



Alfa Laval Equipment Upgrades

Improve decanter availability, process and performance by upgrading your **decanter**.

Experience increased capacity, efficient operation, lower operating costs and longer service intervals.

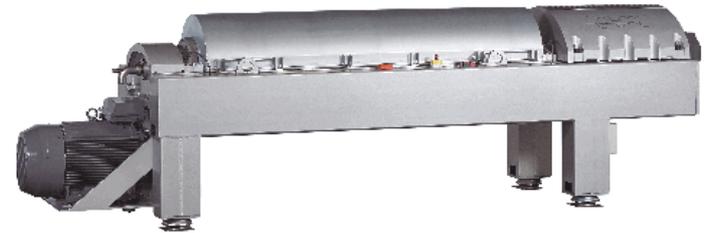


Alfa Laval Equipment Upgrades

Decanter

Benefit from various improvement options for decanters

- Back drive upgrade
- Conveyor upgrade
- Power Plates



Description

Alfa Laval Equipment Upgrades Decanter

Equipment upgrade offerings:

- Back drive upgrade
 - Replace current back drive system (eddy current brake, hydraulic back drive, etc.) with a state-of-the-art back drive and main motors driven by VFD (variable-frequency drive).
- Conveyor upgrade
 - Conveyors are either replaced with the most up-to-date conveyor technology or upgraded with wear protection parts.
- Power Plates
 - Replace existing plate dams with Power Plates

Benefits

Alfa Laval Equipment Upgrades Decanter

Find out which benefit the various upgrade options offer to you

	<i>Reduce energy consumption</i>	<i>Increase cake dryness</i>	<i>Reduce Polymer consumption</i>	<i>Increase capacity</i>	<i>Reduce maintenance costs</i>	<i>Reduce noise</i>	<i>Increase wear protection</i>	<i>Maximize uptime</i>
Back drive upgrade	X	X			X	X	X	X
Conveyor upgrade		X	X	X	X		X	X
Power Plates	X							

When to use

Alfa Laval Equipment Upgrades Decanter

Back drive upgrade

- Whenever a more stable decanter operation might significantly decrease your decanter's operating costs (e.g., increase in dry solids)
- Whenever you suffer frequent failures of the eddy current brake and/or it is producing too much heat and noise

Conveyor upgrade

- Whenever repair or replacement of the existing conveyor is due, consider a conveyor upgrade (exchange) because it might lead to:
 - Increased dry solids/ flow handling capacity and thereby significantly improve decanter operating costs
 - Increased wear resistance due to replaceable wear protection

Power Plates

- Whenever it is desirable to reduce decanter energy consumption and consequently the decanter carbon footprint



Related services

Alfa Laval Equipment Upgrades Decanter

Related services for Alfa Laval Equipment Upgrades Decanter

- Equipment Upgrades Control
- Redesign Decanter
- Commissioning Decanter



Customer case

Alfa Laval Equipment Upgrades Decanter

Upgrades Decanter Back Drive

After an Alfa Laval Performance Audit, a customer decided to upgrade the decanter back drive in order to improve decanter performance, increase cake dryness and save energy.

In addition, the new back drive requires less maintenance and produces less heat and noise compared to an eddy current brake.

Results

- Increased cake dryness and improved decanter performance
- Reduced energy consumption
- Reduced heat and noise
- Reduced maintenance requirements
- Payback time less than 2 years



SAVINGS	VALUE	HOW
Cake dryness	€ 31,500	Higher and more stable torque
Energy savings	€ 900	Motor instead of brake
Maintenance costs	€ 1,800	Less maintenance required
Total annual savings	€ 34,200	Alfa Laval Equipment Upgrades Decanter Back Drive

Customer case

Alfa Laval Equipment Upgrades Decanter

Upgrades Decanter Conveyor

A customer has a severely worn conveyor with TM42 wear protection, which needs complete replacement.

The customer must either invest in an existing conveyor type or in new conveyor technology with higher decanter performance and wear resistance. The customer decided to exchange the existing conveyor with a state-of-the-art conveyor technology.

Results

- Increase process performance: Increase cake dryness and handling capacity
- Reduce maintenance costs with a tiled conveyor and thereby increase wear protection
- Payback time less than 1 year



SAVINGS	VALUE	HOW
Process performance	€ 31,500	Increased cake dryness and handling capacity due to latest conveyor design
Maintenance costs	€ 1,800	No annual conveyor repair
Total annual savings	€ 33,300	Alfa Laval Equipment Upgrades Decanter Conveyor

Customer case

Alfa Laval Equipment Upgrades Decanter

Upgrades Decanter Power Plates

A customer replaced the existing decanter dam plates with Alfa Laval Power Plates.

Results

- Total decanter energy consumption reduced by approximately 15%
- Payback time 2 years



SAVINGS	VALUE	HOW
Energy savings	€ 2,100	Reduced flow handling power
Total annual saving	€ 2,100	Alfa Laval Equipment Upgrades Decanter Power Plates

Frequently asked questions

Alfa Laval Equipment Upgrade Decanter

- Is it easy to apply the upgrades?
 - Yes. Following an evaluation of the specific situation, Alfa Laval experts will be able to offer an upgrade solution which is easily installed either by experts or, in some cases, by the customer.
- Can results be verified?
 - Yes. Verification, which validates the conditions before and after the installation, can be measured in various ways, such as through an ampere meter, cake dryness or a flow meter



Summary

Alfa Laval Equipment Upgrades Decanter

Depending on type of upgrade, the following results can be achieved:

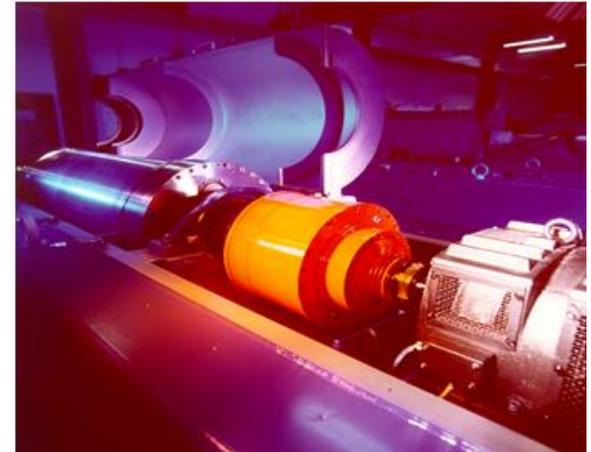
- Reduction of operating and maintenance costs
- Improvement of dewatering process
- Elimination of eddy current brake noise and heat production
- Easy installation of Alfa Laval upgrade packages
- Excellent return on investment
- Fast payback, depending on the application and process conditions

Facts and figures

Alfa Laval Equipment Upgrades Decanter

Upgrades Decanter Back Drive

- Savings on power consumption, typically 15 - 20%
- Savings on disposal cost due to performance improvements, typically 0.5-1% better cake dryness through better torque control.
- Maintenance savings (no costly eddy current brake maintenance)
- Capacity improvements, if performance is restricted on differential speed
- Depending on the situation, there may be other important gains, such as noise and heat reduction, parts availability and more floor space



Facts and figures

Alfa Laval Equipment Upgrades Decanter

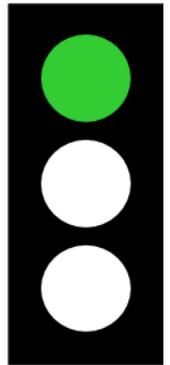
Upgrades Decanter Conveyor

Reduced operating costs through improved process performance:

- Up to 30% more sludge handling capacity at existing cake dryness and polymer consumption = Reduced labour and power costs
- Higher cake dryness = Lower sludge disposal/drying costs
- Lower polymer consumption = Lower polymer costs

Reduced maintenance costs through enhanced erosion protection:

- Upgrading from flame-sprayed hard surfacing to tiles = 3 to 10 times longer conveyor life.
- Feed zone equipped with replaceable wear liners = Lower onsite repair costs



Facts and figures

Alfa Laval Equipment Upgrades Decanter

Upgrade Decanter Power Plates

Reduced operating costs through energy savings:

- Up to 25% energy savings on flow dependent power or 10% to 20% on total power consumption
- When liquid leaves the decanter, it is fully accelerated moving in the direction of the bowl rotation. A Power Plate saves energy by reducing the velocity of discharged liquid, turning the discharge velocity in the opposite direction of the bowl rotation.
- The bigger the decanter, the bigger the savings



