



AlfaCond range

Plate condensers



AlfaCond 400, AlfaCond 600 and AlfaCond 800

Applications

- Condenser in evaporation and crystallization systems
- Condenser in distillation systems
- Turbine condenser in co-generation power plants

Standard design

The AlfaCond consists of a plate pack with alternating welded channels and traditional gasketed channels. All plate surfaces in the gasketed channels are easily accessible for inspection and manual cleaning.

A frame holds up the plate pack, clamps it together and provides connection with the piping system.

The frame consists of two heavy covers of painted carbon steel (the frame plate and the pressure plate) between which the plate pack is pressed together by means of tightening bolts.

The frame plate is stationary, while the pressure plate is movable along the carrying bar, which also holds the plate pack. The carrying bar is supported by the frame at one end and a support column at the other end, which are bolted to the foundation.

Operating performance

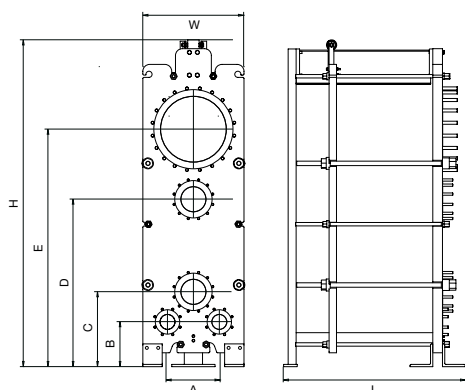
- Condensing capacity up to 80,000 kg/hr (176,000 lb/hr) of vapour depending on process fluid and operating conditions.
- Operating pressures down to 0,05 bara (0,7 psia).

Working principle

AlfaCond is tailored for vacuum condensation. The large vapour inlet connection is placed centrally on the top and the smaller condensate outlet on each side in the bottom. The two medium sized connections for cooling media are centrally placed in the middle, which gives the AlfaCond a symmetrical design.

AlfaCond uses the cassette concept with the plates welded in pairs. The vapour is condensed in the welded channel while the cooling water passes through a gasketed channel. The plate pattern is specifically designed for optimal condensation, with an asymmetric channel configuration that features a large gap on the vapour side and a small gap on the cooling water side. This makes it possible to maintain a very low pressure drop on the vapour side while still keeping up the velocity and turbulence on the cooling water side, thus maximizing the heat transfer efficiency and minimizing fouling.

Dimensions



	H	W	A	B	C	D	E	L
AlfaCond 400	2217	617	270	236	457	1215	1658	1153-3253
AlfaCond 600	2870	888	455	393	657	1470	2085	1595-4595
AlfaCond 800	3191	1132	686	386	627	1526	2303	2220-5820

TECHNICAL DATA

Mechanical design pressure / temperature		AlfaCond 400	AlfaCond 600	AlfaCond 800
PED	Vapour channel	6 barg / 160°C	6 barg / 160°C	6 barg / 160°C
	Cooling media channel	6 barg / 160°C	10 barg / 160°C	10 barg / 160°C
ASME	Vapour channel	60 psig / 320°F	90 psig / 320°F	90 psig / 320°F
	Cooling media channel	90 psig / 320°F	150 psig / 320°F	150 psig / 320°F

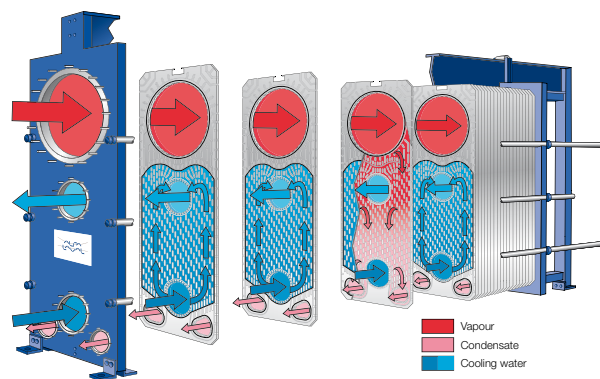
Connections*

Vapour inlet	400 mm/16"	600 mm/24"	800 mm/32"
Condensate outlets	100 mm/4"	150 mm/6"	200 mm/8"
Cooling media inlet & outlet	150 mm/6"	250 mm/10"	300 mm/12"

Maximum heat transfer surface

115 m ² (1,235 sq. ft.)	265 m ² (2,850 sq. ft.)	550 m ² (5,918 sq. ft.)
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Flow principle for AlfaCond



STANDARD MATERIALS

Frame

Mild steel, Epoxy painted

Nozzles

Metal lined with Stainless steel or Titanium

Plates

Stainless steel AISI 316 or Titanium

Gaskets

Field gasket: NBR, EPDM

Ring gaskets: NBR, EPDM, ALEPDM, HNBR, Viton

Particulars required for quotation

- Vapour Inlet temperature, pressure and mass flowrate
- Is the inlet vapour saturated?
- Amount of inert gases in vapour stream
- Temperature of cooling media
- Allowed pressure drops
- Design temperature and pressure

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