



Uncover new potential

Improve efficiency and capacity of
Merco Separators with
Alfa Laval Equipment Upgrades

Make growth and profitability go around



Upgrading your Merco 36 separator with the new Merco 38 rotor assembly gives you the opportunity to boost growth and lift profitability.

To ensure growth and profitability, upgrading your wet milling plant is a business necessity. Whether you want to save energy or increase plant capacity, Alfa Laval ensures that your investment in upgrading makes good business sense.

High-speed separators are critical to your corn wet milling processes. As the world leader of separation technology for the starch industry, Alfa Laval is constantly improving high-speed separators to enhance the productivity and profitability of your plant.

Take the new Alfa Laval Merco® 38 separator, for instance. It is the largest nozzle centrifuge designed specifically for various applications – such as primary separation, gluten thickening, millstream thickening or middling separation – in the corn wet milling process. Despite its higher capacity, the Merco 38 has lower power consumption and is easier to assemble and disassemble than previous models.

Because we recognize the individual needs of different corn wet milling plants, Alfa Laval carefully considered how best to incorporate the key energy-saving and capacity-enhancing features of the Merco 38 into the Merco separators already at work at your plant. The result?

Two upgrade services that can help you save money on energy costs, increase plant capacity, or both.

Good reasons to upgrade

- Higher margins
- Reduced total cost of ownership
- Lower energy costs
- Increased capacity





Two ways to reach your full potential

Upgrading to increase capacity

Increased demand for ethanol and high fructose corn syrup has renewed interest in new processing strategies and equipment to improve efficiency and overall process economics.

To alleviate capacity constraints, Alfa Laval introduces the Alfa Laval Equipment Upgrades High Speed Separators (HSS) - Capacity Booster. This is a straightforward modification of your Merco separator at a lower capital cost than purchasing a new separator. Yet it brings you the benefits of both dramatically increased starch yields and reduced energy consumption per unit.

Upgrading to save energy

According to industry sources, a typical wet milling plant spends approximately \$30 million per year on energy alone. In fact, energy is the second largest operating cost for U.S.-based corn wet millers after the cost of corn itself.

The challenge is reducing energy consumption cost-effectively while maintaining product quality. Are you up to the challenge? The Alfa Laval Equipment Upgrades High Speed Separators (HSS) - Energy Saver can help you meet it.

	Alfa Laval Equipment Upgrades HSS - Capacity Booster	Alfa Laval Equipment Upgrades HSS - Energy Saver
Why	<ul style="list-style-type: none"> • Increased capacity of up to 33% • Energy savings of up to 25%* • Longer service life • Easier to inspect and service 	<ul style="list-style-type: none"> • Energy savings of up to 25%* • Longer nozzle life • Easier to install • Easier maintenance
Who	<ul style="list-style-type: none"> • For owners of Merco 36 separators 	<ul style="list-style-type: none"> • For owners of Merco 30 and 36 separators with Alfa Laval forged rotor bowl and hub assemblies
What	<ul style="list-style-type: none"> • New rotor assembly with E-25 nozzle 	<ul style="list-style-type: none"> • Rotor assembly modification • New E-25 nozzle

*Based on laboratory and field tests. Actual energy savings and capacity increase will vary according to duty and process variables.

A greener way to save energy

To reduce energy consumption and raise your margins, choose the Alfa Laval Equipment Upgrades High Speed Separator - Energy Saver.

Quick payback time

Save money by using less energy, thanks to the advanced design of the high efficiency E-25 nozzle. Alfa Laval modifies your existing rotor assembly with nozzle openings to accommodate new nozzle bushings. With energy savings of up to 25 percent, your investment in upgrading quickly pays for itself.

Results from field tests indicated potential energy savings of up to US \$25,650 each year from upgrading just one Merco 36 separator.* Actual savings will depend upon variables such as product, operating characteristics and energy prices.

Easy maintenance

Upgrading makes your Alfa Laval Merco separator easier to maintain than previous models. Convenient to install and remove, the new E-25 nozzle reduces the amount of time and labour required for routine maintenance.

With the Energy Saver, new replaceable bushings are installed in the nozzle opening in the bowl wall. The bushings provide extra protection and minimize the risk of damage to the bowl wall.

More eco-friendly

By enhancing your Merco separators with E-25 nozzles, your wet milling processes instantly become more environmentally sound, thanks to energy savings that reduce your plant's carbon emissions.



The new high efficiency E-25 nozzles can deliver energy savings of up to 25 percent.

Upgrade your existing nozzles with our new high efficiency E-25 nozzles. The impressive E-25 nozzle design raises the bar on performance. The nozzles are made of highly wear-resistant material and are designed to minimize turbulence. These improvements prolong the service life of the E-25 nozzle.

* Based on average operation of 8,000 hours/year and an average kWh price of US \$0.057. Actual energy savings and capacity increase will vary according to duty and process variables.





Up to 33% more capacity

To handle higher capacity during peak periods but save energy at lower production levels, go with the Alfa Laval Equipment Upgrades High Speed Separator - Capacity Booster.

Increase capacity

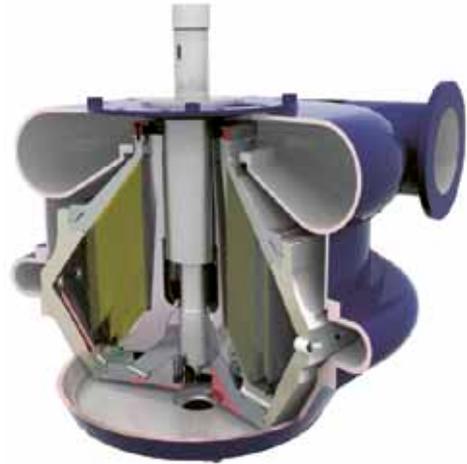
Ready for a whole new bowl game? Get up to 33 percent more capacity for less than the cost of buying a new separator. Simply replace your Alfa Laval Merco 36 rotor assembly and nozzles with a new Alfa Laval Merco 38 rotor assembly. Despite the increase in plant capacity, you will use the same amount of – or in some cases even less – energy as you do today. In addition to enhancing capacity, you get all same the benefits as the Energy Saver.

Easier to save energy

Save energy whenever the additional capacity isn't required. You have the flexibility to increase feed intake during peak production periods and reduce it as production slows. When operating at reduced production capacity, you can realize the same energy savings of up to 25 percent as you do with the Energy Saver.

Easier to inspect and maintain

Does inspecting your disc stack take too much time? Then you'll love two of the most useful features of the new rotor assembly. A new lock ring cuts the time required to remove the bowl cover for routine inspection. And a new design gives you fast access to the return tubes for inspection. Rather than spending time and energy to remove individual discs manually, simply lift the feedwell to remove the entire disc stack assembly at once.



Expand capacity by enhancing your Merco 36 separators with a new Merco 38 rotor assembly. You get up to 33% more capacity and longer service life plus make your Merco easier to service.

Realize your full potential

Step up to a higher level of performance with Alfa Laval Equipment Upgrades High Speed Separators.

Choose an upgrade

Simply choose the Alfa Laval Equipment Upgrades High Speed Separators – the Energy Saver or the Capacity Booster – that best suits your needs. Each package has a defined service scope and price. Then choose the options that meet your exact business requirements and budget.

Customize with options

Tailor your upgrade service with these options to best meet the needs of your wet milling plant.

- Lock ring conversion for easier maintenance and reduced time required to open the unit for inspection.*
- Machine sheave upgrade for easier maintenance by a single person instead of two. No need for special tools.
- Double underflow volute upgrade for additional energy savings at higher nozzle flow.
- Clarifier/classifier conversion for increased process flexibility.
- Spare bearing assembly upgrade for reduced downtime, improved design and interchangeability.
- Feed inlet upgrade for additional energy savings, thanks to reduced inlet pressure drop.*

Enjoy efficient logistics

Whether exchanging nozzles or your entire rotor assembly, Alfa Laval ensures fast, efficient service. Simply contact your sales representative and let us take care of the rest.



Get local support from a global organization

Wherever in the world you happen to be, Alfa Laval Service brings you the expertise of our global organization. Our local engineers know your business and your needs and draw on the experience and resources of our global network. In addition to the upgrade task at hand, they thoroughly examine your high-speed separators to ensure that they are in top operating condition. Call us to find out more about upgrade alternatives for your specific Merco separator.

* Included in the Capacity Booster.



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

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

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