

Centrifugal Separator Clarifier for Milk and Whey



THE PRODUCT

MAXCLEAN 5T is a centrifugal separator configured as clarifier (2-phase), for dairy application, with paring discs, partial and total automatic discharge capabilities, and ready for Clean-In-Place (CIP).

MAXCLEAN 5T is delivered as a skid, mounted on a platform and cabled with its own cabinet.

THE APPLICATION

MAXCLEAN 5T has been designed by HAUS for the dairy industry, specifically for milk or whey cleaning.

Its purpose is to remove the solid impurities, either organic or not organic, before the milk or whey processing taking place. It is also effective in somatic cell and spore reduction.

MAXCLEAN 5T may also be applied in the recovery of precipitated protein from whey.

SPECIAL FEATURES

MAXCLEAN 5T belongs to a new generation of separators, designed exclusively for dairy application.

Highest level of efficiency is achieved, whilst the product is treated gently, preserving high hygiene.

Thanks to advanced features like:

- High Rotational Speed: generating a huge centrifugal force, thanks to quality material and mechanics.
- Disc Stack: closely spaced discs of large diameter, creating a large surface of separation
- Submerged Feed Pipe: a system to introduce and accelerate the product gently, minimizing shear stress, oxygen pick-up and foaming
- Double Valve Discharge System: able to perform very fast and precise discharges of limited bowl portions, for reduced loss of milk and valuable components (fat, protein)
- Paring Disc Outlet with Counter-Pressure Valve: to regulate the bowl load and activate the Submerged Feed Pipe system.
- Strict Hygienic Configuration: quality material, polished discs, fine treatment of contact surfaces to avoid product deposit, and an optional CIP system
- Easy Drive: VFD for smooth start and stops without friction clutch and with lowest possible energy consumption, PLC for automatic control of centrifuge separation and CIP sequence, HMI to adjust operational parameters and to monitor alarms.
- High Stability Basement, made in heavy cast iron covered with stainless steel cladding
- Skid Assembly, easy to put in place, ready to operate

APPLICATIONS

- milk cleaning
- whey cleaning
- whey protein recovery

HIGHLIGHTS

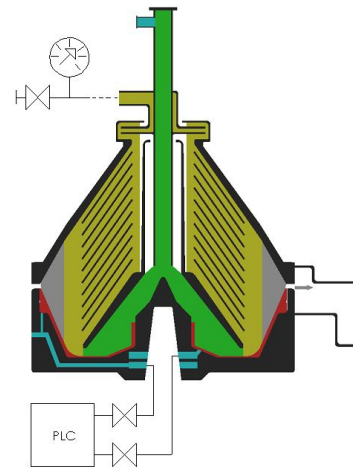
- separation efficiency
- removal of solid
- somatic cell removal
- spore reduction
- gentle treatment
- efficient discharging
- hygienic design
- quality material
- CIP ready
- parameter optimization
- energy saving

OPERATING PRINCIPLES

The product mixture is introduced in the bowl, where it is put on rotation. The centrifugal force results in the product being separated by the solid according to density difference. The milk is forced to flow through tiny spaced discs, which allows also the smaller particle to deposit and being driven apart.

The cleaned liquid overflows from the central outlet, through a paring disc (centripetal pump), to exit under pressure. The counter-pressure valve on the outlet pipe can be adjusted to regulate the liquid load inside the bowl (submerged feed pipe system).

Heavier solid particles accumulate in the sludge volume of the bowl periphery, from where are discharged periodically. During partial discharge operation, only the sludge volume is emptied. Differently, the total discharge operation empties the entire bowl volume. Any sequence of partial and total discharge can be programmed into the PLC via the HMI interface, such that it is carried over by the automatic control system



STANDART CONFIGURATION

- separator assembled on skid
- control panel with PLC and HMI
- operating water booster pump
- electrical motor with VFD
- set of special tools and parts for commissioning
- operator manuals

OPTIONALS

- flow control accessories
- product feed pump and feed valve
- CIP (Cleaning In Place) system

TECHNICAL DATA

Capacity, milk/whey clarification*	up to 5.000 L/h
Bowl/ Sludge Volume	13 / 7 L
Installed Motor Power	11 kW
Separator weight (total, empty)	1100 kg
Bowl weight (alone, empty)	250 kg
Skid overall weight	1300 kg
Noise level	85 dB(A)
Dimension (LxW, H)	1500x1830, 1850

* Nominal capacity, corresponding to specific process condition

MAIN MATERIALS

Bowl Body	EN 1.4418
Bowl Hood and Sliding Piston	Duplex EN1.4462
Discs	AISI 316 EN1.4401
Other Contact Surfaces	AISI 304 EN1.4301
Cover, Sludge Collector	AISI 304 EN1.4301
Separator Frame	Cast Iron with Stainless Steel cladding
Control Panel Cabinet	AISI 304 EN1.4301
Skid Platform	AISI 304 EN1.4301

