

CB14-77

Brazen Plate Heat Exchanger

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, always in counter-current flow. The media are kept in the unit by a brazen seal around the edge of the plates. The contact points of the plates are also brazen to withstand the pressure of the media handled.

Standard design

The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. The channel plates are corrugated to improve heat transfer efficiency and to make them rigid.

Standard materials

Cover plates

Stainless steel AISI 316

Connections

Stainless steel AISI 316

Plates

Stainless steel AISI 316

Brazing material

Copper

Particulars required for quotation

To enable Alfa Laval's representative to make a specific quotation, enquiries should be accompanied by the following particulars:

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



Advantages of brazen plate heat exchangers in Industry and HVAC&R

The Alfa Laval Brazen plate heat exchangers (BHE) have several advantages over traditional heat exchangers in Industrial and HVAC&R applications.

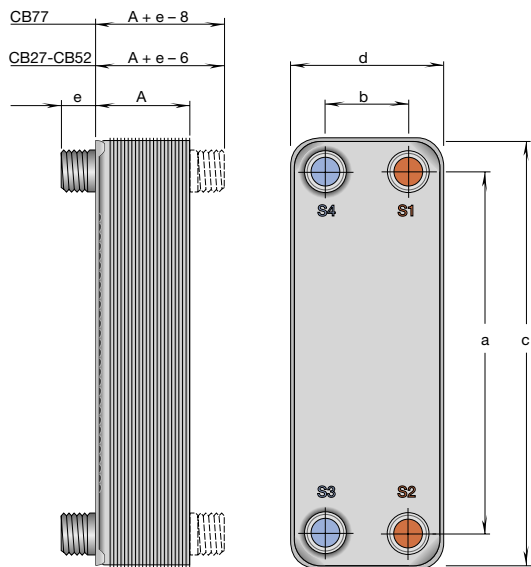
- The high heat transfer efficiency of the BHE makes it extremely compact and also easy to install in places where space is limited.
- The unit has no gaskets and is therefore suitable in applications where temperature and/or pressure is high e.g. in district heating.
- The Alfa Laval supply system reassures that, no matter where you are on the globe, the BHE units are available with a very short delivery time.

Standard Data

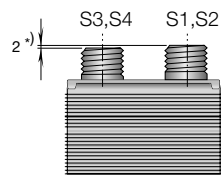
	CB14	CB26	CB27	CB51	CB52	CB76	CB77
Min. working temperature **)	-160°C	-160°C	-160°C	-160°C	-160°C	-160°C	-160°C
Max. working temperature **)	175°C	175°C	175°C	175°C	175°C	175°C	175°C
Min. working pressure **)	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
Max. working pressure, S3S4/S1S2 **)	32 bar	32 bar	32 bar	32 bar	32 bar	A,E,H: 32 bar L,M: 25 bar	25/16 bar
Volume pr. channel, litres	0.02	0.05	0.05	0.095	0.095	A: 0.18/0.25 E: 0.18/0.18 C,M,H: 0.25/0.25	0.25
Max. flowrate, S3S4/S1S2. *)	3.6 m³/h	8.1 m³/h	8.1/12.7 m³/h	8.1 m³/h	8.1/12.7 m³/h	39 m³/h	39/63 m³/h
Standard number of plates H,M,L	14,20, 30,40	10,18,24, 34,50, 70,100	10,18,24, 34,50,70 100,120	10,20, 30,40, 50,60	10-100 (10,20,...)	20-150 (20,30,...)	20-150 (20,30,...)

*) Water at 5 m/s (connection velocity) **) According to European pressure vessel Directive (PED) (CE-Approval)

Standard dimensions



Type	a	b	c	d	e	A	Weight kg
CB14	172	42	208	78	24	8 + n x 2.35	0.7 + n x 0.06
CB26	250	50	310	112	45	9 + n x 2.40	1.2 + n x 0.13
CB27	250	50	310	112	45	9 + n x 2.40	1.2 + n x 0.13
CB51	466	50	526	112	45	10 + n x 2.40	1.9 + n x 0.23
CB52	466	50	526	112	45	10 + n x 2.40	1.9 + n x 0.23
CB76	519	92	618	191	48	A: 10 + 2.5 x n E: 10 + 2.2 x n H,L,M: 10 + 2.85 x n	7.0 + n x 0.44
CB77	519	92	618	191	48	10 + n x 2.85	7.0 + n x 0.44



*) Not valid for CB77
Measurement in mm
(n = number of plates)

