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 fixed 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 2 kg/s, depending on media, permitted pressure drop and temperature program.

Plate types
T2B

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.

Standard materials

**Frame plate**
Mild steel, Epoxy painted

**Nozzles**
Stainless steel Alloy 316, Titanium

**Plates**
Stainless steel Alloy 316 or Titanium

**Gaskets**
Nitrile, EPDM

**Connections**
Straight pipe thread ISO-R ¾"

Technical data

**Pressure vessel code pvcALS™**

**Mechanical design pressure (g) / temperature**
FG 1.6 MPa / 180°C

**Maximum heat transfer surface**
1.0 m² (10.76 sq. ft)

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

Dimensions

Measurements in mm

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