GIAFLEX

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AQ14L

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 inter-plate 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 is stationary, while the pressure plate is movable along the upper carrying bar, which also holds the plate pack. The pressure plate and the plate pack are located by the lower guiding bar. The carrying bar is supported by the frame at one end and a support column at the other which are bolted to the foundation.

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.

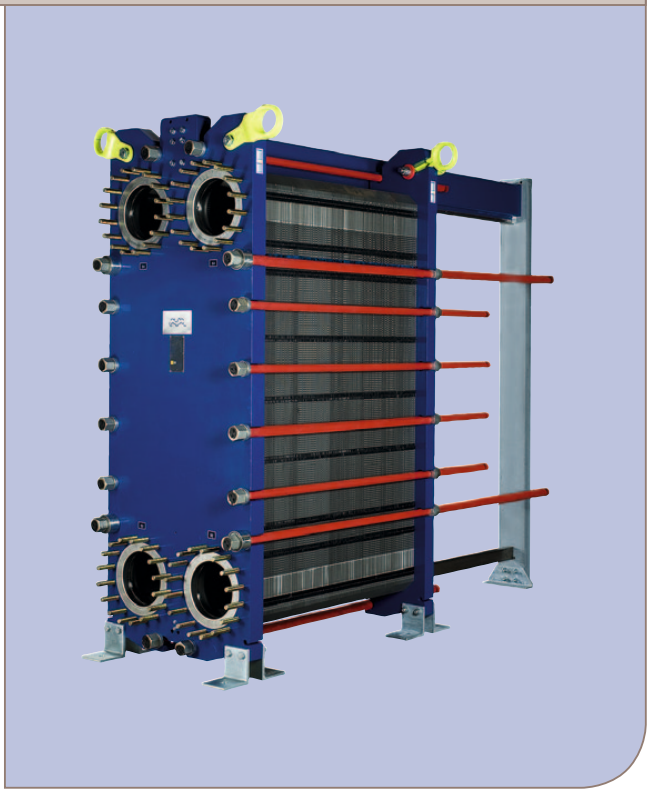
Typical capacities

Liquid flow rate
Up to 650 kg/s (10400 gpm), depending on media, permitted pressure drop and temperature program.

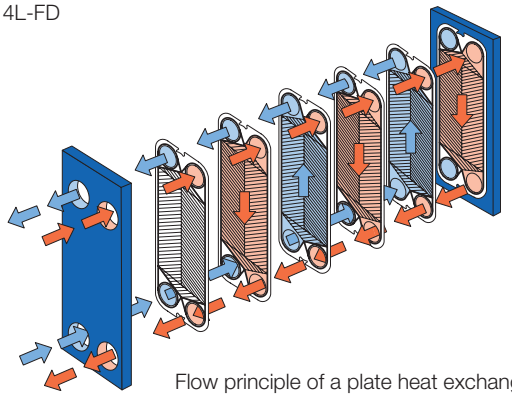
Plate types
AQ14L plates

Frame types
FM, 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 provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.



AQ14L-FD



Flow principle of a plate heat exchanger

STANDARD MATERIALS

Frame plate
Mild steel, painted

Nozzles
Carbon steel
Metal lined: Stainless steel, Titanium

Plates
Stainless steel Alloy 316 / Alloy 304 / Titanium

Gaskets
Nitrile, EPDM

TECHNICAL DATA

Pressure vessel codes, PED, ASME, pvcALS™

Mechanical design pressure (g) / temperature

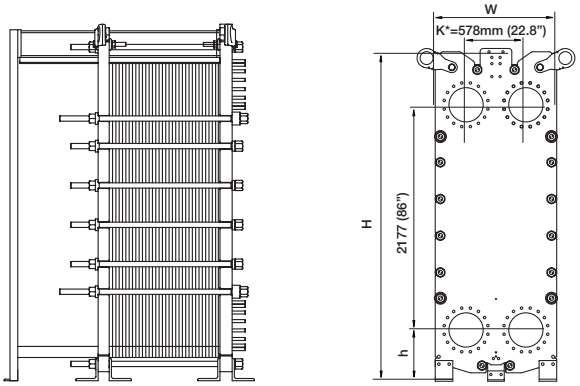
FM	PED / pvcALS™	1.0 MPa / 180°C
FM	ASME	100 psig / 350°F
FG	PED / pvcALS™	1.6 MPa / 180°C
FG	ASME	150psig / 350°F
FD	PED	2.5 MPa / 180°C
FD	ALS	2.5 MPa / 160°C
FD	ASME	300 psig / 350°F
FS	PED	3.0 MPa / 180°C
FS	ASME	400 psig / 350°F

CONNECTIONS

FM	pvcALS™	Size 300 or 350 mm DIN PN10 ASME Cl.150, JIS 10K
FM	PED	Size 300 or 350 mm DIN PN10 ASME Cl. 150
FM	ASME	Size 12 or 14” ASME Cl. 150
FG	pvcALS™	Size 300 or 350 mm DIN PN16 ASME Cl. 150, JIS 16K
FG	PED	Size 300 or 350 mm DIN PN16, ASME Cl. 150
FG	ASME	Size 12 or 14” ASME Cl. 150
FD	PED	Size 300 or 350 mm DIN PN25, ASME Cl. 300
FD	ALS	Size 300 or 350 mm DIN PN25, ASME Cl. 300, JIS 20K
FD	ASME	Size 12 or 14” ASME Cl. 300
FS	PED	Size 300 or 350 mm DIN PN40, ASME Cl. 400
FS	ASME	Size 12 or 14” ASME Cl. 400

Maximum heat transfer surface
1700 m² (18000 sq.ft)

Dimensions



Measurements mm (inch)

Type	H	W	h	C_{min}	C_{max}
AQ14L-FM	3210 (126.4”)	1154 (45.4”)	488 (19.2”)	2190 (86”)	6360 (250”)
AQ14L-FG	3210 (126.4”)	1154 (45.4”)	488 (19.2”)	2205 (89”)	6375 (251”)
AQ14L-FD	3218 (126.7”)	1174 (46.2”)	496 (19.5”)	2230 (88”)	6400 (252”)
AQ14L-FS	3218 (126.7”)	1174 (46.2”)	496 (19.5”)	2245 (88”)	6420 (253”)

The number of tightening bolts may vary depending on pressure rating.
Max no. of plates AQ14L= 1000

K* = 578 mm (22.8 inches) except following cases

584 (23.0")	FS	PED	Size 350DN PN40
589 (23.2")	FD	PED/pvcALS™ ASME	Size 14" ASME Cl.300
589 (23.2")	FS	PED/ASME	Size 14" ASME Cl 300 or 400

Particulars required for quotation
– Flow rates or heat load
– Temperature program
– Desired working pressure
– Maximum permitted pressure drop

AHRI CERTIFIED™
www.ahridirectory.org
Liquid to Liquid Heat Exchangers
AHRI Standard 400

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

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