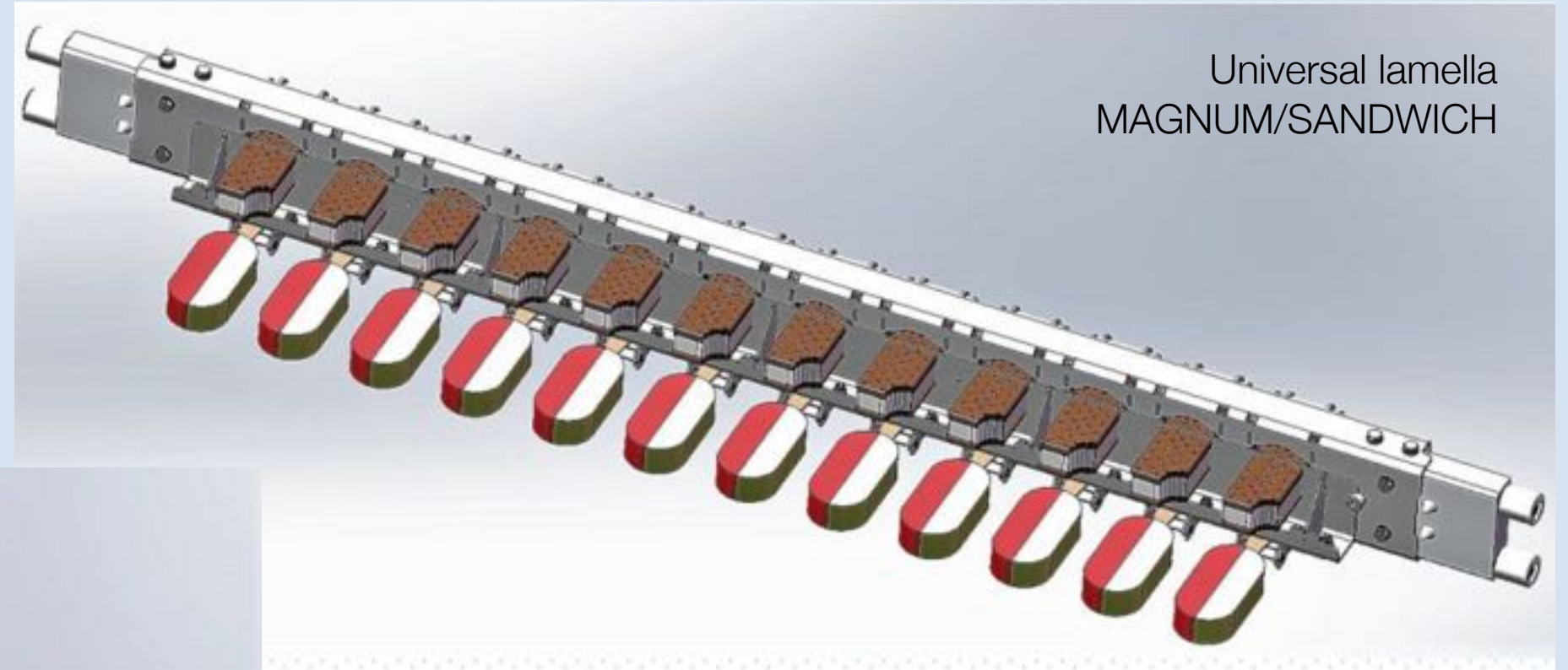
Row of 1 x 16 grippers with STICK

All these devices manufactured in stainless steel, easy to disassemble for cleaning purposes.



8

MLPH – LAMELLA PICK-UP



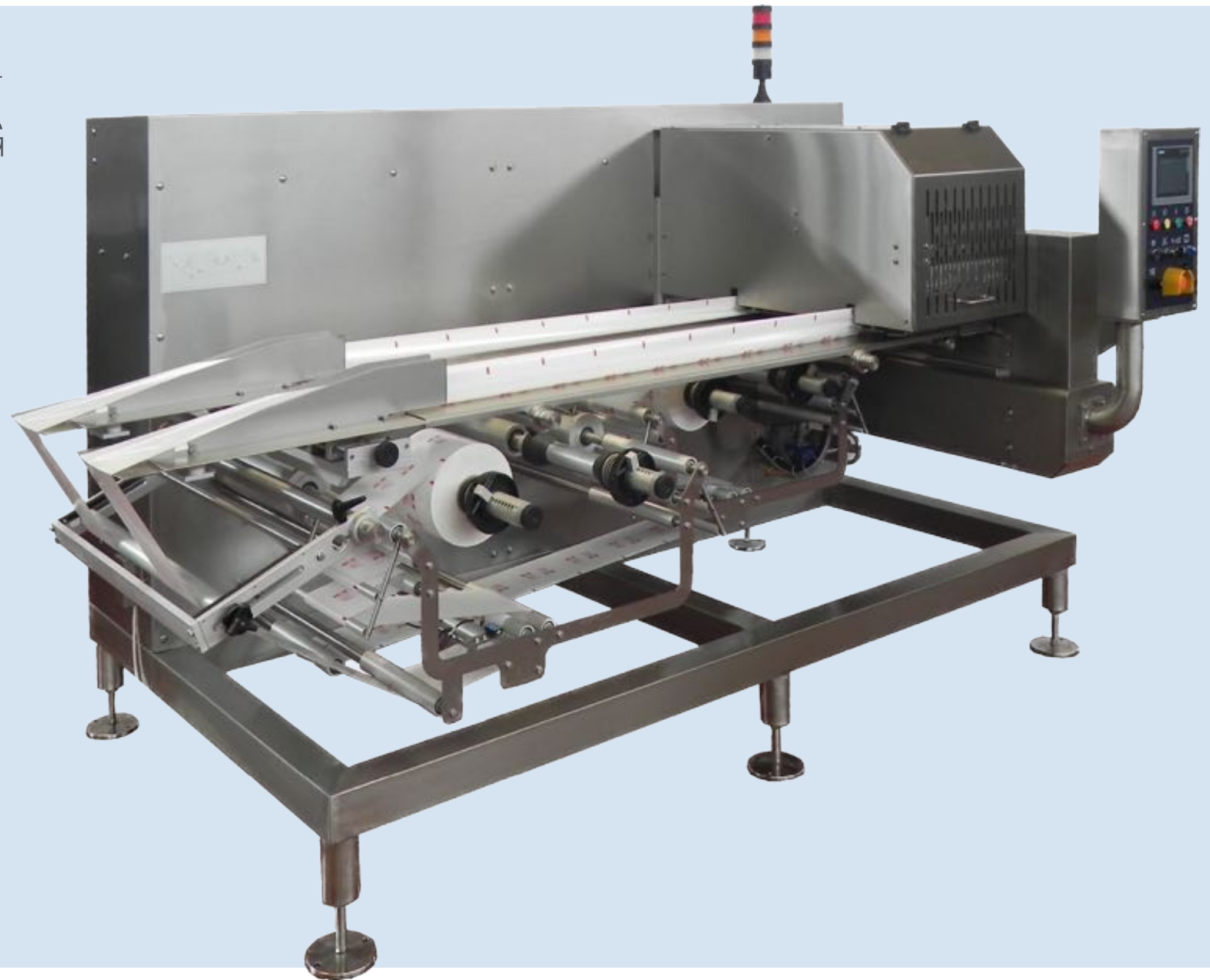
9

AUTOMATIC REVERS WRAPPING MACHINE W800

Product speed: 12.000 pcs/h

Product to be wrapped: STICK, WAFER CUP,
BALL CONE, SANDWICH

- Double lane wrapping machine
- Flowpack style
- For cold and/or hot sealing paper
- The wrapper works fully synchronized with the tunnel and lamella pick-up device
- Pocket conveyor, strong type with aerial arm to transfer products from conveyor to wrapper/s W800.



9

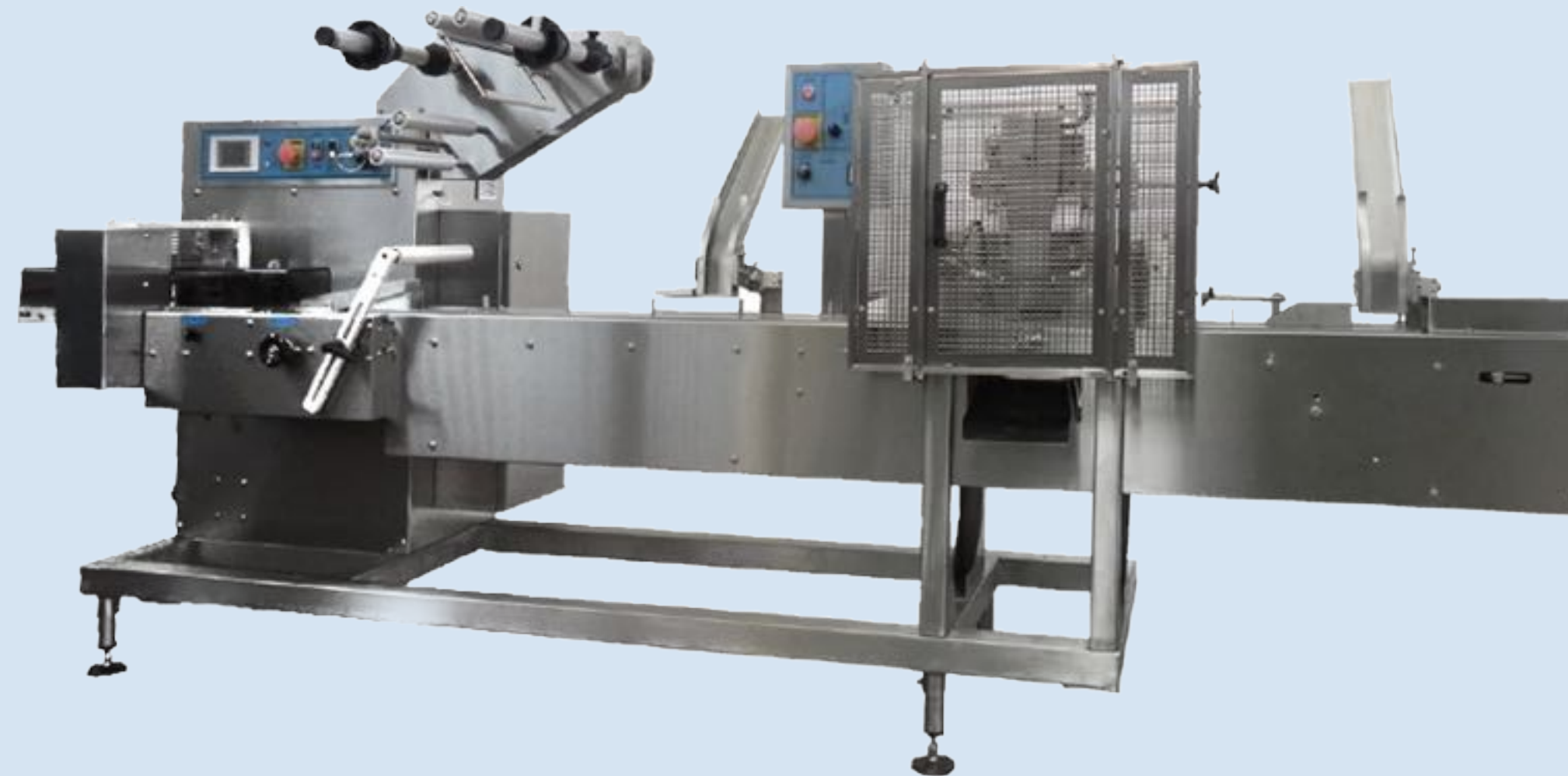
AUTOMATIC REVERS WRAPPING MACHINE W800

- Double reel holder
- Single cutting jaws
- Sealing/cutting jaws with electronic temperature thermoregulator for paper sealing and cutting
- Above groups servo-driven (3 servo-drives in total)
- Pocked conveyor place at the right angle of wrapping machine with upper chain for product transfer
- Standard infeed conveyor with chain
- Adjustable folding box
- Outlet conveyor for wrapped product discharge



10

STAND-ALONE SANDWICH MACHINE UP TO 8.500 PCS/H



Production speed: 8.500 pcs/h
Products to be wrapped: SANDWICH

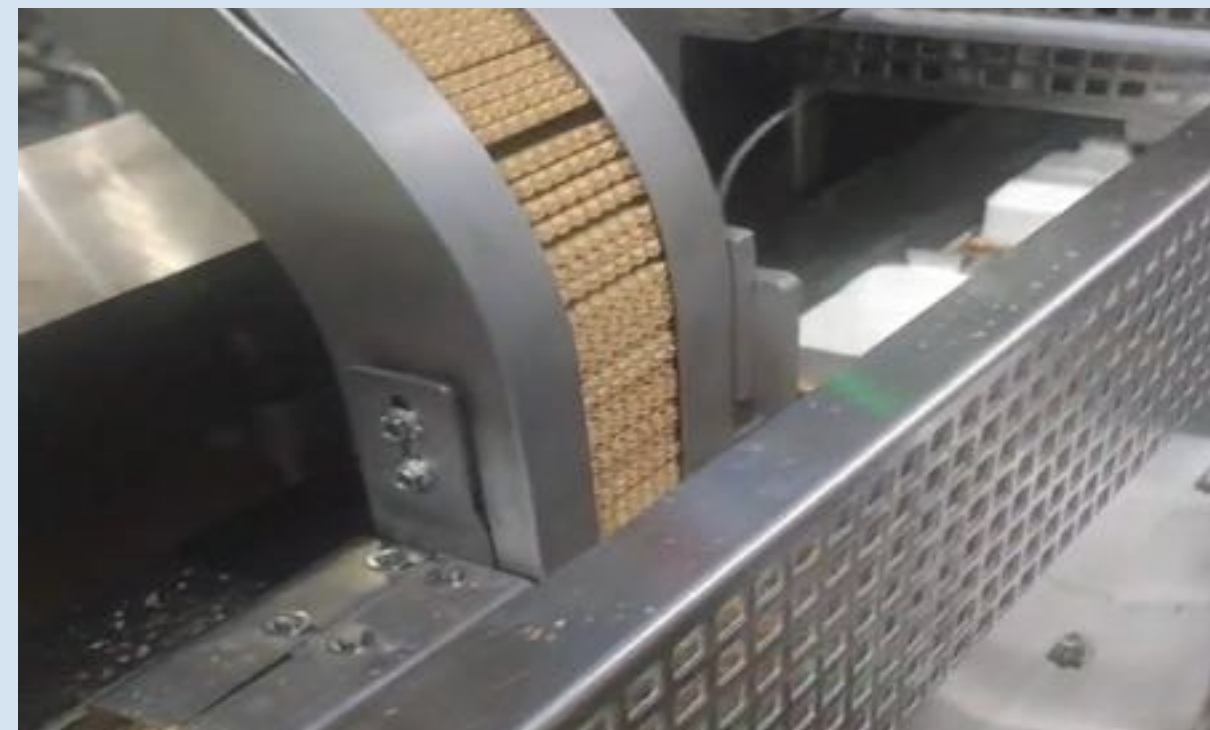
- Main frame: stainless steel, treated steel and anodized aluminium frame with adjustable feet
- Infeed conveyor and folding box: stainless steel, treated steel and anodized aluminium frame
- 2 pcs. biscuits dispensers, pneumatically liftable
- Wire cutter unit with two arks, independently motioned by brushless servo motor controlled by digital drive, offset and wire heating controlled by operator panel
- Extruder nozzle on sliding holder
- No biscuit no slice system controlled by photocell and PLC
- Pusher chain independently motioned by brushless servo motor

10

STAND-ALONE SANDWICH MACHINE UP TO 8.500 PCS/H

Reel holder:

- Double bobbin reel holder, max diameter 300 mm max. width 300 mm
- Brake released gradually controlled with mechanical cams



11

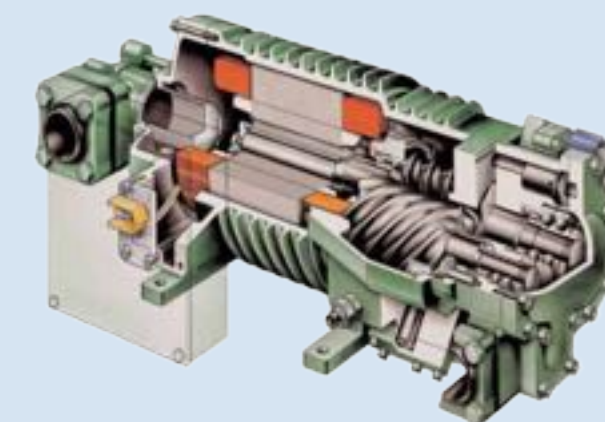
WATER COOLED COMPRESSOR UNIT

Type of compressor:	2HSN-7471-75
Refrigerant gas:	R507, R404A, R449
Expansion temperature:	-44 °C
Cooling power:	(-43°C/+30°C): 115 (50Hz) kW
Temp:	+35°C max.
Voltage:	3 x 400 V/50 Hz

Compressor/condenser assembly to supply the liquid refrigerant.

Consisting of:

- Painted steel frame to support all components, the controls and the electrical/refrigeration plant
- BITZER compressor (screw type) complete with oil, low pressure and high-pressure controls and safety devices
- Electrical control panel
- Piping and cabling up to 20 m



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