



ALDEC 10

High Performance Decanter



Cost-effectiveness above all

The high-performance ALDEC 10 decanter centrifuge provides the most cost-effective solution available on the market for wastewater treatment plants. The ALDEC 10 treats high throughputs of all types of sludges, with both very low (<1%DS) and very high solids contents. Whether you require less polymer consumption, lower life cycle costs, higher cake dryness or clearer effluent and higher capacities, the ALDEC 10 can meet your dewatering and thickening demands.

Ideal for small-capacity treatment plants

If you run a smaller wastewater treatment plant, you no doubt want to limit your dewatering investments. At the same time, you are probably looking for quality equipment that is cost-effective. The ALDEC 10 is compact and efficient, simple to install, easy to maintain and straightforward to operate. Installation and operating costs are kept to a minimum, and the service life costs are unbeatable. The ALDEC 10 feature set follows in the path of the other decanter centrifuges in the ALDEC range, with

- fully enclosed process sections
- critical parts made of wear-resistant material
- high performance combined with low energy consumption.

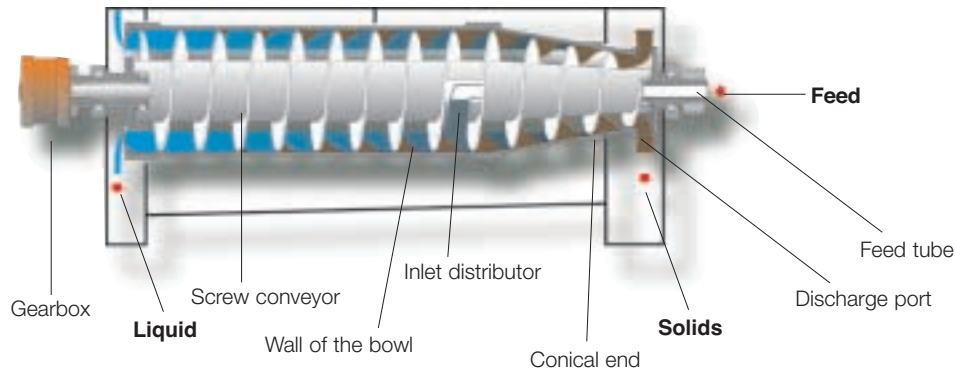
The ALDEC 10 is designed to handle a number of sludge types commonly encountered in the dairy, manufacturing and food industries, which have a wide range of different dewatering and thickening needs. The ALDEC 10 is also ideal for smaller municipal wastewater treatment plants, including those operating at more than one location. The average capacity for normal dewatering duties is 0.2 - 2 m³/h (0.8-9 GPM).

Compact design

The ALDEC 10 is compact and efficient, and enables cost-effective operation that conforms with strict environmental legislation.

Benefits

- reduces sludge volume
- cost-effective performance
- continuous operation
- compact, modular design
- Plug & play unit with Direct On Line start method.



Working principle

Separation takes place in a horizontal cylindrical bowl equipped with a screw conveyor. The feed enters the bowl through a stationary inlet tube and is accelerated smoothly by an inlet distributor. Centrifugal forces cause 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. Only the driest fraction of the cake 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.

Drive system

The bowl is driven by an electric motor and a V-belt transmission drive. Start method is Direct On Line 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.

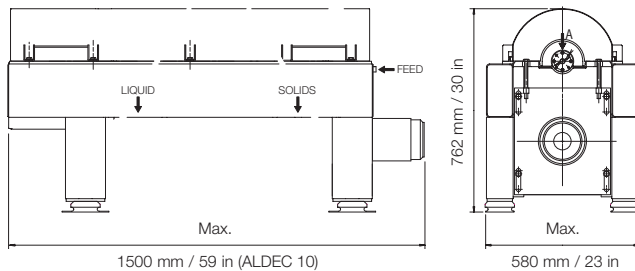
Design

A compact, in-line frame carries the rotating part with main bearings at both ends. Vibration isolators are placed under the frame. The rotating part is enclosed in a casing with a cover and a bottom section in which the solids and liquid outlets are integrated.

Materials

The bowl, conveyor, inlet tube, outlets, cover, and other parts in direct contact with the process media are made of AISI 316 stainless steel. The discharge ports, conveyor flights and feed zone are protected with highly erosion-resistant materials. The frame is made of mild steel with an epoxy enamel finish.

Dimensions



Optimization

The ALDEC range of decanter centrifuges can be adjusted to suit individual sludge dewatering and thickening needs. You can obtain maximum separation efficiency by first varying the feed rate, rotational speed, polymer type and dosage. The optimal balance between liquid clarity and solids dryness is achieved by varying the differential speed between the conveyor and bowl and the pond depth in the bowl.

Technical Data

	ALDEC 10
Max. weight	350 kg (770 lbs)
Bowl material	AISI 316
Other parts in contact with sludge	AISI 316
Typical main drive size	4 kW (5 hp)
Start method	Direct On Line (DOL)

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/environment