

# New UHT tubular strilizer, homogenizer, CIP system for milk & cream - 10.000 Lh

|               |                   |
|---------------|-------------------|
| Machine type: | Various Equipment |
| Ref:          | AT111             |
| Year:         | 2026              |
| Speed:        | 10000 Liters/hour |
| Condition:    | New               |
| Products:     | Dairy, Milk       |

## Technical details

|               |                   |                  |     |
|---------------|-------------------|------------------|-----|
| Machine type: | Various Equipment | Safety features: | Yes |
| Manuals:      | Yes               |                  |     |

## Description

### New UHT tubular strilizer, homogenizer, CIP system for milk & cream - 10.000 Lh

#### Technical Specifications & Performance Data

This tubular indirect UHT sterilizer is engineered for dairy processing with variable-speed operation and high thermal efficiency. It delivers dependable ultra-high-temperature treatment for milk and 40% fat cream with robust heat recovery and precise temperature control across each process stage.

- **Capacity:** Milk 10,000 L/h; Cream 40% fat 5,000 L/h
- **Heat exchanger:** Tubular, corrugated AISI 316 stainless steel tubes
- **Product inlet temperature:** 8°C
- **Homogenizing temperature:** about 65–75°C (intermediate outlet available)
- **Holding temperature:** 90–95°C
- **Sterilization temperature:** 135–142°C for 4 s
- **Outlet temperature:** about 20–25°C
- **Heat regeneration:** about 70% on tubular exchanger
- **Thermal profile:** Heating 5→115°C (pressurized hot water at 132°C), Sterilization 115→142°C (industrial steam ~6 bar), Cooling 142→27°C (water at 17°C), Final cooling 27→25°C (water at 17°C)
- **Balance tank:** 200 L, vertical cylindrical, AISI 304 stainless steel, with 3 level probes and CIP spray ball

- **Product pump:** Stainless steel centrifugal, special high-temperature mechanical seal, operating pressure 5–10 bar
- **Electromagnetic flow meter:** Flanged, 4–20 mA output
- **Hot water circulation group:** High-efficiency pump, 14–16 bar, 10,000 L/h; stainless steel expansion vessel; safety valve; automatic refill; steam–water tubular heat exchanger
- **Temperature regulation:** Pneumatic modulating steam valve; high-efficiency steam trap
- **On-board CIP:** Conductivity measurement, 2 chemical dosing pumps, 2 x 150 L AISI 304 tanks (acid and caustic)
- **Construction:** Pre-assembled on AISI 304 stainless steel skid with adjustable leveling feet

## Advanced Automation & Control Systems

The system is equipped with a modern automation platform to ensure stable UHT processing, traceability, and consistent product quality.

- **Control architecture:** Integrated PLC with a 12-inch HMI touch screen
- **Cabinet layout:** Two AISI 304 stainless steel enclosures (electronics and pneumatics separated)
- **Electronics cabinet:** PLC, HMI, power and automation components
- **Pneumatics cabinet:** Solenoid valves and air distribution
- **Automated functions:** CIP cycle management, pasteurization/sterilization control, temperature regulation, alarm handling, safety interlocks
- **Process data logging:** Continuous monitoring of temperatures, product pressure, holding time, and flow rate
- **Instrumentation:** Electromagnetic flow meter with 4–20 mA output for robust feedback control

## Production Line Integration Capabilities

Designed for seamless integration into dairy processing, beverage production, and industrial packaging environments, this UHT unit interfaces readily with upstream raw milk reception, homogenizers, and downstream holding, filling, and packaging systems.

- Suitable for inline or standalone operation with CIP integration
- Intermediate homogenizer take-off at 65–75 °C for flexible process configuration
- Sanitary connections for quick coupling to existing plant utilities and piping
- Optimized for continuous production where stable flow and temperature profiles are critical
- Ideal for retrofits or expansions of second hand and used bottling line equipment handling dairy-based beverages

## Machine Condition & Maintenance History

The UHT sterilizer is presented new with automated control, sanitary valve sets, and an integrated CIP module. Skid-mounted design simplifies installation, commissioning, and ongoing maintenance.

## Operational Performance & Versatility

Engineered for high-fat dairy products and standard milk, the tubular design supports gentle heat exchange while maintaining product quality. Variable-speed operation and robust thermal regeneration deliver energy efficiency and consistent output.

- Optimized for milk and cream (40% fat)
- High thermal regeneration (~70%) reduces operating costs
- Sanitary pneumatic valves and sterile barriers for stable sterilization pressure management
- Data logging enables quality assurance and process validation

## Installation Requirements & Site Preparation

The pre-assembled stainless steel skid reduces footprint and accelerates deployment. Standard utility connections support rapid tie-in to existing services.

- **Steam:** Industrial steam supply (~6 bar) for sterilization section
- **Hot water:** Pressurized loop supplying up to 132°C for heating section
- **Cooling water:** Approx. 17°C for primary and final cooling stages
- **Compressed air:** For pneumatic valve actuation and control
- **Mounting:** Level floor with access for service and CIP connections

## Safety Standards & Compliance Certification

Built for hygienic dairy processing, the system incorporates sanitary design principles and operator protections across the process and control architecture.

- AISI 304/316 stainless steel product contact and structural elements
- Safety interlocks and alarm management within the PLC
- Sanitary ON/OFF and modulating valves with sterile barriers
- Integrated CIP with conductivity monitoring for validated cleaning
- Skid-mounted layout with organized utilities and guarded enclosures to support safe operation