

FOOD PROCESSING

PHARMACEUTICAL



LAGARDE
AUTOCLAVES

MEETING YOUR EXPECTATIONS



TEXTILE



www.lagarde-autoclaves.com

A BRIEF HISTORY

In answer to the increasing demands of the food processing and textile industries **LAGARDE** was founded in 1921 in Montélimar, France and targeted its activities in the production of industrial processing equipment.



In 1953, **LAGARDE** successfully developed and started the construction and sale of autoclaves for the textile industry and introduced the Company to the export market place. These design studies resulted in patents for Lagarde's unique industrial processes.



In 1972, **LAGARDE** developed the first steam/air sterilising, horizontal retort for food processing and established a new patent for its innovation. In 1975 the continued development resulted in a new range of rotary retorts to improve heat treatment for food production.

In 1979, **LAGARDE** delivered 26 retorts to the Russian Azov Complex. Their first automated sterilising installation included conveyors for baskets and automatic loading/unloading systems.

In 1983, **LAGARDE** joined the German based SCHOLZ Group and became part of the first industrial group specialising in the delivery of autoclaves for all types of applications. **LAGARDE** is set to pursue the opportunities that this synergy will provide using a knowledge base that started in the seventies.

In 1988, a new innovation focused on food processing, combined with further patents, reinforced **LAGARDE** as the only manufacturer able to offer cryogenic gas cooling of products at the end of the heat treatment process.

A STERILISING SOLUTION SUITABLE FOR ALL PRODUCTS AND CONTAINER TYPES

LAGARDE offers a comprehensive range of standard retorts and can also design solutions for a wide range of special applications.

- **Food processing** : cooking, pasteurising, sterilising retorts either in static or rotary format. The "Steamy-Gourmet" for Catering.
- **Textile** : autoclaves for steaming and recovery of moisture for all types of fibres
- **Pharmaceutical** : sterilising retorts for ampoules and pouches of injectables
- **Industrial applications** : various autoclaves for rubber, glass, wood and composites materials

LAGARDE's excellent reputation for its equipment results in numerous references worldwide with leading manufacturers.



LAGARDE meeting your expectations

LAGARDE offers you the benefit of :

- A team of technical engineers and sales managers ready to meet you onsite to share their experience and to support you in the selection of appropriate processes for your requirements.
- An Engineering Department for the design and development of equipment appropriate to the specifications of each customer.
- A Service Department with a team of Engineers ready to respond quickly to give you all the assistance you need thanks to the proximity of international airports (Lyon Saint-Exupéry or Marseille-Provence) or if required technical assistance by telephone or e-mail. Efficiency is enhanced by a comprehensive store of spare parts and further backup from international component suppliers.
- Training courses for maintenance engineers and dedicated courses for your operators to effectively control the equipment.
- Pilot units are available for customers to develop their products or for selection and validation of new processes.



A network of specialist agents ensures LAGARDE has a worldwide presence in all continents and in more than 60 countries.

The assurance of performance sterilisation

Main advantages of our equipments :

- Temperature homogeneity warranted
- Preservation of organoleptic qualities
- Container integrity ensured, even using the most fragile materials
- Cooling with sterile recycled water without any risk of contamination
- Efficient cooling (homogeneous and fast) by a non-clogging distribution system, not sensitive to particles in suspension
- Sterilisation and cooling controlled by electronic programmers and process controllers
- High accuracy of programmed temperatures and perfect reproducibility of cycles
- Pressure ramp independent from the temperature ramp and from rotation speed - programmable for rotary retorts.



Make energy economies

Steam saving :

- Steam technology retort
- Steam/Hot water spray technology retort with hot water recovery system (optional)
- Minimum volume of water to heat

Water saving :

- With a recovery system (optional)

Universal technology and optional processes :

- Defrosting-cooking of unpacked foodstuff (vegetables, meat, etc...)
- Vacuum-system for gas removal when using mechanical closure glass-jars with rubber prior to sterilisation
- Fortification of aromas during the cooking of unpacked foodstuff
- Decontamination by flash steam injection after vacuum

The quality of components, the reliability of the construction

- Construction in accordance with the Regulations applicable in the country of installation
- Applicable Certificates of Conformity
- High quality construction materials : 304 L stainless steel and 316 L (upon request)

ay, **LAGARDE** is one of the world leaders in the supply of autoclaves with more than 2,500 units delivered to over 60 countries.

THE TECHNOLOGY BEHIND EACH TYPE OF THERMAL TREATMENT

LAGARDE can offer a complete range of horizontal retorts using different processes to obtain thermal processing.



STEAM and AIR TECHNOLOGY

Heating by direct steam injection
with fan assisted forced circulation

Cooling by spraying/raining
on containers

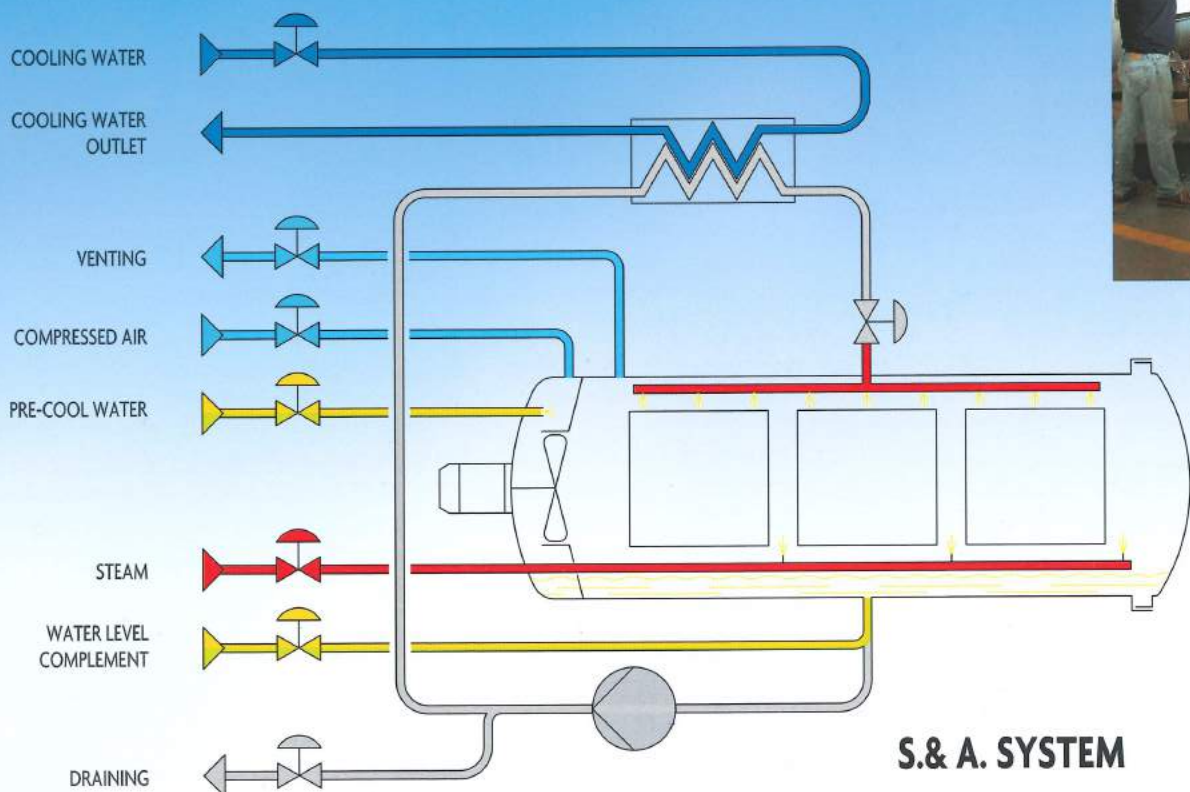


Steam condensate with a small amount of fresh water is re-circulated and gradually cooled using one of the following methods :

- Cooling by adding cold water to the re-circulating process water with the possibility of partial or full immersion.
- Cooling using a heat exchanger. This process does not require any additional chlorine and also allows the possibility to use potable or non-drinking water (well - river - sea water) with no risk of cross contamination.

Further Cooling Option :

- Low temperature cooling with CO₂ cryogenic gas or nitrogen (N₂) after the normal water spraying – raining





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