Gillain & Co
HYGIENIC EQUIPMENT FOR FOOD & LIFE SCIENCES

AlfaNova 76 / AlfaNova HP 76

Fusion plate heat exchanger



General information

AlfaNova is a plate heat exchanger made of 100% stainless steel. It is based on Alfa Laval's new revolutionary technology, AlfaFusion, the art of joining stainless steel components together.

AlfaNova heat exchangers are well suited in applications which put high demand on cleanliness, applications where ammonia is used or applications where copper or nickel contamination is not accepted. Its high resistance to corrosion makes it both hygienic and environmental friendly.

It is extremely compact compared to its capacity to withstand great strains in demanding heat transfer applications.

Applications

Within refrigeration:
- Oil cooler
- Condenser
- Evaporator
- Economizer
- Desuperheater
- Absorption systems

Other main applications:
- Domestic hot water heater
- Process cooling
- Hydraulic oil cooling
- Laser cooling
- Hygienic/sanitary
- Water/water cooling & 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, always in counter-current flow. The media are kept in the unit by a bonded seal around the edge of the plates. The contact points of the plates are also bonded to withstand the pressure of the media handled.

Standard design

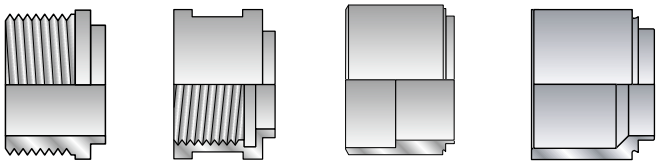
The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. The channel plates are corrugated to improve heat transfer design.

Particulars required for quotation

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

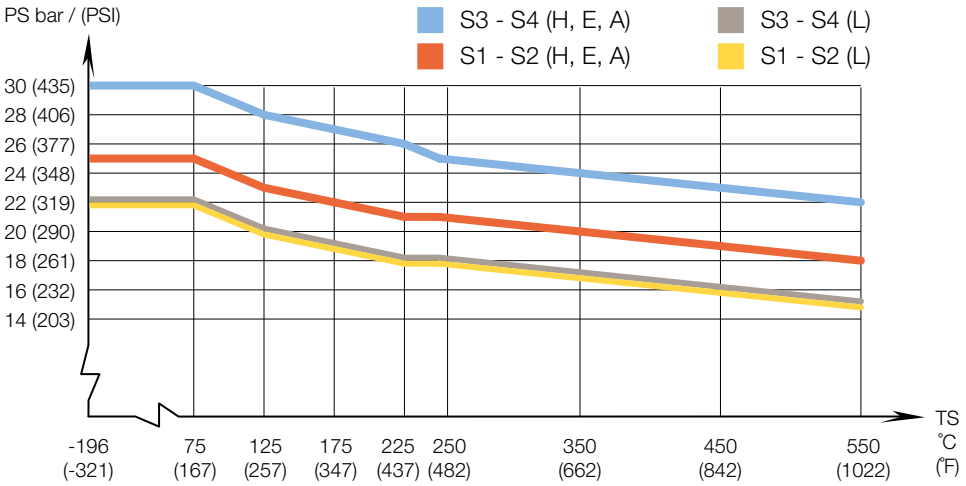
– flow rates or heat load required
– temperature program
– physical properties of liquids in question
– desired working pressure
– maximum permitted pressure drop

Examples of connections



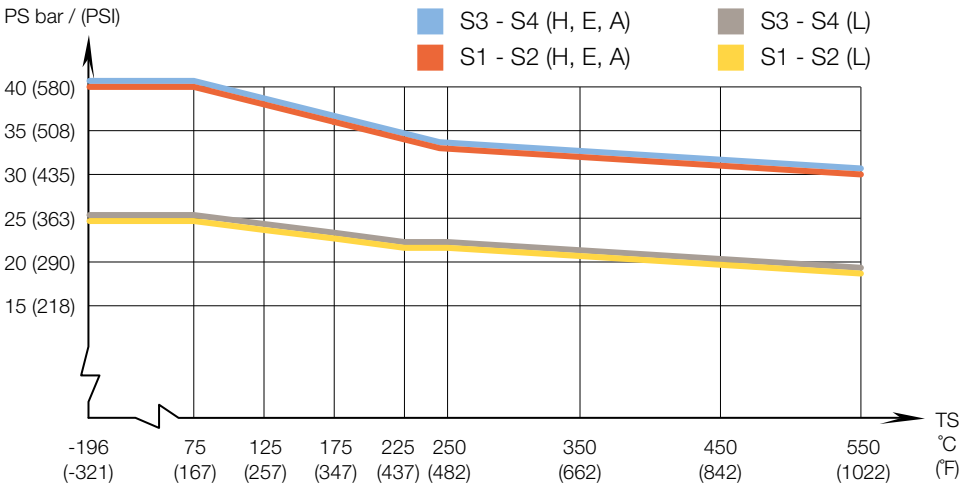
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AlfaNova 76 – PED approval pressure/temperature graph*



Min temperature -10 °C (14 °F) with connection tube made of carbon steel.

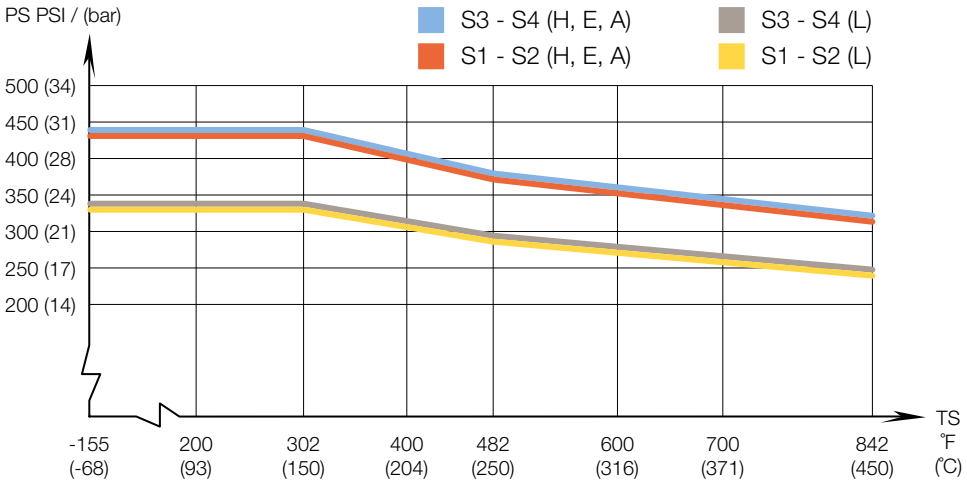
AlfaNova HP 76 – PED approval pressure/temperature graph*



Min temperature -10 °C (14 °F) with connection tube made of carbon steel.

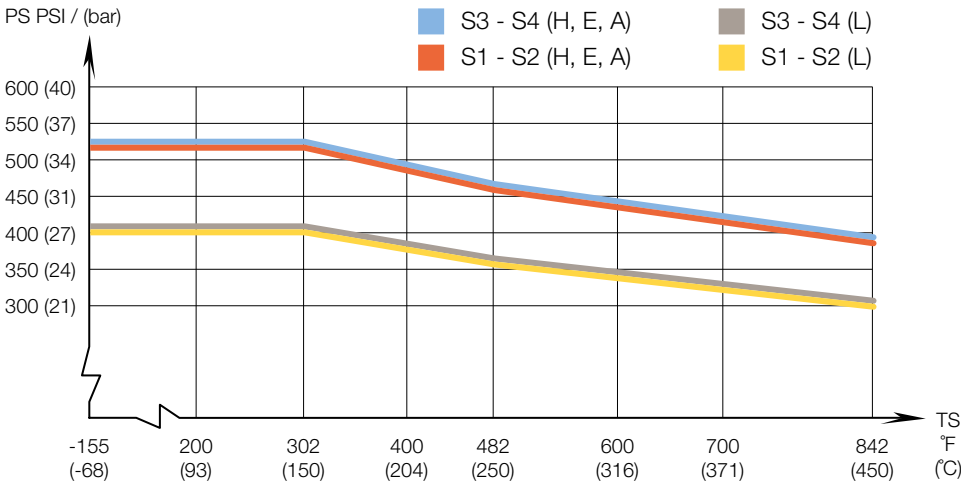
* For exact values please contact your local Alfa Laval representative.

AlfaNova 76 – ASME approval prerssure/temperature graph*



Min temperature -49 °F (-45 °C) with connection tube made of carbon steel.

AlfaNova HP 76 – ASME approval pressure/temperature graph*



Min temperature -49 °F (-45 °C) with connection tube made of carbon steel.

* For exact values please contact your local Alfa Laval representative.

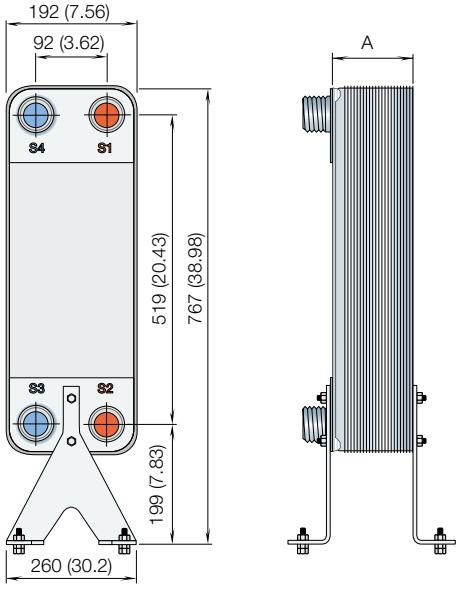
Standard data

Min. working temperature	see graph
Max. working temperature	see graph
Min. working pressure	Vacuum
Max. working pressure	see graph
Volume per channel A, H, L, litres (ga)	0.25 (0.07)
Volume per channel E, litres (ga)	0.18 (0.05)
Max particle size, mm (inch)	1.2 (0.047)
Max. flowrate* m^3/h (gpm)	34 (150)
Min no of plates	10
Max no 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
AlfaFusion filler	Stainless steel



Standard dimensions

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H, L channels A measure mm = 11 + (n x 2.85) ± 5
A measure inch = 0.43 + (n x 0.11) ± 0.2
A channel A measure mm = 11 + (n x 2.56) ± 5
A measure inch = 0.43 + (n x 0.10) ± 0.2
E channel A measure mm = 11 + (n x 2.29) ± 5
A measure inch = 0.43 + (n x 0.09) ± 0.2

H, A, E channels weight kg = 8 + (n x 0.49)
weight lb = 17.6 + (n x 1.08)
L channels weight kg = 8 + (n x 0.42)
weight lb = 17.6 + (n x 0.93)

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H channel A measure mm = 15 + (n x 2.85) ± 5
A measure inch = 0.59 + (n x 0.11) ± 0.2
A channel A measure mm = 15 + (n x 2.56) ± 5
A measure inch = 0.59 + (n x 0.10) ± 0.2
E channel A measure mm = 15 + (n x 2.29) ± 5
A measure inch = 0.59 + (n x 0.09) ± 0.2
L channel A measure mm = 17 + (n x 2.85) ± 5
A measure inch = 0.67 + (n x 0.11) ± 0.2

H, A, E channels weight kg = 10 + (n x 0.49)
weight lb = 22 + (n x 1.08)
L channel weight kg = 10 + (n x 0.42)
weight lb = 22 + (n x 0.93)

(n = number of plates)

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.

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