

## Fusion Bonded Heat Exchanger

## AlfaNova 14, 27, 52, 76, 200 and 400

## Alfa Laval AlfaNova 14, 27, 52, 76, 200 and 400

## Fusion-bonded plate heat exchanger in 100% stainless steel

Alfa Laval AlfaNova fusion-bonded plate heat exchangers are made of 100% stainless steel. They are suitable for applications which place high demand on cleanliness, applications where aggressive media like ammonia are used or where copper and nickel contamination is unacceptable.

AlfaNova provides efficient heat transfer with a small footprint, has an extreme pressure fatigue resistance and covers high temperatures, up to 550°C/1022°F.

**Applications**

Suitable for a wide range of applications, such as:

- HVAC heating and cooling
- Refrigeration
- Oil cooler
- Industrial heating and cooling
- Process heating and cooling

**Benefits**

- Compact
- Easy to install
- Self-cleaning
- Low level of service and maintenance is required
- All units are pressure and leak tested
- Gasket free
- Copper free

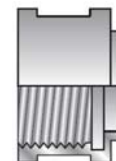
**Design**

The AlfaFusion filler material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service life.

Based on standard components and a modular concept, each unit is custom-built to meet the specific requirements of each individual installation.

**Examples of connections**

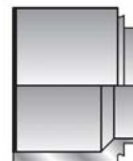
External thread



Internal thread



Soldering



Welding

Technical Data AlfaNova 14

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
AlfaFusion filler	Stainless steel

Dimensions and weight<sup>1</sup>

A measure (mm)	$8 + (2.48 * n)$
A measure (inches)	$0.31 + (0.1 * n)$
Weight (kg) <sup>2</sup>	$0.4 + (0.07 * n)$
Weight (lb) <sup>2</sup>	$0.88 + (0.15 * n)$

- n = number of plates
- Excluding connections

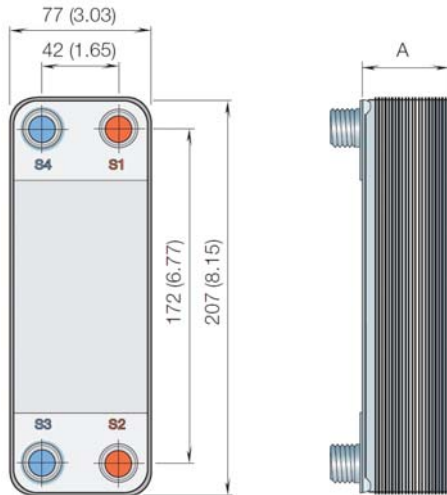
Standard data

Volume per channel, litres (gal)	0.02 (0.0052)
Max. particle size, mm (inch)	1.2 (0.047)
Max. flowrate <sup>1</sup> m <sup>3</sup> /h (gpm)	4.6 (20.2)
Flow directions	Parallel
Min. number of plates	4
Max. number of plates	50

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

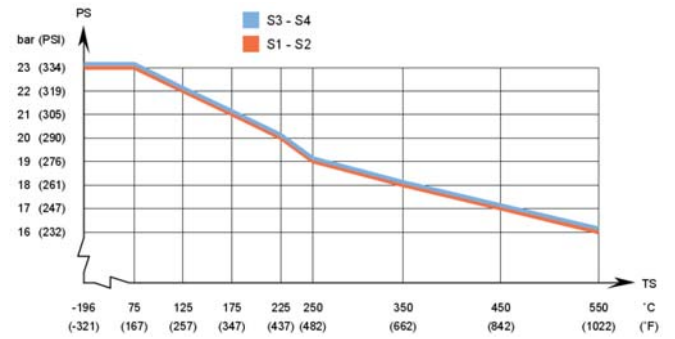
Dimensional Drawing

mm (inches)

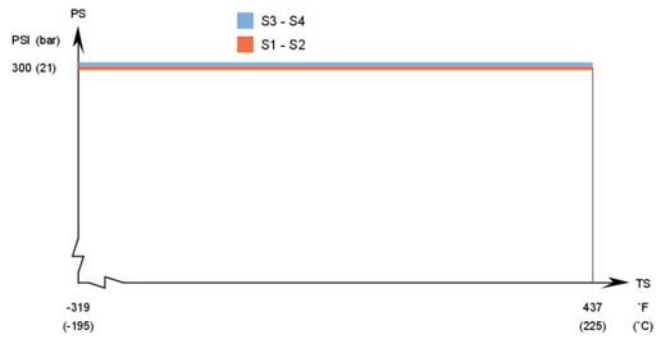


Design pressure and temperature

AlfaNova 14 - PED approved pressure/temperature graph



AlfaNova 14 - UL approved pressure/temperature graph



Designed for full vacuum.

Alfa Laval plate heat exchangers are available with a wide range of pressure vessel approvals. Please contact your Alfa Laval representative for more information.

**NOTE:** Values above are to be used as an indication. For exact values, please use the drawing generated by the Alfa Laval configurator or contact your local Alfa Laval representative.

Technical Data AlfaNova 27

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
AlfaFusion filler	Stainless steel

Dimensions and weight<sup>1</sup>

A measure (mm)	11 + (2.42 * n) HP: 13 + (2.42 * n) XP: 15 + (2.42 * n)
A measure (inches)	0.43 + (0.1 * n)
Weight (kg) <sup>2</sup>	1 + (0.13 * n) HP: 1.5 + (0.13 * n) XP: 2 + (0.13 * n)
Weight (lb) <sup>2</sup>	2.2 + (0.29 * n) HP: 3.31 + (0.29 * n) XP: 4.41 + (0.29 * n)

- n = number of plates
- Excluding connections

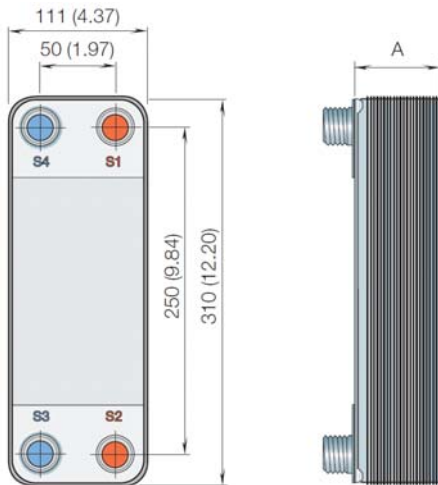
Standard data

Volume per channel, litres (gal)	0.05 (0.013)
Max. particle size, mm (inch)	1.2 (0.047)
Max. flowrate <sup>1</sup> m <sup>3</sup> /h (gpm)	14 (62)
Flow directions	Parallel
Min. number of plates	6
Max. number of plates	100

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

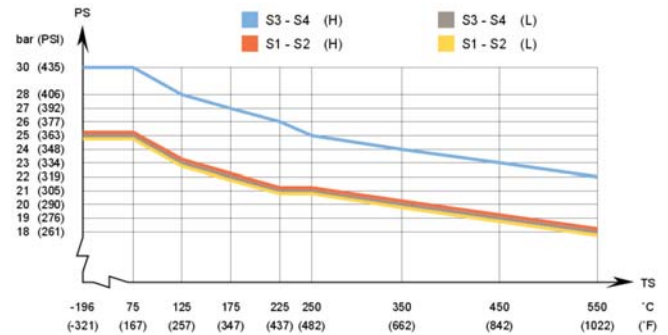
Dimensional Drawing

mm (inches)

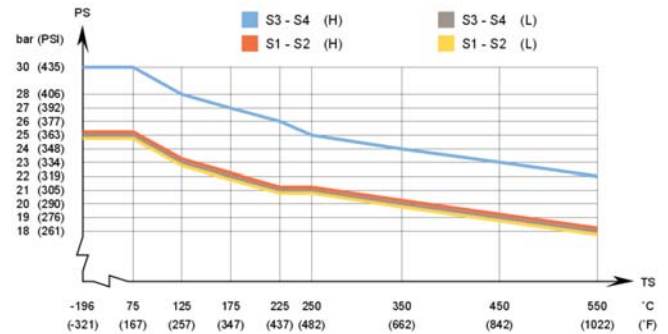


Design pressure and temperature

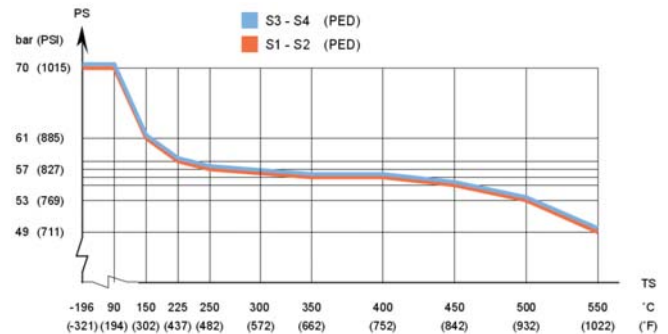
AlfaNova 27 - PED approved pressure/temperature graph



AlfaNova HP 27 - PED approved pressure/temperature graph



AlfaNova XP27 - PED approved pressure/temperature graph



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Technical Data AlfaNova 52

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
AlfaFusion filler	Stainless steel

Dimensions and weight<sup>1</sup>

A measure (mm)	11 + (2.48 * n)
A measure (inches)	0.43 + (0.1 * n)
Weight (kg) <sup>2</sup>	1.9 + (0.22 * n)
Weight (lb) <sup>2</sup>	4.19 + (0.49 * n)

- n = number of plates
- Excluding connections

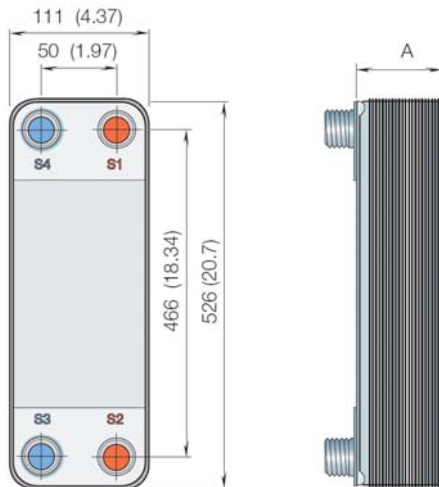
Standard data

Volume per channel, litres (gal)	0.095 (0.025)
Max. particle size, mm (inch)	1.2 (0.047)
Max. flowrate 1 m <sup>3</sup> /h (gpm)	14 (62)
Flow directions	Parallel
Min. number of plates	6
Max. number of plates	150

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

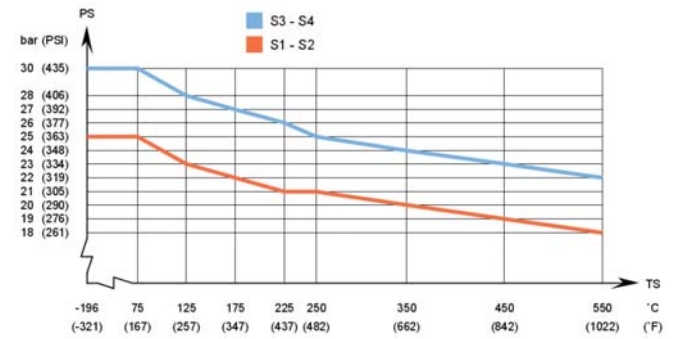
Dimensional Drawing

mm (inches)

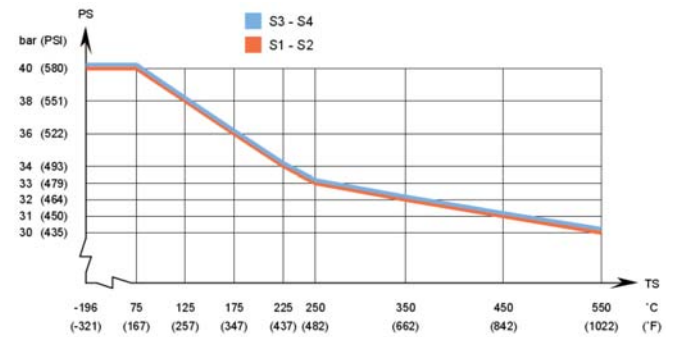


Design pressure and temperature

AlfaNova 52 - PED approved pressure/temperature graph

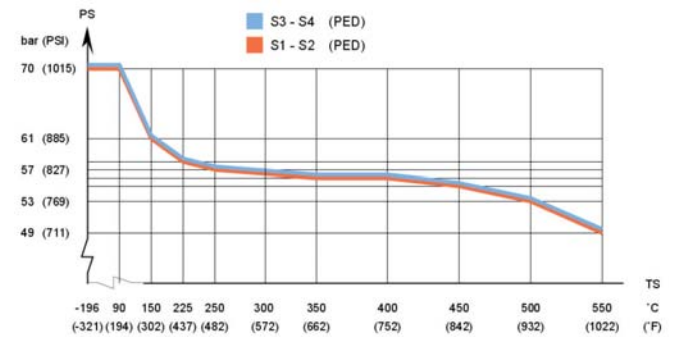


AlfaNova HP 52- PED approved pressure/temperature graph



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

AlfaNova XP52 - PED approved pressure/temperature graph



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Technical Data AlfaNova 76

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
AlfaFusion filler	Stainless steel

Dimensions and weight<sup>1</sup>

A measure (mm)	11 + (2.85 * n)
A measure (inches)	0.43 + (0.11 * n)
Weight (kg) <sup>2</sup>	8 + (0.49 * n)
Weight (lb) <sup>2</sup>	17.64 + (1.08 * n)

- n = number of plates
- Excluding connections

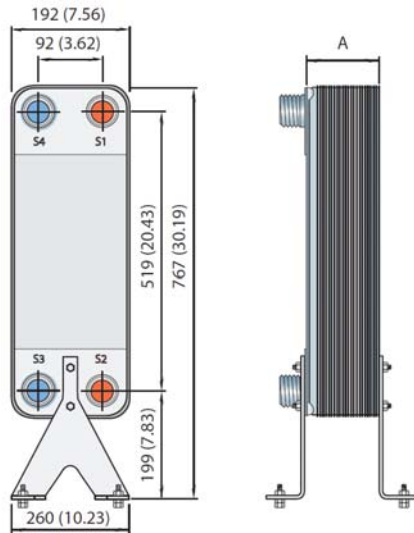
Standard data

Volume per channel, litres (gal)	A) S1-S2: 0.25 (0.065)
	(A) S3-S4: 0.18 (0.046)
	(H, L): 0.25 (0.065)
	(E): 0.18 (0.046)
Max. particle size, mm (inch)	1.2 (0.047)
Max. flowrate <sup>1</sup> m <sup>3</sup> /h (gpm)	37 (163)
Flow directions	Parallel
Min. number of plates	10
Max. number of plates	150

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

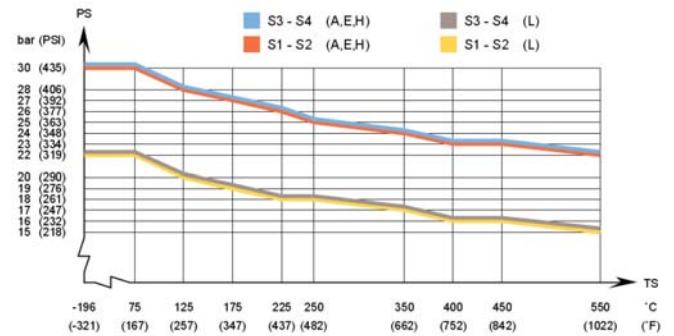
Dimensional Drawing

mm (inches)



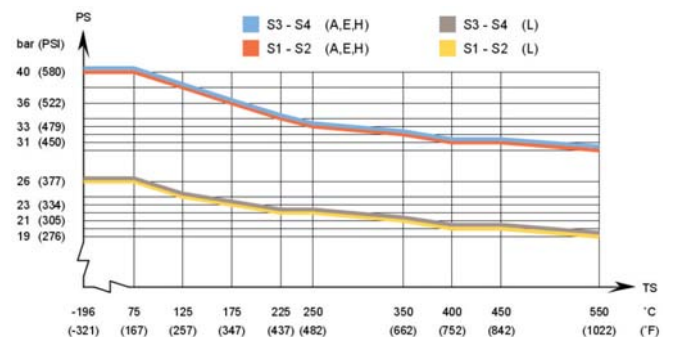
Design pressure and temperature

AlfaNova 76 – PED approval pressure/temperature graph <sup>1)</sup>



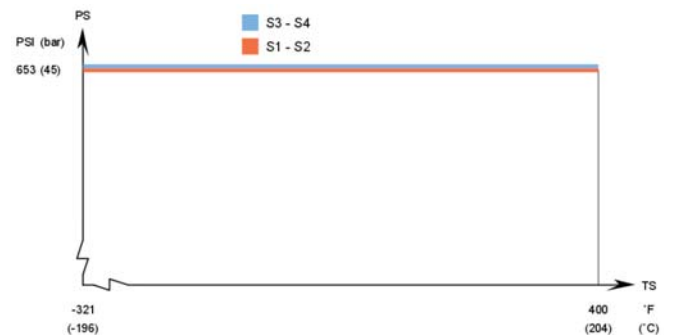
- Min. temperature -10°C (14°F) with connection tube made of carbon steel.

AlfaNova HP 76 – PED approval pressure/temperature graph <sup>1)</sup>



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

AlfaNova HP 76 – UL approval pressure/temperature graph <sup>1)</sup>



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Marine approvals

AlfaNovaM HP 76 can be delivered with marine classification certificate (ABS, BV, CCS, ClassNK, DNV, GL, LR, RINA, RMRS)

1.2

Technical Data AlfaNova 200

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
AlfaFusion filler	Stainless steel

Dimensions and weight<sup>1</sup>

A measure (mm)	9.3 + (2.85 * n)
A measure (inches)	0.37 + (0.11 * n)
Weight (kg) <sup>2</sup>	12 + (0.75 * n)
Weight (lb) <sup>2</sup>	26.46 + (1.65 * n)

- n = number of plates
- Excluding connections

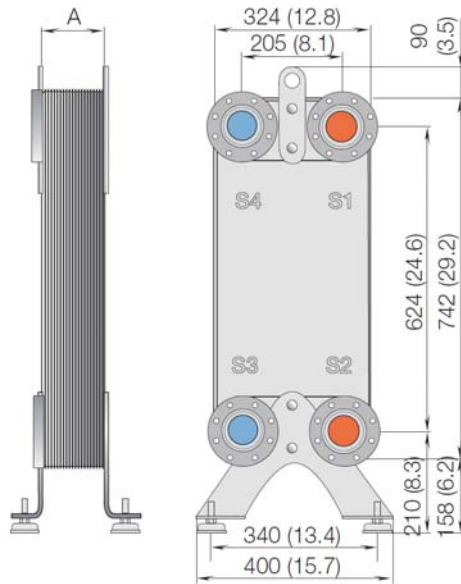
Standard data

Volume per channel, litres (gal)	0.51 (0.13)
Max. particle size, mm (inch)	1 (0.04)
Max. flowrate 1 m <sup>3</sup> /h (gpm)	128
Flow directions	Parallel
Min. number of plates	10
Max. number of plates	230

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

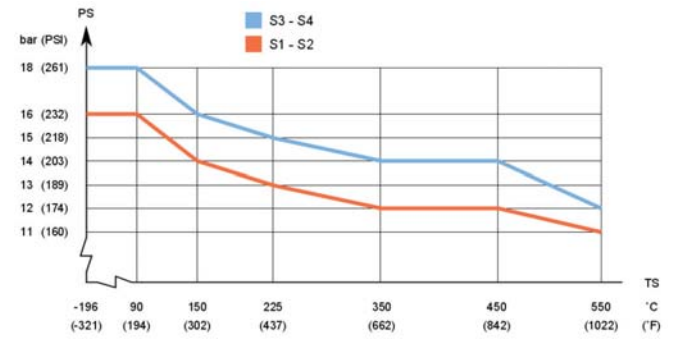
Dimensional Drawing

mm (inches)

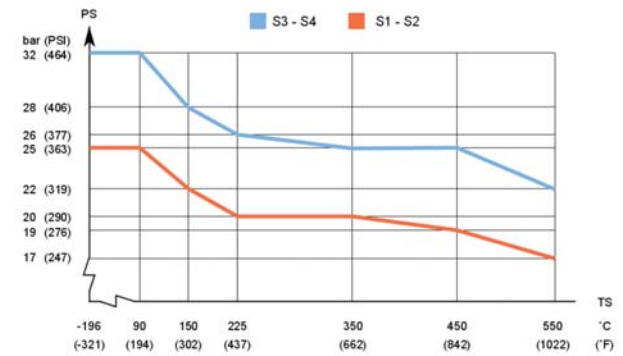


Design pressure and temperature

AlfaNova 200 – PED approval pressure/temperature graph <sup>1)</sup>



AlfaNova HP 200 – PED approval pressure/temperature graph <sup>1)</sup>



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Technical Data AlfaNova 400

Standard materials

Cover plates	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
AlfaFusion filler	Stainless steel

Dimensions and weight<sup>1</sup>

A measure (mm)	14 + (2.65 * n)
A measure (inches)	0.55 + (0.1 * n)
Weight (kg) <sup>2</sup>	22 + (1.4 * n)
Weight (lb) <sup>2</sup>	48.5 + (3.09 * n)

- n = number of plates
- Excluding connections

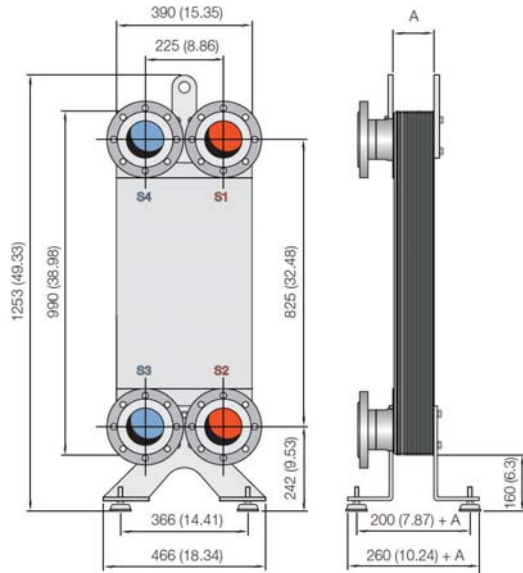
Standard data

Volume per channel, litres (gal)	0.74 (0.19)
Max. particle size, mm (inch)	1.8 (0.07)
Max. flowrate <sup>1</sup> m <sup>3</sup> /h (gpm)	200 (880)
Flow directions	Parallel
Min. number of plates	10
Max. number of plates	270

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

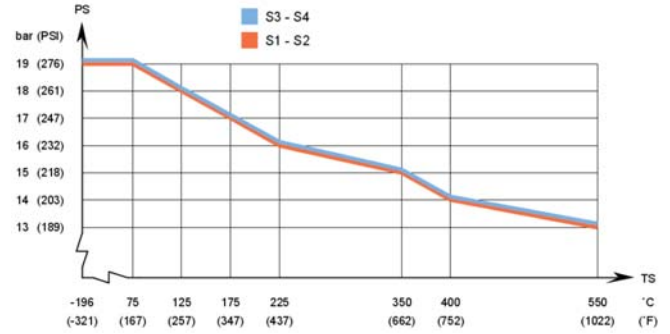
Dimensional Drawing

mm (inches)



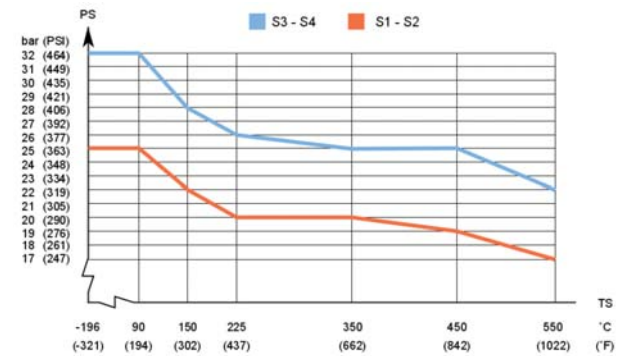
Design pressure and temperature

AlfaNova 400 – PED approval pressure/temperature graph <sup>1)</sup>



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

AlfaNova HP 400 – PED approval pressure/temperature graph <sup>1)</sup>



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

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