AQ6L

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 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 120 kg/s (1900 gpm), depending on media, permitted pressure drop and temperature program.

Plate types
AQ6L

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

AQ6L-FG

provides the passage between the plates, supports each plate against the adjacent one and enhances the turbulence, resulting in efficient heat transfer.
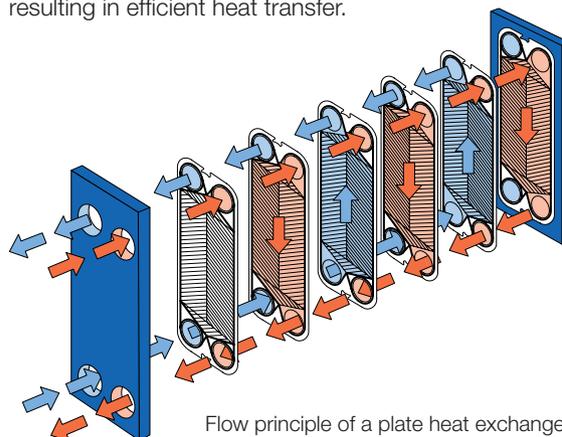
Flow principle of a plate heat exchanger

STANDARD MATERIALS

Frame plate
Mild steel, painted

Nozzles
Carbon steel
Metal lined: Stainless steel, Titanium
Rubber lined: Nitrile, EPDM

Plates
Stainless steel: Alloy 304, Alloy 316, Titanium

Gaskets
Nitrile, EPDM

TECHNICAL DATA

Pressure vessel codes, PED, ASME, pvcALS™
Mechanical design pressure (g) / temperature*

FM	pvcALS™	1.03 MPa / 180ºC
FG	pvcALS™	2.0 MPa / 180°C
FG	PED	2.0 MPa / 180°C
FG	ASME	150 psig / 482°F
FD	ASME	300 psig / 482°F
FS	pvcALS™	3.5 MPa / 180°C
FS	PED	3.5 MPa / 180°C
FS	ASME	460 psig / 482°F

* All PED and ALS units, except FM, are optimised for a design temperature of 50ºC (122°F).
All PED and ALS units are also available for of multi range temperatures 50, 100, 150, 180 and 200ºC with corresponding lower design pressure.
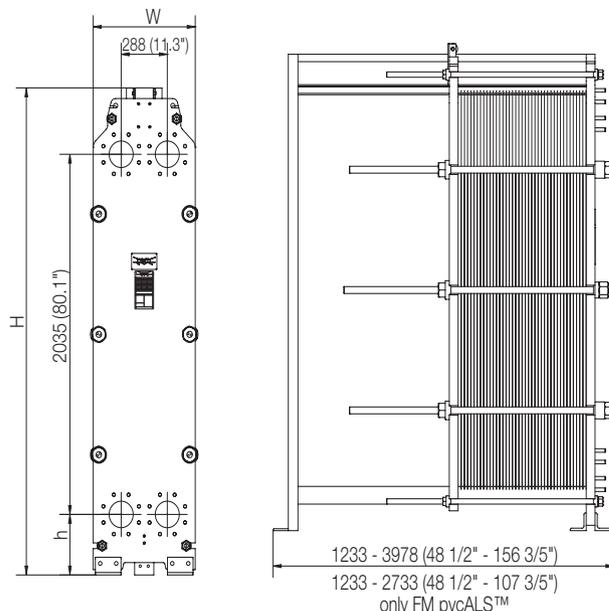
CONNECTIONS

Maximum heat transfer surface
990 (1,1 x 900) m² (10660 sq.ft)

FM	pvcALS™	Size 150 mm	DIN/GB/GOST PN10, ASME Cl. 150, JIS 10K
FG	pvcALS™	Size 150 mm	DIN/GB/GOST PN16, PN25, ASME Cl. 150, JIS 10K, JIS 16K
FG	PED	Size 150 mm	DIN PN16, PN25 ASME Cl. 150
FG	ASME	Size 6"	ASME Cl. 150
FD	ASME	Size 6"	ASME Cl. 300
FS	pvcALS™	Size 150 mm	DIN/GB/GOST PN25, PN40/ASME Cl.300/ JIS 20K
FS	PED	Size 150 mm	DIN PN25, PN40 ASME Cl. 300
FS	ASME	Size 6"	ASME Cl. 300

DIMENSIONS

288 (11.3")
2035 (80.1")
H
h
W

1233 - 3978 (48 1/2" - 156 3/5")
1233 - 2733 (48 1/2" - 107 3/5")
only FM pvcALS™

Measurements mm (inch)

Type	H	W	h
AQ6L -FM/pvcALS™	2752 (108 1/3")	610 (24")	342 (13 1/2")
AQ6L -FG/PED/pvcALS™	2752 (108 1/3")	637 (25")	342 (13 1/2")
AQ6L -FG/ASME	2752 (108 1/3")	646 (25 3/7")	342 (13 1/2")
AQ6L -FD/ASME	2752 (108 1/3")	646 (25 3/7")	342 (10 1/3")
AQ6L -FS/PED/pvcALS™	2752 (108 1/3")	646 (25 3/7")	342 (13 1/2")
AQ6L -FS/ASME	2752 (108 1/3")	646 (25 3/7")	342 (13 1/2")

The number of tightening bolts may vary depending on pressure rating and Pressure Vessel Code (PVC) requirements.

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

GIAFLEX