



## AlfaNova 400 / AlfaNova HP 400

### Fusion plate heat exchanger

#### General information

AlfaNova plate heat exchangers are 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

- Evaporators
- Economizers
- Absorption systems
- Process 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, normally 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.

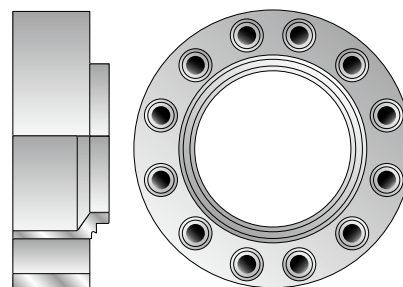
#### Particulars required for quotation

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

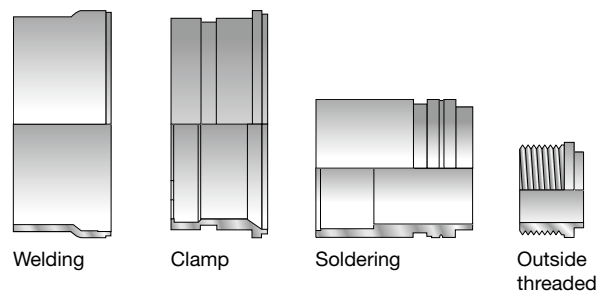
- flow rates or heat load required
- temperature program
- physical properties of liquids in question
- desired working pressure
- maximum permitted pressure drop



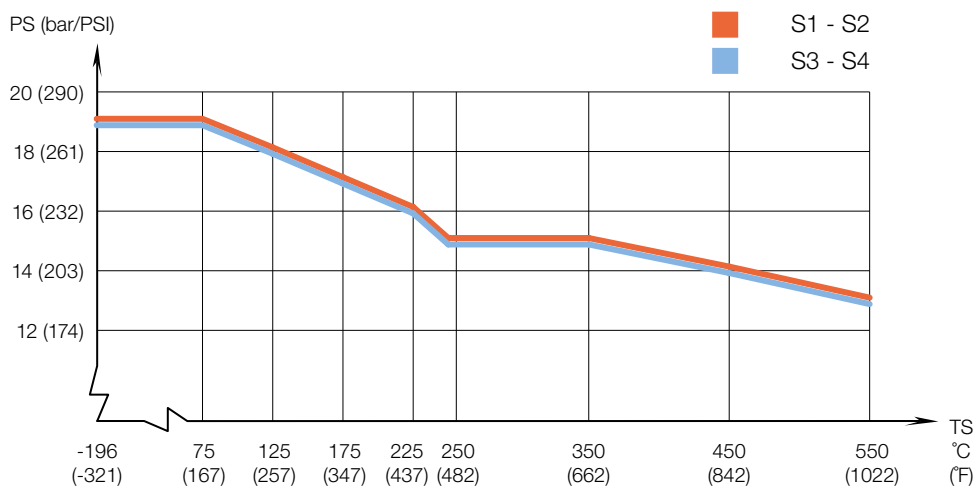
#### Examples of connections



Compact flanges

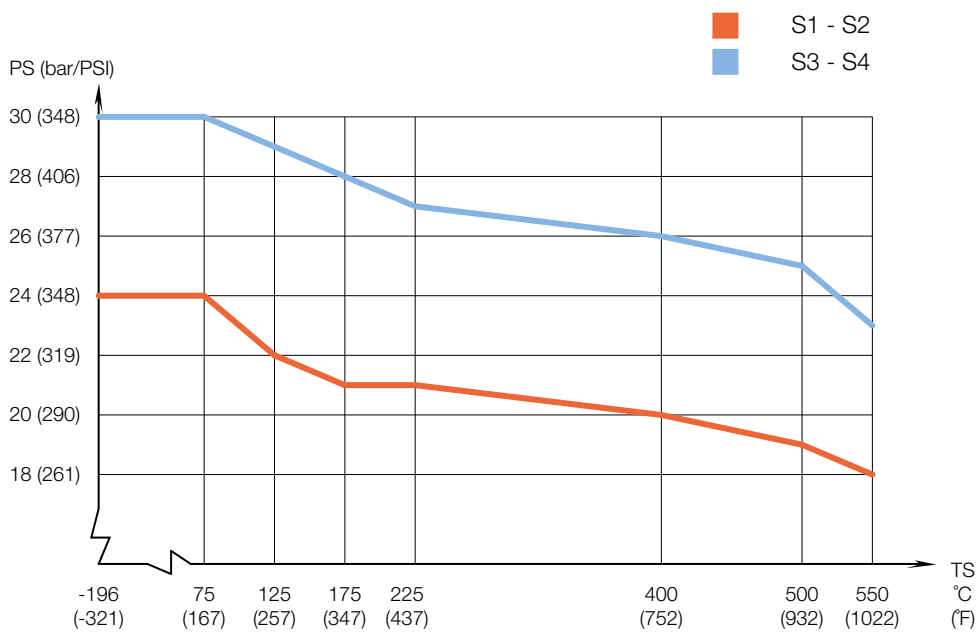


**AlfaNova 400 – PED approval pressure/temperature graph\***



Min temperature -50 °C (-58 °F) with connection tubes made of carbon steel.

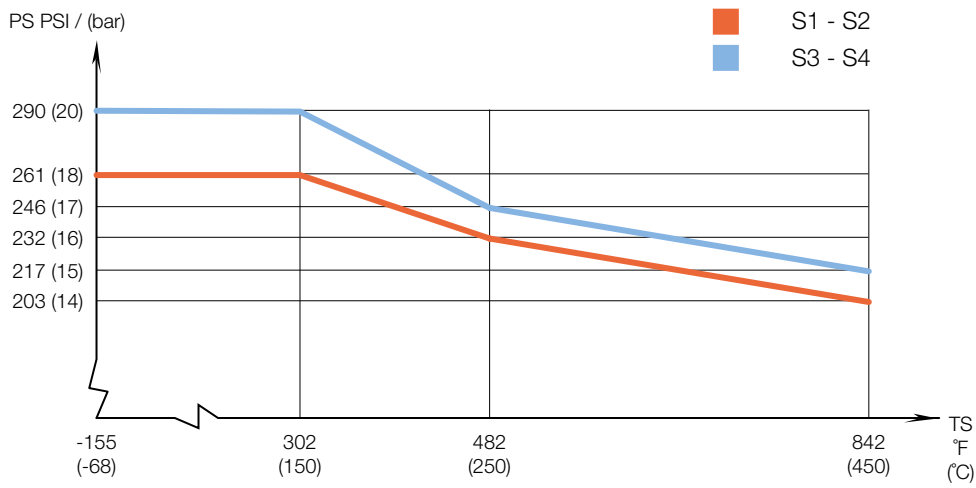
**AlfaNova HP 400 – PED approval pressure/temperature graph\***



Min temperature -50 °C (-58 °F) with connection tubes made of carbon steel.

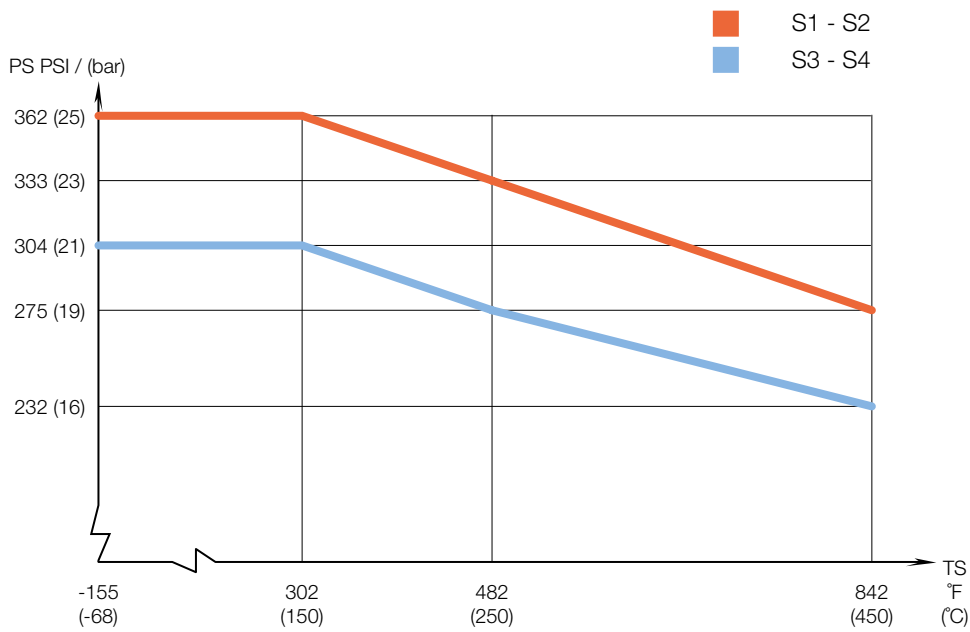
\* For exact values please contact your local Alfa Laval representative.

**AlfaNova 400 – ASME approval pressure/temperature graph\***



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

**AlfaNova HP 400 – ASME approval pressure/temperature graph\***



Min temperature -49 °F (-45 °C) with connection tubes 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, litres (ga) | 0.74 (0.20) |
| Max. particle size mm (inch)    | 1.8 (0,07)  |
| Max. flowrate * m³/h (gpm)      | 170 (748)   |
| Min no of plates                | 10          |
| Max no of plates                | 270         |

\*) 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**

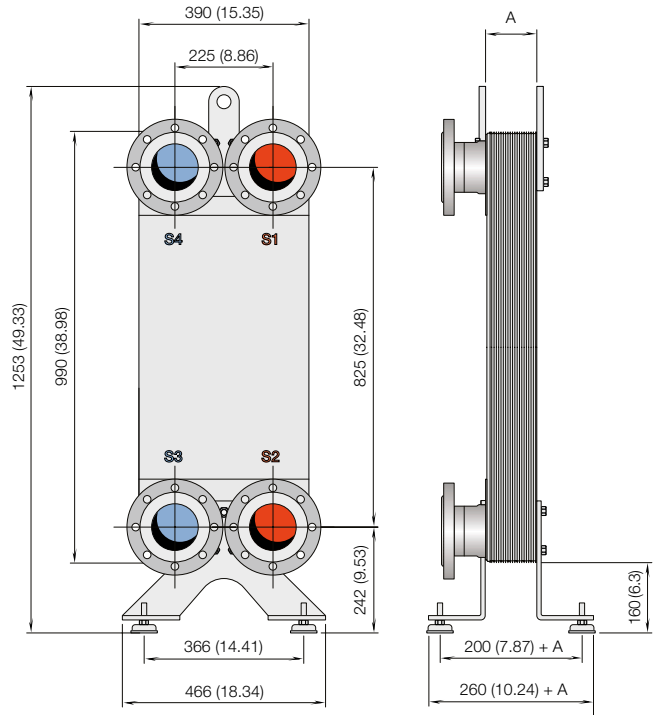
**AlfaNova 400**

|                |                           |
|----------------|---------------------------|
| A measure mm   | = 14 + (n x 2.65) ± 10    |
| A measure inch | = 0.55 + (n x 0.10) ± 0.4 |
| Weight kg      | = 62 + (n x 1.4)          |
| Weight lb      | = 136.7 + (n x 3.08)      |

**AlfaNova HP 400**

|                |                            |
|----------------|----------------------------|
| A measure mm   | = 17 + (n x 2.65) ± 10     |
| A measure inch | = 0.67 + (n x 0.10) ± 0.39 |
| Weight kg      | = 67 + (n x 1.4)           |
| Weight lb      | = 147.7 + (n x 3.08)       |

(n = number of plates)



**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](http://www.alfalaval.com).