

Juice

The application of plate heat exchanger

Nowadays, we care about more than what a bottle of juice taste like, the health-conscious has changed the drinking behavior. Original ecology and no additive become popular slogan and appear in the public field of vision. To achieve what juice companies' permission, juice products have to be processed not only economically, but also precisely. Our solution guarantee you the most reliable and efficient thermal systems for your flow scheme.



Processing

Many unit operations are involved in transforming the whole fruit into the needed fruit juice, puree or pulp products. The fruit treatment depends on the process design. If raw materials are used for multiple purposes, such as fresh market, whole processing, additional products and fruit juice, the process plan will be very different from that of juice factory only. In some cases, cleaning, classification and inspection are stored before the factory, or can be reversed or repeated before juicing.

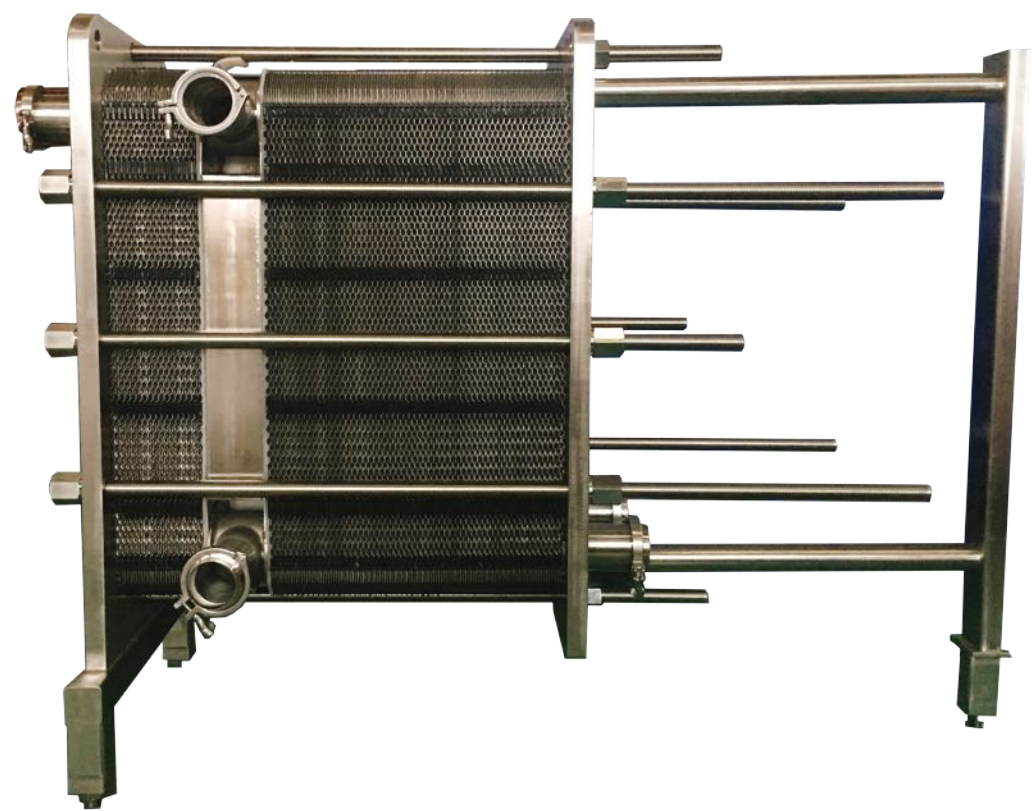


Although there are key differences in dealing with each kind of fruit used for juice and important varieties and season adjustment, the generalized flow scheme puts the operation in the right angle. Under normal circumstances, fruit juice will not be taken care of in the aspects of packaging, transportation or post-processing for fresh markets and solid packaged fruits. The operation of cooling, cleaning, classification and inspection should pay attention to the quality and heat transfer. Cooling depends on the heat transfer from fruit to air or water. Cooling and cleaning can include physical removal of surface fragments by brush or air injection separation before cleaning with water.

These steps greatly reduce water consumption and accelerate the flow of products. Efficient equipment can minimize the use of cooling/heating energy and washing water. When the implementation is not in time, the pollution level will actually increase. Therefore, equipment and water sanitation are usually necessary for chlorination and recovery.

PHE never fails you

Plate heat exchanger is an efficient and energy-saving heat exchange equipment, due to its characteristics of high heat transfer efficiency, hygienic, economical heating cost, strong adaptability, small volume, compact structure, convenient disassembly, cleaning and maintenance, etc, it is widely used in heating, cooling, sterilization and other working conditions of various liquids in juice industry.



High heat transfer coefficient

The complex flow-path constructed by multiple convoluted plates make it 3~5 times in thermal transfer coefficient than tubular heat exchanger.

Easy to scale

The corrugation surface lead to turbulence phenomena, which makes its fouling coefficient is only 1/3 ~ 1/10 of that of tubular heat exchanger and less overhaul.

Less footprint

The compact design of PHE makes it very convenient for modernization and expansion of the existing plant or restriction on land area.

Accurate temperature control

The temperature of sterilization should be as low as possible, make sure it could kill the germs and remain quality.

Short retention time

It means the fruit will not be overheated, which keeps the nutrition inside.

Environmental friendly

Heating and cooling combined into a whole, so heat recovery is easy. As long as the heated material is used as a heat source to preheat the newly entered fluid, it can meet the operation requirements of cooling or heating the two fluids respectively, killing two birds with one stone and saving energy.





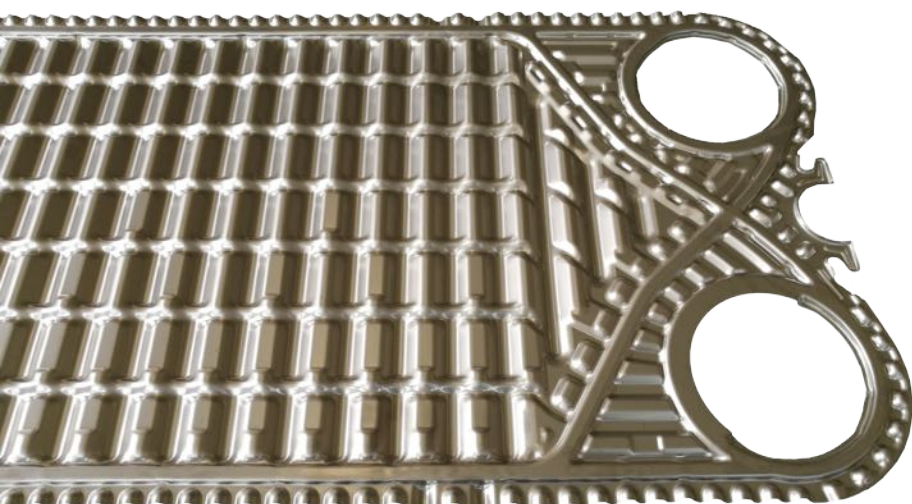
The great advantage of our plate heat exchanger lies in its easy maintenance and flexibility to adapt to any production requirements. Due to different board ripples, various possible nominal connection widths and different heat lengths, we always provide correct and economic solutions for your application.

PHE Standard Range General Specifications

Gasket plate heat exchanger	
Max connection diameter/DN	350
Max. volume flow m ³ /h	1800
Max. Heat transfer surface/m ²	1380
Designed Pressure rate MPa	2.5
Temperature °C	-40-180
Plate material	304 SS, 316 SS, Titanium
Frame material	Carbon Steel, 304 SS, 316 SS



We use FDA standard stainless alloy for the frame in case there is any contact with the juice, which makes sure there is no contaminants from the plate heat exchanger. The plates and gaskets inside are also food grade. You could choose either single-section or multi-section depending on your working condition.



The 8mm deep wide gap plates allow almost every raw juice fluid (up to 5mm diameter particles) going through without retention.



Gasket	Temperature/ °C	Media
EPDM Ethylene propylene diene monomer	-25-150	Water, aqueous solution, lean acid and base
NBR Nitrile rubber	-25-130	Water, aqueous solution, fat, vegetable oil and mineral oil, ethanol and glycol
FPM/Viton Fluoro rubber	-20-180	High concentration inorganic acid (oxidizing acid), hot water and steam, high temperature mineral oil
CR Chloroprene rubber	-40-125	Ammonia and various fluorine-containing refrigerants



Our **service** is better than you expected

HFM has rich experience in Juice solution. 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.

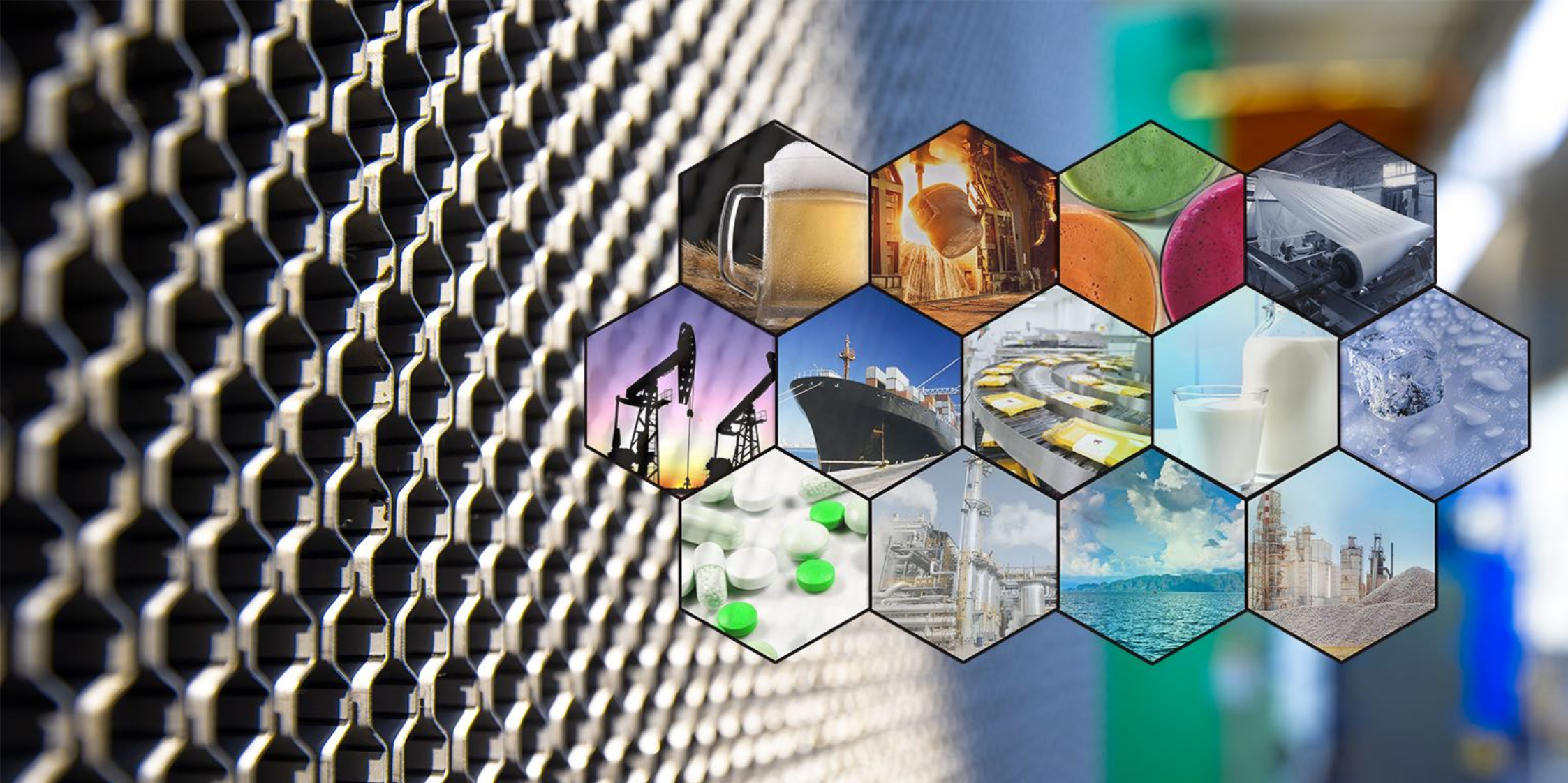
2, Spares replacement

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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