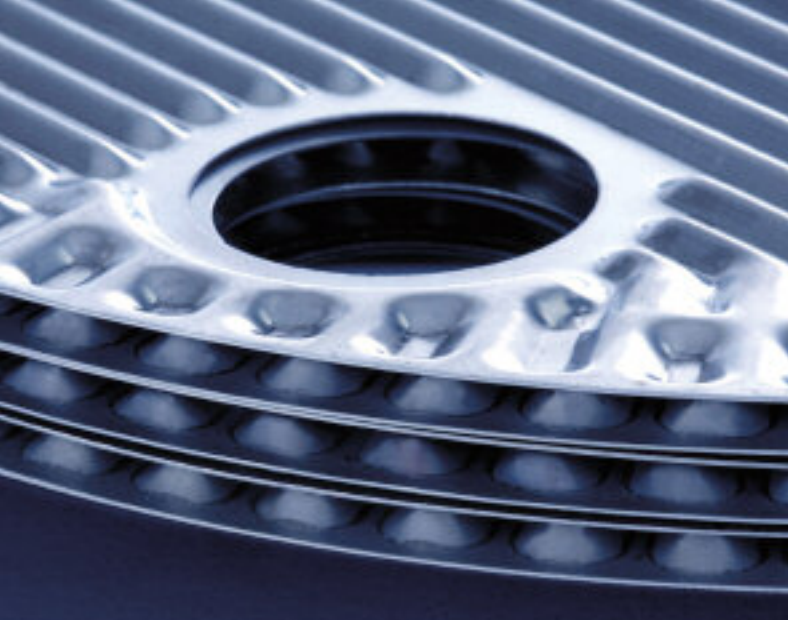




Tough enough to go round

AlfaDisc™ shell-and-plate heat exchanger for the process industries





All welded steel plates



Heavy industrial applications

AlfaDisc withstands tough process conditions

Now you can rely on AlfaDisc to tackle the high pressure, high temperature and aggressive media applications that are traditionally handled by shell-and-tube heat exchangers while providing the high thermal efficiency of plate heat exchangers.



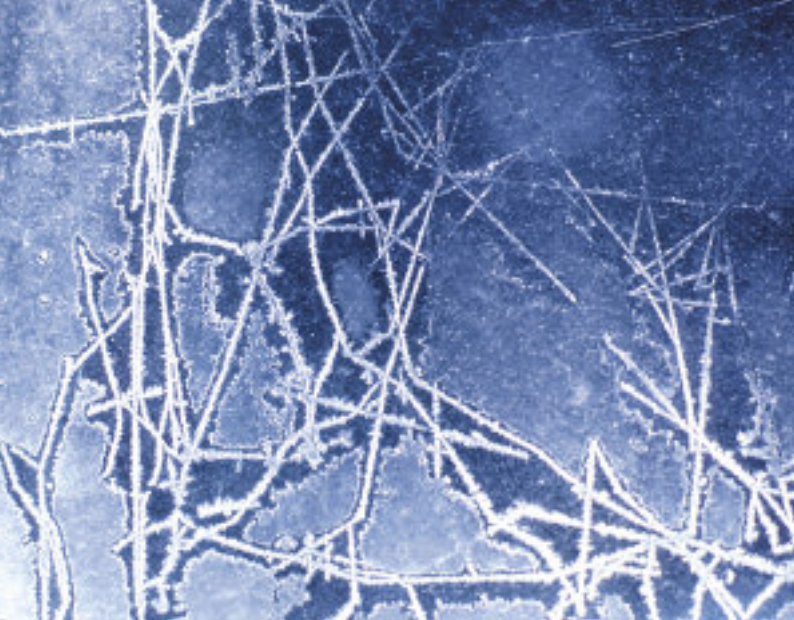
AlfaDisc – The tough little guy that brings you the thermal efficiency of a plate heat exchanger and the robustness of a conventional shell-and-tube.

Designed for use with liquids, gases, steam and two-phase mixtures, AlfaDisc meets the challenges of applications that are beyond the capability of gasketed plate heat exchangers. In fact for most applications, the AlfaDisc transfers heat more efficiently than shell-and-tubes thanks to the highly turbulent flow created by the corrugated patterns of its all-welded circular plates. Because of its high thermal efficiency, the AlfaDisc can handle close temperature approaches of 1°C (2°F).

High mechanical strength and no gaskets means this compact shell-and-plate heat exchanger can withstand temperatures up to 538°C (1000°F), pressures as high as 100 bar (1450 psi) and aggressive media. This makes the AlfaDisc an excellent choice for applications involving evaporation and condensation. In addition, AlfaDisc is capable of handling both single-pass and multi-pass flows, making it a good choice for heat recovery, too.

Tough enough for industrial processes

- For liquids, gases and two-phase mixtures
- For temperatures between -160°C (-256°F) and +538°C (+1000°F)
- For pressures up to 100 bar (1450 psi)
- For aggressive media
- For evaporation
- For condensation



Extreme temperatures



Petrochemical and process industries

Profit from less-is-more technology

Investing in technology conversion pays off. Replacing shell-and-tube heat exchangers with the cost-effective AlfaDisc has clear advantages – where less of almost everything delivers more profit to your bottom line.

Less space

The AlfaDisc is lighter in weight and occupies significantly less space than shell-and-tubes. This not only translates into big savings in installation costs, it also frees up valuable space on your plant floor.

Lower operating costs

Thanks to AlfaDisc's high thermal efficiency, you get maximum heat recovery using minimal heating and/or cooling media. This cuts your plant's media consumption, energy costs and environmental impact.

Less maintenance

Designed for high turbulence, even at low velocities, AlfaDisc's circular corrugated plates minimize fouling. Unlike high-maintenance shell-and-tube units that are more complicated to clean, the standard AlfaDisc unit is easily cleaned by flushing.

Simply connect the unit to an Alfa Laval Cleaning-In-Place (CIP) unit to remove scaling using our environmentally friendly cleaning agents. As an alternative to the standard all-welded unit, the Alfa-Disc is also available with a removable core to provide access to the shell side for cleaning and inspection.

Does the jobs of shell-and-tubes

- For liquids, gases and two-phase mixtures
- For temperatures up to 538°C (1000°F)
- For pressures up to 100 bar (1450 psi)
- For aggressive media
- For evaporation
- For condensation

Does the jobs that gasketed plate heat exchangers can't

- For high pressures and temperatures that exceed the capabilities of gasketed plate heat exchangers
- For organic solvent/solvent inter-changers when aggressive media is used
- For use as a heater or cooler when extremely high or low temperatures prevent the use of gaskets



A tireless worker, the AlfaDisc comes with a fully welded plate pack that is highly resistant to thermal expansion.



Various high pressure steam applications



Condensation and aggressive media

Small details make a big difference

Just think of the AlfaDisc as the tough, hard-working little guy that takes on demanding jobs. But AlfaDisc also comes with the flexibility and finesse to cover virtually all process industry requirements.

Flexible modular design

Let Alfa Laval work closely with you to optimize AlfaDisc's heat transfer area to meet your current needs. We work closely with you to select the right AlfaDisc size and configuration to ensure that the unit meets your requirements.

Close approach temperatures

It's impossible to handle close approach temperatures with shell-and-tube units. This isn't a problem for the AlfaDisc. Flow paths can be set in a true counter-current flow arrangement, making it possible to achieve approach temperatures of 1°C (2°F). AlfaDisc is also capable of handling crossing temperatures.

This flow arrangement, along with the high turbulence created by the unit's circular corrugated plates, promotes maximum heat transfer with hold-up volumes that are between 80 and 90

percent less than those required for shell-and-tubes. This ensures quick response for your processes.

Good fatigue resistance

AlfaDisc plates are welded together in an accordion-like pattern, making the unit resistant to thermal and pressure fatigue. This makes the heat exchanger suitable for cyclic operation in applications such as steam heating as well as for continuous or batch processes.

The AlfaDisc range

Choose from four AlfaDisc models: the AlfaDisc 50, AlfaDisc 100, AlfaDisc 150 and AlfaDisc 200. The model numbers refer to the nominal size of the DN connection on the plate side. Nozzle sizes up to DN 700 are avail-

able on the shell side to handle higher vapour or liquid flow rates.

AlfaDisc is part of Alfa Laval's range of all-welded heat exchangers for the process industries. At Alfa Laval, you can find a comprehensive range of heat exchangers – from gasketed and copper brazed to fusion-bonded and fully welded – to meet virtually every need. After all, Alfa Laval is the world's leading provider of heat transfer technology.

AlfaDisc characteristics	
Design temperature	-160°C (-256°F) and up to to +538°C(+1000°F)
Design pressure	From full vacuum (FV) to 100 bar(1450 psi)
Lowest achievable temp difference	1°C (2°F)
Performance	Low to high thermal length (NTU duty)

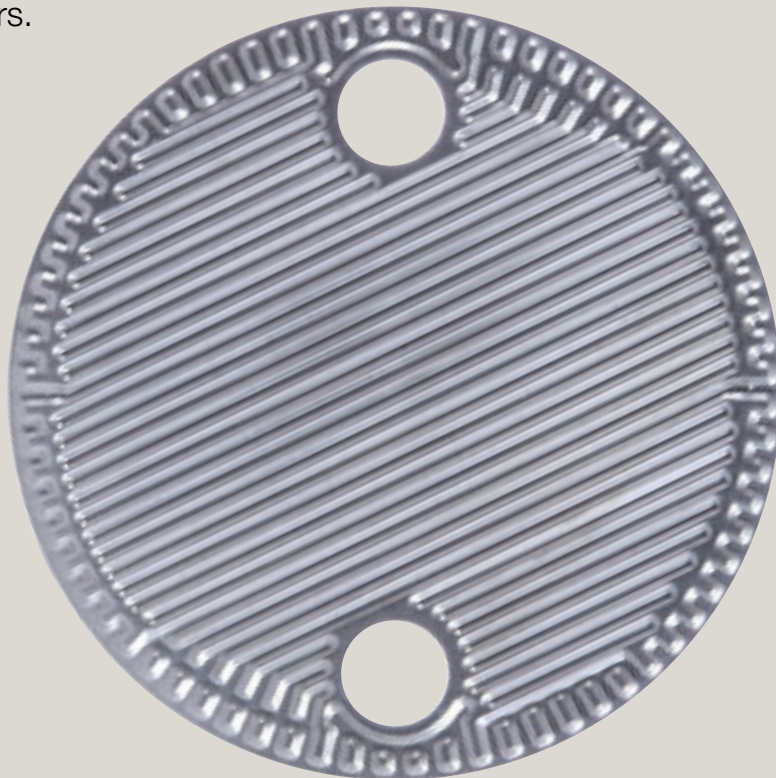
AlfaDisc

When it comes to demanding industrial processes, most people rely on shell-and-tube heat exchangers. What they may not realize is that reliable technology doesn't have to be big and bulky.

The all-welded AlfaDisc™ from Alfa Laval is a compact shell-and-plate heat exchanger that offers the thermal efficiency of a plate heat exchanger and handles pressures up to 100 bar (1450 psi) and temperatures up to 538°C (1000°F).

Like traditional shell-and-tube heat exchangers, the AlfaDisc is designed for use with aggressive media, high pressures and high temperatures. The big difference, however, lies in its circular plates, compact size and big cost-savings that AlfaDisc can deliver to your operations.

Best of all, AlfaDisc comes with the same quality, reliability, performance and high thermal efficiency that are the hallmarks of Alfa Laval plate heat exchangers.



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.