



CBXP27

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. The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. The plate design guarantees the longest possible life.

The design options of the brazed heat exchanger are extensive. Different plate patterns are available for various duties and performance specifications. You can choose a standard configuration BHE, or a unit designed according to your own specific needs. The choice is entirely yours.

Typical applications

- HVAC heating/cooling
- Refrigeration
- Industrial cooling/heating
- Oil cooling

CO₂ refrigerant applications

- Suction gas heater
- Oil cooler
- Evaporator
- Economizer
- Sub cooler
- Condenser

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 counter-current 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.

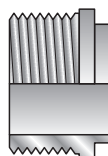


Particulars required for quotation

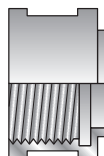
To enable Alfa Laval's representative to make a specific quotation, specify the following particulars in your enquiry:

- required flow rates or heat load
- temperature program
- physical properties of liquids in question
- desired working pressure
- maximum permitted pressure drop

Examples of connections



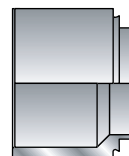
Outside threaded



Inside threaded

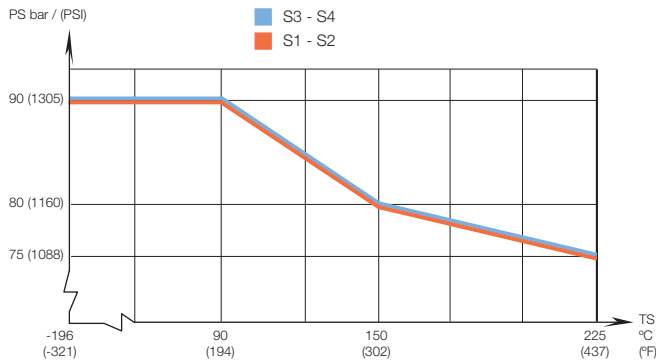


Soldering

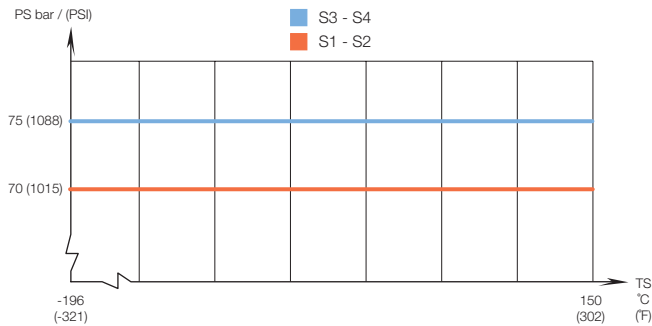


Welding

PED approval pressure/temperature graph*



KHK 150° approval pressure/temperature graph*



* For exact values please contact your local Alfa Laval representative.

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) | 0.05 (0.013) |
| Max particle size mm (inch) | 1.2 (0.05) |
| Max flowrate m³/h (gpm)* | 14.5 (64) |
| Min no of plates | 6 |
| Max no of plates | 150 |

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

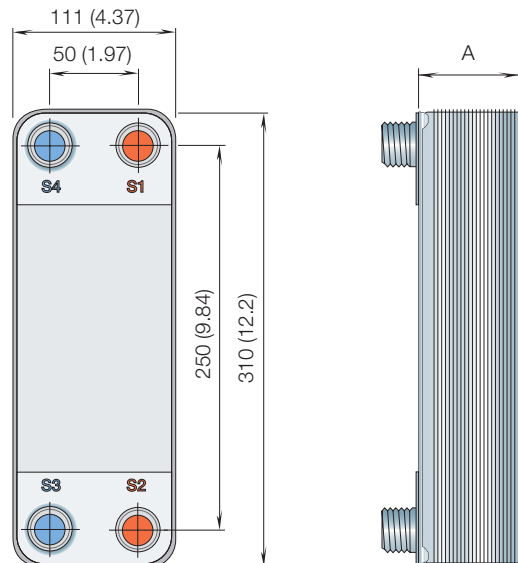
Standard materials

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

Standard dimension and weight*

$$\begin{aligned}
 \text{A measure mm} &= 9 + (n \times 2.4) \pm 3 \\
 \text{A measure inch} &= 0.35 + (n \times 0.094) \pm 0.12 \\
 \text{Weight** kg} &= 2 + (n \times 0.13) \\
 \text{Weight** lb} &= 4.4 + (n \times 0.28)
 \end{aligned}$$

** excluding connections
(n = number of plates)



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.