# AC18 / ACH18

## Brazed plate heat exchanger

### 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 single circuit heat exchanger include a patented 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

- Economizer for injection compressors
- Small heat pumps and chiller systems
- Oil cooling

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

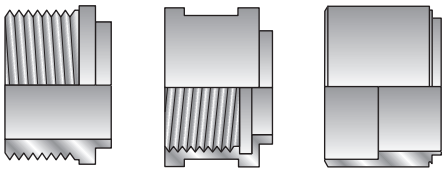
AC18/ACH18 cover capacities from 2 kW up to 10 kW. Based on standard components and a modular concept, each unit is custom-designed for each specific installation.

### 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

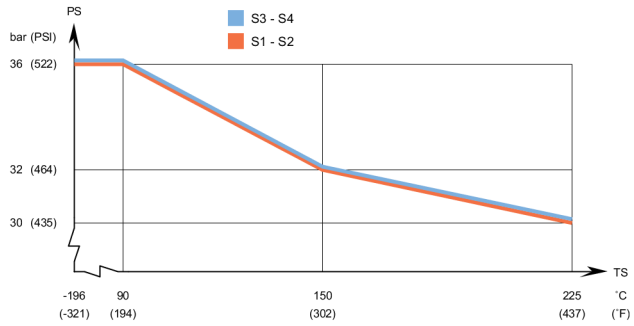
### Examples of connections*



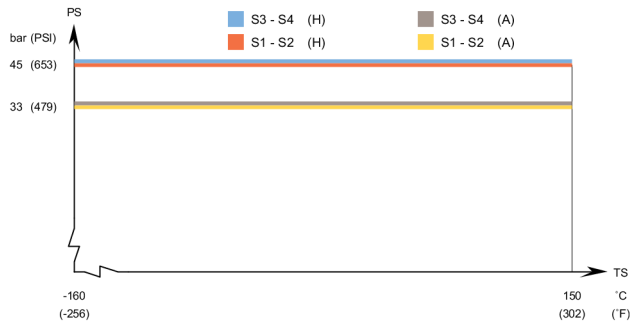
External threaded | Internal threaeded | Soldering

* More connections are available on request.

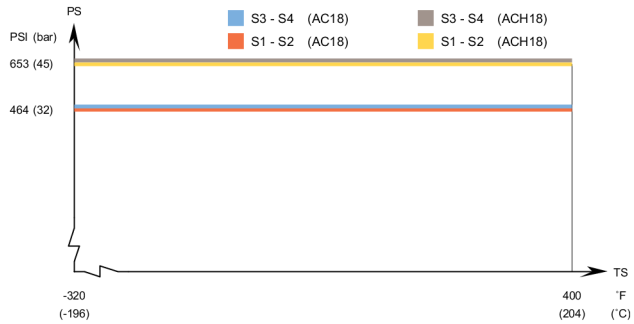
### AC18 - PED approval pressure/temperature graph AH



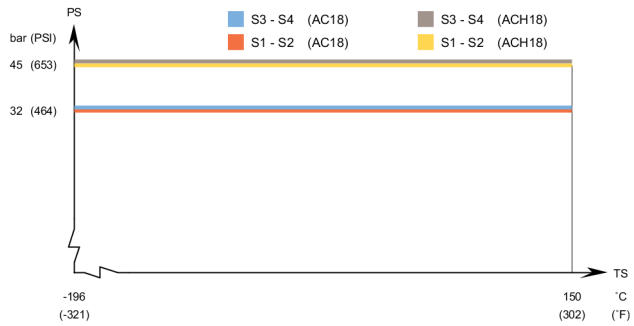

### ACH18 - PED approval pressure/temperature graph AH




### AC18 / ACH18 - UL approval pressure/temperature graph AH




### AC18 / ACH18 - CRN approval pressure/temperature graph AH




## Standard dimensions and weight

**AC18 / ACH18**

| | | |
|---|---|---|
| A measure mm | = | 8.5 + (2.16 * n) (±2 mm or ±2.5 %) |
| A measure inch | = | 0.33 + (0.09 * n) (±0.08 inch or ±2.5 %) |
| Weight** kg | = | 0.4 + (0.07 * n) |
| Weight** lb | = | 0.88 + (0.15 * 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 H, litres (ga) | 0.038 (0.0098) |
| Volume per channel A, litres (ga) | 0.042 (0.011)<br>0.035 (0.009) |
| Max. particle size mm (inch) | 1.1 (0.04) |
| Max. flowrate* $m^3/h$ (gpm) | 4.1 (18) |
| Min. nbr of plates | 4 |
| Max. nbr of plates | 52 |

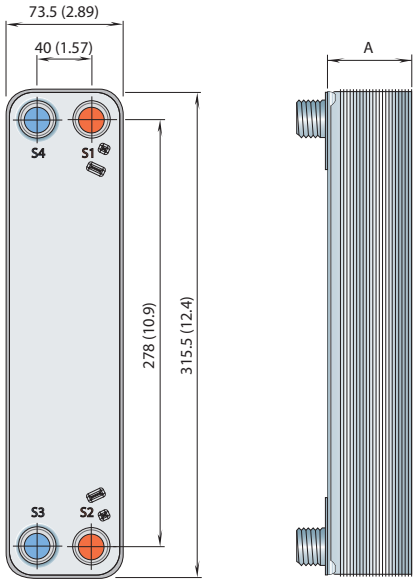
* Water at 5 m/s (16.4 ft/s) (connection velocity)

## Standard materials

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

## 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