



Alfa Laval AQ20

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 975 kg/s (15500 gpm), depending on media, permitted pressure drop and temperature program.

Plate types

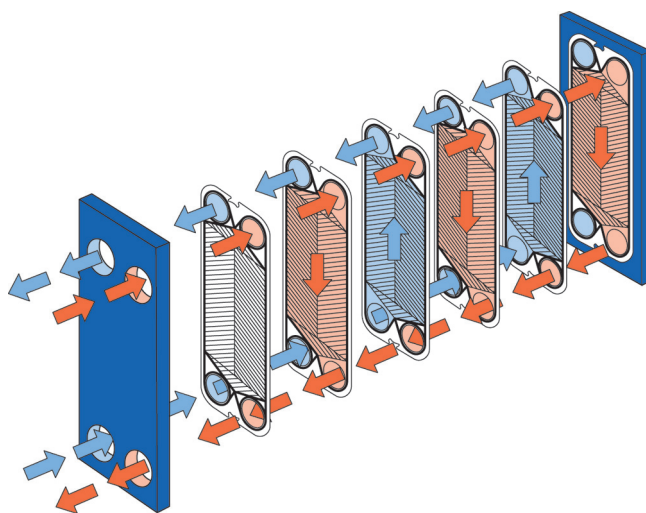
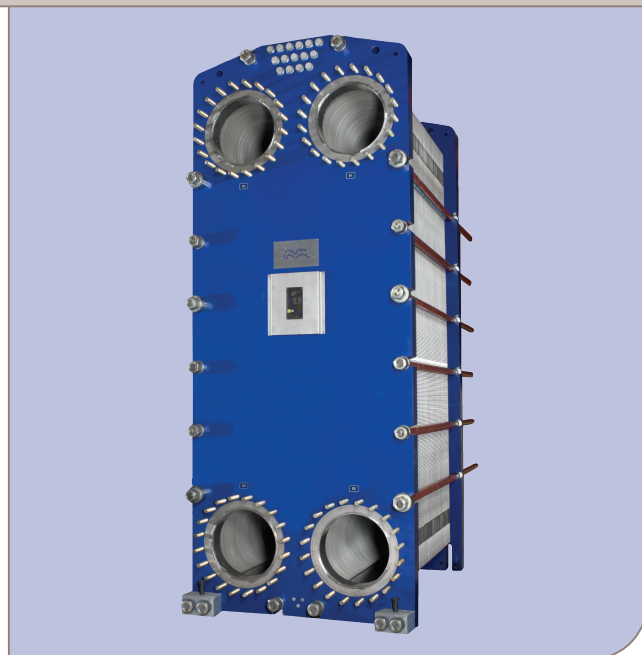
AQ20M

Frame types

FM, 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 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, Epoxy painted

Nozzles

Carbon steel

Metal lined: Stainless steel, Titanium

Plates

Stainless steel Alloy 316, Alloy 254 or Titanium.

Gaskets

Nitrile or EPDM

TECHNICAL DATA

Mechanical design pressure (g) / temperature

FM	pvcALS™	1.0 MPa / 150°C
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

CONNECTION STANDARD

Size: DN500 / NPS 20

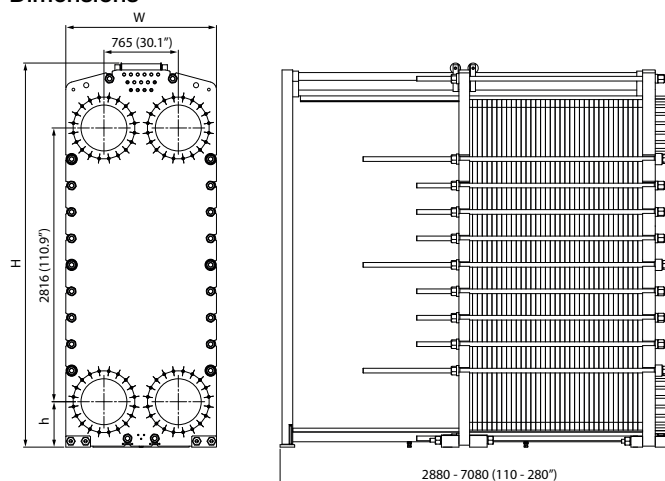
FM	pvcALS™	EN 1092-1 PN10 ASME B16.5 Class. 150
FG	PED	EN 1092-1 PN10, EN 1092-1 PN16 ASME B16.5 Class 150
FG	ASME	ASME B16.5 Class 150
FD	PED	EN 1092-1 PN25 ASME B16.5 Class 300
FD	ASME	ASME B16.5 Class 150, ASME B16.5 Class 300

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

Maximum heat transfer surface

2880 m² (31018 sq. ft)

Dimensions



Measurements mm (inch)

Type	H	W	h
AQ20-FM	4095(161 ⁷ / ₈ "	1550 (61")	467(18 ³ / ₈ "
AQ20-FG	3951(155 ⁹ / ₁₆ "	1550 (61")	467(18 ³ / ₈ "
AQ20-FD	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
- Physical properties of liquids in question
- Desired working pressure
- Maximum permitted pressure drop
- Available steam pressure

The thermal performance is third party certified through the AHRI Liquid to Liquid Heat Exchangers certification program



How to contact Alfa Laval

Up-to-date AlfaLaval contact details for all countries are always available on our website on www.alfalaval.com