



NiSoPURE

Lots of advantages for your aseptic food & dairy production

GEA has developed NiSoPURE, a new milestone in the success story of GEA homogenizers, a stand-alone skid able to produce the required sterile water to flush aseptic chambers with low environmental impact. Connected to the homogenizer, NiSoPURE drastically reduces the consumption of energy, water and steam.

Applications

- Dairy applications, UHT milk, ESL milk, cream, soy milk, ice-cream mix, desserts
- Food, nutritional emulsions, baby food, tomato-based products etc.

Advantages

- Water and steam savings of up to 90 % compared to the standard system
- Reduction of energy consumption (energy recovery)
- High system reliability & short payback time
- Guarantees the highest quality std of sterile water to flush aseptic barriers
- Dedicated circuits and bypass systems for CIP/SIP
- High reliability of the process
- Excellent quality standard of the sterile water

Uses

- NiSoPURE is available for all the Ariete machines (suitable for continuous UHT treatment)
- It can be supplied both with the homogenizer and standalone for retrofit.

Casing

- Frame made completely in stainless steel
- Easy access and maintenance with removable panels in lexan

NiSoPURE

The best friend of your aseptic homogenizer

NiSoPURE is available for all the Ariete machines and it can be supplied both with the homogenizer and standalone for retrofit.

Virtuous temperature loop for a full energy recovery

- Water is heated following a spore inactivation technique to obtain value of $F_0=6$
- Then it is cooled to temperature values that are compatible with the static and dynamic seals present in the flushed aseptic chambers.
- The heat surrendered by the treated water during the cooling stage is absorbed by the untreated water flow at the system inlet, which is thereby preheated.
- The NiSoPURE applied to a 5 piston homogenizer, allows to reduce consumption from 110 to only 10-15 kg/h of steam and from 2,200 to 150 kg/h of water.

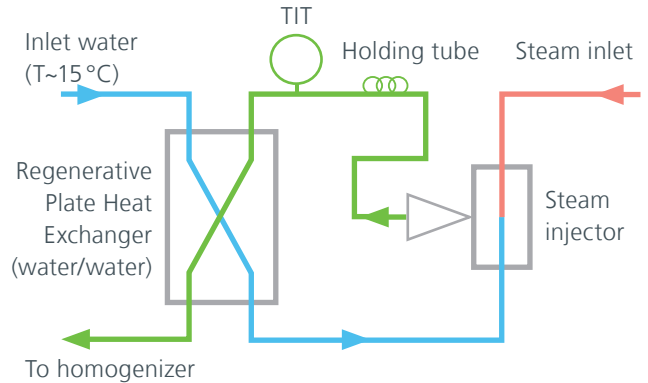
Automation and control

- The NiSoPURE can be managed by a local control or by a remote control.
- In case of local control, the phases are set and commanded from the front of the electrical panel using the HMI device. The remote control can be handled by electrical contacts or via Ethernet.

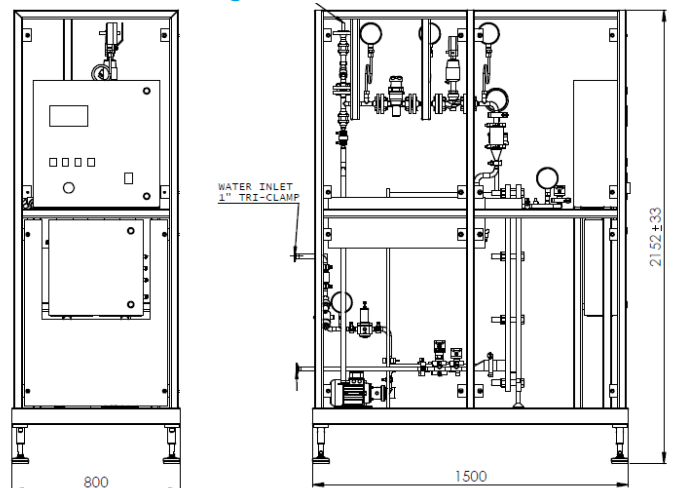
Main technical features

- Product line connections 1" Tri-Clamp™
- Double wall heat exchanger for energy recovery
- Direct Steam Injection system to heat instantly the water.
- Holding tube which assures the sterility of water
- Temperature and flow transducers which ensure the right flow rate and sterility of the water

Overall scheme of water cycle inside NiSoPURE system



Dimensional drawing



Overall dimensions (mm)

Design features

Net weight	450 kg
Gross weight	690 kg
Wooden box measurement (cm)	180X100X255

Performance & Utilities details

Water flow rate	150 l/h
Steam flow rate	10-15 kg/h
Absorbed motor power	up to 0.5 kW
Power supply	Frequency 50 Hz ÷ 60 Hz Voltage 200 V ÷ 500 V
Compressed air inlet pressure	6 bar ÷ 10 bar
Water inlet pressure	2 bar ÷ 4 bar
Water quality (pH)	6÷8 pH
Steam inlet pressure	5 bar ÷ 7 bar
Steam Inlet temperature	145°C ÷ 150°C

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