



Vapor Gasket heat exchanger

How it works

Vapor GPHE is purpose-built for evaporation, featuring two compact inlet feed connections and a spacious outlet dedicated to vapor and concentrate. It is equipped with one sizable inlet and two smaller outlets for condensate. The design of Vapor GPHE incorporates plates welded in pairs, allowing for effective condensation of heating steam in the welded channel, while the evaporated product smoothly flows through the gasketed channels.

Benefits

Enhanced thermal conductivity

The arrangement of corrugated plates induces intense turbulence, resulting in significantly higher heat transfer efficiency compared to traditional shell-and-tube evaporators. Vapor GPHE excels particularly in scenarios with high concentration and viscosity, effortlessly handling temperature variations as low as 3–4°C. This quality proves exceptionally advantageous when integrated into TVR and MVR systems.

Minimal fouling and effortless maintenance

The extensive plate turbulence enables highly effective chemical cleaning procedures. Due to the reduced volume capacity, only minute quantities of cleaning agents are necessary in comparison to shell-and-tube systems. Furthermore, the flexible design of Vapor GPHE ensures easy accessibility to heat transfer surfaces for inspection or mechanical cleaning.

Flexible capacity expansion

One prominent advantage of Vapor GPHE is its capability to increase or decrease capacity by adding or removing cassettes within the existing framework. This feature stands in stark contrast to shell-and-tube evaporators, where capacity remains fixed upon installation.

Saving

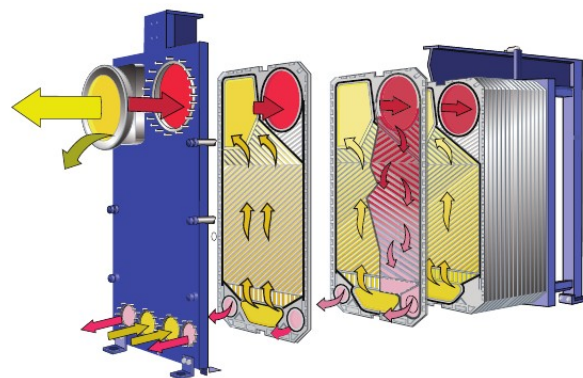
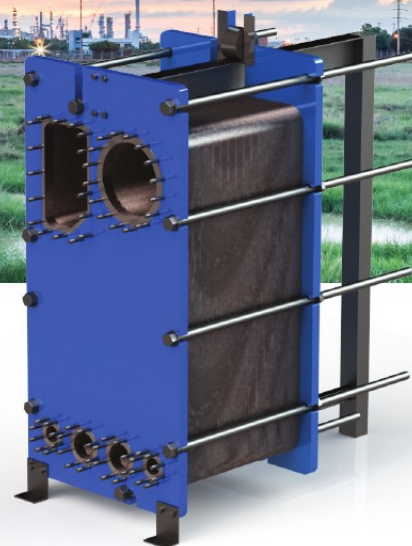
The remarkable heat transfer efficiency translates into a substantial reduction in required heat transfer surface area compared to shell-and-tube evaporators. Consequently, Vapor GPHE becomes highly cost-effective, especially when dealing with demanding materials like SMO, titanium, nickel, and Hastelloy. Additionally, the compact and adaptable design of Vapor GPHE greatly diminishes expenses related to transportation, assembly, and installation when compared to shell-and-tube units.

Enhanced product quality

The exceedingly low hold-up volume within Vapor GPHE means that only a negligible amount of product remains inside the evaporator at any given time. This brief exposure time to the evaporator proves highly beneficial for heat-sensitive products, ensuring improved product quality.

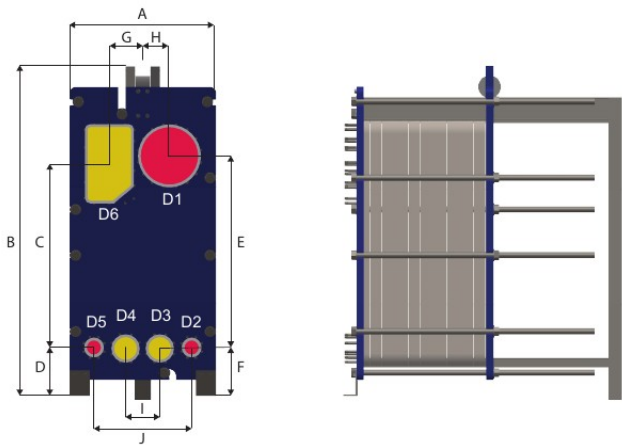
Applications

- Biotech and Pharmaceutical
- Chemicals
- Energy and Utilities
- Food and Beverages
- Water and Waste treatment



- | | |
|--|---|
| ■ Steam in | ■ Feed in |
| ■ Condensate | ■ Vapour out |
| | ■ Concentrate |

Dimensional drawing



Technical data

Plate Type	Free channel, mm
Semi-welded	6 / 6.5
Materials	316/316L, 904L, 254
Heat transfer plates	C-276
	Ni, Ti
Field gaskets	NBR, EPDM
Ring gaskets	NBR, EPDM, FKM
Flange connections	Metal lined: stainless steel, nickel, titanium
Frame & pressure plate	Carbon steel with painted

Model	A	B	C	D	E	F	G	H	I	J	D1	D2/D5	D3/D4	D6
EC350	1160	2610	1430	385	1576	394	271	252	290	806	350	DN100	DN150	DN350
EC500	1160	2610	1509	394	1532	438	278	223	290	806	400	DN100	DN150	DN500
EC650	1380	3210	2028	430	2158	414	294	329	300	913	450	DN150	DN150	DN650

Operational data

Max. design pressure	Max. design temperature (°C/°F)
6.0/ 8.0 barg	180/356
Extended pressure and temperature rating may be available	