



ALDEC G2

Smart Decanter



Shifting the benchmarks

The innovative Alfa Laval ALDEC G2 decanter centrifuge design has shifted the accepted benchmarks for dewatering performance, providing an improvement of as much as 30% compared with previous generations of decanter centrifuges.

This complete range features a compact, modular design with all critical parts made of wear-resistant materials. The result is reliable, continuous operation and easy, trouble-free process control.

Easy to operate, easy to get results

The outstanding features of the ALDEC G2 design make it easy to accomplish a wide range of performance targets.

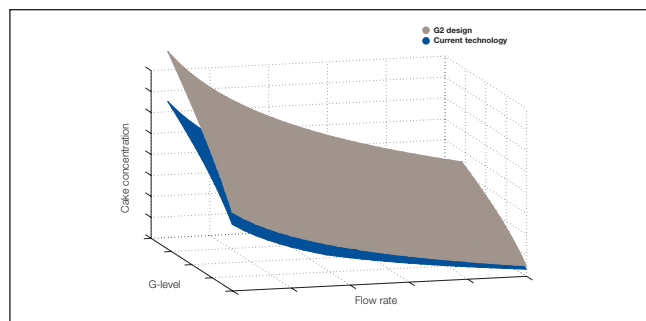


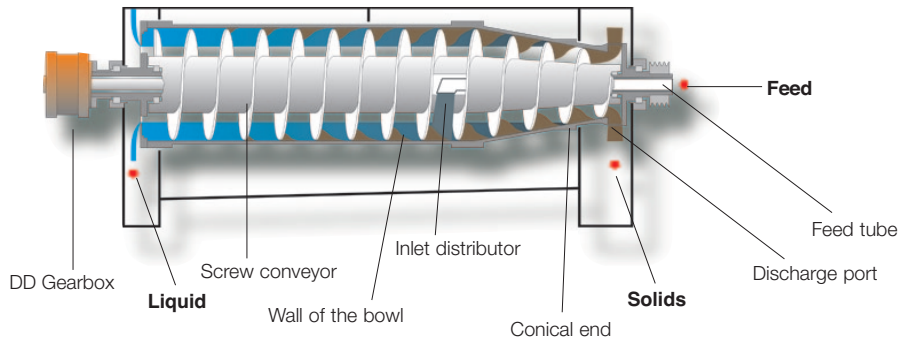
Fig. 1 Shifting dewatering performance parameters, all round.

- More sludge treated, more efficiently
- Greater processing capacity for any given equipment footprint
- Better process control
- High level of protection against erosion
- Low maintenance costs
- Low energy consumption
- Low life cycle costs
- Major savings on sludge disposal
- Fast and easy mechanical and electrical installation and commissioning.

Enhancement packages

In some cases, the economics of sludge treatment operation can require the addition of one or more special Alfa Laval enhancement packages. You can select between:

- enhanced dewatering package – achieve even greater cake dryness and lower sludge disposal costs.
- enhanced wear protection package – maintenance costs can be reduced still further by selecting more wear resistant materials. This in turn extends service intervals.
- enhanced serviceability package – features that save you time by making both operation and maintenance easier.
- enhanced control packages – add-on control systems that provide additional functionality and varying degrees of automation.



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 rotor. 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.

The ALDEC G2 design enables the hydraulic pressure inside the bowl to enhance scrolling through a narrow opening. This means that only the very driest fraction of the sludge cake leaves the bowl through the solids discharge openings into the casing. Separation takes place along 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 ALDEC G2 decanter centrifuge can be adjusted to suit specific requirements by varying

- the bowl speed to ensure the exact G force required for the most efficient separation.
- the conveying speed for the best possible balance between liquid clarity and solids dryness.
- the pond depth in the bowl for the best possible balance between liquid clarity and solids dryness.
- the feed rate – the ALDEC G2 is designed to handle a wide range of flow rates.

Design

Alfa Laval designed the ALDEC G2 decanter centrifuge with a focus on performance, easy access, reliability and low noise levels. The rotating assembly is supported on a compact welded box beam frame with main bearings at both ends. The in-line main motor is flange- or foot mounted onto the unit with adjustable brackets for belt tension adjustment. The bowl is driven at the conical end by an electric motor with a V-belt transmission.

The bowl, conveyor, casing, inlet tube, outlets and other parts in contact with the process media are made of AISI 316 and duplex stainless steel.

Direct drive

The drive system that is an integral part of the ALDEC G2 design was specially developed by Alfa Laval to make it possible to control the conveying speed automatically. This

ensures the best possible balance between liquid clarity and solids dryness, irrespective of any variations in the feed flow that may occur.

The Direct Drive system comprises an exceptionally efficient gearbox and variable frequency drive, which together avoid exposing the bowl drive to parasitic braking power. It also simplifies the electrical installation and keeps power consumption and CO₂ emissions to the absolute minimum. In addition, the Direct Drive is capable of accurate control within the complete range of differentials, with no need for changing belts or pulleys.

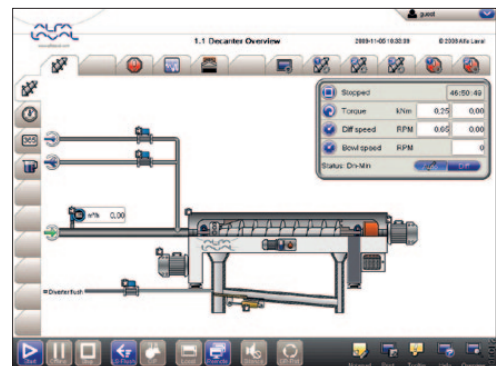
2Touch controls package

Each ALDEC G2 decanter centrifuge is equipped with a 2Touch control package as standard, pre-installed and factory-tested.

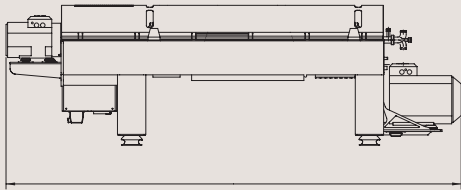
The combination of 2Touch control systems and ALDEC G2 separation technology makes sure you get the most out of any ALDEC G2 installation, at the same time as keeping costs for installation, commissioning, operation and maintenance to a minimum.

Additional enhancement packages are available for the 2Touch controls package. These include:

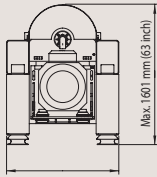
- Maintenance and training aids, including access to manuals in PDF format and videos about routine maintenance procedures.
- Process module for constant polymer control and dosing optimization.
- Protection against power loss, thus ensuring safe, uninterrupted operation, regardless of power dips or outages.
- Service packages for remote monitoring, response and reporting.



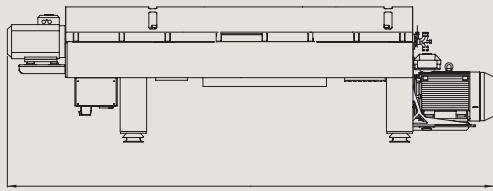
Dimensions



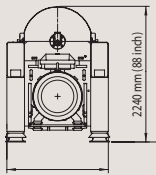
ALDEC G2-45 4275 mm (168 inch)
ALDEC G2-75 5020 mm (198 inch)
ALDEC G2-95 5712 mm (225 inch)



990 mm (39 inch)
1060 mm (42 inch)
1150 mm (46 inch)



ALDEC G2-105 5842 mm (230 inches)
ALDEC G2-115 6452 mm (254 inch)
ALDEC G2-125 6900 mm (272 inch)
ALDEC G2-165 9245 mm (364 inch)



1300 mm (51 inches)
1450 mm (58 inch)
1510 mm (60 inch)
2050 mm (81 inch)



Technical Data

Designation	Max. Weight kg (lbs)	Bowl Material	Other product and liquid wetted parts	Typical Main drive Size kW (HP)	Typical Back drive Size kW (HP)	Back drive control
ALDEC G2-45	2300 (5071)	duplex stainless steel	AISI 316	11-37 kW (15-50 HP)	5.5/11 kW (7.5/15 HP)	VFD
ALDEC G2-75	3200 (7050)	duplex stainless steel	AISI 316	11-55 kW (15-75 HP)	7.5/15 kW (10/20 HP)	VFD
ALDEC G2-95	4500 (9900)	duplex stainless steel	AISI 316	18.5-90 kW (25-125 HP)	11/22kW (15/30 HP)	VFD
ALDEC G2-105	5000 (11023)	duplex stainless steel	AISI 316	30-132 kW (40-150 HP)	15/30 kW (20/40 HP)	VFD
ALDEC G2-115	6500 (14300)	duplex stainless steel	AISI 316	37-160 kW (50-200 HP)	15/30 kW (20/40 HP)	VFD
ALDEC G2-125	8600 (18959)	duplex stainless steel	AISI 316	55-250 kW (75-350 HP)	22/37 kW (30/50 HP)	VFD
ALDEC G2-165	19000 (42000)	duplex stainless steel	AISI 316	132-355 kW (150-400 HP)	37/55 kW (50/75 HP)	VFD

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