



T20

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 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 225 kg/s (3600 gpm), depending on media, permitted pressure drop and temperature program.

Plate types

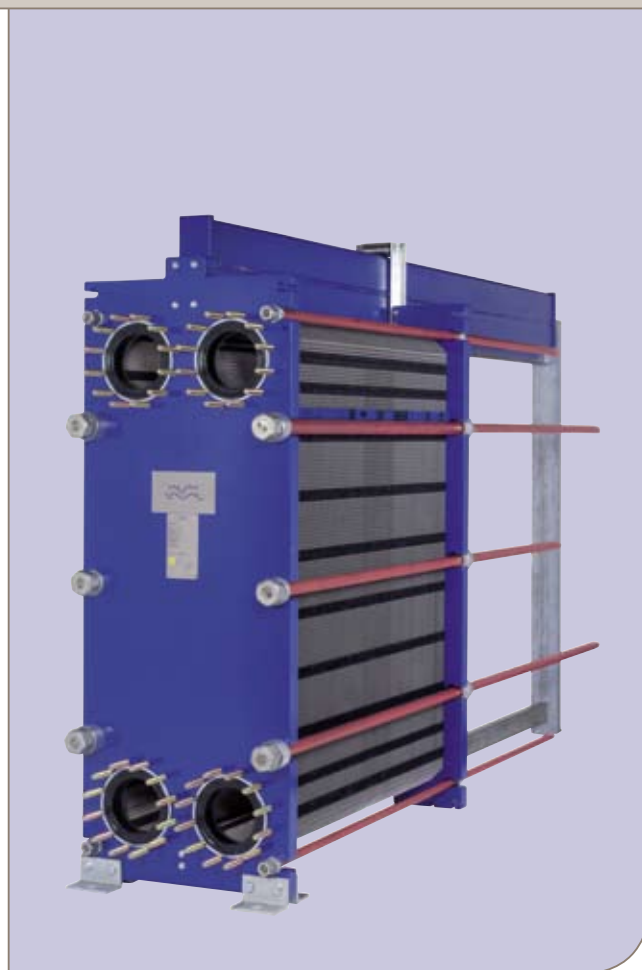
T20P, T20B and T20M plates

Frame types

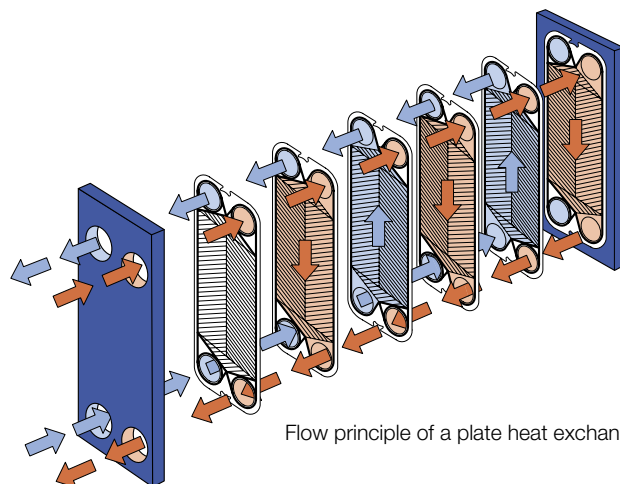
FM, FG and FS

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.



T20-BFG



Flow principle of a plate heat exchanger

STANDARD MATERIALS

Frame plate

Mild steel, Epoxy painted

Nozzles

Rubber lined

Carbon steel

Metal lined: Stainless steel, Titanium, Alloy C-276

Plates

Stainless steel Alloy 304, Stainless steel Alloy 316,

Alloy 254 SMO, Alloy C-276 or Titanium

Gaskets

Nitrile or EPDM

TECHNICAL DATA

Mechanical design pressure (g) / temperature

FM	pvcALS™	1.0 MPa / 180°C
FG	pvcALS™	1.6 MPa / 180°C
FG	PED	1.6 MPa / 180°C
FG	ASME	150 psig / 350°F
FS	PED	3.0 MPa / 160°C
FS	ASME	400 psig / 320°F

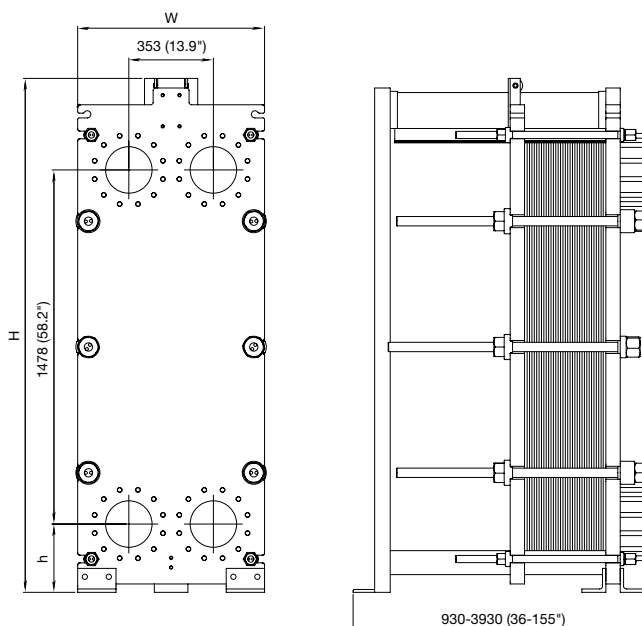
CONNECTIONS

FM	pvcALS™	Size 200 mm	DIN PN10/JIS 10 K
		Size 8"	ASME Cl. 150
FG	pvcALS™	Size 200 mm	DIN PN16/JIS 16K
		Size 8"	ASME Cl. 150
FG	PED	Size 200 mm	DIN PN10/16
FG	ASME	Size 8"	ASME Cl. 150
FS	PED	Size 200 mm	DIN PN25/40
FS	ASME	Size 8"	ASME Cl. 300/400

Maximum heat transfer surface

630 m² (7000 sq. ft)

Dimensions



Measurements mm (inch)

Type	H	W	h
T20-FM	2145 (84 1/2")	780 (30 11/16")	285 (11 7/32)
T20-FG	2145 (84 1/2")	780 (30 11/16")	285 (11 7/32)
T20-FS	2183 (84 1/2")	780 (30 11/16")	323 (12 11/16)

Particulars required for quotation

- Flow rates or heat load
- Temperature program
- Physical properties of liquids in question (if not water)
- Desired working pressure
- Maximum permitted pressure drop
- Available steam pressure

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How to contact Alfa Laval

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