

Pasteurization



Pasteurization is necessary in the milk/dairy/juice industry, where products must be processed to recognized international hygiene standards before being passed for human consumption. The pasteurization process kills bacteria that is harmful to human consumption.

In the USA, the Food and Drug Administration (FDA) has extensive regulations that spell out the legal requirements for this process.

In Europe, it is a legal requirement for companies to record the pasteurisation of all dairy products.

How the process works

Continuous pasteurisation involves the pumping of raw material from a storage tank through a pasteurizer/heat exchanger, where it is heated to a specific temperature to kill micro-organisms. Pasteurization temperatures vary according to the product being treated.

When that temperature is reached, the 'hot' product is pumped from the pasteurizer unit through a holding tube which has a 3-way divert valve and temperature probe fitted at the end of it. If the temperature is too low, the three-way divert valve is switched to divert the 'hot' product back into the storage tank for recycling.

The hot product temperature is recorded on a chart or data recorder for traceability purposes. If the hot product temperature is acceptable, it is cooled by passing it through the pasteurizer/heat exchanger, from where it is then passed out for packaging and distribution. The chart or data recorder also records the cold product temperature.

How can ABB help?

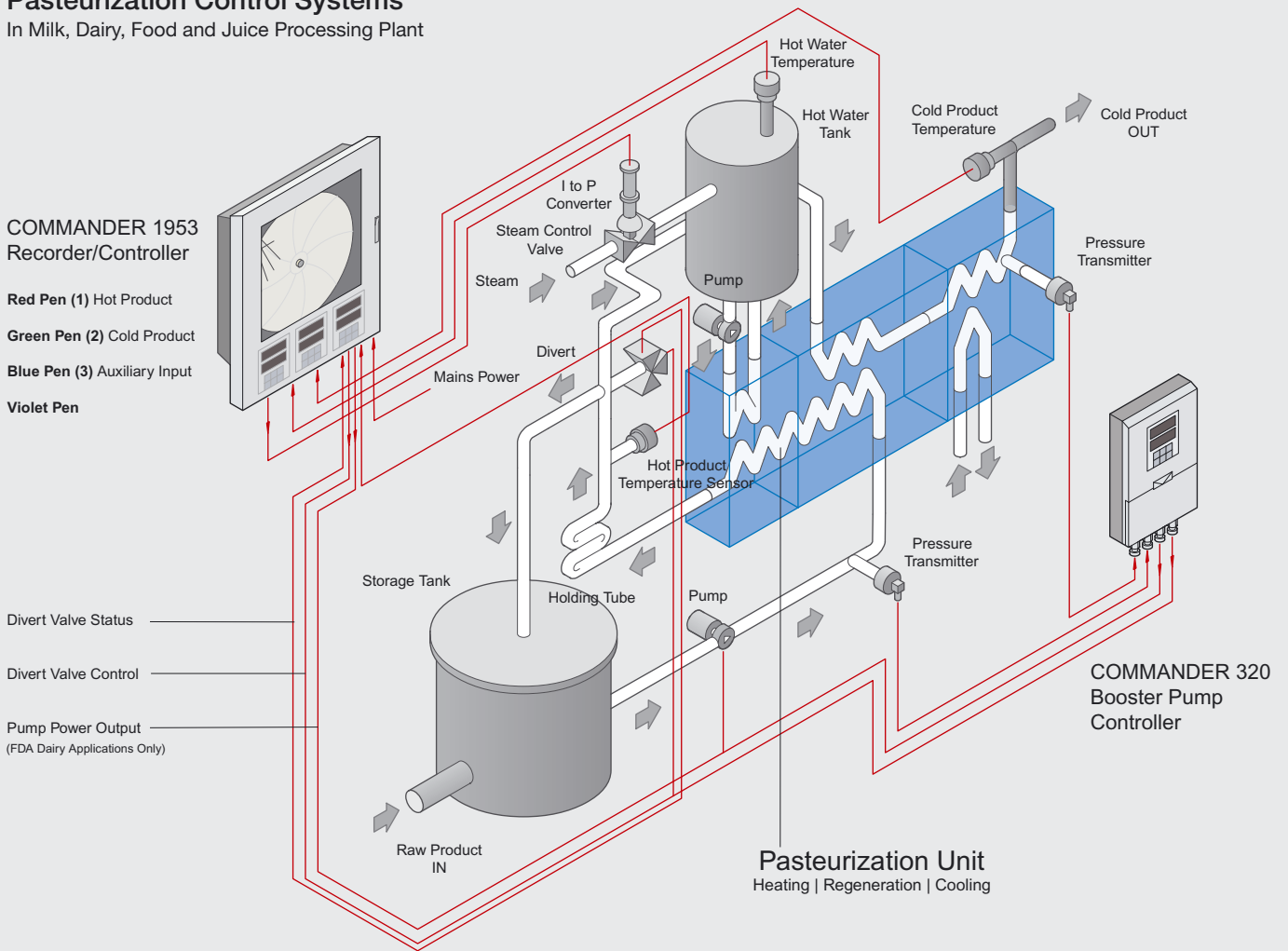
ABB supplies a range of instrumentation equipment suitable for pasteurization applications, including:

- Paper chart recorders
- Videographic data recorders
- Controllers
- Pressure transmitters
- Temperature probes
- Temperature transmitters
- I to P converters
- Valve positioners and actuators



Pasteurization Control Systems

In Milk, Dairy, Food and Juice Processing Plant



Example of Pasteurization Control System

