Steam and Water Spray technology is proven to be an energy efficient and effective process system to pasteurize or sterilize food products in all kind of cans, bowls, pouches or trays made of metal, glass, foil, plastic film or paperboard materials.
About Steam Water Spray Technology

First engineered by Surdry (patent 1983), the system combines the steam-air mixture with superheated water spray, which is circulated at high speed by a pump through multiple spreaders over the top and at each side of the packages. The sprays mix the steam and the air and create a turbulent highly convective atmosphere in the chamber. When the sterilization phase is finished, the water is recirculated via a heat exchanger where external cold water will bring down the temperature of the retort water and the packages in very efficient and homogeneous way.

Operational Safety

The equipment is also designed to meet all pressure vessel and machine safety regulations. Surdry shop is EU and ASME certified for construction of pressure vessels.

Food Safety

Both the technology and the control systems are accepted by the FDA in retorts operated in and out of the USA.

The highlights of the Steam and Water Spray Technology

Direct steam injection in combination with superheated top and side water spray ensures good heat distribution and safe process repeatability with minimum cleaning. Retort pressure is controlled by air injection and venting with high accuracy within the recipe settings to ensure perfect container integrity. Water spray provides fast and even cooling. The water may come from a cooling tower or water chiller and it may be reclaimed for reuse. The amount of water in the vessel is small and is recirculated by a pump via a filter before reaching the spray nozzles. The flow is controlled by means of a flowmeter and the level via level control instruments. The process water may remain in the vessel for consecutive cycle.

High Class Controls

- Allen Bradley PLC and touch panel.
- Video or paper recorder with temperature probe independent from the control.
- Water recirculation control by flowmeter.
- All control instruments are carefully selected from top brands with international service.
- High accuracy safety Anderson electronic thermometer accepted by the FDA to replace mercury-in-glass thermometers.

Sterinet Recipe Management and Record Keeping Software

Sterinet is the most user friendly and complete software system of its kind. From a Host PC located anywhere near or away from the retort room, the operation is monitored in real time and full process records are stored in data and graphic formats. The system is designed and protected for high data security. Easily traceable records are produced in formats acceptable to the FDA and process authorities of official and private organizations worldwide.
Retort models

Static Retorts
Available in diameters 1300, 1400 and 1700 mm and baskets from 1 to 8, with capacity ranging from 1 to 8.5 cubic meters.

Oscillating Retorts
Available in diameters 1400 and 1700 mm and baskets from 1 to 6. The gentle agitation by gravity benefits all foods with liquid, viscous or dairy based products.

Rotary Retorts
Available in diameters 1400 and 1700 mm and baskets from 1 to 5. Adequate for those products which require end-over-end agitation by full rotation.

R&D Pilot Retorts
Available in static, oscillating and rotary models. Simulation of multiple processes. They can work with a single container up to small batch of 150 kg.

Load Handling Accessories
A wide range of standard or custom made baskets, trays, trolleys and other auxiliary equipment is available for the wide range of retorts and the infinite number of applications.