

Pilot Pasteurization & Sterilization

HT320 Pilot Heat Treatment System

Small scale, industrial performance

The OMVE HT320 HTST/UHT pilot processing system gives research & development, quality assurance and pilot departments access to a unique formula of continuous flow heat treatment processes suitable for a broad range of products.

The pilot systems can be customized with different heat exchangers and have a very low dead volume.

The entire system is operated by a central PLC for easy operation. HTST/UHT systems can be designed to operate at different nominal capacities from 20L/hr up to 200L/hr. Higher capacities are available upon request.

Unlike other systems, the OMVE HT320 HTST/UHT pilot systems are modular and can be configured specifically to your project's requirements. The configuration of the HTST/UHT system depends on product and process specifications. All processes can be performed aseptically.

Features & Benefits

- Industrial A-brand components
- Customizable, modular build
- Supports different kinds of heat exchangers
- In-line operation with other equipment
- Full CIP/ SIP
- Highest level of automation
- Low product hold-up
- Broad range of accessories to suit your requirements

Applications

- Baby food
- Beverages
- Coffee & tea
- Desserts & puddings
- Fruit and vegetable juices & purees
- Health & nutritional products
- Dairy products
- Pharmaceuticals
- Sauces & soups

Working Principle

The HT320 system contains standard a feed hopper, a product pump, a CIP pump, heat exchangers (pre- and main heat with independent control), 2 cooling sections and a touchscreen.

The product is pumped from the product feed hopper or external connection to the heat exchangers. In the heat exchangers the product is heated to the set temperature. After the heating the product can go through an optional holding box and be sequentially cooled by the cooling sections. A back-pressure valve keeps the system pressurized to prevent boiling during processing. Three stages can be distinguished during operation: sterilization (SIP), production, and cleaning (CIP).



Optional Accessories

- Mixer in feed tank
- Aseptic execution
- Conductivity meter
- Full CIP upgrade (standard)
- Full automated control valves
- Data logging facilities
- Different kinds of holding cells
- Additional heating circuit
- Different kinds of heat exchangers

Specifications

Product Code	HT320-30	HT320-50	HT320-100	HT320-200
Adjustable flow rate	10-50L/hr	20-80L/hr	60-150L/hr	100-300L/hr
Pressure product pump	10bar /20bar*	10bar/ 20bar*	20bar	20bar
CIP pump flow rate	400L/hr	400L/hr	400L/hr / 1200L/hr	1200L/hr
Cleaning temp. @ 30 min.	85°C* [158°F / 185°F]			
Sterilization temp. @ 30 min.	130°C [284°F]			
Max. temp. boiler (medium size)	160°C [320°F]			
Internal diameter tubes	8mm/ 10mm [0,3" /0,4"]	8mm/ 10mm [0,3" /0,4"]	10mm/ 16mm [0,4" /0,63"]	16mm [0,63"]
Max. viscosity - tubes	2500cPs	2500cPs	2000cPs	1500cPs
Max. viscosity - plates	500cPs	500cPs	200cPs	200cPs
Max. particles - tubes	3mm [0,12"]	3mm [0,12"]	4mm [0,16"]	4mm [0,16"]
Max. particles - plates	1mm [0,04"]	1mm [0,04"]	1mm [0,04"]	1mm [0,04"]
Heating hot water (electrical)	Yes	Yes	Yes	N/A
Heating hot water (steam)	Yes	Yes	Yes	Yes
Weights & Dimensions				
L x W x H	1900 x 1200 x 2100mm [75 x 47,3 x 82,7"]	2200 x 1200 x 2100mm [86,6 x 47,3 x 82,7"]	2500 x 1200 x 2200mm [98 x 47,3 x 86,6"]	2500 x 1200 x 2200mm [98 x 47,3 x 86,6"]
Materials				
Product side	SS316			
Required utilities				
Electrical supply	370-400Vac/ 3ph+N+E/ 50Hz/ or 200-240Vac/ 3ph+E/ 60Hz			
Compressed air	6bar(g) [87psi]			
Water supply	2,5bar(g) [36,5psi]	Chilled water supply		3,5bar(g) [51psi]
High pressure steam	6-8bar(g) [87-116psi]	Low pressure steam		3,5bar(g) [51psi]

*optional

Integration with other sub equipment

The OMVE HTST/UHT pilot systems are compatible with different processing equipment, providing the unique ability to simulate an industrial line on a laboratory or pilot scale. All equipment is controlled by a central operating system.