



Alfa Laval AXP112

Brazed plate heat exchanger for extremely high pressure requirements

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.

Alfa Laval AXP112 is a brazed heat exchanger with external frames in carbon steel that withstands operating pressures of 140 bar (2030 psi). AXP112 is specially designed to fulfill the need when using CO₂ 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 heating/cooling
- Oil cooling

CO₂ refrigerant applications

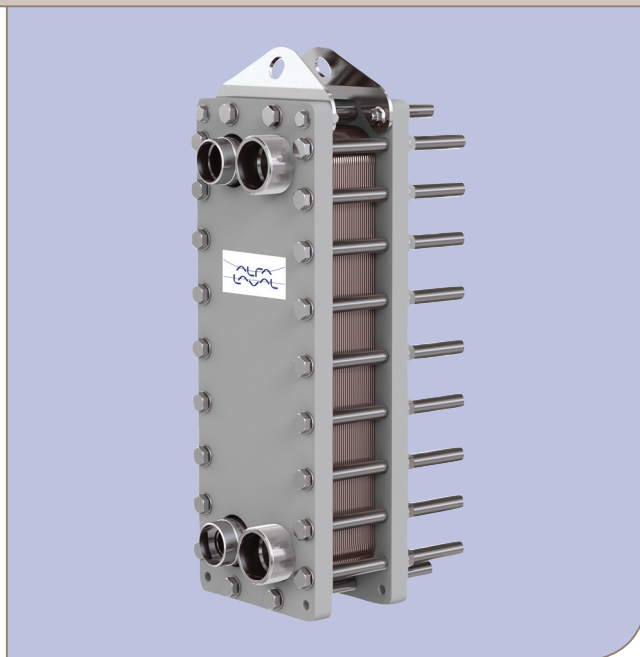
- Suction gas heating
- Oil cooling
- Evaporating
- Economizing
- Sub cooling
- Condensing

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.

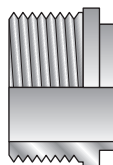


Particulars required for quotation

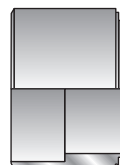
To enable Alfa Laval's representative to make a specific quotation, specify the following particulars in your enquiry:

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

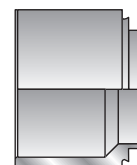
Examples of connections



External threaded

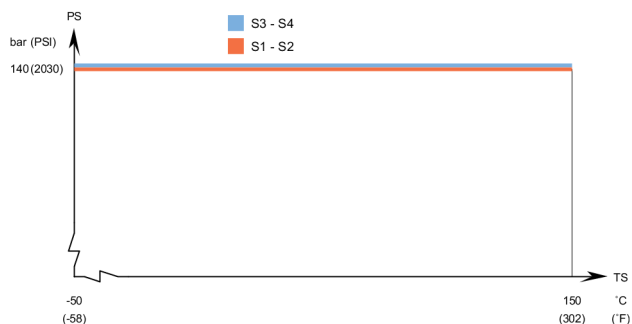


Soldering



Welding

AXP112 - PED approval pressure/temperature graph



Standard dimensions and weight*

A measure mm	=	$21 + (2.07 \cdot n)$ (± 3 mm or ± 1.5 %)
A measure inch	=	$0.83 + (0.08 \cdot n)$ (± 0.12 inch or ± 1.5 %)
Weight* kg 10-30 plates	=	$96.0 + (n \times 0.35)$
Weight* kg 31-70 plates	=	$99.0 + (n \times 0.35)$
Weight* kg 71-110 plates	=	$102.0 + (n \times 0.35)$
Weight* kg 111-160 plates	=	$105.3 + (n \times 0.35)$
Weight* kg 161-210 plates	=	$108.6 + (n \times 0.35)$
Weight* kg 211-250 plates	=	$111.6 + (n \times 0.35)$
Weight* kg 251-300 plates	=	$115.2 + (n \times 0.35)$
Weight* lb 10-30 plates	=	$211.6 + (n \times 0.77)$
Weight* lb 31-70 plates	=	$218.2 + (n \times 0.77)$
Weight* lb 71-110 plates	=	$224.9 + (n \times 0.77)$
Weight* lb 111-160 plates	=	$232.1 + (n \times 0.77)$
Weight* lb 161-210 plates	=	$239.4 + (n \times 0.77)$
Weight* lb 211-250 plates	=	$246.0 + (n \times 0.77)$
Weight* lb 251-300 plates	=	$254.0 + (n \times 0.77)$

(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)	0.18 (0.05)
Max. particle size mm (inch)	1 (0.04)
Max. flowrate* m ³ /h (gpm)	51 (224.4)
Min. nbr of plates	10
Max. nbr of plates	300

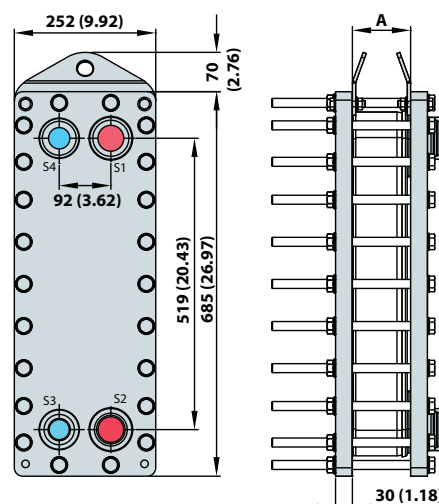
* Water at 5 m/s (16.4 ft/s) (connection velocity)

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing material	Copper
External frames	Carbon steel

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