



AXP27

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.

AXP27 is a brazed heat exchanger with external frames in carbon steel that withstands operating pressures of 130 bar. AXP27 is specially designed to fulfill the need when using CO₂ as refrigerant in subcritical and transcritical applications. The brazing material seals and hold 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

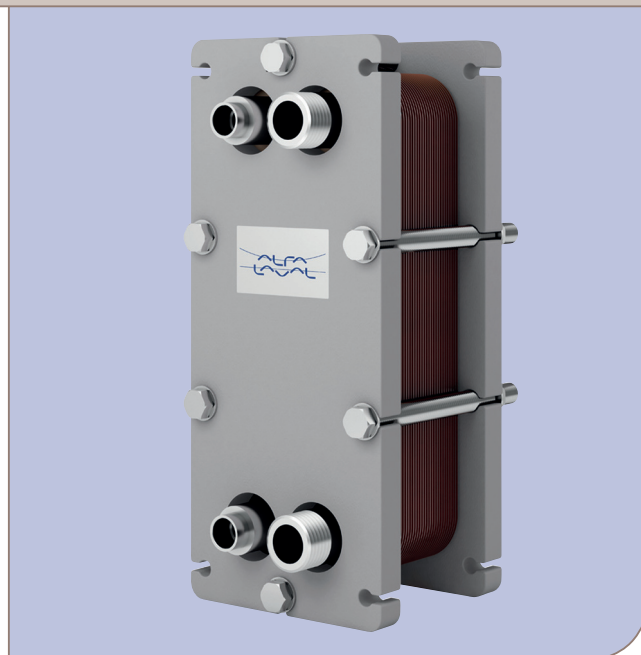
- Suction gas heating
- Oil cooling
- Economizing
- Sub cooling
- Condensing

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.

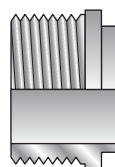


Particulars required for quotation

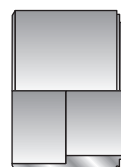
To enable Alfa Laval's representative to make a specific quotation, specify the following particulars in your enquiry:

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

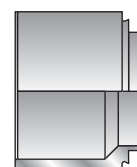
Examples of connections



External threaded

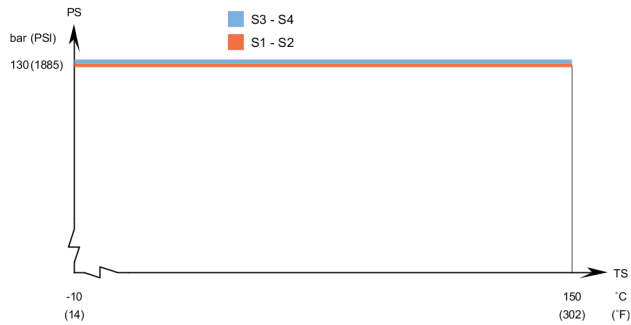


Soldering

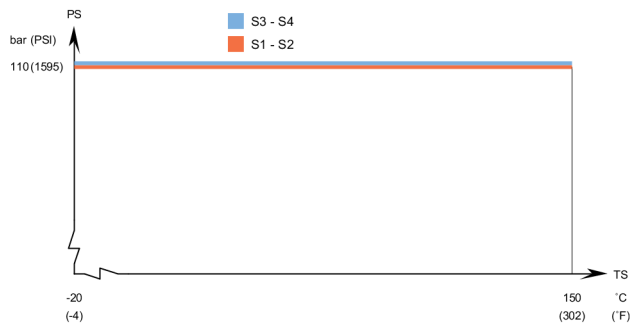


Welding

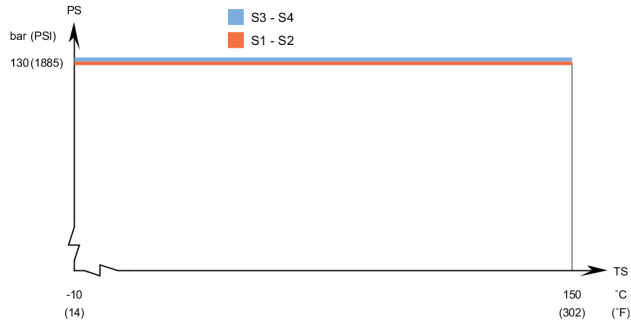
AXP27 - PED approval pressure/temperature graph



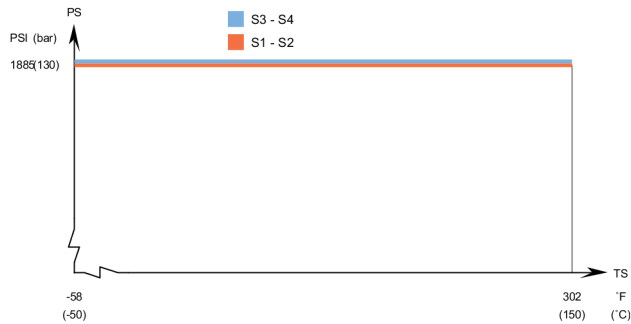
AXP27 - KHK approval pressure/temperature graph



AXP27 - CRN approval pressure/temperature graph



AXP27 - UL approval pressure/temperature graph



Standard dimensions and weight*

A measure mm	= 13 + (2.4 * n) ±3 mm
A measure inch	= 0.51 + (0.09 * n) ±0.12 inch
Weight* kg <40 plates	= 19.7 + (n x 0.13)
Weight* kg 41-80 plates	= 20.5 + (n x 0.13)
Weight* kg 81-120 plates	= 21.3 + (n x 0.13)
Weight* kg 121-150 plates	= 23.1 + (n x 0.13)
Weight* lb<40 plates	= 43.5 + (n x 0.29)
Weight* lb41-80 plates	= 45.2 + (n x 0.29)
Weight* lb81-120 plates	= 47.0 + (n x 0.29)
Weight* lb121-150 plates	= 51.0+ (n x 0.29)
(n = number of plates)	
* For exact values please contact your local Alfa Laval representative.	

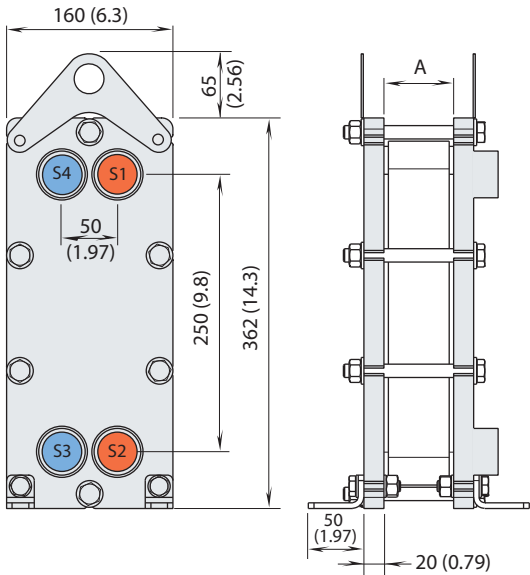
Standard data

Min. working temperature	see graph
Max. working temperature	see graph
Min. working pressure	vacuum
Max. working pressure	see graph
Volume per channel, litres (ga)	0.05 (0.013)
Max. flowrate* m³/h (gpm)	14 (61.6)
Min. nbr of plates	6
Max. nbr of plates	150
* 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