



TL3

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.

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 5 kg/s (80 gpm), depending on media, permitted pressure drop and temperature program.

Plate types

TL3B, TL3P

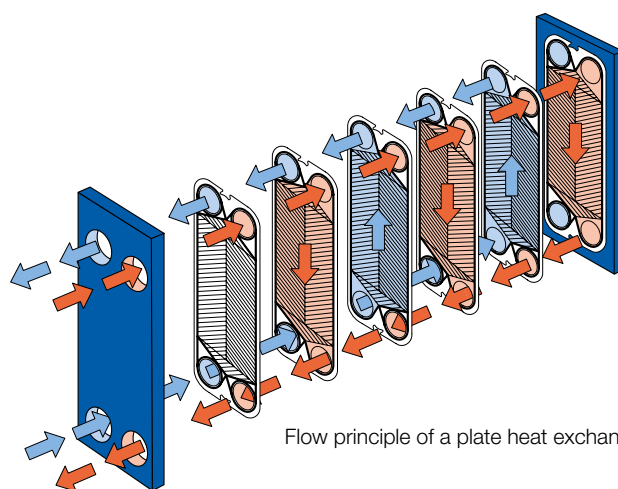
TL3BD, double wall plates

Frame types

FG

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

Pipe: Stainless steel, Titanium

Plates

Stainless steel Alloy 316 / Alloy 304, Titanium
Alloy 254 SMO, Alloy C-276

Gaskets

TL3B Nitrile, EPDMP, HNBR, EPDMFF
TL3P Nitrile, EPDMP, HeatSeal™, HNBR, Viton®G
TL3BD Nitrile, EPDMP, EPDMFF

TECHNICAL DATA

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

FG	pvcALS™	1.6MPa / 180°C
FG	PED	1.6MPa / 180°C
FG	ASME	150 psig / 356°F

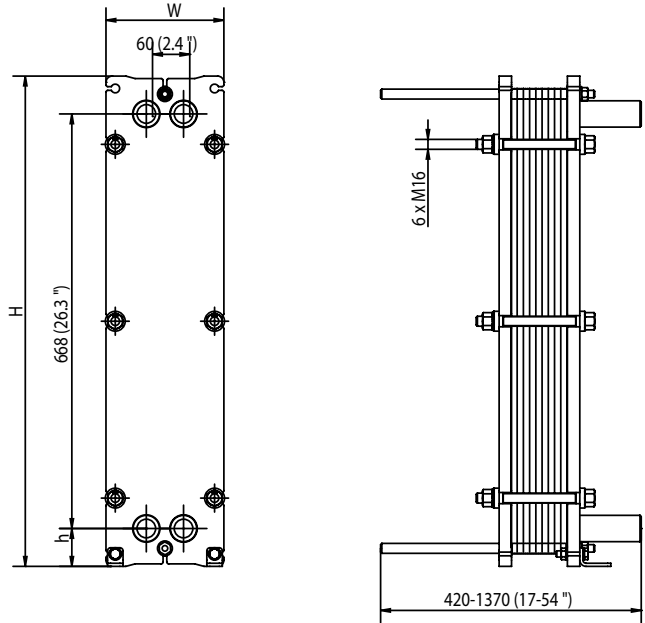
Maximum heat transfer surface

10.9 m² (117.3 sq.ft)

CONNECTIONS

FG	PED	Size 1¼"	Pipe, thread ISO-R 1¼"
FG	pvcALS™	Size 1¼"	Pipe, thread ISO-R 1¼" and NPT 1¼"
FG	pvcALS™	Size 1¼"	Internal thread ISO-G 1¼", carbon steel
FG	ASME	Size 1¼"	Pipe, thread NPT

Dimensions



Measurements mm (inch)

Type	H	W	h
TL3-FG	790 (31.1")	190 (7.5")	61 (2.4")

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

PCT00103EN 0904

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