

# Inline Pasteurization and Sterilization

## HT220 Lab Indirect Heat Treatment System

### Modular, Flexible & Reliable

The compact HT220 system enables you to run a trial with less than 3 liters of product. This reduces the required amount of ingredients, preparation time, start-up time and processing time. Moreover, the HT220 allows you to conduct more trials in a day, improving your R&D productivity.



The HT220 features easily accessible heat exchangers (tubular, plates) for indirect processing of liquid food products, allowing you to quickly & effortlessly modify the process configuration.

Developers have full process control using OMVE smart software with step-by-step guided programs to run SIP, processing and CIP automatically. Intuitive software in a 9,6" touch screen provides a clear, dynamic overview of the conditions (temperature, flow, pressure), which are recorded in the data logger and can be exported for traceability and quality control. Changeover between recipes is simple with the versatile HT220 thanks to its easy-to-use recipe management system.

### Features & Benefits

- Very user-friendly
- Low in maintenance costs
- Full sanitary & aseptic design
- Easy accessibility for maintenance
- Full CIP/ SIP
- High level of automation

### Applications

- Baby food
- Desserts & puddings
- Dairy products
- Functional beverages
- Fruits, vegetable juices & purees
- Pharmaceuticals
- Coffee & tea
- Health & nutritional products
- Sauces & soups

### Working Principle

Three stages can be distinguished during the system's operation: sterilization, production and cleaning (CIP).

The sterilization (SIP) cycle involves heating the system to a specific temperature (typically 121°C) for a set duration (usually 20 minutes) to effectively eradicate microorganisms.

After the SIP cycle the system is ready for processing. The system will stabilised at the set temperature profile with running water, after which production can be started. Following production, the system should be cleaned (CIP) by using the cleaning program.



## Optional Accessories

- Mixer in feed hopper
- Flow control/ meter
- External data logging
- Variable holding tubes
- Additional pre-heating boiler
- Temperature control cooling
- Aseptic execution
- Data logging & remote assistance

## Specifications

Product Code	HT220-20	HT220-50
Vessel size	5 or 10L	10L
Max. pressure product pump	10bar [145psi]	10bar [145psi]
Nominal/ process flow rate	20L/hr / 10-30L/hr	50L/hr / 40-60L/hr
CIP flow rate product pump	Up to 160L/hr	Up to 160L/hr
CIP pump (optional)	Up to 600L/hr	Up to 600L/hr
Max. temperature boiler (medium size)	160°C [320°F] Main heat	160°C [320°F] Main heat
Hot water (electrical heated)	6kW, 2x6kW (50Hz) or 7 + 6kW (60Hz)	6kW + 8kW
<b>Tube-in-Tube Heat Exchanger</b>		
Internal diameter	8mm or 10mm [0,3" / 0,4"]	8mm or 10mm [0,3" / 0,4"]
Max. particle size	3mm [0,12"]	3mm [0,12"]
Viscosity	2500cPs	2000cPs
<b>Bolted Plate Heat Exchanger</b>		
Max. particle size	0,5mm [0,02"]	0,5mm [0,02"]
Viscosity	500cPs	500cPs
<b>Materials</b>		
Product side	SS316	SS316
<b>Weights &amp; Dimensions</b>		
Weight	312kg [688lbs]	380kg [838lbs]
L X W x H	1074 x 900 x 1750mm [42,3 x 35,4 x 68,9"]	1600 x 900 x 1750mm [63,0 x 35,4 x 68,9"]
<b>Required utilities</b>		
Electrical (heated by 1 electrical boiler)	370-400Vac/ 3ph+N+E/ 50Hz/ 16A or 200-240Vac/ 3ph+E/ 60Hz/ 32A	
Electrical (heated by 2 electrical boilers)	370-400Vac/ 3ph+N+E/ 50Hz/ 32A or 200-240Vac/ 3ph+E/ 60Hz/ 32A	
Water	2,5bar(g) 0°C - 20°C [36psi 32°F - 68°F]	
Steam low pressure (optional)	3bar(g) [116psi]	
Steam for DSI (optional)	8bar(g) [116psi]	
Compressed air	6bar(g) [87psi]	

### 3 Levels of Control



Basic: Manual control utilities & product flow



Pro: Automatic control utilities; manual control product flow



Expert: Automatic control utilities & product flow

OMVE Netherlands B.V.  
Gessel 61  
3454 MZ, De Meern  
The Netherlands  
Tel +31 30 241 00 70  
sales@omve.com  
omve.com

OMVE Americas Inc.  
251 Main Street East, Suite L01  
Milton, ON L9T 1P1  
Canada  
Tel +1 416 986 8442  
sales@omve.com  
omve.com

Lab & Pilot Equipment

