

Marine Vessels Solution

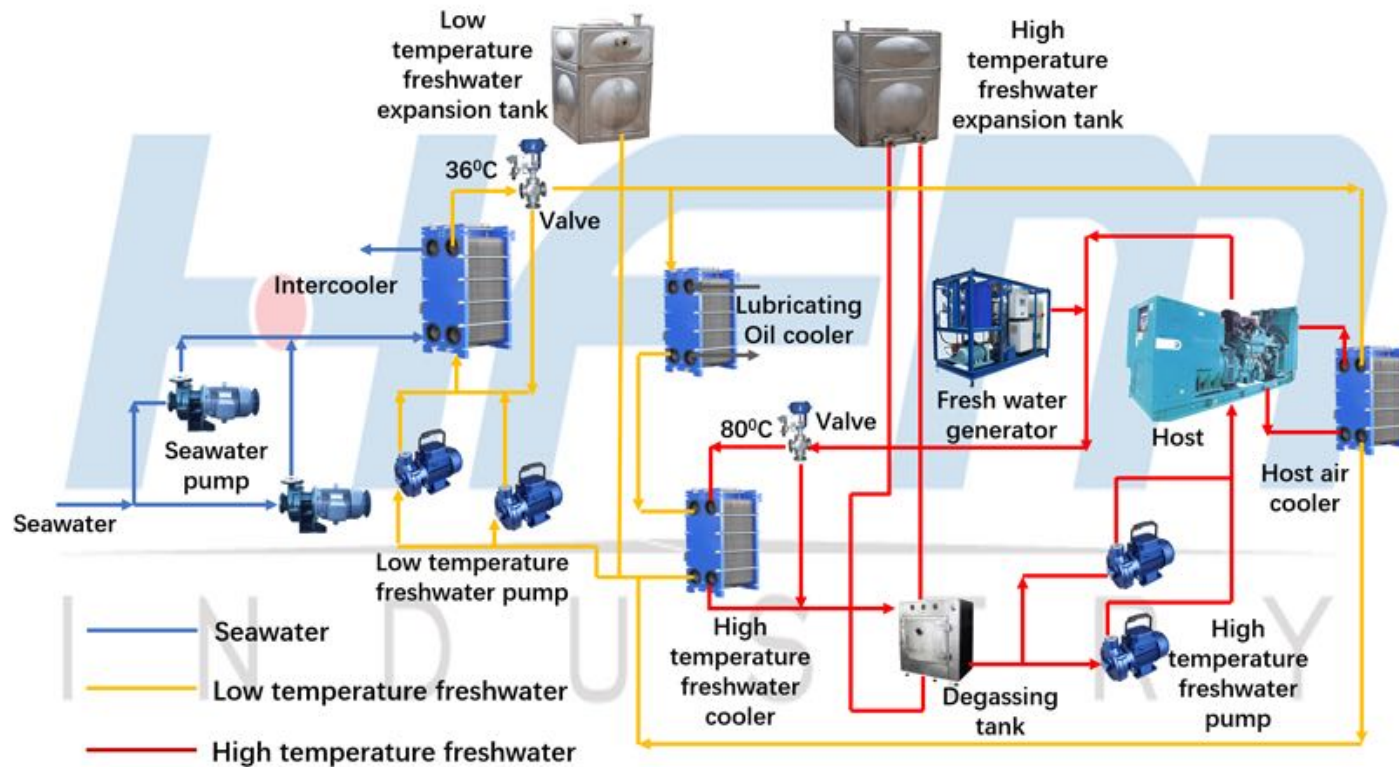
Plate heat exchanger application

Boat is an isolated land surrounded by sea water, you breathe the salty air, you drink the treated water and you live in a narrow space with everything you have to live with, all because of the duty you carry and safe return. Hofmann offers the most reliable and efficient thermal systems for your vessels, our device aims to provide maximum efficiency for various closed-circuit cooling systems at sea and handle other vehicle-mounted applications, including fresh water production and HVAC systems.

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The heat transfer area of plate heat exchanger (PHE) achieved by the same volume is 5-10 times that of the shell and tube heat exchanger, and it is easy to dismantle and clean. The compact design structure makes it perfect for the marine vessels.



Ship independent I type central cooling water system

The central cooling system of the ship mainly includes high temperature fresh water closed cooling system and low temperature fresh water closed cooling system. The ship's main engine is cooled by a high temperature freshwater cooling system, low temperature fresh water closed cooling system is cooled by high temperature fresh water and various lubricants, and then through the central cooler low temperature fresh water is cooled by using seawater. The central cooling system of the ship is separated from seawater and freshwater pipelines. Only one central cooler is used to contact the seawater, which makes the freshwater pipe less corrosion and clean, reduces the management cost, and enhances the system reliability. Titanium plate heat exchanger plays a vital role to adapt to the high corrosiveness of seawater, and the plate heat exchanger also has a compact structure, small size. As the ship's main heat transfer equipment, it is a very good choice.



PHE Standard Range General Specifications

	Gasket plate heat exchanger	Brazed heat exchanger	semi-welded plate heat exchangers
Max connection diameter/DN	500	100	200
Max. volume flow m ³ /h	4000	160	650
Max. Heat transfer surface/m ²	1520	65	320
Designed Pressure rate MPa	2.5	4.5	2.5
Temperature °C	-40-180	-196~225	-40~180
Plate material	304 SS, 316 SS, Titanium	316 SS	316 SS, Titanium
Frame material	Carbon Steel, 304 SS, 316 SS	316 SS	Carbon Steel

The BHE used on vessels is a copper-brazed and extremely compact heat exchanger. Due to its gasket-free design and wide performance range, it is used in a variety of applications in cargo and fuel gas systems, for example as a refrigerant economizer or gas heater.



The Gasket plate heat exchanger is expandable and easy servicing. The design flexibility makes them ideally suited for a wide variety of shipboard cooling and heating applications.



The working circumstances of PHE is different from the land

- 1, Unstable on the sea, which causes vibration, impact, large angle tilt and noise, etc.
 - There are multiple hook points located in the frame, and the frame foot could be riveted into the ground.
 - Very compact in structure which having more stringent restrictions on the heat exchanger space and quality.
- 2, Cooling medium is usually used by sea water, high salinity and high corrosiveness, which could damage the plates and gaskets.
 - Titanium plates with 100% dye penetrant inspection, and specific corrosion resistant protection layer if our customers need.

The Semi-Welded Plate Heat Exchanger, one side is sealed by laser welding, and the other side is sealed by gaskets. This increases maintainability, but allows the use of aggressive medium and higher pressure than the completely inflated model. This means that the heat exchanger can be used in the application of refrigerants





Our **service** is better than you expected

HFM offers rich experience in land and sea applications. We have multiple global warehouses and service teams around the world, the delivery time and freight are reduced to the largest extent, and spare parts can be delivered at the fastest speed. Manufacturing is merely one part of our business, knowing our customers requirements and acknowledge various kinds of working conditions is our daily life.

1, Inventory management

In order to ensuring delivery effectiveness, based on the acknowledge of PHE market and supply chain management, HFM has distributed the warehouses around the world.

2, Spares replacement

HFM has the full range of plate heat exchanger spares, our service engineers could either travel to the scene or remote guid your team to replace.

3, Cleaning service

HFM can provide both CIP(cleaning in place) and disassembling cleaning services depending on your circumstances.





Professional design solution:

Our technical department dealt with various application year after year, the accumulative experience forged a special team with exploring spirit and critical spirit. The gasket plate heat exchanger is our core business, thousands of units have been in services for many years in different fields.

Service is our cornerstone:

We consider customer as our priority, understanding customers' real needs and rapid feedback are the basics.

We and customers are bound to each other for learning and developing, sharing knowledge keeps us growing, which makes accomplishing projects easier and faster.

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