



AQ20M

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 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 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 plates.

Typical capacities

Liquid flow rate

Up to 1300 kg/s (20800 gpm), depending on media, permitted pressure drop and temperature program.

Plate types

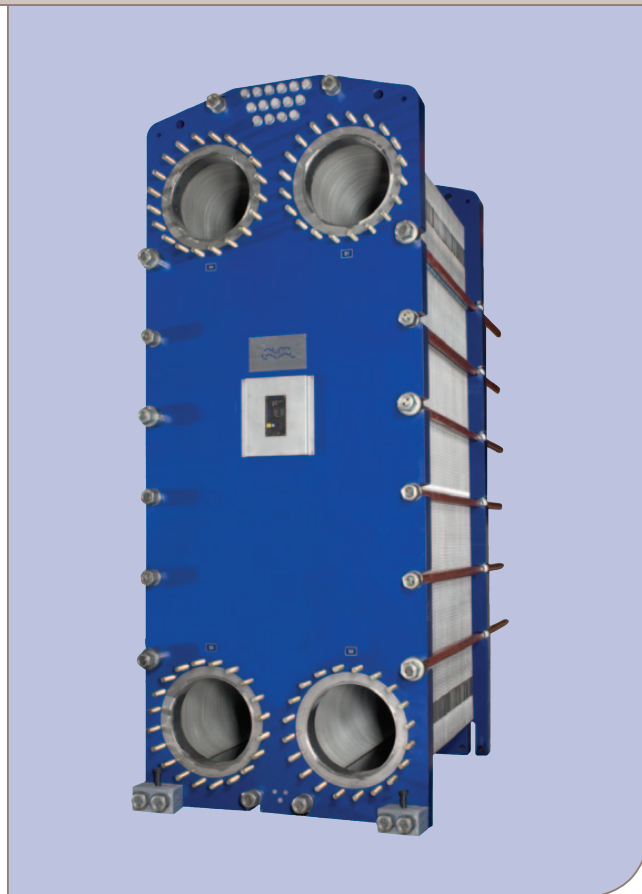
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Frame types

FG and FD

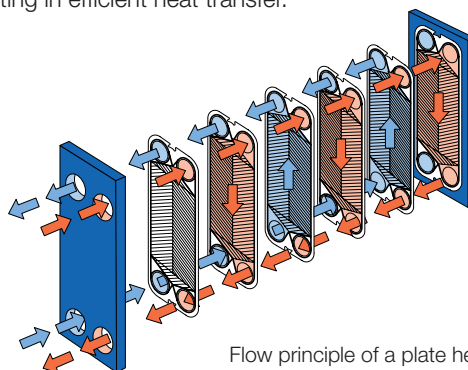
Working principle

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



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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

Metal lined: Stainless steel, Titanium

Plates

Stainless steel: Alloy 316 or Titanium

Gaskets

Nitrile or EPDM

TECHNICAL DATA

Mechanical design pressure (g) / temperature

| | | |
|----|------|------------------|
| FG | PED | 1.6 MPa / 180°C |
| FG | ASME | 150 psig / 350°F |
| FD | PED | 2.5 MPa / 180°C |
| FD | ASME | 300 psig / 350°F |

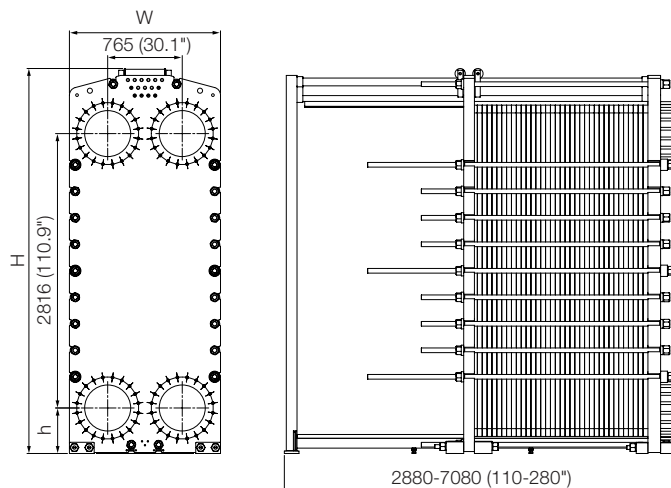
CONNECTIONS

| | | | |
|----|------|-------------|--------------|
| FG | PED | Size 500 mm | DIN PN16 |
| FG | ASME | Size 20" | ASME Cl. 150 |
| FD | PED | Size 500 mm | DIN PN25 |
| FS | ASME | Size 20" | ASME Cl. 300 |

Maximum heat transfer surface

2880 m² (31018 sq. ft)

Dimensions



Measurements mm (inch)

| Type | H | W | h |
|-----------|------------------|------------|---------------|
| AQ20M-MFG | 3951 (155 9/16") | 1550 (61") | 467 (18 3/8") |
| AQ20M-MFD | 3951 (155 9/16") | 1550 (61") | 467 (18 3/8") |

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

Particulars required for quotation

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



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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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