

May 2026

Processing Equipment Used in Cheese and Dairy Production

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guth
SOUTH AFRICA

We will briefly look at the following

- Pasteurising
- Separation & Standardising
- PRS System
- Double Cream Cheese Production
- Bactofugation
- Small To Medium Cheddar Production
- Large Scale Cheddar Production
- Commercial Feta Production
- Homogenisation
- Mozzarella
- Pizza Cheese
- Processed Cheese
- RO Unit
- Fixed Weight Cutting Cheese
- Shredding And Dicing



Guth Cheese Pasteuriser

Features And Benefits

- Compact
- Skid mounted
- Hygienic
- Heat recovery
- User friendly
- After heating to the correct temperature for culture addition in the cheese vat
- Excellent local support & serviceability
- Critical spares stocked





Automatic Standardization System



Top solutions for automatic milk and cream standardization

- Automatic standardising of fat in skim milk and cream without needing to know the fat in incoming milk.
- Ability to program in the protein value of incoming cheese and milk and calculate the correct fat protein ratio.
- Extremely accurate due to 2 mass meters installed.





REDA Separators

The REDA separator offers high-efficiency separation, low product losses, hygienic construction, and reliable continuous operation – making it an ideal solution for modern dairy and liquid food processing plants.

Features and Benefits

- Fat separation of milk and whey and Clarification of milk
- Bigger bowl design gives longer time between discharges.
- Low cost of ownership
- Reliable performance and very soft milk inlet.
- Quality build
- Local support and serviceability
- User friendly controls
- Excellent separation efficiency



Protein Recovery System



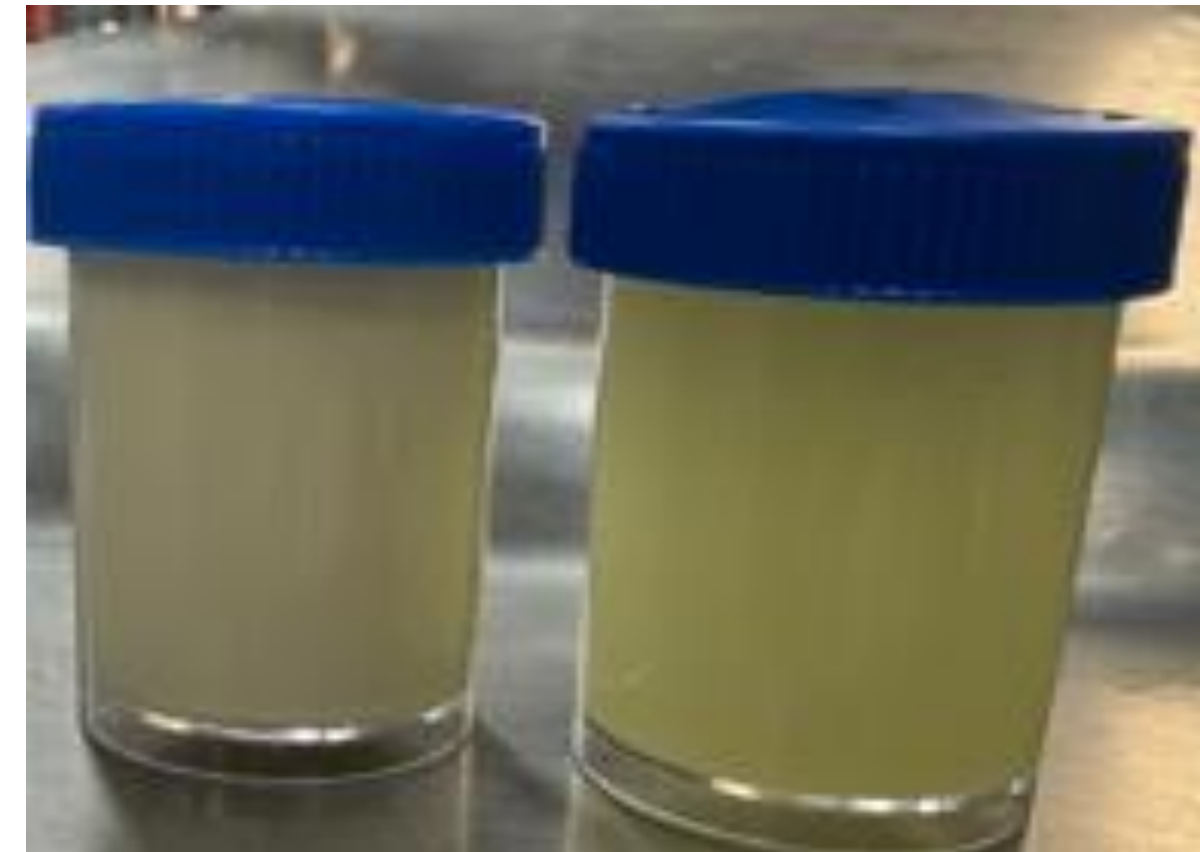
Features and Benefits

- Allows recovery of milk during desludge stage
- Introduces water into bowl just before desludge
- This pushes milk back into the inside of the bowl then sludge is discharged
- Reduce milk loss
- Less water consumption
- Less effluent
- Short payback

REDA Double Cream Cheese Separator



Samples



Cream Cheese

Whey

Bactofugation



- More than 80% reduction of total bacteria
- More than 95% reduction of aerobic spores
- More than 98% reduction of anaerobic spores



No damage of
fat globules



High separation
efficiency



Noiseless
operation



Easy integration
into existing lines

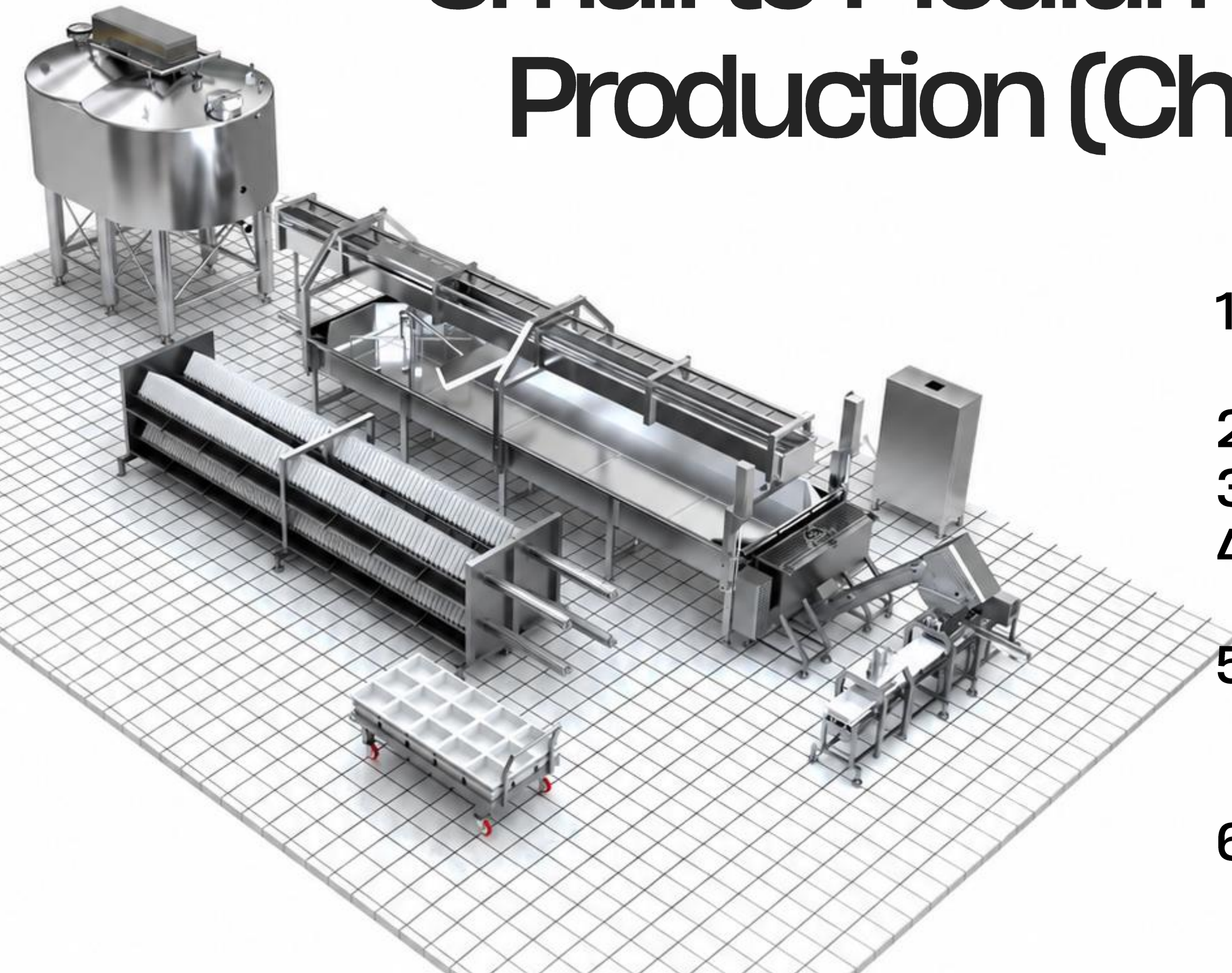


Automatic solids
expulsion

Small to Medium Cheese Production (Cheddar)

Steps

1. Curd prep in Double O Cheese Vat
2. Drain whey in Finishing Vat
3. Stir curd until correct PH
4. Curd pushed through End Opening Door
5. Transfer curd to Cheddar Tower or Mould filling and pre press unit
6. Press moulds





Stirred Curd in Finishing Vat



Mould Filling and Pre Press Unit

- SS Cheddar mould placed on conveyer
- Cheese fed by auger through curd milling unit
- Weighed into cheddar mould.
- Moved into pre-press station.



Mould Pressing







Horizon II Vat

Relco Cheddar Belt



OptiSet® 4.1

Accurate coagulation timing for repeatable curd cutting

OptiSet® 4.1 monitors curd development within the vat to identify the exact instance of coagulation. Based on cheese-maker-defined recipes, the system initiates cutting at optimum firmness, supporting consistent moisture, yield, and curd quality

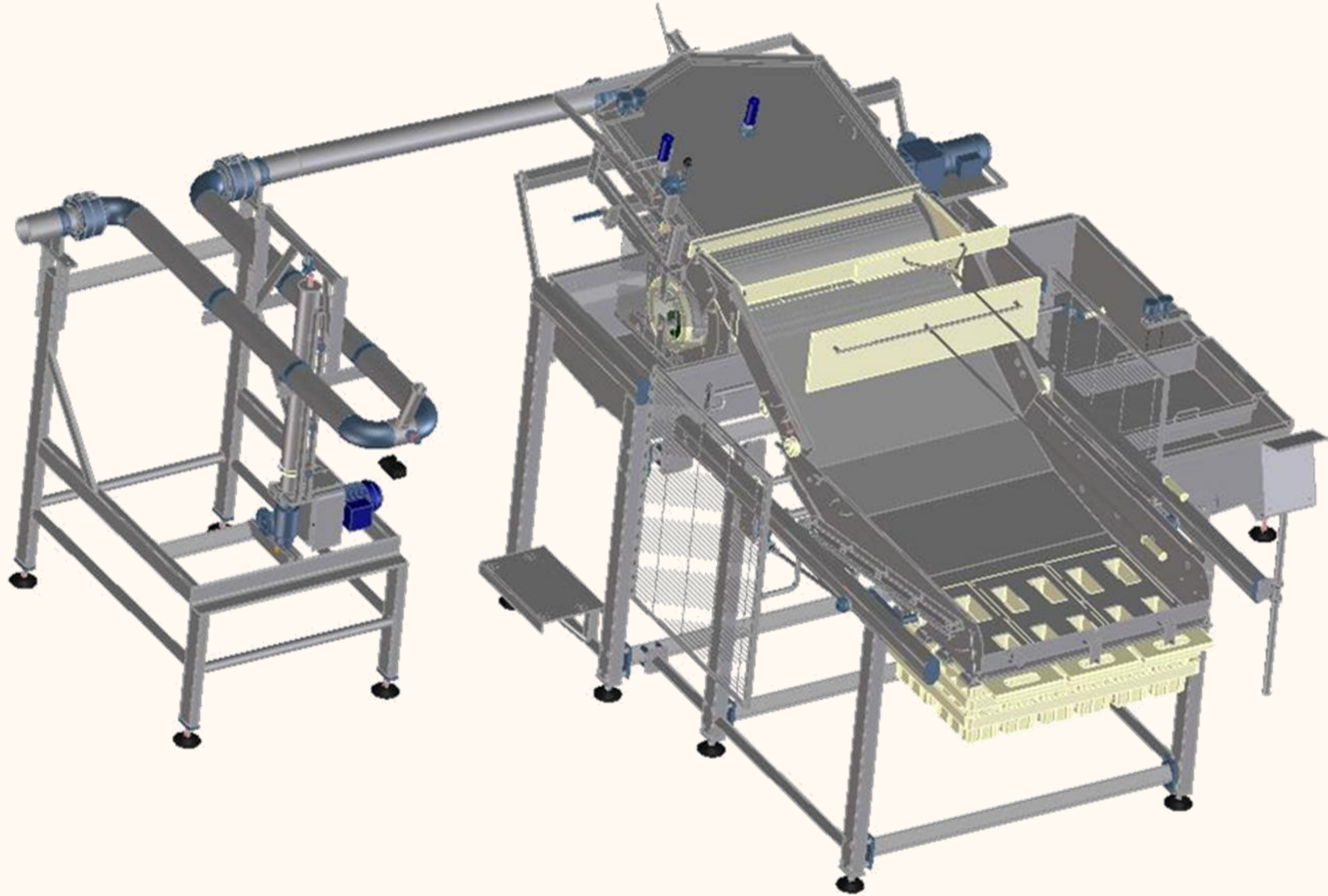


TRU-BLOCK™ Blockformer



- Consistent curd fusion and uniform block quality
- Hygienic, robust design with improved sanitation
- Supports multiple cheese styles and block sizes
- Optimized whey flow and reduced product transitions
- Easy inspection and maintenance access
- Efficient CIP cleaning with improved drainage
- Sloped base prevents water and debris build-up
- Very good weight and height accuracy and consistency.

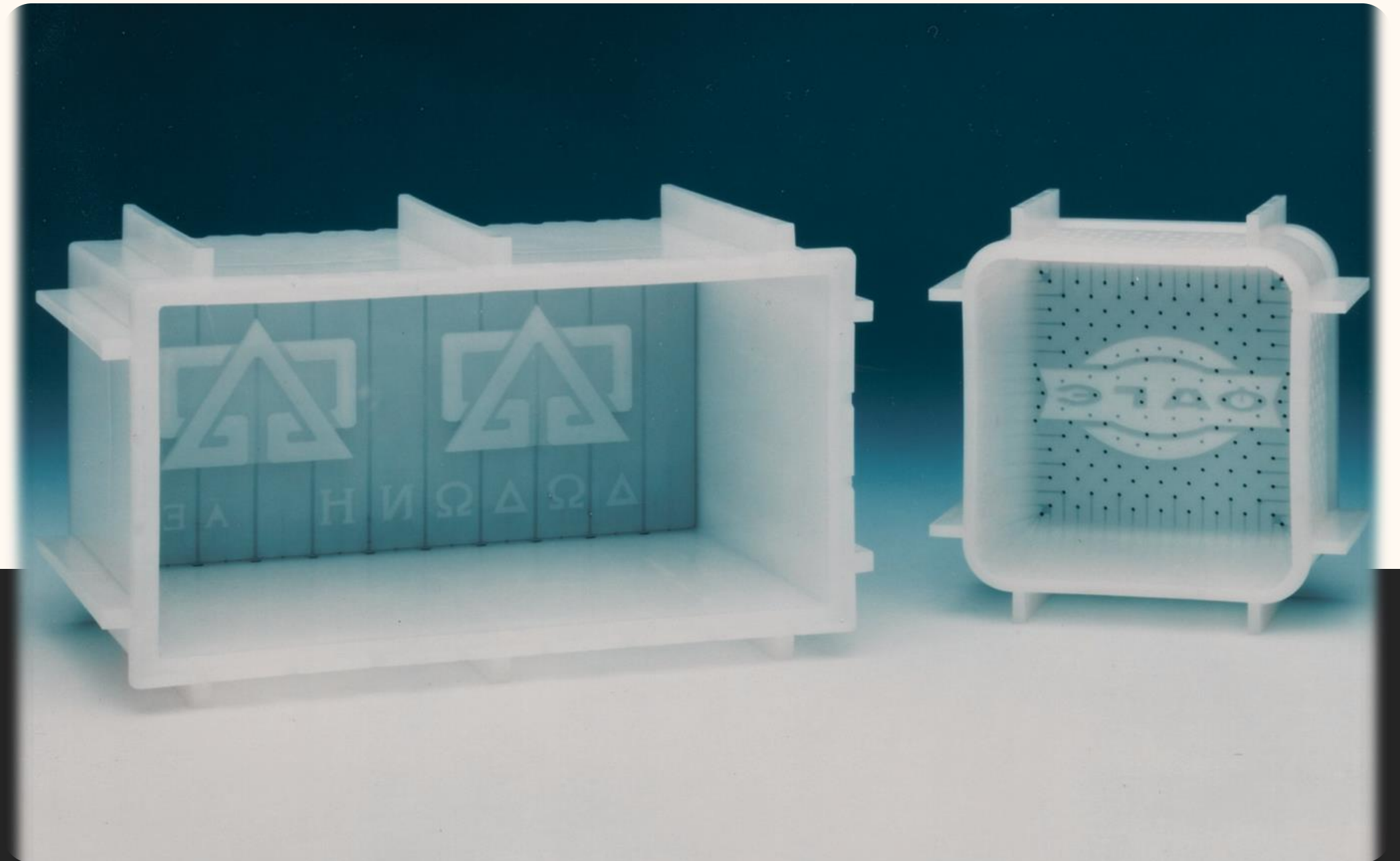
Commercial Feta Production



Curd drainage installation combined with portioning



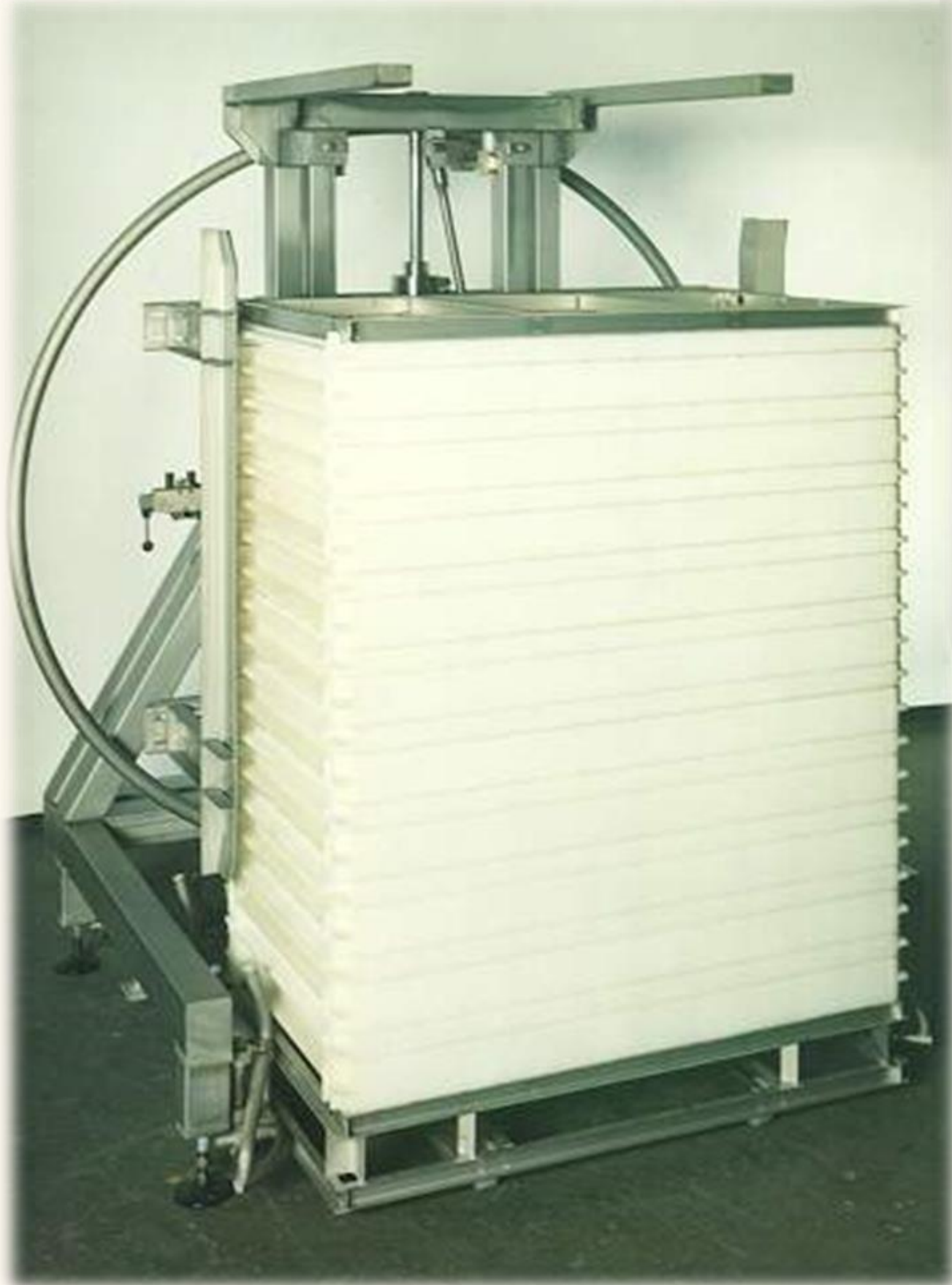
Form execution according to the requirements of the customer



Filled Blockforms



Stack Turner



- **Stack of Blockforms with carriage**
- **Manual infeed**



Homogeniser

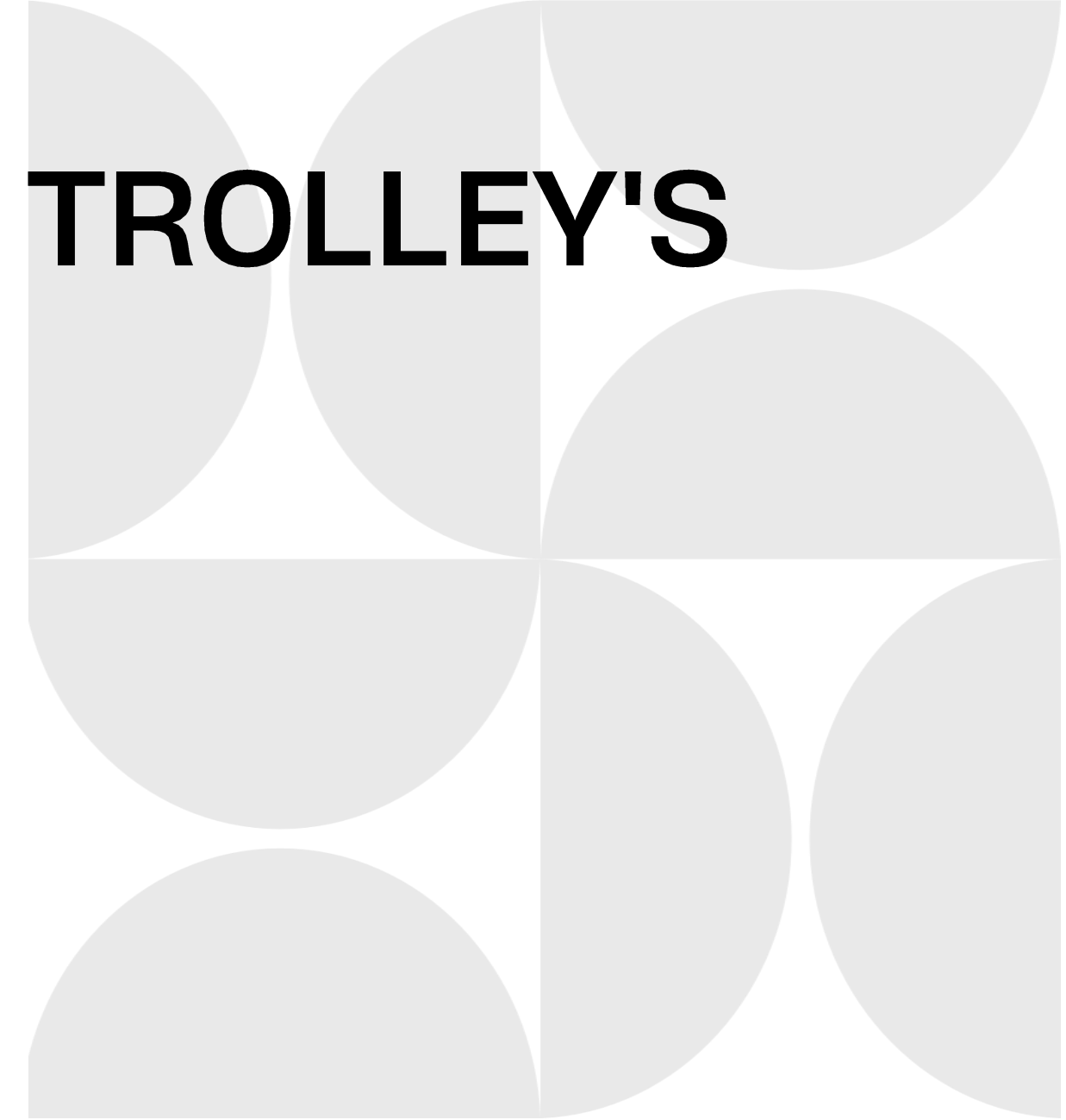
- Improved yield
- Increase flavour due to breakdown of fat globules allowing lipolytic enzymes better access to fat.



- Sometimes used by feta processors to give a more stable and uniform emulsion, resulting in a creamier texture



CHEESE VAT & DRAINING TROLLEY'S



MOZZARELLA PRODUCTION LINE



- Curd milled
- Cooked with hot water and or steam.
- Stretched by means of augers and or stretching arms
- Dry salt addition if required.
- Carousel moulding including pre cooling assisting in shape retention.



The automatic spherical mozzarella production system is a turnkey solution which begins with the coagulation of milk until the product is ready for packaging. The system shown includes 4 double "O" cheese vat machines (1), essential if one chooses to start with milk as a raw material. The functions, in this first phase of the production process, are: milk coagulation and curd maturation. The curd is then discharged into the appropriate drainage trucks (2) and after reaching the right pH of maturation it is introduced into the cooker-stretcher machine (3). The stretched cheese will be formed by the special moulding roller machine (4), which in cascade introduces the mozzarella into the pre-cooling (5) and cooling (6) vats. The system is completely made in AISI 304/316 stainless steel and is completely arranged for the CIP automatic washing system. The size and features can be personalised based on customer requirements.

Brine and Cooling Bath



STEAM

COOKER-STRETCHER

- Higher Production yields
- Energy savings (less steam)
- No waste water (No fatty residue)
- Faster processing time
- Can process frozen curd and dry ingredients
- Ensures consistent moisture level
- Good texture for mozzarella, pizza cheese and analogue cheese.



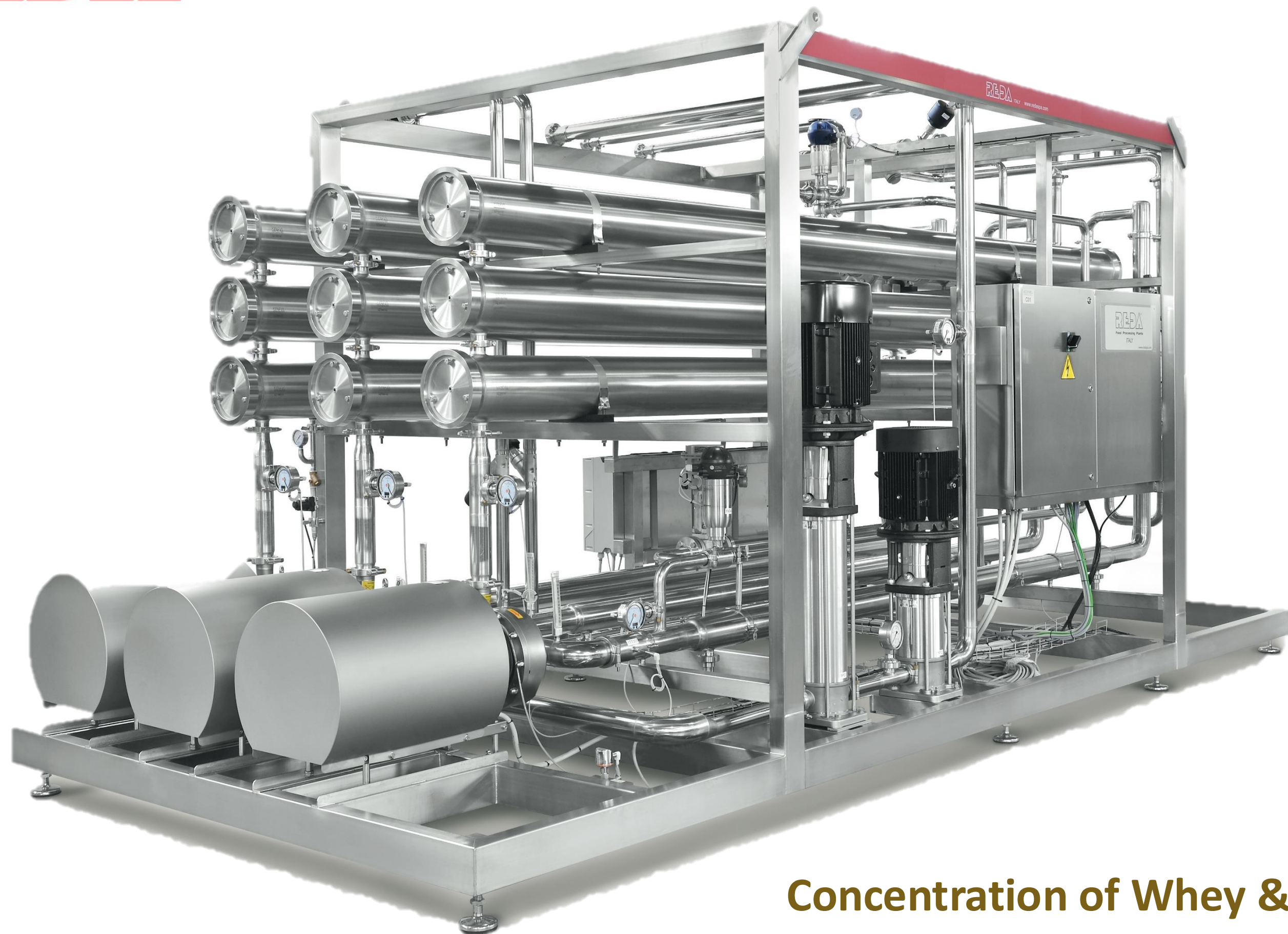


Processed Cheese Cooker

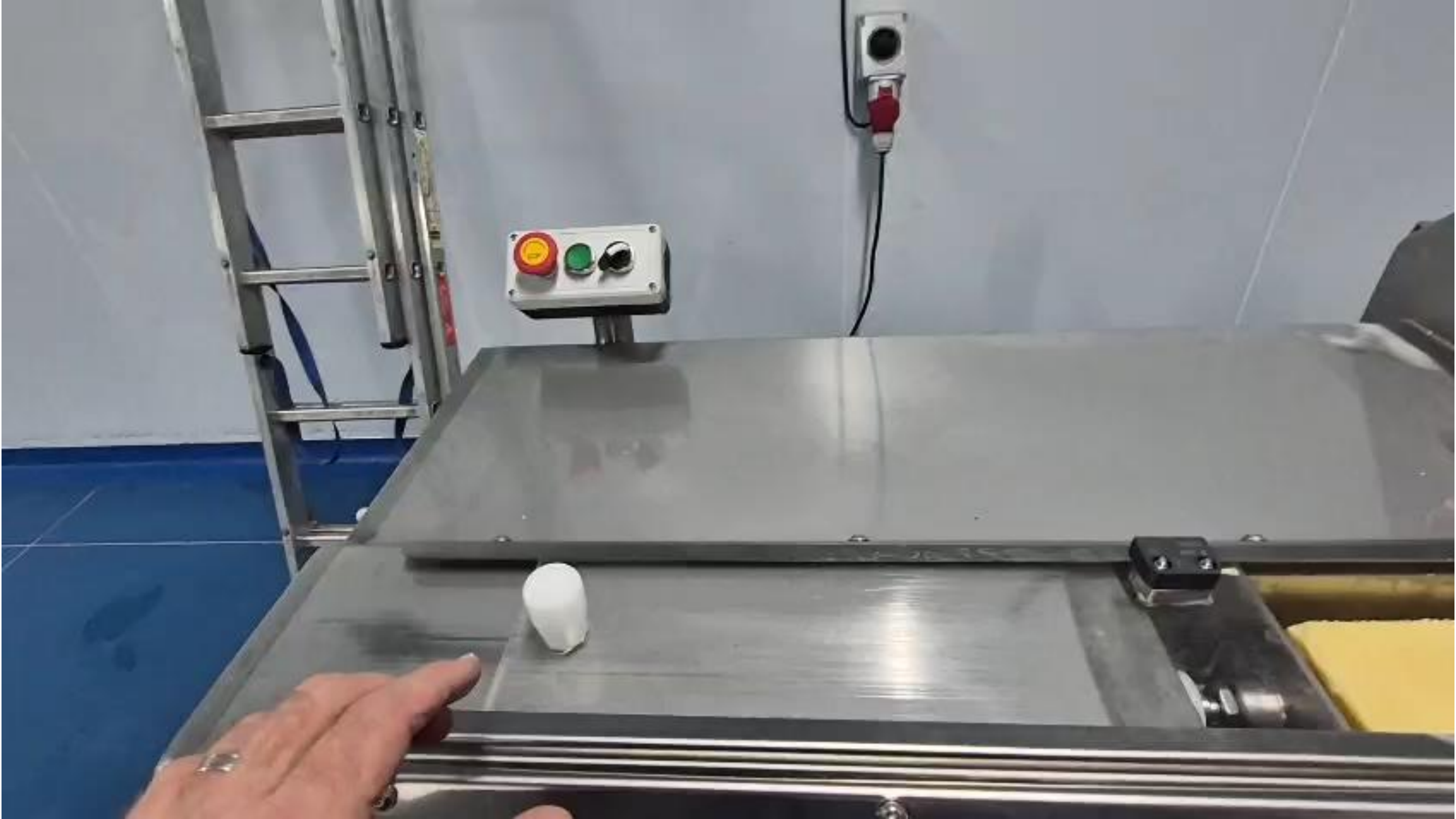
Features and Benefits

- Heating (Steam injection)
- Mixing
- Emulsifying
- Vacuum deaeration
- Melting
- Grinding
- Cooling

REDA



Concentration of Whey & Milk





Cheese Shredding and Dicing Line





Fixed Weight Portion cutter

- Loaves are cut into fixed weight portions.
- Loaf is weighed and contour scanned
- High capacity
- Extremely accurate.



REDA Steriliser



CF FILTRATION PROCESS



Cross-Flow-Principle

CAUSTIC RECOVERY





REDA



Thank you

