

Homogenizes and Emulsifies

HP304 Pilot 3-Piston In-Line Homogenizer

Accurate Production Simulation for Higher Stability

The OMVE HP304 in-line high-pressure homogenizer is designed to be installed with the OMVE HTST/UHT systems or with other small-scale continuous flow heat treatment systems to enable you to more accurately simulate a production process.

This high-pressure homogenizer will give better properties to the product, such as improved stability, shelf life, taste mouth feeling and can also reduce the number of additives required.



This adaptable homogenizer is easy to use in-line with the OMVE HTST/UHT system and does not require pulsation dampers. The homogenizer can be fully integrated with automatic pressure or flow control depending on your needs. This will result in fewer operation errors, lower maintenance costs and more processing productivity.

Features & Benefits

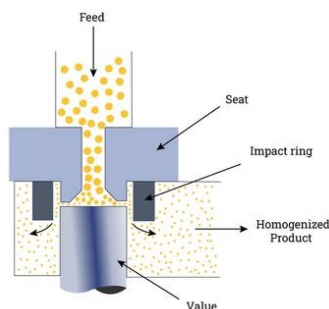
- 3 Plungers for minimum pulsation
- Easy operation with HTST/UHT systems
- Suitable for CIP and SIP
- High level of automation for effortless operation
- Two-stage homogenization valves
- Minimum of dead volumes
- Aseptic design upgrade

Applications

- Dairy
- Plant-based beverages
- (Vegetable) creams
- Juices
- Nutraceuticals

Working Principle

The homogenizer operates by forcing the liquid through a narrow, high-pressure gap between a stationary and a rotating component. This process subjects the liquid to intense shear and pressure, breaking down particles and droplets into smaller, uniform sizes (of 0.2 to 2 microns). The turbulence and mechanical forces generated during this process lead to thorough mixing and stabilization of the product.

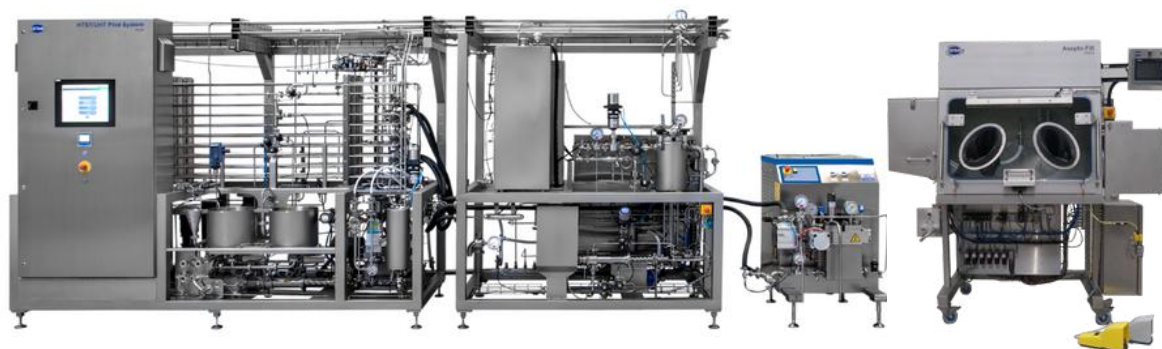


Optional Accessories

- Aseptic execution
- Automation upgrade
- By-pass for higher flow-rate during CIP

Specifications

Product code	HP304-50	HP304-100	HP304-200
Adjustable flow rate	30-90L/hr	60-150L/hr	100-300L/hr
Homogenization pressure	600bar [8700psi]	600bar [8700psi]	400bar [5800psi]
Homogenization stages	2		
Number of plungers	3		
Max. viscosity (in-line)	Approx. 2000cPs		
Max. particle size	0,5mm		
Operating temperature	< 90°C [194°F]		
Pressure reading	Digital (analogue on request)		
Minimum feed pressure	1bar(g) [14,5psi]		
Cleaning temp. @ 30 min.	90°C [194°F]		
Sterilization temp. @ 30 min.	140°C [284°F]		
Lubrication	Water (continuous)		
Materials			
Product side	Stainless Steel 316 High Performance Super Duplex SS		
Weights & Dimensions			
Weight	520kg [1146lbs]		
L x W x H	1400 x1200 x 1200mm [55 x 47 x 47"]		
Required utilities			
Electrical supply	370-400Vac/ 3ph+N+E/ 50Hz/ or 200-240Vac/ 3ph+E/ 60Hz		
Water supply	2,5bar(g) [36psi]		
Steam (only aseptic)	3,5bar(g) [51psi]		



Integrated homogenizer, controlled by the HMI of the UHT system

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Lab & Pilot Equipment

