



CB400

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
- Process heating/cooling
- Hydraulic oil cooling
- Oil cooling

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.

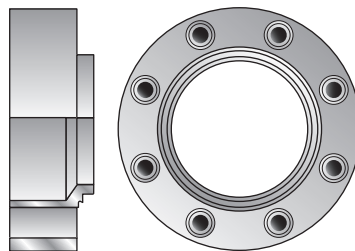
Particulars required for quotation

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



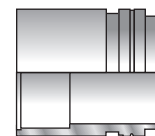
Compact flanges



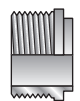
Welding



Clamp

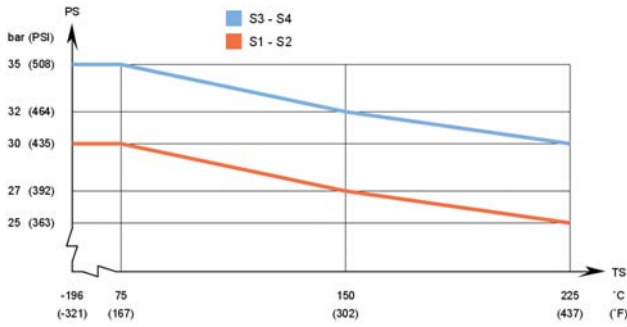


Soldering

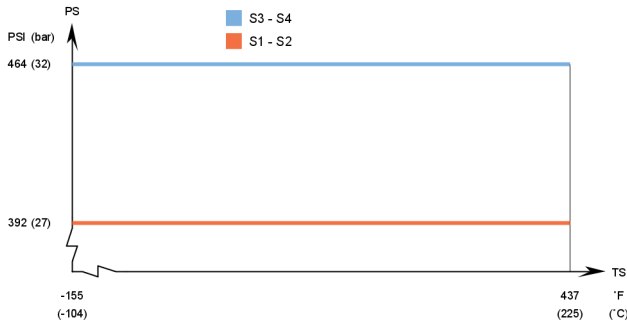


External threaded

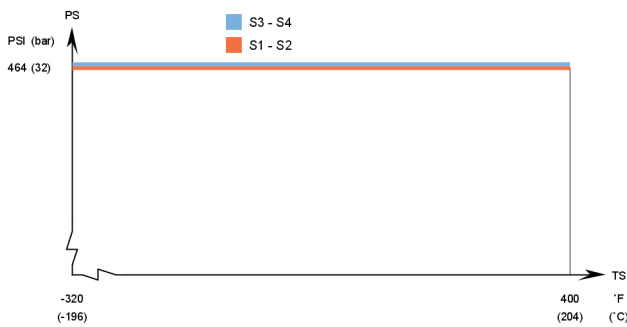
CB400 - PED approval pressure/temperature graph*



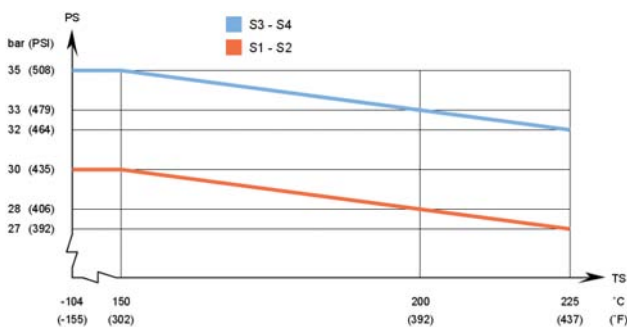
CB400 - ASME approval pressure/temperature graph*



CB400 - UL approval pressure/temperature graph*



CB400 - CRN approval pressure/temperature graph*



Standard dimensions and weight*

A measure mm = 14 + (2.56 * n) (+/-10 mm)
 A measure inch = 0.55 + (0.1 * n) (+/-0.39 inch)
 Weight** kg = 24 + (1.35 * n)
 Weight** lb = 52.91 + (2.98 * 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) | 0.74 (0.19) |
| Max. particle size mm (inch) | 1.8 (0.07) |
| Max. flowrate* m ³ /h (gpm) | 200 (881) |
| Min. nbr of plates | 10 |
| Max. nbr of plates | 270 |

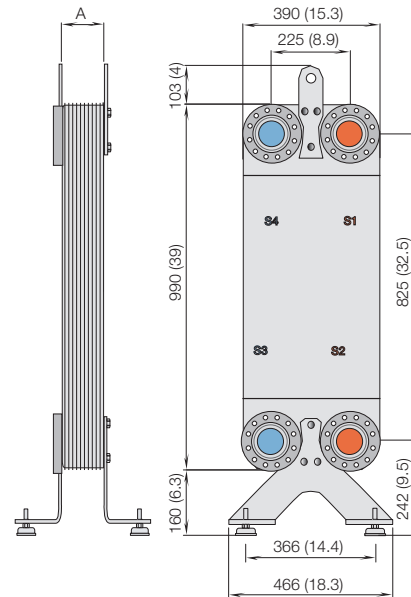
* Water at 5 m/s (16.4 ft/s) (connection velocity)

Standard materials

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

Standard dimensions

mm (inch)



Marine approvals

CBM400 can be delivered with marine classification certificate (ABS, BV, CCS, Class NK, DNV, GL, LR, RINA, RMRS).

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