

# In-Line Sterilization

## HT223 Laboratory DSI System | HT323 Pilot Plant DSI System

The add-on Direct Steam Injection with flash tank system

Direct steam injection (DSI) requires highly accurate control of the steam that is injected in the product to ensure an accurate temperature. In the flash tank the product is rapidly cooled under vacuum. The flash tank pump will pump the product further through the system.

OMVE has designed a fully sanitary DSI with flash tank system that offers a high level of automation to make the operation very user-friendly. This unit can be added to an existing UHT system.



The system can be fully controlled by the HT220 or HT320 system. The nominal capacity ranges from 20L/hr up to 200L/hr.

## Features & Benefits

- User-friendly
- Aseptic design
- Automatic CIP/ SIP
- High level of automation
- Up to 20bar flash tank pump outlet pressure
- 0,2bar(a) vacuum for cooling in the flash tank

## Applications

- Baby food
- Plant-based protein drinks
- Dairy products
- Low viscosity drinks with small particles

## Working Principle

The HT223/ HT323 System gives the operator maximum flexibility in heating various liquid products with direct steam injection. It is possible to treat your product with different temperatures to simulate your industrial process.

During the typical operation, three processes can be distinguished: sterilization (SIP), production and cleaning in place (CIP).



## Optional Accessories

- Connection to the homogenizer
- External data logging
- Variable holding tubes
- Remote assistance

## Specifications

| Product Code                    | HT223  | HT323                                    |
|---------------------------------|--|--|
| Size                            | 20L/hr or 50L/hr   | 20L/hr up to 200L/hr                     |
| Nominal / process flow rate     | 20L/hr (10-30L/hr) 50L/hr (30-80L/hr)                          | 50L/hr / 30-90L/hr                       |
| Max. temperature steam          | 160°C [320°F]  | 160°C [320°F]                            |
| <b>DSI Heat Exchanger</b>       |  |  |
| Internal diameter/ connection   | ½"   | ½", ¾"                                   |
| Max. particle size              | 1mm [0,08"]  | 1mm [0,08"]                              |
| Viscosity @ injection           | Up to 500cPs   | Up to 500cPs                             |
| <b>Materials</b>                |  |  |
| Product side                    | SS316  | SS316                                    |
| <b>Weights &amp; Dimensions</b> |  |  |
| Weight                          | 250kg [551lbs]   | 350kg [771lbs]                           |
| L x W X H                       | 1050 x 1020 x 1450mm [41,3 x 40,2 x 57"]                       | 1500 x 1300 x 2000mm [59 x 51,2 x 78,7"] |
| <b>Required utilities</b>       |  |  |
| Electrical                      | 370-400Vac/ 3ph+N+E/ 50Hz/ 16A or 200-240Vac/ 3ph+E/ 60Hz/ 32A |  |
| Steam for DSI                   | 6-8 bar(g) [88 - 116psi]                                       |  |



The HT223 and HT323 can be seamlessly integrated with other OMVE equipment.

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Lab & Pilot Equipment

