



## T20MW/BW

### Semi welded plate heat exchanger

#### Applications

Semi-welded plate heat exchanger for general heating, cooling and heat recovery of aggressive media in one channel.

#### 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 semi-welded plates combine the flexibility and serviceability of the gasketed heat exchangers with the assurance against leakage of the welded heat exchangers. In the plate arrangement, every other channel is welded, and every other channel is gasketed. 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 semi-welded plate heat exchanger is provided with gaskets specifically designed to resist aggressive media. The non-aggressive media flows in the gasketed channels. This construction means that it can easily be dismantled, for example for exchanging gaskets or for inspection and cleaning of the gasketed channels.

The semi welded plate heat exchanger features corrosion-resistant plate material, absence of pressure retaining welds, double gasket seals, and a flexible yet vibration-resistant design all to assure long life and trouble free operation.

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.



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#### Typical capacities

Liquid flow rate

Up to 677 kg/s, depending on media, permitted pressure drop and temperature program.

#### Plate types

T20MW and T20BW plates

#### Frame types

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.

## STANDARD MATERIALS

### Frame plate

Mild steel, Epoxy painted

### Nozzles

Carbon steel

Metal lined: Stainless steel, Titanium

### Plates

Stainless steel AISI 316 or Titanium

### Gaskets

Field gaskets Nitrile, EPDM

Ring gaskets Chloroprene, EPDM

### Connections

FG PED Size 200 mm DIN PN10/16

FG ASME Size 8" ASME Cl. 100/150

FS PED Size 200 mm DIN PN25/40

FS ASME Size 8" ASME Cl. 300/400

## TECHNICAL DATA

### Mechanical design pressure (g) / temperature

FG PED 1.6 MPa / 180 °C

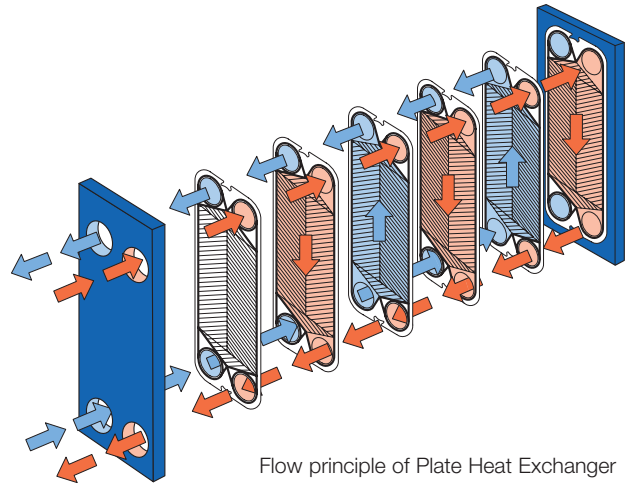
FG ASME 150 psig / 350 °F

FS PED 3.0 MPa / 160 °C

FS ASME 400 psig / 320 °F

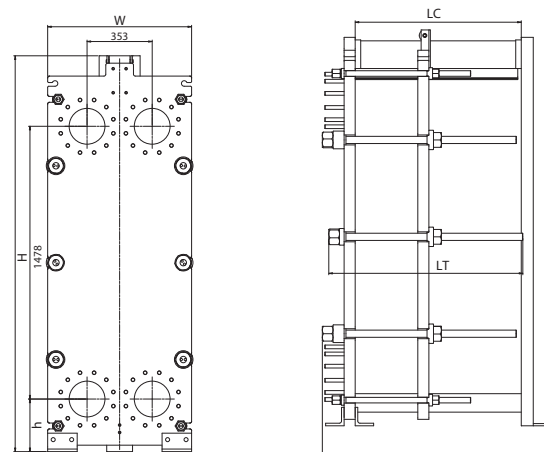
### Maximum heat transfer surface

425 m<sup>2</sup> (4,550 sq. ft)



Flow principle of Plate Heat Exchanger

## Dimensions



### Measurements (mm)

Type	H	W	h
T20-MWFG	2145	780	285

### 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

### How to contact Alfa Laval

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