

# Go round!

Smaller, sleeker and more efficient heat exchangers deliver big on thermal efficiency and cost savings. Find it hard to believe that anything so small can do the job of shell-and-tube heat exchangers? Think again.

Take the all-welded AlfaDisc plate-and-shell heat exchanger from Alfa Laval, for instance. This little powerhouse opens up a whole new world of possibilities by combining the thermal efficiency of Alfa Laval plate heat exchangers with the capabilities to handle the high temperatures and pressures of conventional shell-and-tube heat exchangers.

So say goodbye to straight and U-shaped tubes, and say hello circular plates. Making the switch from bulky tube bundles to compact circular plates brings greater efficiencies all around.



#### 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, foodstuff, starch and pharmaceuticals.

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

#### How to contact Alfa Laval

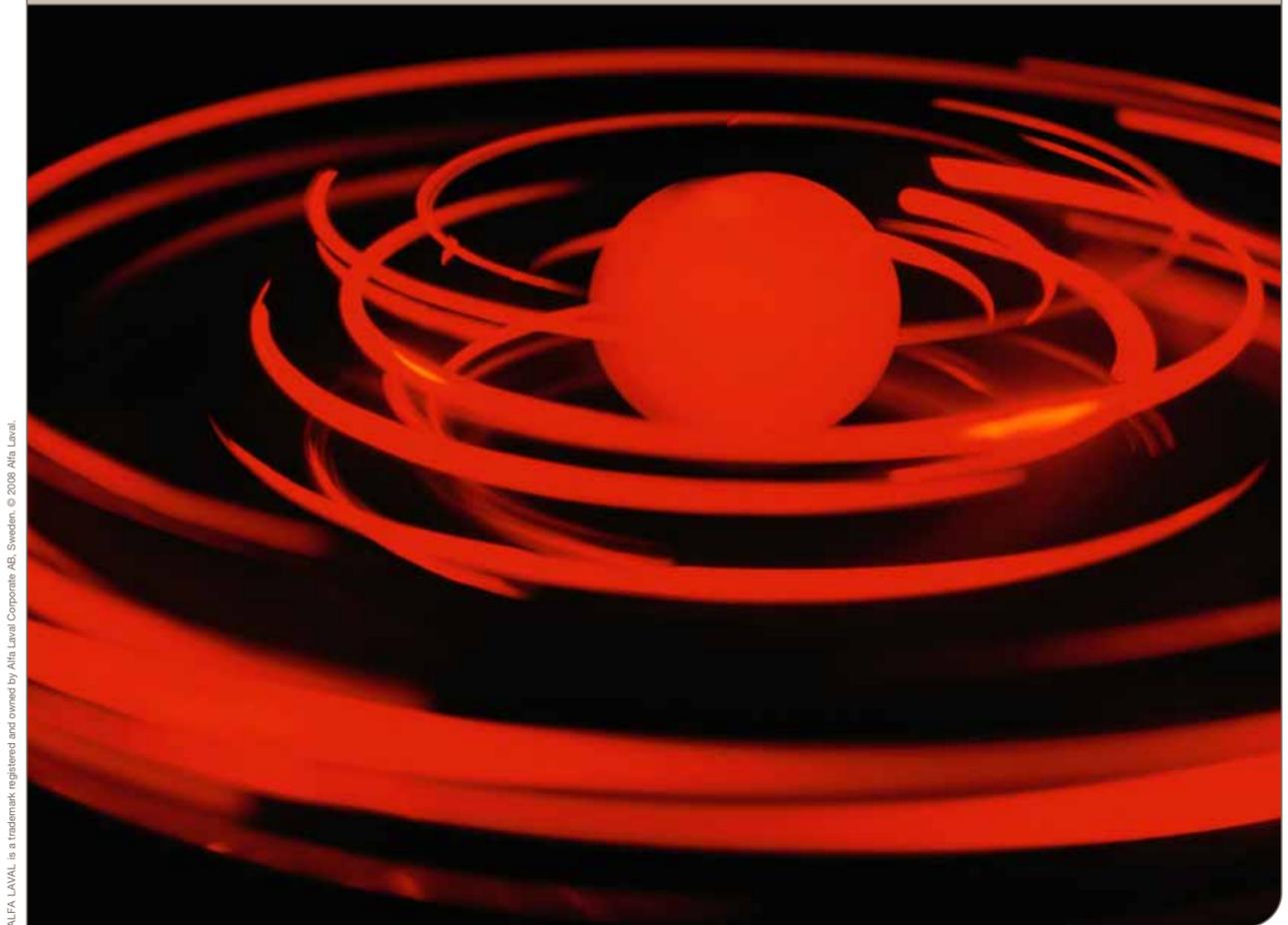
Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com).

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## Go round for tough conditions

AlfaDisc™ plate-and-shell heat exchangers for demanding pressures and temperatures



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All welded steel plates



Heavy industrial applications



Extreme temperatures



Wash liquids and surface treatment



Various high pressure steam applications



Oil cooling

## The small shell that's big on efficiency



A tireless worker, the AlfaDisc comes with a fully welded plate pack that is highly resistant to thermal expansion. The best of both worlds: The thermal efficiency of a PHE combined with the robustness of a conventional shell-and-tube.

The AlfaDisc is strikingly small, but astonishingly big on heat transfer efficiency and on its ability to handle tough temperatures and pressures with ease. Under these demanding conditions, gasketed plate heat exchangers cannot be used and, because of limited space availability, large, bulky shell-and-tubes are impractical.

The genius of AlfaDisc lies in its fully-welded pack of compact circular plates. Housed in a sturdy steel cylindrical shell, this accordion-like core construction provides a more effective heat transfer surface area than traditional tubes. Rather than drawing out the heat transfer process with multi-pass tube bundle configurations, AlfaDisc does the job quickly and efficiently, thanks to its compact cylindrical design.

### Less space, more savings

Compact design delivers additional savings in the form of lower material cost and, as a result, lower capital investment. For starters, AlfaDisc requires less steel and other metals to manufacture and generally occupies less than half the space required by comparable shell-and-tube units.

The AlfaDisc is also lighter than shell-and-tubes so its supporting base foundation is smaller, too. Plus its noticeably smaller footprint frees up volumes of floor space for other uses.

### Solid energy savings

Why replace your trusty shell-and-tube? Simply put, shell-and-tubes cost a whole lot more to operate than the AlfaDisc. Incredibly compact, AlfaDisc achieves higher levels of performance while actually requiring less pump power.

Because shell-and-tubes are larger in size, the hold-up volume in the unit is greater than what is required by AlfaDisc. These low hold-up volumes enable the AlfaDisc to respond much more quickly to any process change, thereby providing faster, more reliable control of the unit.

### Takes the heat and pressure

An ingenious cylindrical shell design and a higher heat transfer coefficient than shell-and-tubes make the AlfaDisc an excellent choice for unprecedented heat transfer. Capable of handling pressures up to 100 bar (680 psi), the AlfaDisc does not disappoint when it

»The genius of AlfaDisc lies in its fully-welded pack of compact circular plates«

comes to performance. No stranger to high temperatures, AlfaDisc also delivers virtuoso performance at temperatures between -160°C and 540°C, thanks to its all-welded design.

### Easy to maintain

Maintenance is easy. Alfa Laval's corrugated circular plates are designed for high turbulence, even at low velocities, and therefore minimize fouling. As an alternative to the standard all-welded construction, the AlfaDisc is also available with a removable core to provide access to the shell side for cleaning, inspection and repair. Cleaning in place is possible on both the shell side and the plate side no matter which configuration you choose.

### Why replace shell-and-tubes?

- Smaller size and weight
- Greater efficiency
- Reduced structural and support requirements
- Significant capital and operating cost savings
- Easier to install

### Extremely demanding

Talk about demanding. AlfaDisc meets the challenges of tough liquid-to-liquid and two-phase duties in demanding high-pressure and high-temperature applications such as these:

- Heat recovery
- Industrial heating
- Wash liquids
- Surface treatment
- HVAC steam heating
- Industrial steam
- Waste steam
- Exhaust gases
- Thermal oil



## Quality that spans the globe

With so many other fully welded solutions out there, you may wonder why you should choose AlfaDisc?

AlfaDisc distills everything wonderful about Alfa Laval heat exchangers into a compact package that stands up to high pressures and tough temperatures. So you can enjoy the quality and reliability of an Alfa Laval heat exchanger and the convenience of a global service network that is hard to match.

### Part of a complete product range

As the world's leading provider of heat transfer technology, Alfa Laval has a comprehensive range of heat exchangers – from gasketed and copper brazed to fusion-bonded and fully welded – to meet virtually every need.

Manufacturing and processes industries around the globe rely on Alfa Laval for the convenience of a one-stop shop for all of their heat transfer needs.

The AlfaDisc range meets most requirements for all types of industries. Three port diameters (50, 100, 150 mm) are available and Alfa Laval is continuously expanding its all-welded range to accommodate your needs.

### Know your options

The all-welded AlfaDisc helps you keep your options open. In addition to the standard range, there are three other AlfaDisc configurations to meet special requirements:

- A multi-pass unit to handle close temperature approach
- Two-in-one unit with two separate plate packs housed in the same shell for additional space savings.
- A unit with removable core to provide complete accessibility to the shell side for cleaning, inspection and repair.

### Quick convenient delivery

Because semi-finished AlfaDisc units are kept in stock and then quickly customized to meet your specifications, Alfa Laval can guarantee fast, efficient delivery, no matter where in the world you are. Our global distribution network and strategically located service centres ensure that you can get the products you need when and where you need them.

### Comprehensive global support

Alfa Laval's worldwide Parts & Service organization knows no bounds. Our

### Global reach, local presence

- More than a century of heat transfer expertise
- Quality you can count on
- Worldwide service network
- Technical support where and when you need it
- Efficient logistics and fast, reliable delivery

network of experienced field service engineers is active in more than 100 countries around the globe. Help is always just a phone call away. Whether you need assistance with commissioning, spare parts, training or system optimization, we'll be there.