

## AlfaNova 27, 52 & 76

### AlfaNova 27, 52 & 76 - Fusion-brazed Plate Heat Exchangers

#### General information

AlfaNova is a completely new type of plate heat exchanger (PHE), the world's first PHE made of 100% stainless steel. It is based on Alfa Laval's new revolutionary technology, Alfa Fusion, the art of joining stainless steel components.

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 environmentally 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
- Desuper heater
- 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 brazed seal around the edge of the plates. The contact points of the plates are also brazed to withstand the pressure of the media handled.

#### Standard design

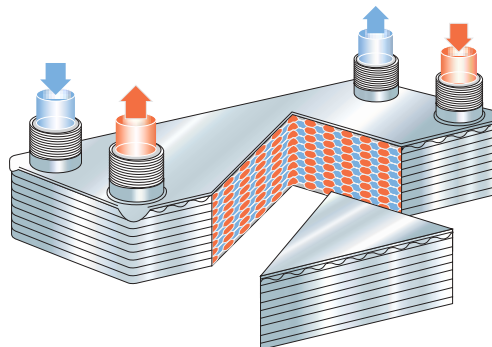
The plate pack is covered by cover plates. Connections are located in the front or rear cover plate. The channel plates are corrugated to improve heat transfer design.



#### Particulars required for quotation

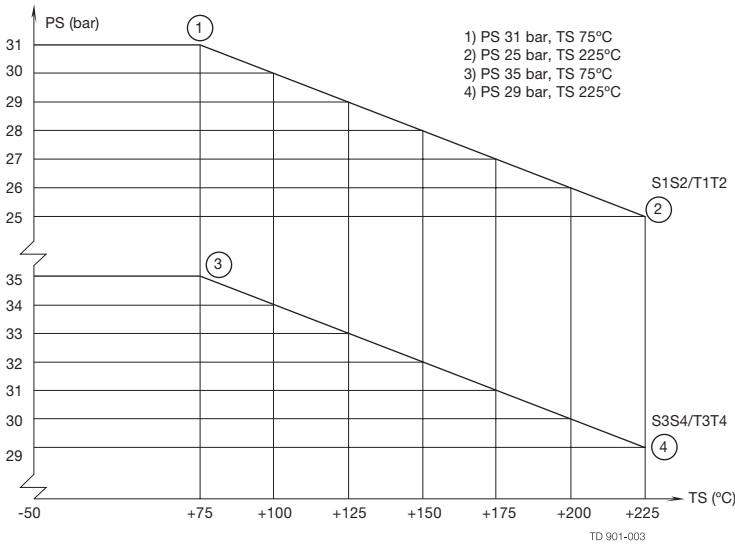
To enable Alfa Laval's representative to make a specific quotation, enquiries should be accompanied by the following particulars:

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



Flow principle of an AlfaNova plate heat exchanger

CE approval pressure/temperature graph (Alfa Nova HP 27)



Standard data

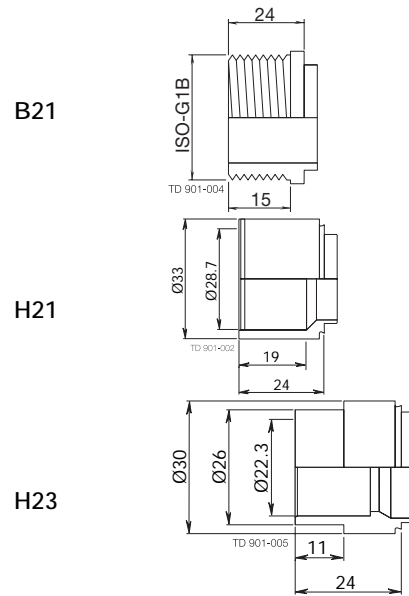
Min. working temperature	-50°C
Max. working temperature	see graph
Min. working pressure	Vacuum
Max. working pressure	see graph
Volume per channel, litres	0.05
Max. flowrate *)	7.5 m³/h

\*) Water at 5 m/s (connection velocity)

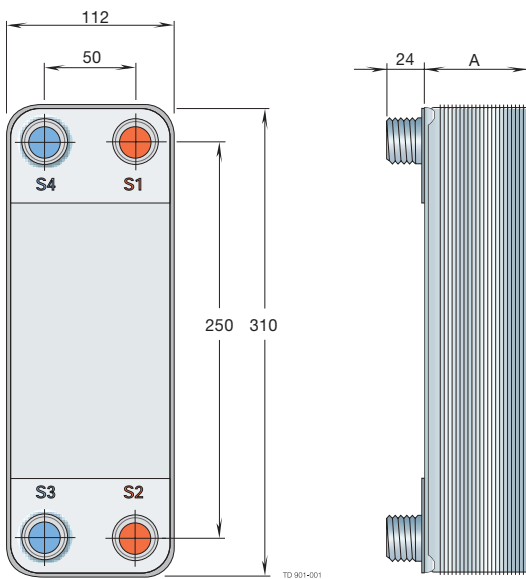
Standard materials

Cover plates	Stainless steel AISI 316
Connections	Stainless steel AISI 316
Plates	Stainless steel AISI 316
AlfaFusion filler*	Stainless steel AISI 316

Standard connections

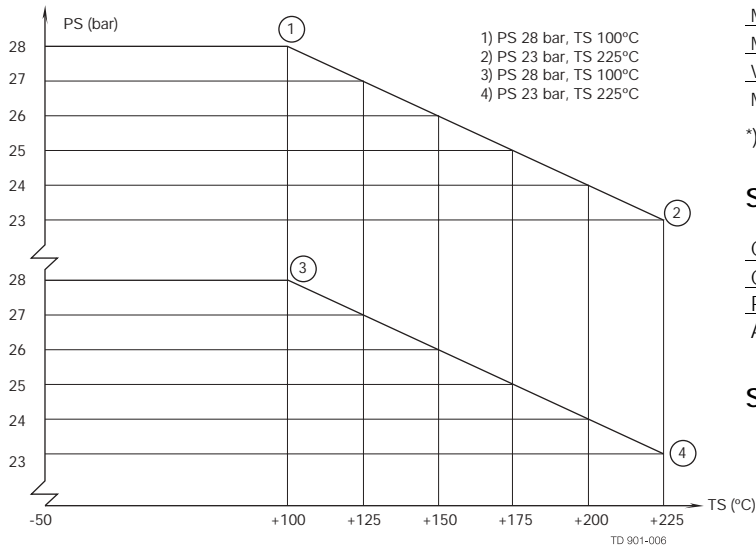


Standard dimensions (mm)



$A = 14 + n \times 2.4$   
 Weight kg:  $1.5 + n \times 0.13$   
 (n = number of plates)

CE approval pressure/temperature graph (Alfa Nova HP 52)



Standard data

Min. working temperature	-50°C
Max. working temperature	see graph
Min. working pressure	Vacuum
Max. working pressure	see graph
Volume per channel, litres	0.095
Max. flowrate *)	7.5 m³/h

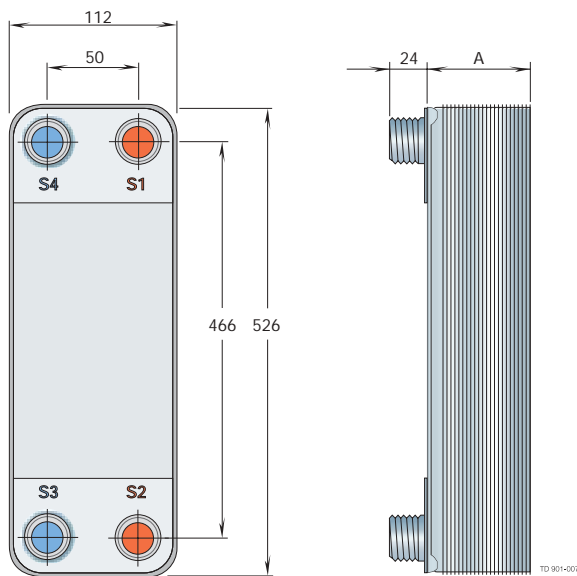
\*) Water at 5 m/s (connection velocity)

Standard materials

Cover plates	Stainless steel AISI 316
Connections	Stainless steel AISI 316
Plates	Stainless steel AISI 316
AlfaFusion filler*	Stainless steel AISI 316

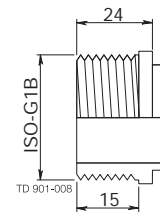
Standard connections

Standard dimensions (mm)

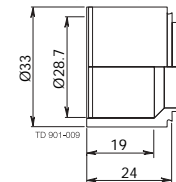


$A = 12 + n \times 2.4$   
 Weight kg:  $2.2 + n \times 0.23$   
 (n = number of plates)

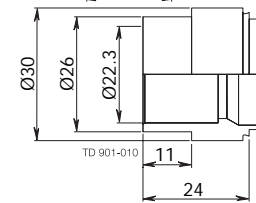
B21



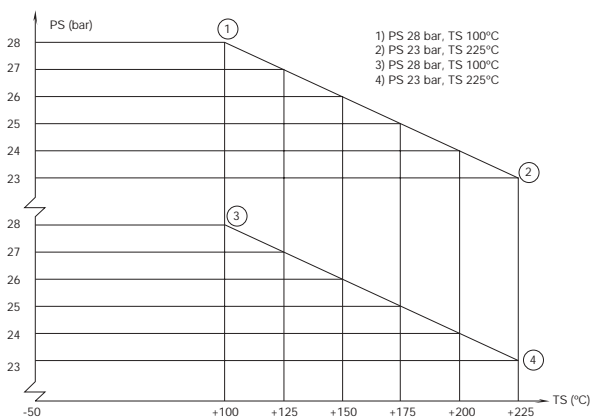
H21



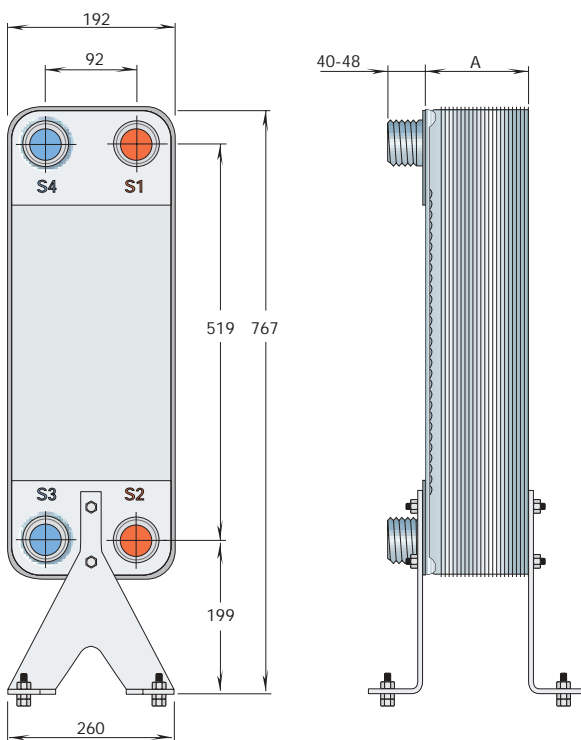
H23



CE approval pressure/temperature graph (HP 76)



Standard dimensions (mm)



$A = 14 + n \times 2.85$   
 Weight kg:  $9.0 + n \times 0.44$  with feet  
 (n = number of plates)

Standard data

Min. working temperature	-50°C
Max. working temperature	see graph
Min. working pressure	Vacuum
Max. working pressure	see graph
Volume per channel, litres	0.25
Max. flowrate *)	34 m <sup>3</sup> /h

\*) Water at 5 m/s (connection velocity)

Standard materials

Cover plates	Stainless steel AISI 316
Connections	Stainless steel AISI 316
Plates	Stainless steel AISI 316
AlfaFusion filler*	Stainless steel AISI 316

Standard connections

