



# AXP14

## 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.

### Applications

- Heat pumps
- Commercial
- Refrigeration
- Heat recovery

### CO<sub>2</sub> Refrigerant applications

- Gas cooling
- Oil cooling
- Suction gas heating
- Condensing
- Evaporating
- Economizing
- Desuper heating

### 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.

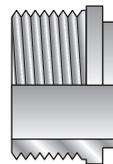


### Particulars required for quotation

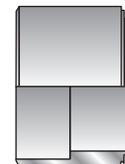
To enable Alfa Laval's representative to make a specific quotation, specify the following particulars in your enquiry:

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

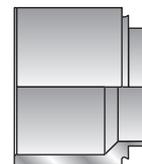
### Examples of connections



External threaded

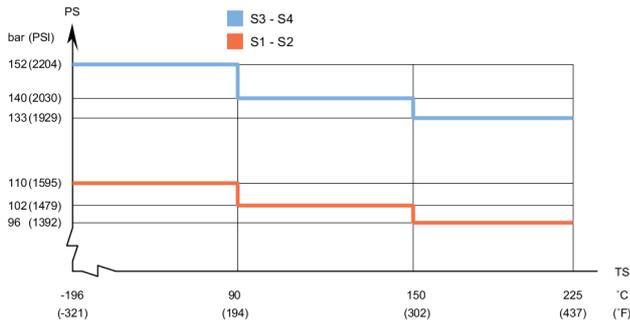


Soldering

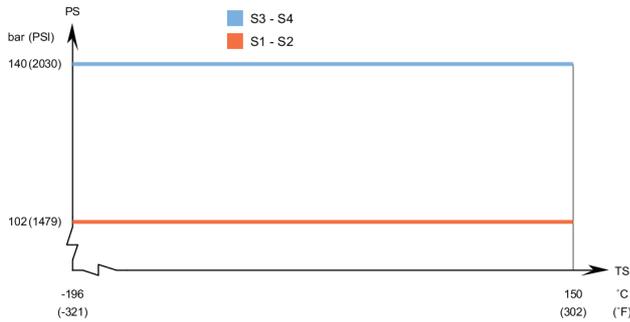


Welding

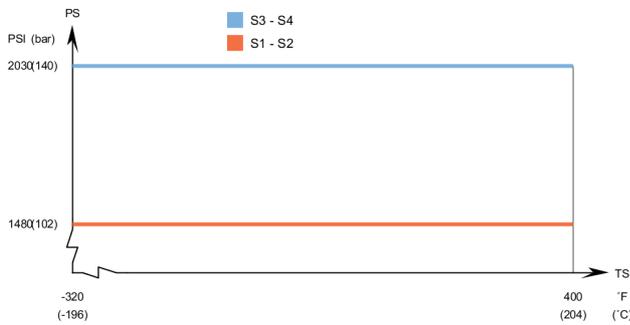
### AXP14 - PED approval pressure/temperature graph



### AXP14 - CRN approval pressure/temperature graph



### AXP14 - UL approval pressure/temperature graph



### Standard dimensions and weight\*

A measure mm =  $8 + (1.15 * n)$  ( $\pm 1$  mm or  $\pm 1$  %)  
 A measure inch =  $0.31 + (0.05 * n)$  ( $\pm 0.04$  inch or  $\pm 1$  %)  
 Weight\*\* kg =  $0.32 + (0.04 * n)$   
 Weight\*\* lb =  $0.71 + (0.09 * n)$

(n = number of plates)

\* Excluding connections

### Standard data

Min. working temperature	-196°C (-321°F)
Max. working temperature	225°C (437°F)
Min. working pressure	vacuum
Max. working pressure	see graph
Volume per channel, litres** (ga)	0.01 (0.0026)
Max. particle size mm (inch)	0.4 (0.016)
Max. flowrate* m <sup>3</sup> /h (gpm)	2.8 (12.32)
Min. nbr of plates	10
Max. nbr of plates	150

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

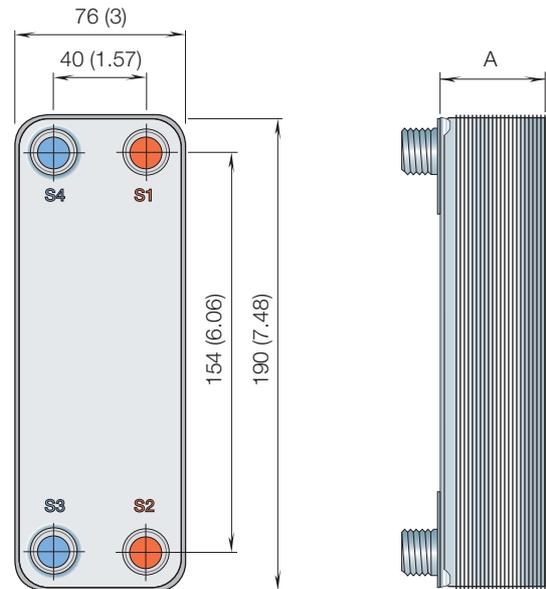
\*\* CE mark not applicable according to directive 97/23/EC article 3.3

### Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing material	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](http://www.alfalaval.com)