

# Alfa Laval AQ14S

## AlfaQ™ AHRI-certified plate heat exchanger

### Applications

General heating and cooling duties.

### Standard design

The plate heat exchanger consists of a pack of corrugated metal plates with port holes for the passage of the two fluids between which heat transfer will take place.

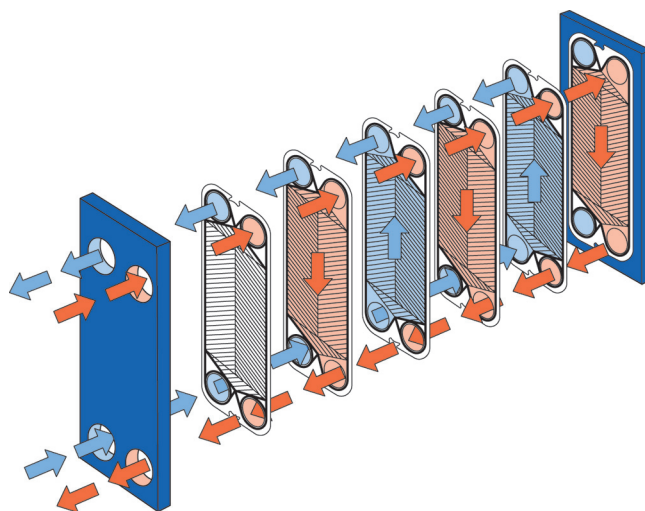
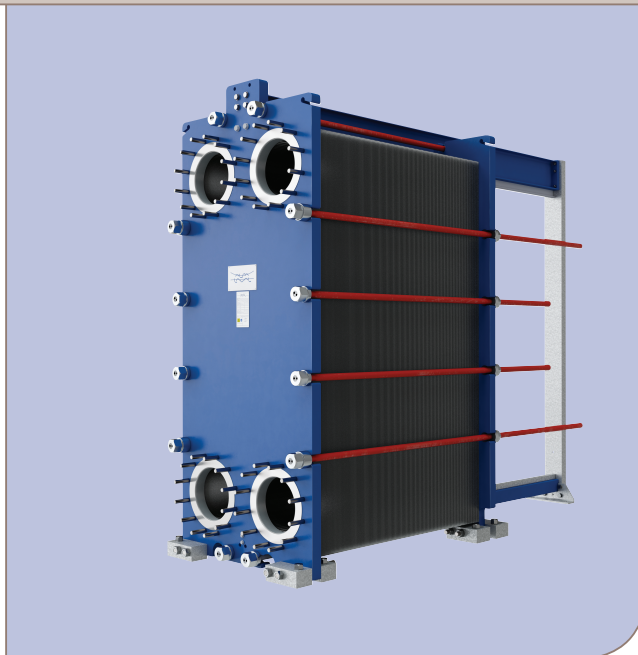
The plate pack is assembled between a fixed frame plate and a movable pressure plate and compressed by tightening bolts. The plates are fitted with gaskets, which seal the interplate channels and direct the fluid into alternate channels. The number of plates is determined by the flow rate, physical properties of the fluids, pressure drop and temperature program. The plate corrugations promote fluid turbulence and support the plates against differential pressure.

The frame plate and the pressure plate are suspended from an upper carrying bar and located by a lower guiding bar, both of which are fixed to a support column.

Connections are located in the frame plate or, if either or both fluids make more than a single pass within the unit, in the frame and pressure plate.

### Working principle

Channels are formed between the plates and the corner ports are arranged so that the two fluids flow through alternate channels. The heat is transferred through the plate between the channels, and complete counter-current flow is created for highest possible efficiency. The corrugation of the plates provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.



Flow principle of a plate heat exchanger

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## STANDARD MATERIAL

### Frame/pressure plate

Mild steel, coated with water-based epoxy paint

Customized paint systems may be available on request.

### Nozzles/Connections

Carbon steel

Metal lined: Stainless steel Alloy 316, Titanium

Other materials may be available on request.

### Plates

Stainless steel Alloy 304, Alloy 316, Titanium

Other materials may be available on request.

### Gaskets

Nitrile, EPDM or Viton

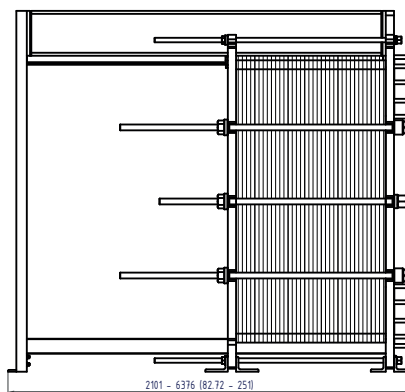
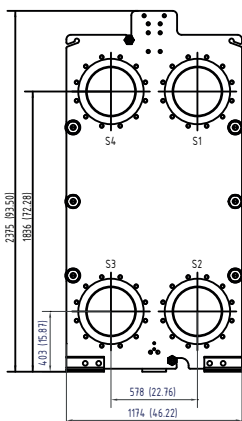
Other grades and materials may be available on request.

## TECHNICAL DATA

### Design pressure (g)

FM	pvcALSTM	1.034 MPa
FM	PED	1.034 MPa
FG	pvcALSTM	1.6 MPa
FG	PED	1.6 MPa
FG	ASME	150 psig
FD	pvcALSTM	2.5 MPa
FD	PED	2.5 MPa
FD	ASME	300 psig
FS	ASME	400 psig

Higher pressures may be available on request.



### Design temperature

Determined by gasket material.

### Plate types

AQ14SP

### Connection size

DN350 / NPS 14 / 350A

DN300 / NPS 12 / 300A

### Connection standard

FM	pvcALSTM	EN 1092-1 PN10, ASME B16.5 Class 150, JIS B2220 10K
FM	PED	EN 1092-1 PN10, ASME B16.5 Class 150
FG	pvcALSTM	EN 1092-1 PN16, ASME B16.5 Class 150, JIS B2220 16K
FG	PED	EN 1092-1 PN16, ASME B16.5 Class 150
FG	ASME	ASME B16.5 Class 150
FD	pvcALSTM	EN 1092-1 PN25, ASME B16.5 Class 300, JIS B2220 20K
FD	PED	EN 1092-1 PN25, ASME B16.5 Class 300
FD	ASME	ASME B16.5 Class 300
FS	ASME	ASME B16.5 Class 400

Standard EN 1092-1 corresponds to GOST 12815-80 and GB/T 9115.

Extended connections are available for ASME B16.5 Class 150, Class 300, Class 400 size NPS 14.

### Particulars required for quotation

- Flow rates or heat load
- Temperature program
- Physical properties of fluids in question
- Desired working pressure and temperature
- Allowable pressure drops

The number of tightening bolts may vary depending on pressure rating.

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