



AQ10

AlfaQ™ AHRI-certified plate heat exchanger

Applications

Plate heat exchanger for general heating and cooling duties.

Standard design

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

The plate pack is assembled between a fix frame plate and a movable pressure plate and compressed by tightening bolts. The plates are fitted with a gasket, which seals the interplate channel and directs the fluids 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 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 plates.

Typical capacities

Liquid flow rate.
Up to 350 kg/s (5600 gpm), depending on media, permitted pressure drop and temperature program.

Plate types

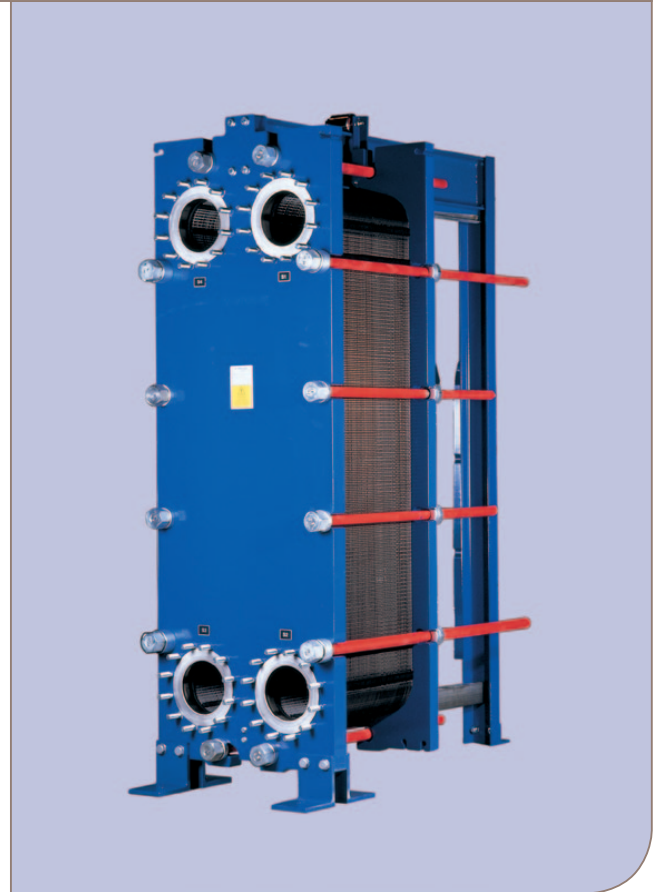
AQ10, AQ10M

Frame types

FMS, FGS, FG, FD and FS

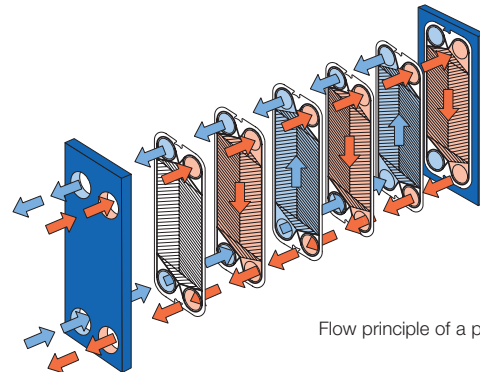
Working principle

Channels are formed between the plates and the corner ports are arranged so that the two media 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



AQ10-FG

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

STANDARD MATERIALS

Frame plate

Mild steel, painted

Nozzles

Carbon steel

Metal lined: Stainless steel, Titanium

Rubber lined: Nitrile, EPDM

Plates

Stainless steel Alloy 316 or Titanium

Gaskets

Nitrile or EPDM

TECHNICAL DATA

Pressure vessel codes PED, ASME, pvcALS™

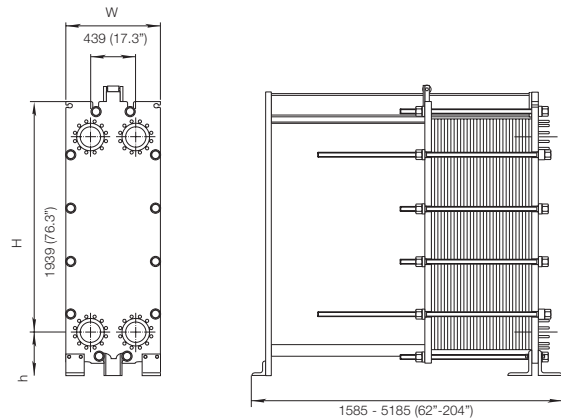
Mechanical design pressure (g) / temperature

FMS PED, pvcALS™	1.0 MPa / 180°C
FGS PED, pvcALS™	1.6 MPa / 180°C
FGS ASME	150 psig / 350°F
FG PED, pvcALS™	1.6 MPa / 200°C
FG ASME	150 psig / 350°F
FD PED, pvcALS™	2.5 MPa / 210°C
FD ASME	300 psig / 350°F
FS ASME	400 psig / 350°F

CONNECTIONS

FMS PED	Size 200/250 mm	DIN 2501 PN10, ASME Cl. 150
FMS pvcALS™	Size 200/250 mm	DIN 2501 PN10, ASME Cl. 150, JIS 10K
FGS PED	Size 200 mm	DIN 2501 PN16, ASME Cl. 150
FGS pvcALS™	Size 200/250 mm	DIN 2501 PN16, ASME Cl. 150, JIS 10K/16K
FGS ASME	Size 8"	ASME Cl. 150
FG PED	Size 200/250 mm	DIN 2501 PN16, ASME Cl. 150
FG pvcALS™	Size 200/250 mm	DIN 2501 PN16, ASME Cl. 150, JIS 10K/16K
FG ASME	Size 8"/10"	ASME Cl. 150
FD PED	Size 200/250 mm	DIN 2501 PN25, ASME Cl. 300
FD pvcALS™	Size 200/250 mm	DIN 2501 PN25 ASME Cl. 300, JIS 20K
FD ASME	Size 8"/10"	ASME Cl. 300
FS ASME	Size 8"/10"	ASME Cl. 400

Dimensions



Measurements mm (inch)

Type	H	W	h
AQ10-FMS	2595 (102'')	920 (36.2'')	325 (12.8'')
AQ10-FGS	2595 (102'')	920 (36.2'')	325 (12.8'')
AQ10-FG	max 3103 (122.2'')	920 (36.2'')	435 (17.1'')
AQ10-FD	max 3103 (122.2'')	940 (37'')	435 (17.1'')
AQ10-FS	max 3103 (122.2'')	940 (37'')	435 (17.1'')

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

Maximum heat transfer surface

940 m² (10.000 sq. ft)

Particulars required for quotation

- Flow rates or heat load
- Temperature program
- Desired working pressure
- Maximum permitted pressure drop



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

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