



Foodec 200

Food-focused decanter centrifuge



Foodec 200 decanter centrifuge

Application

Alfa Laval Foodec decanter centrifuges are designed for food and beverage applications where good hygiene practices are essential in order to comply with strict sanitary regulations. These decanter centrifuges are available for both 2-phase and 3-phase separation. They are ideal for use in the food industry in situations where the material being processed has to be separated into either a liquid and a solids phase, or into two liquid phases and a solids phase.

Benefits

- cost-effective performance
- continuous operation
- compact, modular design
- Plug & play unit with Direct-On-Line (DOL) start method.

Standard design

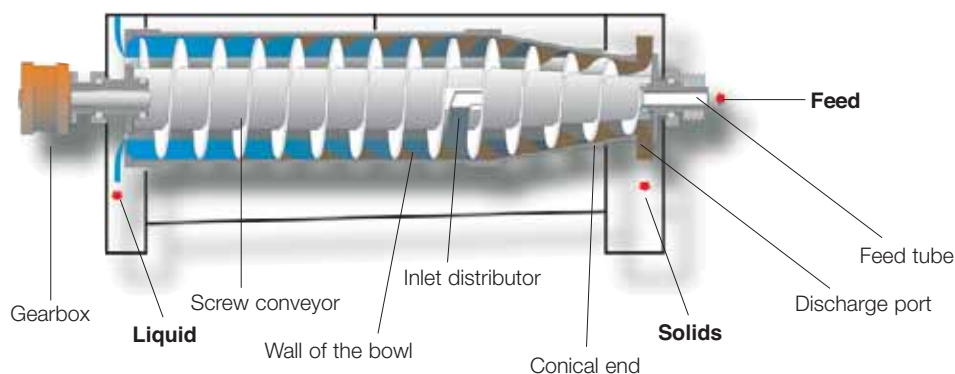
Alfa Laval designed the Foodec decanter centrifuge with a focus on hygiene, easy access, reliability and low noise levels. The rotating assembly is mounted on a compact welded box beam frame with main bearings at both ends. The cover is designed to ensure easy access. The in-line motor is flange-mounted on the decanter, with adjustable brackets for belt tension adjustment.

The bowl is driven at the conical end by an electric motor and V-belt transmission. Bowl, conveyor, casing, inlet tube, outlets and other parts in contact with the process media are made from stainless steel AISI 316.

Operating principle

Separation takes place in a horizontal cylindrical bowl equipped with a screw conveyor. The product is fed into the bowl through a stationary inlet tube and is smoothly accelerated by an inlet rotor. Centrifugal forces cause instant sedimentation of the solids on the wall of the bowl. The conveyor rotates in the same direction as the bowl, but at a different speed, thus moving the solids towards the conical end of the bowl.

The new Foodec design enables the hydraulic pressure inside the bowl to improve scrolling through a narrow opening. Only the driest fraction of the solids leaves the bowl through the solids discharge openings into the casing. Separation takes place throughout the total length of the cylindrical part of the bowl, and the clarified liquid leaves the bowl by flowing over adjustable plate dams into the casing.



Process optimization

The decanter centrifuge can be adjusted to suit individual requirements by varying:

- bowl speed, to ensure the exact G force required for optimized separation
- conveying speed, for optimized balance between liquid clarity and solids discharge capacity
- pond depth in the bowl for optimized balance between liquid clarity, solids dryness, and inter-phase setting between heavy and light liquid phases
- feed flow – Alfa Laval decenter centrifuges are designed to deal with a wide range of flow rates.

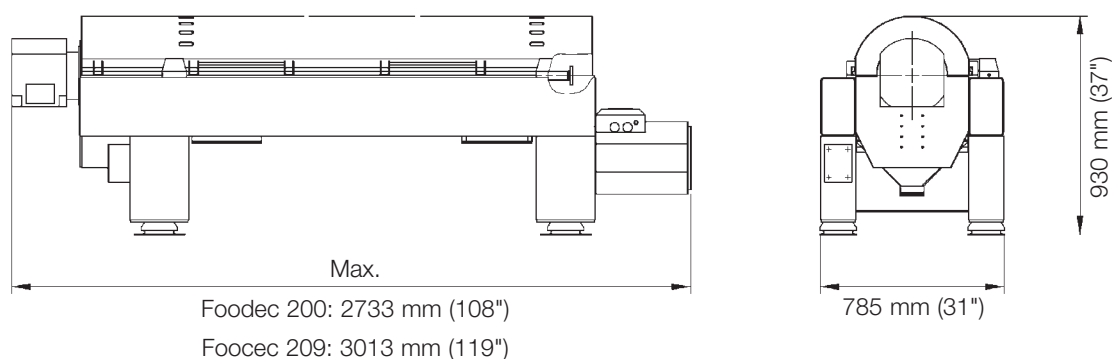
Drive system

The bowl is driven by an electric motor and a V-belt transmission drive. Start method is Direct-On-Line (DOL) using a mechanical clutch. Power is transferred to the conveyor by means of a two-stage planetary gearbox. The speed difference between the bowl and the conveyor is obtained by an efficient back drive system.

Options

Foodec decenter centrifuges provide design options such as grooves in the bowl to provide a more hygienic way to transport the material being processed through the unit. Other options include a paring disc and a complete purge system to keep foaming to a minimum and limit oxidation; pulp wash facilities; process rinse and a full cleaning-in-place (CIP) capability, as well as FDA-approved elastomers and seals.

Dimensions



Technical data

		Foodec 200	Foodec 209
Capacity		Depends on application	Depends on application
G-force max.		3030	3030
Bowl material		AISI 316	AISI 316
Other wetted parts		AISI 316	AISI 316
Weight	kg.	1400 (3080 lbs)	1500 (3300 lbs)
Installed Power	kW	11 kW (15 Hp)	11 kW (15 Hp)
Sound Pressure Level ¹	dB(A) re. 20µPa	80	81

¹ Declared A-weighted emission sound pressure level in free field over a reflecting plane at 1 m distance from the decanter, operating at maximum bowl speed, tested with water and closed outlet.

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com