

Horizontal Crystallizer

HM-HCR-V horizontal crystallizer is a cooling crystallization equipment. The crystallization of the medium is operated under atmospheric pressure. The crystallization temperature is determined by the process and the crystallization process is discontinuous. Its outstanding characteristics are simple structure, energy-saving and comfortable operation.

The crystallizer is horizontal closed cylinder structure, with packing sealing device and reduction gear installed on both end covers. The tank wall has the cooling water interlayer. The hollow shaft is arranged in the center of the tank to fix the cooling coil and agitating spiral belt. Both ends of the shaft heads have the function of cooling water circulation.

Application:

- 1) Crystallization of liquid glucose
- 2) Crystallization of glutamic acid, xylose and xylitol
- 3) Crystallization of tartaric acid and malic acid
- 4) Crystallization of salts in the chemical industry
- 5) Crystallization of sodium gluconate, calcium carbonate

Features:

- 1) Customized design to meet the needs of various customers.
- 2) The transmission device has compact structure, stable operation, high efficiency and low noise.
- 3) Reliable mechanical seal, short stop time.
- 4) Small gap between the spiral belt and the barrel body, uniform stirring, not blocked.
- 5) Advanced circulating water cooling system with good cooling effect and high crystallization effect.
- 6) Stainless steel inner cylinder, corrosion resistance, long service life.

Hongmao relies on the professional design, the strict production management, the fine processing procedure, provides the high efficiency and energy saving equipment system for the customer. Manufacturing factory has passed the international ISO9001 quality system certification, and with the design and manufacturing capacity of pressure vessels. Customers can choose international ISO, EU CE and other standards for equipment design and production according to their needs.

Technical parameter

Model	HM-HCR-V25	HM-HCR-V30	HM-HCR-V36	HM-HCR-V40	HM-HCR-V45
Volume (m3)	25	30	36	40	45
Working pres. (Mpa)	≤ 0.16				
Feed DS %	70%~75%				
Power (kw)	3	4	5.5	5.5	7.5
Rotary speed (r/min)	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8
Overall dimension (mm)	5880×2980×3545	6680×2980×3545	7165×3250×3833	6305×3833×4045	6805×3600×4045
Weight (kg)	13500	15200	18232	171000	18420

Vertical Continuous Crystallizer

HM-VCR-V vertical continuous crystallizer is used to crystallize solids from the supersaturated solution by cooling. The solution is entered through the feed pipe at the top of the crystallizer. Through the cooling module in vertical and the cooling module in series to form a pre-designed temp. gradient to cool the material. After the crystallized material reaches the bottom of the equipment, it reaches a certain temp. and particle size, and then it is discharged through the outlet with insulation jacket at the bottom of the equipment into the next process for processing.

The seed needed for the crystallization process is supplied from the seed tank.

The integral cooling module moves up and down reciprocating in a straight line, to stir and mix the materials in the cylinder body. The frequency and amplitude of the straight line motion can be continuously adjusted. The driving part adopts a superimposed high pressure dual action pump station system with one use and one standby, including solenoid valve, oil press. gauge, oil pressure adjustment switch, oil level observation hole and oil temp. gauge, with remote monitoring function of sound and light alarm.

The bottom of the crystallizer is equipped with a standard reducer. The scraper transports the crystallized material to the outlet and prevents hanging of the wall.

Application:

- 1) Crystallization of liquid glucose
- 2) Crystallization of fructose, mannitol and maltitol
- 3) Crystallization of glutamic acid, xylose and xylitol
- 4) Crystallization of tartaric acid and malic acid
- 5) Crystallization of salts in the chemical industry
- 6) Crystallization of sodium gluconate, calcium carbonate

Features:

- 1) Continuous and large-scale production
- 2) Automatic control to ensure stable product quality
- 3) Save floor space
- 4) Simple and convenient operation

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Technical parameter

Model	HM-VCR-V110	HM-VCR-V178
Volume (m3)	128	178
Material loading volume (m3)	110	160
Effective cooling area (m2)	250	380
Material	SS304	SS304
Cooling modules qty.	11 (10 groups coil + head jacket)	12 (11 groups coil + head jacket)
Cooling control circuit	5+1 (jacket)	5+1 (jacket)

Reducer power (kW)	1.5 / 2.2	1.5 / 4
Power of hydraulic station (kW)	15	22
Total height around (m)	21	21.8
Barrel body (mm)	Φ3300×8	Φ3800×8