



M3 Compact frame

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 mounted in a frame assembly and compressed between a frame plate and a pressure plate. 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 frame assembly consists of the following components: frame plate with connections, pressure plate, side plates and bars. The exploded views shows how the components are assembled.

Typical capacities

Liquid flow rate: Up to 4 kg/s, depending on media, permitted pressure drop and temperature program.

Plate types

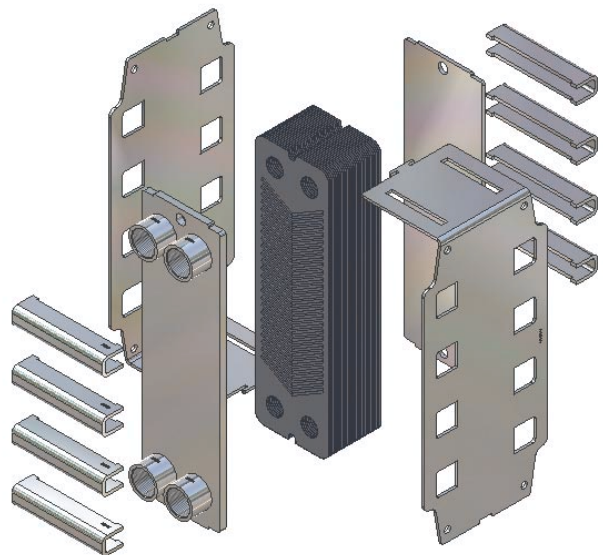
M3

Frame type

CFG



M3-CFG.

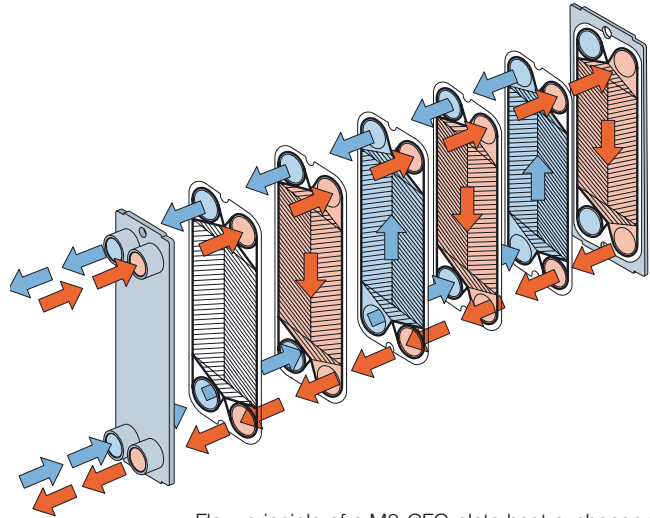


Exploded view of a frame assembly and plate pack.

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 M3-CFG plate heat exchanger.

Standard materials

Frame assembly:	Stainless steel AISI 304
Nozzles:	Stainless steel AISI 316, Titanium
Plates:	Stainless steel AISI 316 or Titanium
Gaskets:	Nitrile

Connections

Straight pipe material thread BSP 1 1/4"

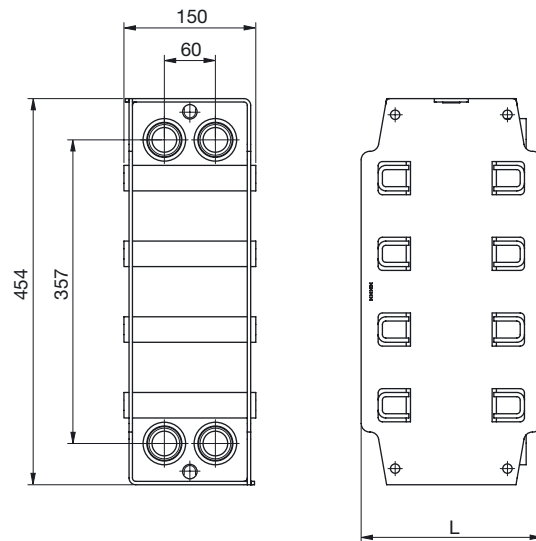
Technical data

Mechanical design	
pressure (g)/temperature:	CFG 16 Bar/-10 to 130°C
Maximum heat transfer surface:	2.2 m ² (23 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
- Available steam pressure

Dimensions



Measurements (mm).

No. of plates	Length mm L	Weight kg	
		Plates in AISI 316	Plates in Titanium
15	175	21.0	19.0
25	205	25.5	22.0
30	220	27.5	23.5
35	235	29.5	25.0
45	265	34.0	28.0
55	295	38.0	30.5
70	340	44.5	35.0

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