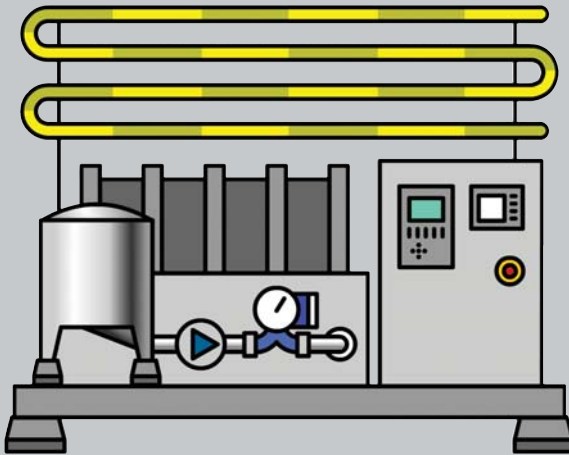




# EGG PASTEURISATION SYSTEMS



Solutions for Food and Egg Processing

# SANOVO egg Pasteurisers

■ The SANOVO pasteurisers are specially designed for the egg processing industry and are available with either plate or tubular heat exchangers. A gentle handling and accurate temperature control are some of the key elements that have been optimised in the pasteuriser to maintain good quality of eggs and to ensure efficient pasteurisation.

The SANOVO pasteurisers cover two proven models both available with a capacity range of 600 - 6000 l/h and meet the common regulations and specifications according to CEE by using a regenerating unit with an external water cycle for heat transfer:

- **SANOMIDI:** Is a cost-effective solution for semi-automatic operation. The temperature regulation and the diversion valves are automatically controlled. Other valves are manually operated e.g. washing cycle.
- **SANOMAXI:** Is a fully automatically controlled system where all regulation and valves are controlled by the specially designed SANOVO software. Optional, the system can be equipped with the computer based SCADA system (Supervision Control & Data Acquisition).

## More uptime and less cleaning



■ The addition of one or more of the following features will maximise actual pasteurising time, by minimising the risk of fouling:

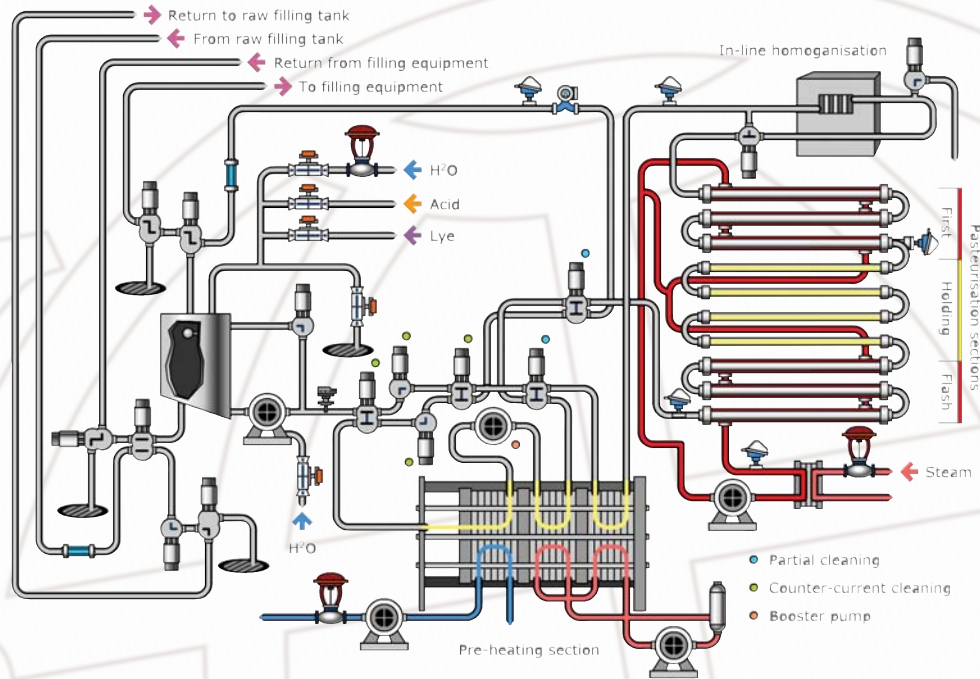
- In-line homogenisation
- Tubular heat exchanger
- Counter-current cleaning
- Partial cleaning

## In-line homogenisation avoids separation of whole egg or yolk

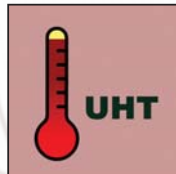
■ In-line homogenisation before heating section allows a higher pasteurisation temperature in combination with longer continuous operation and reduces the separation of the liquid whole egg or yolk when stored.



# SANOVO Pasteurisers - specially-designed for the egg industry



## UHT and zero count by tubular exchanger



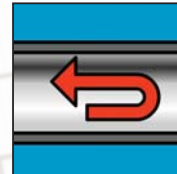
■ Tubular pasteurisation systems are used for UHT pasteurisation (Ultra High Temperature 68-70°C) and extend the interval between cleaning operations.

As the heat transfer takes place with optimal heat transfer in the tubular heat exchanger, the burn-on risk (fouling) is minimized even at very high pasteurisation temperatures.

## Efficient cleaning for sugared/salted eggs

■ The counter-current cleaning system cleans the pipes and heat exchanger using CIP liquid in normal and subsequently counter-current direction.

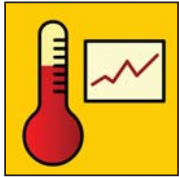
Providing the pasteuriser with a set of valves for partial cleaning of the heat exchanger improves the cleaning significantly.



Both contribute to longer continuous operation time and reduction of corrosion, ensuring long pasteuriser life.

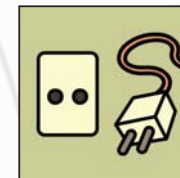
# Automation for egg pasteurisation

■ Different levels of automation are available for semi-automatic or fully-automatic operations including data recording and logging.



The local operator panel - equipped with unique SANOVO software - helps the operator during the pasteurisation processes by displaying operation status, warnings and alarms.

## “Plug&Go” tested prior to delivery



■ The pasteuriser is fully or partly skid-mounted and has been tested thoroughly prior to shipment for easy and fast start-up of the pasteuriser.

Only external connections are required before running the pasteuriser.

## Zero count with flash pasteurisation

■ Flash pasteurisation unit is an optional heat exchanger that heats the egg liquid up to an ultra high temperature (Ultra High Temperature 68-70°C) for a short period of time, before it flows to the regenerating unit.

As a result the two-step heating impact leads to high decimation of bacteria and the possibility of zero count (<10 total plate counts) under optimal conditions.



# Configuration

⚠ Depending on dynamic viscosity the pasteuriser must be configured with a specific pump and heat exchanger. Dynamic viscosity depends on the type of egg liquid, temperature, dry matter and contents of salt and/or sugar. The SANOVO pasteuriser is able to run up to 12% salt or 50% sugar. The limit depends on in going dry matter and temperature.

Below typical dynamic viscosities is shown:

- ☐ White egg; 10-11 % dry matter @ 4°C: 5-50 cP
- ☐ Whole egg; 22-24 % dry matter @ 4°C: 50-200 cP
- ☐ Yolk; 44 % dry matter @ 4°C: 200-300 cP
- ☐ Yolk; 44% dry matter @ 4°C mixed with 8 % salt: 3,500 cP
- ☐ Yolk; 44 % dry matter @ 4°C mixed with 11% salt: < 6,000 cP

Dynamic viscosity		Configuration					
Min	Max	Centr. pump	Positive pump	Booster pump	Temp. regulation	Special Plate	Tubular
0 cP	300 cP	Yes	Opt.	N/R	N/R	N/R	Opt.
300 cP	700 cP	-	Yes	N/R	N/R	N/R	Opt.
700 cP	1500 cP	-	Yes	Yes	N/R	Yes	Opt.
1500 cP	3000 cP	-	Yes	Yes	Yes	Yes	-
3000 cP	6000 cP	-	Yes	Yes	Yes	Yes	-

N/R = not required Opt. = Option

Centr. = Centrifugal pump as feeding pump

Positive = Lobe pump as feeding pump and centrifugal pump as cleaning pump

Booster = Lobe pump just before the cooling unit

Temp. reg. = Temperature regulation in cooling section to ensure stable liquid temperature

Special Plate = Due to high viscosity special plate heat exchanger are required to reduce pressure drop



☐ SANOMAXI Pasteuriser with in-line homogenisation.



☐ SANOMAXI Pasteuriser with tubular heat exchanger



01.09c.2006

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