



AC500DQ / ACH500DQ

Brazed plate heat exchanger with double refrigerant circuit

General information

Alfa Laval introduced its first brazed plate heat exchanger in 1977 and has since continuously developed and optimized its performance and reliability.

Brazing the stainless steel plates together eliminates the need for gaskets and thick frame plates, which makes the heat exchanger compact and saves material. The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service lifetime.

The AlfaChill (AC) brazed plate heat exchangers are specifically designed for heat transfer in air conditioning, refrigeration and heat pump applications.

Innovative features for this double circuit heat exchanger include a patented distributor integrated in the plate design.

Typical applications

- Evaporation in chillers and heat pumps
- Condensing in chillers and heat pumps

The standard design supports a wide variety of HFC refrigerants such as R407C, R404A, R507. The high-pressure version is suitable for R410A and natural refrigerants (CO₂ - propane).

Capacity range

AC500DQ / ACH500DQ cover capacities from 200 kW up to 600 kW. Based on standard components and a modular concept, each unit is custom-designed for each specific installation.

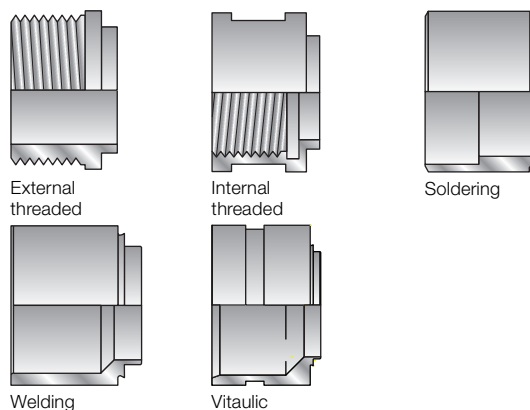
Request for quotation

To receive a quotation for brazed plate heat exchangers that meet your requirements, please provide Alfa Laval representatives with:

- Required flow rates or heat load
- Temperature program (inlet and outlet)
- Brine and refrigerant type
- Desired working pressure
- Maximum permitted water/brine pressure drop
- Connection types



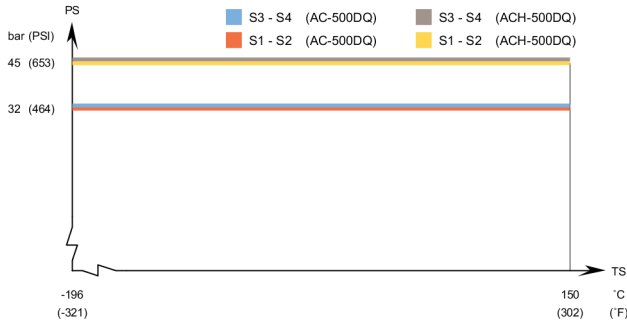
Examples of connections*



* More connections are available on request.

Maximum allowed design pressure

AC500DQ / ACH500DQ - PV code PED pressure/temperature graph



PV code	Model	Min temperature bar (psi) / °C (°F)	Max temperature bar (psi) / °C (°F)	Channel
UL	AC	31(450) / -195(-319)	31(450) / 204(400)	S1-S2, S3-S4
	ACH	45(653) / -195(-319)	45(653) / 204(400)	S1-S2, S3-S4
CRN	AC	32(464) / -196(-321)	32(464) / 150(302)	S1-S2, S3-S4
	ACH	45(653) / -196(-321)	45(653) / 150(302)	S1-S2, S3-S4
KRA	AC	32(464) / -196(-321)	32(464) / 150(302)	S1-S2, S3-S4
	ACH	45(653) / -50(-58)	45(653) / 150(302)	S1-S2, S3-S4
KHK	AC	34(493) / -196(-321)	34(493) / 150(302)	S1-S2
		38(551) / -196(-321)	38(551) / 150(302)	S3-S4
	ACH	45(653) / -196(-321)	45(653) / 150(302)	S1-S2, S3-S4

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Standard dimensions and weight*

A measure mm	=	12 + (2.61 * n) ±2 %
A measure inch	=	0.47 + (0.1 * n) ±0.08 %
Weight** kg	=	13 + (0.84 * n)
Weight** lb	=	28.66 + (1.85 * n)

(n = number of plates)

* Excluding connections

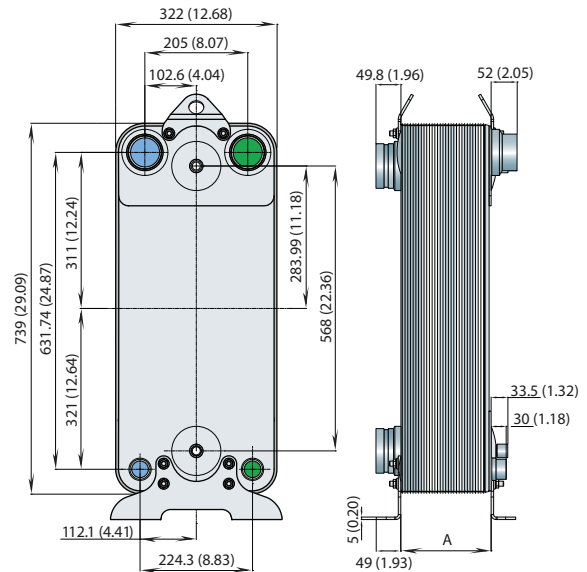
Standard data

Min. working temperature	See graph
Max. working temperature	See graph
Min. working pressure	Vacuum
Max. working pressure	See graph
Volume per channel, litres (ga)	0.50 (0.13)
Max. flowrate* m ³ /h (gpm)	120 (528)
Min. nbr of plates	10
Max. nbr of plates	270

* Water at 5 m/s (16.4 ft/s) (connection velocity)

Standard dimensions

mm (inch)



For exact values please contact your local Alfa Laval representative

How to contact Alfa Laval

Up-to-date AlfaLaval contact details for all countries are always available on our website on www.alfalaval.com