AC72 / ACH72

Brazed plate heat exchanger

General information
Alfa Laval introduced its first brazed plate heat exchanger (BHE) 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 high efficiency single circuit heat exchanger include a new type of distributor for efficient distribution throughout the plate pack as well as an asymmetric plate design. The plate design provides the flexibility to select the best configuration for optimized evaporation temperature and/or condensation temperature in order to keep the brine/water pressure drop at the desired level.

Typical applications
- Evaporator and condenser in high efficiency chillers
- Evaporator or Condenser in high efficiency A/W heat pumps
- Evaporator or Condenser in high efficiency B/W and W/W heat pumps
- Economizer

The standard design supports a wide variety of HFC refrigerants such as R407C, R404A, R507, R134a. The high-pressure version is suitable for R410A, R32 and natural refrigerants (CO2, propane).

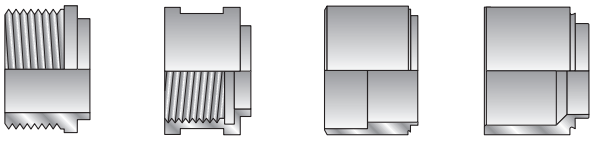
Capacity range
AC72/ACH72 cover capacities from 5 kW up to 70 kW (2-20 RT). Based on standard components and a modular concept, each unit is custom-designed for each specific installation.

Working principles
The heating surface consists of thin corrugated metal plates stacked on top of each other. Channels are formed between the plates and corner ports are arranged so that the two media flow through alternate channels, usually in countercurrent flow for the most efficient heat transfer process.

Standard design
The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Particulars required for quotation
To enable Alfa Laval's representative to make a specific quotation, specify the following particulars in your enquiry:
- required flow rates or heat load
- temperature program
- physical properties of liquids in question
- desired working pressure
- maximum permitted pressure drop

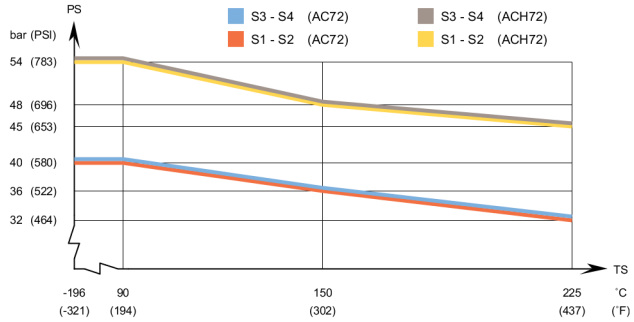
Examples of connections



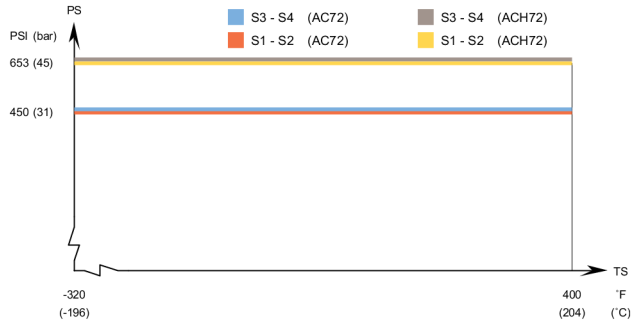
External threaded | Internal threaeded | Soldering | Welding

* More connections are available on request.

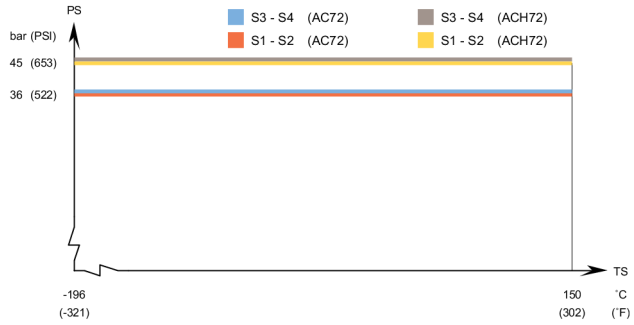
AC72 / ACH72 - PED approval pressure/temperature graph



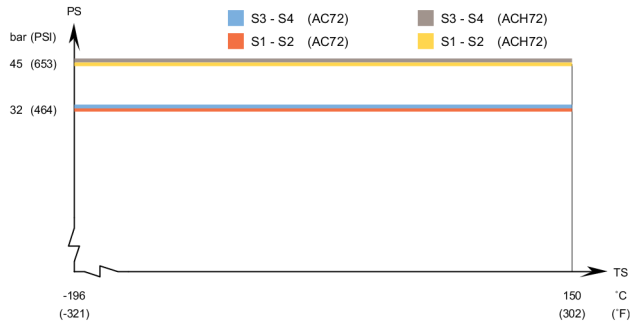
AC72 / ACH72 - UL approval pressure/temperature graph



AC72 / ACH72 - KHK approval pressure/temperature graph



AC72 / ACH72 - KRA approval pressure/temperature graph



Standard data

Min. working temperature	see graph
Max. working temperature	see graph
Min. working pressure	vacuum
Max. working pressure	see graph
Volume per channel AH, litres (ga)	0.104 (0.027) 0.084 (0.022)
Max. particle size mm (inch)	1 (0.04)
Max. flowrate* m^3/h (gpm)	12 (52.8)
Min. nbr of plates	4
Max. nbr of plates	160

* Water at 7m/s (22.96 ft/s) (connection velocity)

Standard materials

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

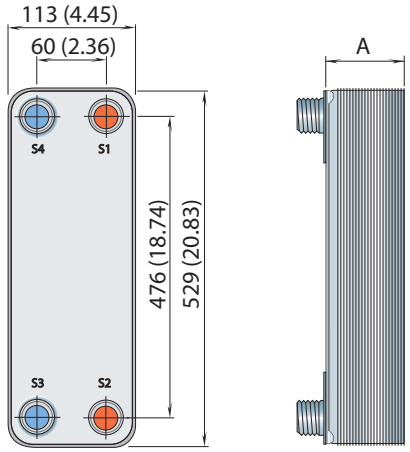
Standard dimensions and weight

A measure mm = 13 + (1.98 * n) (±2.5 mm or ±1.5 %)
A measure inch = 0.51 + (0.08 * n) (±0.1 inch or ±1.5 %)
Weight** kg = 2.1 + (0.19 * n)
Weight** lb = 4.63 + (0.42 * n)

(n = number of plates)
** Excluding connections

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