CB110 / CBH110

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
- Industrial heating/cooling
- Condensing
- Tap water
- Oil cooling
- Air dryer
- Solar 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*

* More connections are available on request.
Standard dimensions and weight*

**CB110**
- A measure mm = 15 + (2.56 * n) (±2 mm or ±1.5 %)
- A measure inch = 0.59 + (0.1 * n) (±0.08 inch or ±1.5 %)
- Weight kg = 4.82 + (0.32 * n)
- Weight lb = 10.63 + (0.71 * n)

**CBH110**
- A measure mm = 15 + (2.56 * n) (±2 mm or ±1.5 %)
- A measure inch = 0.59 + (0.1 * n) (±0.08 inch or ±1.5 %)
- Weight kg = 5.68 + (0.32 * n)
- Weight lb = 12.52 + (0.71 * 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, L, M, filter (gas): 0.21 (0.05)
- Max. particle size mm (mesh): 1.2 (0.05)
- Max. flowrate m³/h (gpm): 51 (224)
- Min. nbr of plates: 10
- Max. nbr of plates: 240
* 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**

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<tr>
<th>Dimension</th>
<th>CB110</th>
<th>CBH110</th>
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<tr>
<td>mm (inch)</td>
<td>200 (7.87)</td>
<td>768 (30.24)</td>
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<tr>
<td></td>
<td>260 (10.24)</td>
<td>92 (3.62)</td>
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For exact values please contact your local Alfa Laval representative

**Marine approvals**
CB110 can be delivered with marine classification certificate (ABS, BV, CCS, Class NK, DNV, GL, LR, RINA, RMRS).

PCT00152EN 1306
Alfa Laval reserves the right to change specifications without prior notification.

How to contact Alfa Laval
Up-to-date AlfaLaval contact details for all countries are always available on our website on www.alfalaval.com