

JUICES PROCESS PLANTS

REDA
Food Processing Plants



Aseptic Technology



REDA TECHNOLOGY FOR THE JUICES and NECTARS INDUSTRY

REDA projects and manufactures a vast range of plants and machinery, processing groups and complete lines for food applications which represent the best solution to your production needs.

Thanks to our long experience in a complete Turnkey plants and in the Aseptic UHT technology for the liquid foods, Reda is able to supply the

latest technology and automation for juices and nectars production. After 30 years in liquid food processing field and supported by the satisfaction of our customers all around the world, Reda represents one of the most reliable partners in the preparation and treatment of juices, nectars, soft drinks, isotonic and tea.



PREPARATION – PASTEURIZATION – DEGASATION – HOMOGENEIZATION for the Aseptic or Hot Fill

JUICES / NECTARS PREPARATION UNITS

REDA AUTOMATIC PREPARATION UNIT is a plant projected and designed for the preparation of fruit juices, nectars and other beverages starting from fruit concentrates or fruit purees with addition of further ingredients.

The final product is then sent to the sterilization/pasteurization section and finally to the filling section.

The plant is pre-mounted, pre-tested and ready for the loading of the raw materials and to feed the UHT Processing lines and the aseptic filling. The loading of the different ingredients is automated and based on preloaded recipes on the PLC. Each ingredient shall be perfectly dosed by the loading cells according to the recipe selected by the operator in the Control Board: fruit purees or concentrates, water, refined sugar, citric acid, additives and/or other ingredients.

The correct value in °Brix of final product shall be measured by a special refractometer that will stop automatically the charge of necessary sugar to achieve the desired Brix degree.

The CIP cleaning of the line (tanks, pipings, valves, etc.) is executed automatically through its premounted own CIP system.

All production data shall be memorized and could be archived on the supervision PC for the traceability of the working batches.



Main features of preparation units:

- Automatic loading and dosing of ingredients.
- Recipes memorization on PLC.
- User-friendly through touch screen in the OP.
- Automatic loading/unloading lines.
- Pre-mounting and Pre-testing before delivery.
- Very simply and easy connections.



JUICES / NECTARS PASTEURIZATION UNIT

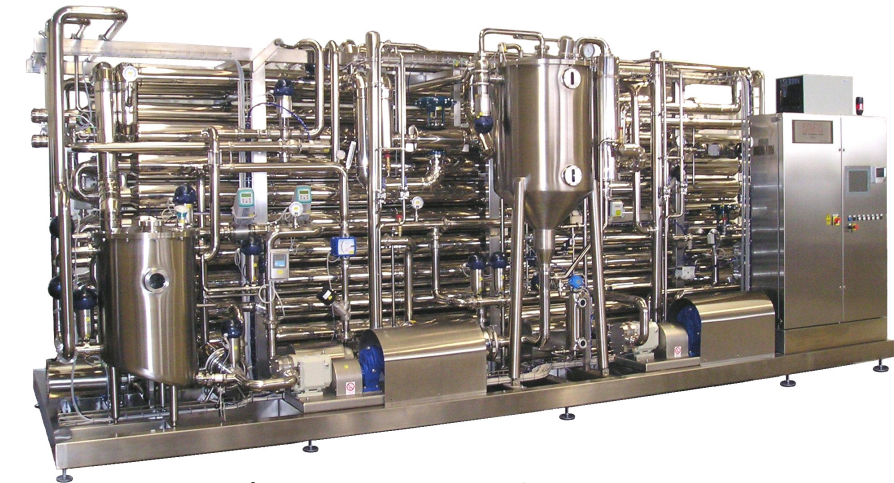
The UHT treatment (Ultra High Temperature) is a modern and innovative technological process that consists in carrying a fluid to high temperature and, after a short holding time, cooling it quickly down to room temperature. The sterilized product, is then filled in Aseptic or Hot Fill conditions.

Treated products keep freshness, taste and nutritional value similar to fresh products but with the great advantage that they can be kept at room temperature for several months,

or even a year, without the use of conservancies.

High acidity products (PH<4.5) can be processed at lower temperature, between 90°C and 121°C, as the survived thermo resistant spores shall remain innocuous, blocked in the acid ambient.

The choice of the treatment temperature, between 90°C and 121°C, and the holding time from 30 to 60 seconds shall depend on the product.



10,000 l/h tubular pasteurizer for Orange juice with particles

The tubular sterilization plant REDA "ATR-UHT (Aseptic tubular Reda-UHT) is a modern plant where the most advanced techniques of thermal exchange and automation have been applied.

The tubular exchanger unit is composed of modules of 4 /6 mt. in stainless steel AISI 316L or Duplex for the isotonic drinks, connected in series by special clamp type connections, permitting an easy internal pipes check.

Each module contains the heat exchanger pipes, which can be corrugated to improve the thermal exchange and also treat high viscosity products.

DEGASER WITH AROMA RECOVERY SYSTEM

For products like juices, purees and nectars the Degaser is useful to eliminate the oxygen that is responsible of the product oxidation causing changes of colour and losses of product nutritional value.

Inside an under-vacuum vessel, the product is distributed in a thin film to optimize the degasing effect (max 0.5 mg/l residual Oxygen). Into a special designed condenser, cooled by cold water, the aromatic fractions are recovered and reintroduced in the product, while the non-condensable gasses, including the oxygen, are extracted by the vacuum pump.



HOMOGENIZATION

The homogenizing action for nectars or smoothies obtained at 150/250 bar, grants a dispersion of particles on the mass, avoiding phases separation during the conservation and gives a smooth texture and mild taste to the final product.

Main features of pasteurization units:

- Long production runs (more than 72 hours).
- Low vulnerability to dirty.
- User-friendly software.
- Fast modification of process parameters.
- Low maintenance costs.
- Optimal inspectionability of the tubular heat exchanger.
- Pre-mounting and Pre-testing before delivery.
- Very simply and easy connections.

AUTOMATION

The Automation purpose is to enable easier and safer the plant operations, and furthermore grants a constant and high quality. The automation is controlled by PLC with the operator interface (O.P.) and permits the monitoring of the working parameters, possible alarms, products flow and all secondary fluid flows during all phases.

The working parameters can be always modified by the Operator Panel.

All the working phases, the parameters such as time, temperatures, pressures, possible alarms, etc., shall be memorized on "Working Report" page.

The automation system can be connected to the net for a possible centralized control or for a remote checking by Modem (Teleservice).



REDA JUICES / NECTARS PRODUCT RANGE

- SELF CLEANING JUICE CLARIFIERS
- CONCENTRATORS BY COLD and HOT EVAPORATION
- JUICES / NECTARS PREPARATION LINES
- U.H.T. PASTEURIZATION / STERILIZATION PLANTS (Purees, Concentrates and Juices)
- DEGASERS WITH AROMA RECOVERY SYSTEM
- HIGH PRESSURE HOMOGENIZER
- ASEPTIC STORAGE TANKS



MULTI-PURPOSE STERILIZATION LINE FOR MILK, FRUIT JUICES, BEVERAGE
(Blending/Preparation Unit + UHT Processing line + Aseptic Storage Tank)