



A family of G

Alfa Laval's complete series of fuel ethanol decanters



Answering the global call for ethanol

Alfa Laval's complete series of dedicated fuel ethanol decanters are unparalleled in performance, reliability and energy efficiency.

It's the real power of G – on every capacity level.





SG2. Spent Grain, generation 2. A name that speaks of dedication.

Alfa Laval has more than 40 years' experience in processing stillage from grain ethanol production. Sharples Centrifuge Co, subsequently acquired by Alfa Laval, first introduced decanter centrifuges to this application and dominated it from the start, first in beverage plants and later in fuel ethanol plants. This lengthy experience is the basis for Alfa Laval's product portfolio including the latest addition, the SG2 Series.

More focus on ethanol

The ethanol industry has been a particularly successful area for Alfa Laval decanters. And as the market for fuel ethanol is booming – forever changing

the face of road transportation – Alfa Laval continues to focus closely on developing products for this industry.

The SG2 decanter series has been designed and built by Alfa Laval with the specific requirements of fuel ethanol production in mind. SG2 stands for "spent grain, generation 2."

With over 400 units installed to date, the first generation has been the industry's preferred decanters for decades. Now Alfa Laval is introducing new models to the series and fine-tuning the performance of existing ones. The result is the most cost-efficient, high-volume separation

solutions currently available for stillage processing.

The right choice

The SG2 Series offers a choice of performance and capacity levels, with bowl sizes ranging from 200 to 740 mm – yielding a throughput from 2 to 100 m³/hr, (10-450 GPM[US]). Whether you need to upgrade an existing plant or build a new one, there is always an Alfa Laval SG2 decanter to fit the job.



"We have been very impressed with the performance of our Alfa Laval Decanter centrifuges both from the process performance standpoint, as well as the mechanical reliability standpoint. When we expanded, it was an easy choice to continue with Alfa Laval".

Dwayne Braun, General Manager, US Bio Platte Valley, Central City, Nebraska, USA



A family with a proud heritage. And some brand new promises.

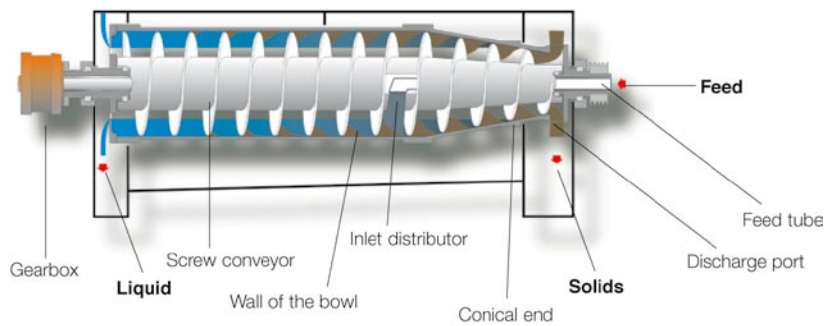
Don't change a winning team – an old truth. After nearly half a century of successful stillage processing in the ethanol industry, it might be tempting to sit back and rest on our laurels. Except, that's completely contrary to Alfa Laval's business philosophy.

Good enough is not good enough

Our decanter centrifuges are unparalleled in performance and reliability. Now Alfa Laval needs to take those acclaimed characteristics to new levels of throughput and energy efficiency.

That's why Alfa Laval continuously adjusts and fine-tunes the SG2 decanters in response to our customers' higher requirements. For example:

- To maximize separation efficiency, Alfa Laval has designed an inlet zone that eliminates degradation of the solids feed.
- To optimize the overall decanter performance, the screw conveyors have been adapted to stillage solids.
- To maximize solids handling capacity and minimize bottlenecks in the cake



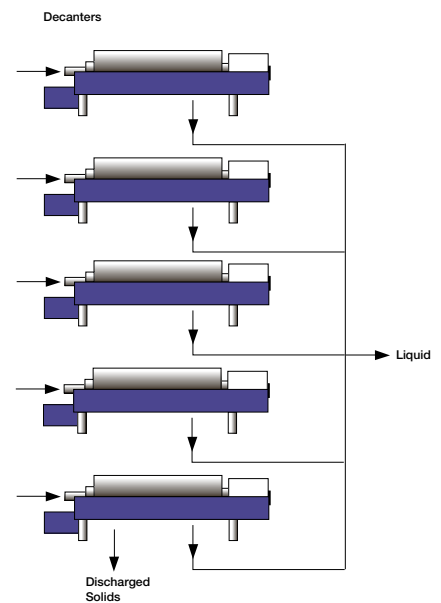
discharge, the outlet has a 360-degree opening.

- To maximize the up-time and increase service intervals, wear-prone components have special abrasion protection.
- To avoid corrosion, the optimum grade of stainless steel is used for each component, and centrifugal casting of the steel ensures a uniform, flawless material that resists fatigue in high-stress operation.

The list goes on.

A compelling newcomer

One result of these engineering efforts is the SG2-700, a new decanter that yields the driest cake, the clearest centrate and the lowest energy consumption anywhere. This translates to less energy needed for evaporation and drying, which, in turn, improves bottom-line results. Also, the lower price and smaller footprint of the new SG2-700 allow some innovative decanter configurations.



Rather than installing four larger units in a 100 MGY plant, a higher total output can be achieved at a lower total cost by using five SG2-700s.



How the SG2 Series will help you produce more ethanol. While spending less on machines and energy.

Alfa Laval knows what customers want: Higher throughput. Lower energy costs. Greater reliability. Less downtime. Less maintenance. Less noise. More design options. All at a lower price.

This is exactly what the SG2 Series offers. More for less. Thanks to their well-balanced, straightforward design, top-grade materials and unique control systems, all SG2 decanters operate more reliably and more efficiently than other similar machines – even at centrifugal levels of 3,500 G.

Engineered for results

Common design elements of the SG2 Series include the compact in-line support for the rotating assembly

and both motors. This simplifies installation and service and reduces vibration and noise.

The bowl, conveyor, casing, inlet and outlet (as well as other parts that are in contact with the stillage) are made of corrosion-resistant 316 stainless steel and duplex steel. And parts subject to abrasion from the process material are protected with a replaceable layer of carbide.

Direct Drive™ is a patented system that automatically controls the speed differential between the bowl and the conveyor. It maintains the optimum balance between liquid clarity and solids dryness – regardless of feed variations. Decanter Core Controller™ is the overall control

system. Using a powerful graphic user interface, it monitors and controls all vital components to ensure simple, safe and reliable operation.

Convenient maintenance

To minimize downtime for planned maintenance, Alfa Laval has made the SG2 Series exceptionally convenient for service with easy access to all parts and rapid assembly/disassembly. Dismantling and remounting the bowl, for example, require less than 45 minutes.

And thanks to Alfa Laval's vast international network of service centers, an experienced technician will always be nearby for maintenance and troubleshooting.

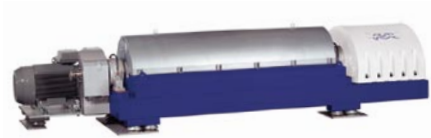
Alfa Laval decanter centrifuges for larger ethanol plants



SG2-600 ethanol decanter



SG2-700 ethanol decanter



SG2-800 ethanol decanter

	SG2-600	SG2-700	SG2-800
Bowl diameter	575 mm	650 mm	740 mm
Bowl speed, max	3,075 rpm	3,100 rpm	2,800 rpm
G-force, max	3,039 G	3,500 G	3,243 G
Capacity *	33-60 m ³ /hr, 155-275 GPM (US)	50-90 m ³ /hr, 220-400 GPM (US)	65-120 m ³ /hr, 285-525 GPM (US)
Plant Size	40-60 MGY	50-110 MGY	>100 MGY

* Actual capacity depends on type and composition of raw material.

Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineered solutions.

Our equipment, systems and services are dedicated to helping customers to optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

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

