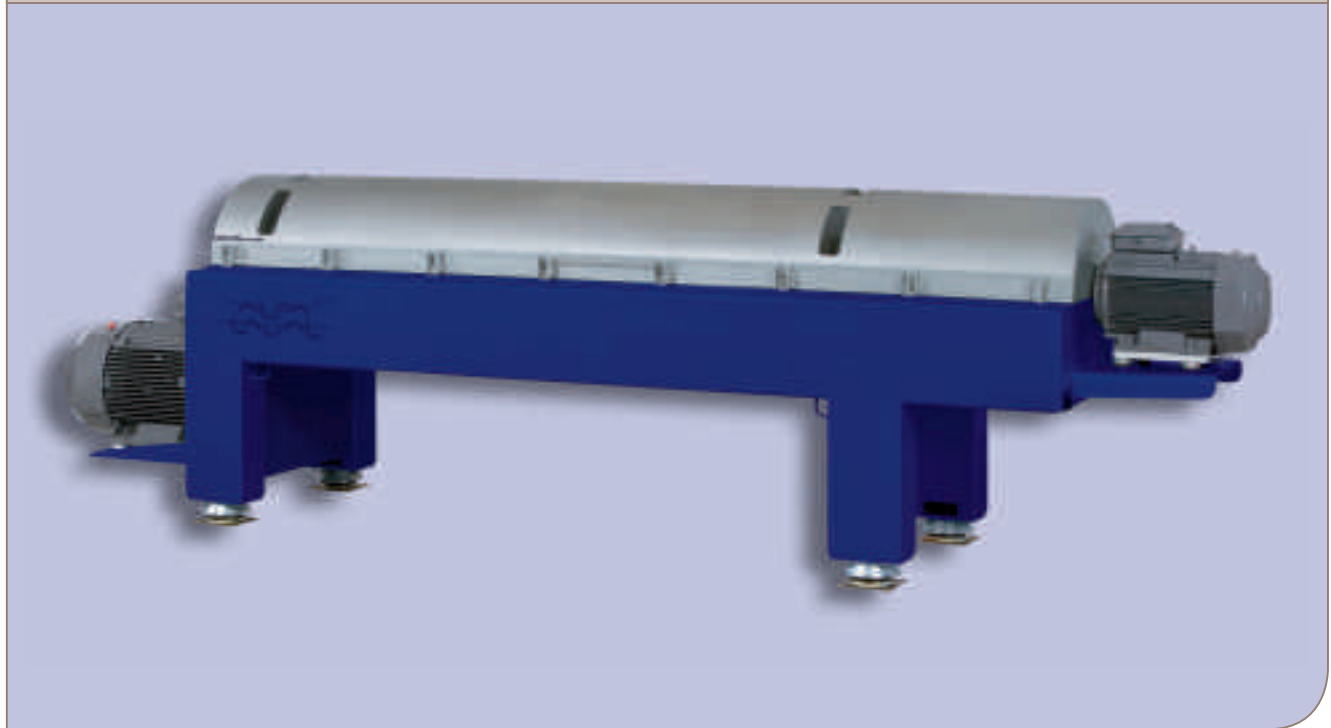




SG2-700

High Performance Decanter for the Process Industry



Application

Alfa Laval SG2-700 decanters provide the most cost-effective, high-performance separation solution currently available for DDGS production. This decanter centrifuges is used to process high throughputs of stillage from all grain types so as to achieving a low level of suspended solids and high cake dryness, with reduced power consumption and lower life cycle costs.

Design

Alfa Laval designed the SG2-700 decanter with a focus on performance, easy access, reliability and low noise levels. The rotating assembly is supported on a compact, in line, welded box beam frame which includes the both motors for ease of installation, quietness and low vibration. The bowl is driven at the conical end by an electric motor using a V-belt transmission.

The bowl, conveyor, casing, inlet tube, outlets and other parts that come into contact with the process media are

made of AISI 316 and duplex stainless steel. Parts that are subject to wear are protected with replaceable sintered tungsten carbide or weld applied tungsten carbide.

Operating principles

Separation takes place in a horizontal cylindrical bowl equipped with a screw conveyor. The product Stillage is fed into the bowl through a stationary inlet tube and is then smoothly accelerated by an inlet rotor. Centrifugal force immediately makes the solids build up on the wall of the bowl.

The conveyor rotates in the same direction as the bowl, but at a lower speed, thus moving the solids towards the conical end of the bowl. The solids leave the bowl through the solids discharge openings into the casing. Separation takes place throughout the entire length of the cylindrical part of the bowl, and the clarified liquid leaves the bowl by flowing over adjustable plate dams into the casing.

Direct Drive

Direct Drive is a unique system developed by Alfa Laval for automatic control of the differential speed between the bowl and the conveyor. This makes it easy to maintain the best possible balance between liquid clarity and solids dryness, irrespective of variations in the feed.

Direct Drive comprises a new type of gearbox and variable frequency drive, which do not expose the bowl drive to parasitic braking power loss. The electrical installation is straightforward, power consumption is kept to a minimum, and accurate control is achieved within a wide range of differentials.

Decanter Core Controller (DCC).

The decanter is controlled by a dedicated control system with a central processor, featuring a graphic interface. The DCC controls the Direct Drive, dependent on the solids load in the bowl. A number of parameters related to the decanter are also monitored in order to ensure easy, safe and reliable operation – even when performing at maximum levels.

External bus options for control equipment from several major manufacturers enable customers to integrate the decanter centrifuge into their own systems.

Process optimization

The SG2 decanter centrifuge can be adjusted to suit specific requirements by varying the

- conveying speed for optimized balance between liquid clarity and solids dryness
- pond depth in the bowl for optimized balance between liquid clarity and solids dryness
- feed flow – the Alfa Laval decanter centrifuge is designed to handle a wide range of flow rates.

Options

SG2 decanters are available in three phase design, whereby corn oil can be separated from the stillage at the same time as dewatering of the cake and clarification of the liquor.

SG2 decanter centrifuges are available with a paring disc and are ATEX-compliant for zones 22.

Technical data	SG2-700
Bowl diameter	650 mm (25.6 inch.)
Max. bowl speed	3100 rpm
Max. G-force	3500 G
Weight	6500 kg
Installed power	137-167 kW (184-225 hp)
Sound pressure level ¹ , dB (A) rel 20µ Pa	89

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

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information direct.