Continuous Crystallization

CRA226 Crystallizer

Creates new opportunities on small-scale

The OMVE CRA226 crystallizer gives you maximum flexibility and the ability to simulate different kinds of industrial crystallization processes.

When using the CRA226 for crystallization of oil and fats, the quality of the product is defined by its consistency, structure, plasticity and hardness. Meeting the specific temperature and shear conditions are key factors to control the texture. As the recipes and processes are unique for each product, flexibility to configure a crystallization process it is important.

The OMVE CRA226 can be supplied with multiple scraped surface heat exchanger barrels, pinworker(s) and different lengths of resting tubes at pressures up to 50 bar(g). The process can be configured in different ways to control the aeration, final level of crystallization, mechanical force/shear during processing and the pressure in the system.

The hygienic design allows each cleaning and minimizes the risk of contamination during processing.

Features & Benefits

- Plug & Play
- Easy control by colour touch screen
- Maximum flexibility in configurations
- System pressures up to 50bar
- Hygienic design
- Integrated CIP mode
- Highest level of automation
- Easy dismantling of the SSHE

Applications

- Butter and butter blends
- Edible fats and oils
- Spreads and shortenings
- Bakery fillings
- Puff pastry
- Cosmetics

Working Principle

The unit operates as a liquid processing and crystallization system, starting with a feed hopper where the product is introduced. A product pump pressurizes and transfers the product through the system.

The product flows through a cooling barrel to initiate crystallization, followed by a resting tube that provides the residence time for stabilization and development of the crystal structure.

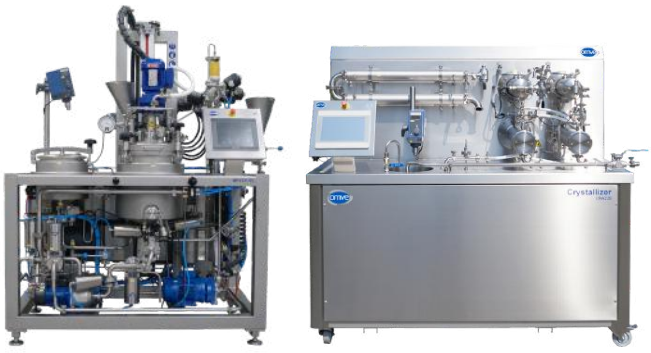
The process is monitored and controlled via a touch screen, allowing precise adjustments of pressure, temperature, and flow. The system can be expanded with a pin worker, additional cooling barrels, and other accessories to simulate crystallization processes.

Optional Accessories

- Mixer in the feed hopper
- Controlled aeration with nitrogen
- Separate CIP pump
- Upgrade to higher pressures
- Heat tracing & re-melting
- Additional barrel(s) and pin worker(s)
- Flow meter (mass or electro-magnetic)
- Upgrade in automation
- Double-jacketed vessel, pin workers & resting tubes

Specifications

Product code	CRA226
Process flow rates	10-30L/hr
CIP flow rate	160L/hr
System pressures	40bar(g) [580psi(g)]*
Additional CIP pump (optional)	Up to 900L/hr
Refrigeration system (external)	-25°C [-13°F]
Max. particle size	4mm
Max. rotating speed	715 & 2300 rpm
Dead volume per barrel	470ml
Pin Worker Rotation Speed	1500 rpm
Air incorporation	Flow controlled
Overrun	Up to 200%
Materials product side	SS216
Blades	Peek (standard)
Weights & Dimensions	
Weight	660kg [1455lbs]
L x W x H	1800 x 1150 x 1650mm [70,9 x 45,3 x 65"]
Required utilities	
Electrical supply	370-400Vac/ 3ph+N+E/ 50Hz/ 32A or 200-240Vac/ 3ph+E/ 60Hz/ 32A
Compressed air	4-7bar(g) [87psi]
Compressed air / Nitrogen injection (optional)	Max. 12bar(g) [174psi]
Water	2-4bar(g) [29-58psi]
Drains	Required



MPV231EF Emulsifier & CRA226 Crystallizer

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