

## Compact Electrical Pasteurisers

### **General characteristics:**

Our compact electrical pasteuriser has been designed to carry out the thermal treatment of milk and its by-products, soft-drinks and juices. The objective is to eliminate the pathogenic micro-organisms through the application of high temperature during a short period of time.

The electrical pasteurisers stand out because of its autonomy – the generation of hot water is made by heating coils connected directly in line with the heating section. These machines are very reliable and offer a solid thermal stability as they reduce drastically the time needed to reach operating temperature. Their construction is robust and come preassembled on a compact platform. The units are delivered only after being fully tested.

Installation is quite simple and it's only necessary to connect the unit to the electrical current and to the fluid supply lines (reception of raw milk, storage of pasteurised milk and mains water) in order to be able to start working.

Pasteurisation unit made up of:

- Heat exchanger with 0.5mm plates in AISI 316 and gaskets in NBR, frame in AISI 304.
- Centrifugal pump FL31CI for milk feed.
- Food-grade hydraulic circuit DIN11851 with orbital welding.
- Holding tube for maintaining temperature.
- Divert valve for non-pasteurised product, pneumatically actuated.
- By-pass system to regulate the temperature of the pasteurised product and graduate the outlet temperature of the milk.
- Manual butterfly valves with multi-position handles to operate.
- Temperature probes PT100 to control the fluid.
- Hot-water generation system: heating coils, centrifugal pump for recirculation of water L20C, temperature probe PT100, water inlet valve with automatic regulation and non-return valve, safety valve, expansion vessel, pressure gauge and purge.
- Pneumatic system to regulate and operate with flow-regulating valve, filter, pressure gauge and solenoid.
- Tank of 25 litres for the preparation of cleaning solutions.

CE marked control panel with:

- 7" touch screen.
- Digital thermograph with temperature register.
- USB port to extract information.
- Operation of solenoids.
- Control of pumps.
- Emergency stop.
- LED indicators.
- Switches.
- Control box in stainless AISI 304.
- Mounted on platform supported by 4 anti-vibration feet.
- Made in stainless steel AISI 304.
- Standard voltage: III / 400V / 50Hz

Options:

- Different thermal cycles according to client's requirements.
- Plate heat-exchanger of 4 sections for outlet to homogeniser, skimming machine, etc..
- Holding tube with longer retention times.
- Electrical power matched to energy requirements for specific thermal cycle.
- Materials in contact with the product stainless steel AISI 316.
- Other voltages and frequencies according to country of destination.
- A chiller unit for cold water generation can be incorporated on request.

**Technical Characteristics:**

MODEL	FLOW (L/h)	ELECTRICAL POWER CONSUMPTION (kW)		
		4 – 75 – 4° C	4 – 75 – 20° C	4 – 75 – 35° C
PAST-250E	250	4	6	10
PAST-500E	500	8	10	20
PAST-1000E	1000	10	20	40

\* We calculate heat recovery of 90%.

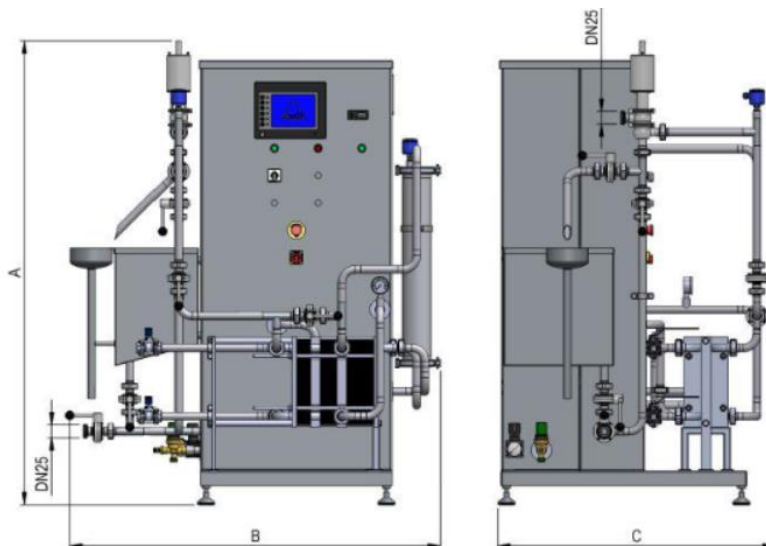
\* The power consumption is calculated using the heating section of the plate interchanger. These values indicate the necessary energy to maintain the temperature of the hot water in the heating circuit.

\* Thermal cycles can be combined in the same heat-exchanger plate pack. To do this a bypass system is installed to adjust the outlet temperature and go from 20° to 35°C. In case of lowering the temperature down to 4° C the pasteuriser will need a refrigeration section installed.

**Common services requirements:**

- Compressed air: 1 Nm<sup>3</sup>/h.
- Hot water for models 250, 500 y 1000 l/h and made with the pump in the hot water generation circuit. The automatic filler valve constantly maintains the circuit full at a pressure of 1.5 bar.
- The flow of cold or glycol water (for cooling to 4°C) for models 250, 500 and 1000 l/h is 700, 1300, 2200 l/h respectively.
- Energy consumption of cold or glycol water (for cooling to 4° C) in models 250, 500 and 1,000 l/h is 3000 Frig/h, 6000 Frig/h and 12000 Frig/h respectively.

**Dimensions:**



MODEL	(L/h)	A	B	C	Weight (Kg)
PAST-250E	250	1700	1350	1000	325
PAST-500E	500	1700	1350	1000	350
PAST-1000E	1000	1850	1350	1000	400

### Tariffs of standard models:

MODELO	FLOW (L/h)	Price £ (GBP)		
		4 – 75 – 4° C	4 – 75 – 20° C	4 – 75 – 35° C
PAST-250E	250	£12,500	£10,800	£11,500
PAST-500E	500	£13,500	£11,500	£12,700
PAST-1000E	1000	£14,500	£12,300	£14,500

\* In case the client needs 2 or 3 thermal cycles in the same pasteuriser the cost will be the greater shown.

\* In case extras are required please consult the Technical Design office.

### Example PI&D (Flow Diagram):

