AlfaNova 27 / AlfaNova HP 27

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 application
- 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

Outside threaded
Inside threaded
Soldering
Welding
Standard data

**AlfaNova 27**
- **Min. working temperature**: see graph
- **Max. working temperature**: see graph
- **Min. working pressure**: Vacuum
- **Max. working pressure**: see graph
- **Volume per channel H, L, litres (gal)**: 0.05 (0.01)
- **Max. particle size mm (inch)**: 1.2 (0.05)
- **Max. flowrate * m³/h (gpm)**: 7.5 (33)
- **Min no of plates**: 6
- **Max no of plates**: 100

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

**AlfaNova HP27**
- **Min. working temperature**: see graph
- **Max. working temperature**: see graph
- **Min. working pressure**: Vacuum
- **Max. working pressure**: see graph
- **Volume per channel H, L, litres (gal)**: 0.05 (0.01)
- **Max. particle size mm (inch)**: 1.2 (0.05)
- **Max. flowrate * m³/h (gpm)**: 7.5 (33)
- **Min no of plates**: 6
- **Max no of plates**: 100

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

* For exact values please contact your Alfa Laval representative.

**Standard dimensions**

**AlfaNova 27**
- **A measure mm** = 11 + (n x 2.42) ± 4.5
- **A measure inch** = 0.43 + (n x 0.095) ± 0.18
- **Weight kg** = 1 + (n x 0.13)
- **Weight lb** = 2.2 + (n x 0.29)

**AlfaNova 27 HP**
- **A measure mm** = 13 + (n x 2.42) ± 4.5
- **A measure inch** = 0.51 + (n x 0.095) ± 0.18
- **Weight kg** = 1.5 + (n x 0.13)
- **Weight lb** = 3.3 + (n x 0.29)

(n = number of plates)

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Min temperature -10 ºC (14 ºF) with connection tube made of carbon steel.

Min temperature -49 ºF (-45 ºC) with connection tube made of carbon steel.