Applications
AlfaDisc is suitable for most of the applications, such as general cooling and heating duties, condensation, evaporation, reboiling and stream heating.

Standard design
AlfaDisc is built on the Plate & Shell concept. It is able to withstand higher design pressure, is more compact, is better developed for fatigue applications, has the possibility for asymmetric flow and is cleanable on one side. These features in combination with an attractive price gives the range competitive advantages over other welded concepts.

The AlfaDisc all-welded plate heat exchanger provides the thermal efficiency and compactness of a plate and frame unit under conditions that would normally call for a shell and tube unit.

Designed for use with liquids, gases and two-phase mixtures at pressure up to 100 bars (CE/PED) and 47 bars (ASME) and at temperatures up to 538°C, the Plate&Shell unit works well with aggressive media, such as organic solvents, steam heaters and interchangers that are beyond the capability of a gasketed unit. The unit is also available with removable core design.

Typical capacities
Liquid flow rate
Up to 139 kg/s (2085 gpm), depending on media, permitted pressure drop and temperature program.

Sizes
AlfaDisc 50
AlfaDisc 100
AlfaDisc 150

Working principle
The unit features a plate side and a shell side, which offer high pressure ratings. It has alternating channels for hot and cold media, and can offer true counter-current or co-current flow. Number of passes could be up to 4 on each side.

Nozzle sizes up to DN 400 can be accommodated on the shell side of the exchanger, offering higher steam and liquid flow rates. Nozzles on the plate side can be up to DN 150.
TECHNICAL DATA

Design pressure
CE/PED  Vacuum to 100 bars
ASME  Vacuum to 47 bars

Design temperature
Carbon steel Shell  -29 - 538°C
Stainless steel Shell  -160 - 538°C

Standard design pressure (g) / temperature
HS ASME/PED  10 bar / -29 - 300°C
US ASME/PED  25 bar / -29 - 300°C
SS ASME/PED  40 bar / -29 - 300°C.

Maximum heat transfer surface
AlfaDisc 50  22 m² (235 sq.ft.)
AlfaDisc 100  66 m² (706 sq.ft.)
AlfaDisc 150  162 m² (1733 sq.ft.)

STANDARD MATERIALS

Shell Material
Mild steel, Epoxy painted or stainless steel

Cover Material
Mild steel, Epoxy painted or stainless steel

Nozzles
Stainless steel and Titanium
Could be combined with carbon steel flanges

Plate material
316L & Titanium

STANDARD CONNECTIONS

Sizes mm (inch)  Plateside  Shellside
AlfaDisc 50  50 (2")  50-150 (2"- 6")
AlfaDisc 100  100 (4")  100-300 (4"-12")
AlfaDisc 150  150 (6")  150-400 (6"-16")

Pressure ratings
CE/PED  PN16, 25&40
ASME  ASME cl. 150, 300 & 600

AlfaDisc – Plate pressure (g) / temperature

STANDARD MATERIALS

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.

Alfa Laval reserves the right to change specifications without prior notification.

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