omd oliver m. dean, inc.
800-648-3326
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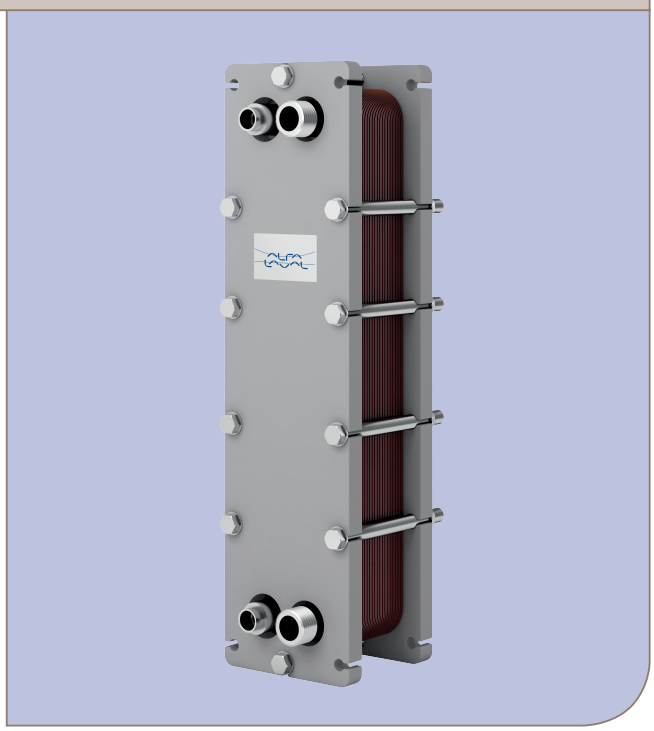
AXP52

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.

AXP52 is a brazed heat exchanger with thin external frames that withstands operating pressures of 130 bar. AXP52 is specially designed to fulfill the need when using CO_2 as refrigerant in subcritical and transcritical applications. 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

CO_2 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

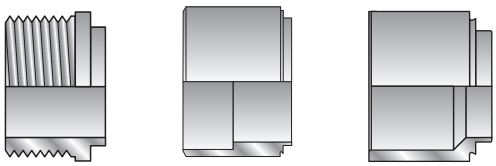
The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. To improve the heat transfer design, the channel plates are corrugated.

Particulars required for quotation

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

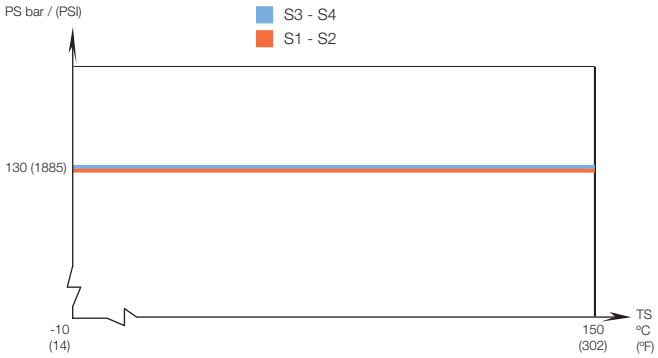
- required flow rates or heat load
- temperature program
- physical properties of liquids in question
- desired working pressure
- maximum permitted pressure drop

Examples of connections



Outside threaded | Soldering | Welding

AXP52 PED approval pressure/temperature graph*



* For exact values please contact your local Alfa Laval representative

Standard dimension and weight*

A measure mm	= 14 + (n x 2.4) ± 3
A measure inch	= 0.55 + (n x 0.09) ± 0.12
Weight kg** < 50 plates	= 32.7 + (n x 0.22)
Weight kg** 51-100 plates	= 35.4 + (n x 0.22)
Weight kg** 101-150 plates	= 38.4 + (n x 0.22)
Weight lb** < 50 plates	= 72.1 + (n x 0.49)
Weight lb** 51-100 plates	= 78 + (n x 0.49)
Weight lb** 101-150 plates	= 84.7 + (n x 0.49)

** excluding connections
(n = number of plates)

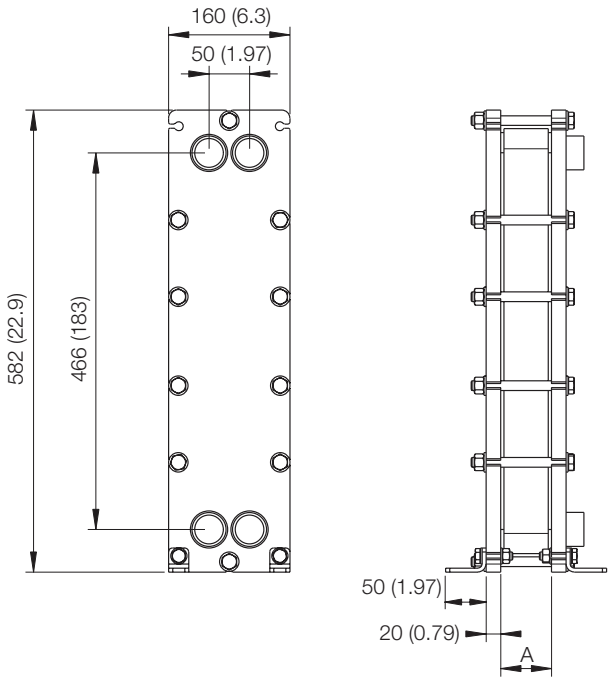
Standard data

Min. working temperature	see graph
Max. working temperature	see graph
Min. working pressure	Vacuum
Max. working pressure	see graph
Volume per channel, litres (ga)	0.095 (0.025)
Max particle size mm (inch)	1.2 (0.05)
Max flowrate m^3/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 velosity)

Standard materials

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



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

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.