



TS6

Plate Heat Exchanger

Applications

General heating and cooling duties. Heating by means of steam.

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, an additional auxiliary connection for steam may be mounted on the pressure plate to handle high capacities.

Typical capacities

Liquid flow rate

Up to 20 kg/s (300 gpm), depending on media, permitted

pressure drop and temperature program.

Water heating by steam

200-1800 kW

Plate types

TS6-M

Frame types

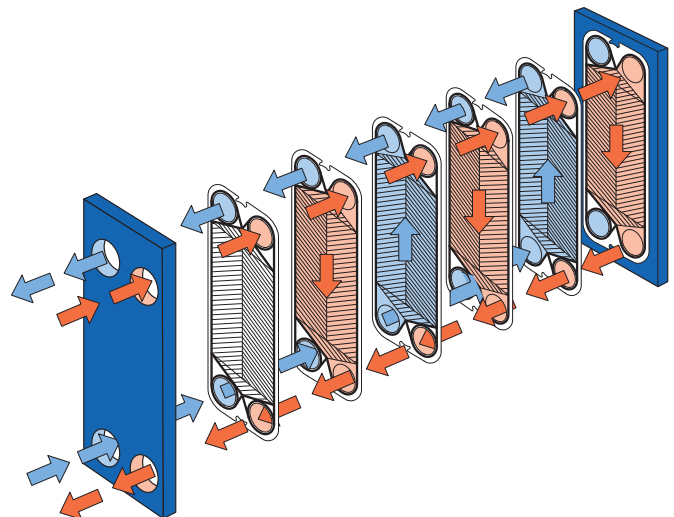
FG and FD

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



TS6-MFG



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, Titanium

Gaskets

Nitrile, EPDM, Viton®

Other grades and material available on request.

TECHNICAL DATA

Pressure vessel codes, PED, ASME, pvcALS™

Mechanical design pressure (g) / temperature

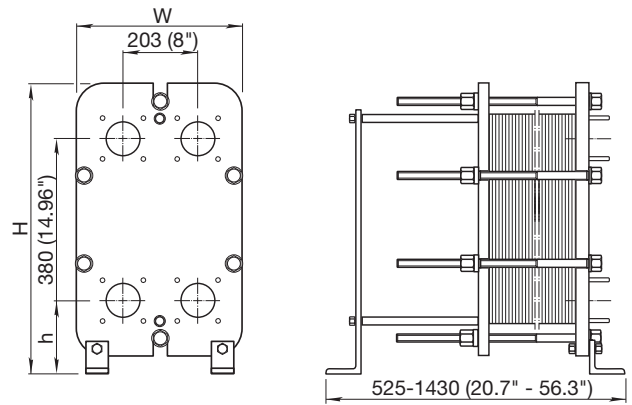
FG	PED	1.6 MPa / 180°C *)
FG	pvcALS™	1.6 MPa / 180°C
FG	ASME	207 psig / 482°F
FD	PED	2.5 MPa / 180°C
FD	ASME	300 psig / 482°F

*) Frame FG also approved for 1.2 MPa / 200°C to allow use in steam systems without safety valves.

Connections

		Size:	
FG	PED	65 mm	DIN PN16, ASME Cl. 150
FG	pvcALS™	65 mm	DIN/GB/GOST PN16, JIS 10 K, JIS 16 K
FG	ASME	3"	ASME Cl. 150
FD	PED	65 mm	DIN PN25, ASME Cl. 300
FD	ASME	2½"	ASME Cl. 300
FD	pvcALS™	65 mm	DIN/GB/GOST PN25, JIS 10 K, JIS 20 K

Dimensions



Measurements mm (inch)

Type	H	W	h
TS6-FG	704 (27.7")	400 (15.7")	188 (7.4")
TS6-FD	704 (27.7")	410 (16.1")	188 (7.4")

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

Maximum heat transfer surface

13 m² (140 sq. ft)

Particulars required for quotation

- Flow rates or heat load
- Temperature program
- Physical properties of liquids in question (if not water)

How to contact Alfa Laval

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