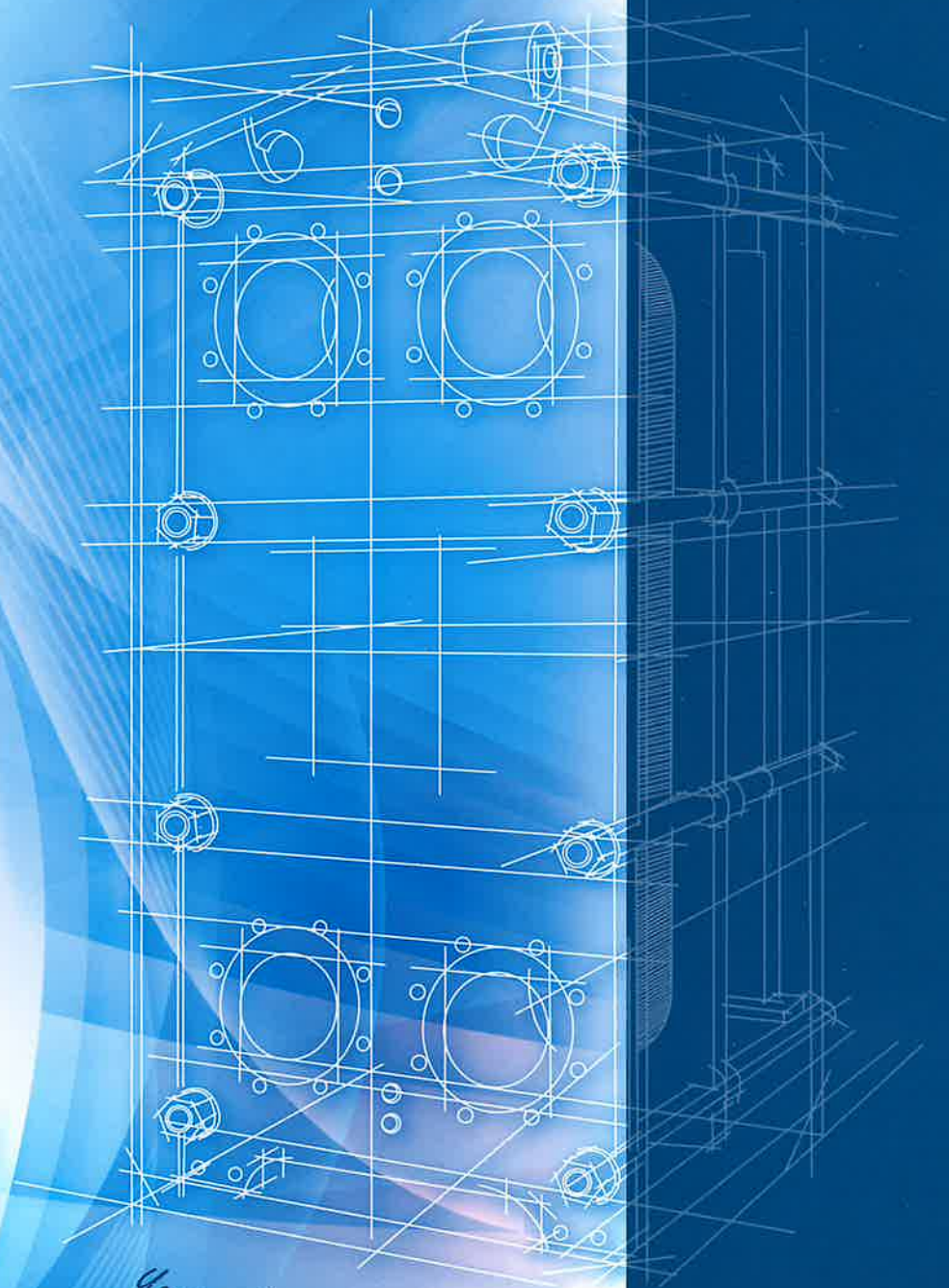


INNOVATION OF HEAT EXCHANGER



Your reliable heat exchanger

IES



■ OUR COMPANY

IES Group was established in 1998 and headquartered in Hong Kong. With perseverance and commitment to the “creation of excellence”, IES has experienced steady development and continued growth since its establishment.

IES Group has over 20 years of industry experience manufacturing heat exchangers, as well as the integration of automated control systems. Our expertise ranges from R&D, manufacturing, and sales & service; offering our customers a complete product and service experience. We specialize in the design and manufacture of various types of high-efficiency heat exchangers, energy-saving and environmental protection products based on market requirements. Our design & products adhere to ISO 9001:2008 and other related industry standards. IES products are widely used in air conditioning, central heating systems, space heating and pool heating. Our products can be found across multiple industries including electrical, metallurgy, petrochemical, food, and pharmaceutical covering China, Hong Kong, Macau and Southeast Asia.

IES Group's production base is located in Guangdong. Our plant covers over 10,000 m², and features multiple production lines, providing customers with a combination of product solutions such as plate heat exchangers, shell heat exchangers, double tube sheet heat exchangers, plate heat exchanger package units, storage / semi-storage type heat exchangers and electric heaters.

As a leading supplier of heat transfer solutions, IES is committed to the improvement of living environments, work efficiency, and actively participates in the development of green energy-saving products, to consistently provide safe, reliable, cost-effective heat exchange solutions to customers.

Certification



▲ ISO 9001



▲ ISO 14001



▲ ISO 3834



▲ BS EN 10088

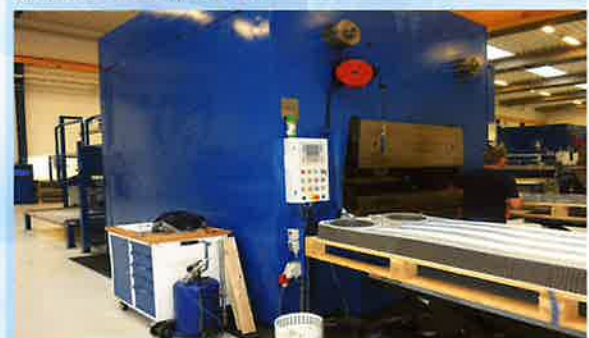
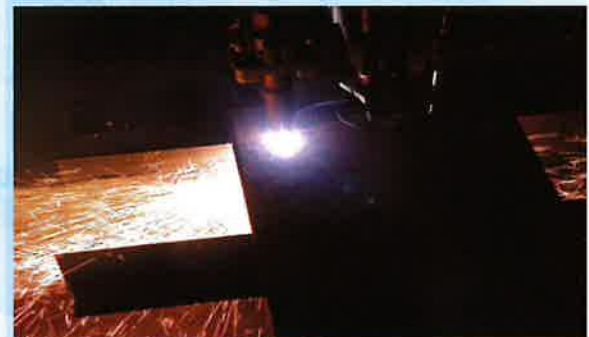
Specialist in Heat Exchanger

High quality - High performance gasketed plate heat exchangers

High performance plate heat exchangers consist of a number of formed, sealable high transfer flow plates, spaced by NBR or EDPM gaskets, to facilitate the transfer of heat between two fluids. The pressed plates and channel spacing creates highly turbulent flow behaviour, resulting in optimal self-cleaning and the highest possible heat transfer.

As a specialist in heat exchangers, IES's gasketed plate heat exchangers are available in various models and dimensions, offering the best solution to a great range of heat exchanger applications in HVAC and industry as well as district cooling and heating applications.

IES offers a wide range of plate heat exchangers to meet the needs of diverse industries.



- HVAC



- Chemical Plant



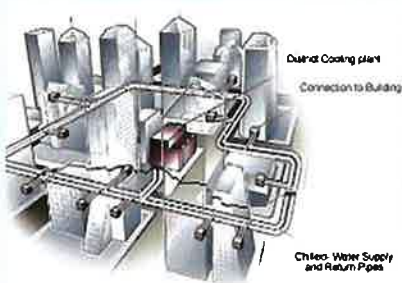
- Dairy, Food & Beverages



- Data Centre



- District Cooling & Heating



- Pharmaceutical



- Drinking Water



- Power Plant

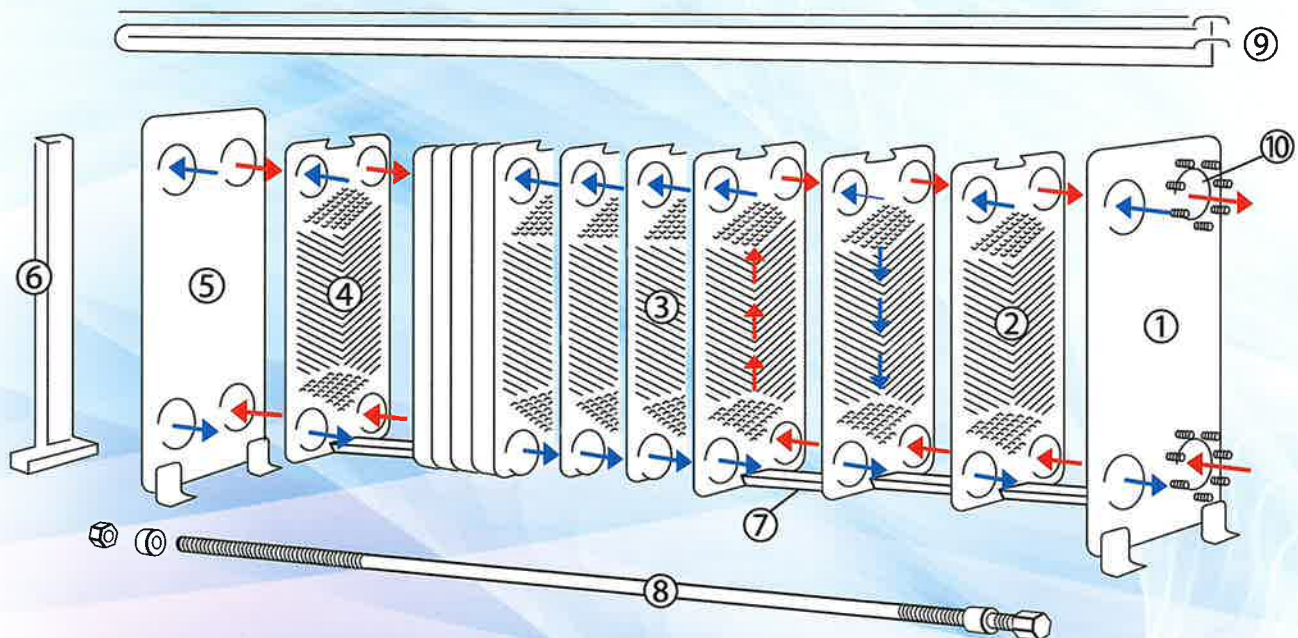


■ PHE Design & Construction

IES PHE is assembled in a full pack of heat transfer plates and spaced by gaskets for fluids isolation. The plates and gaskets are compressed together in a rigid frame to form an arrangement of parallel flow channels with alternating hot and cold fluids. The movable rear plate is tightened with several threaded rods and the two fluids flow through the plate side by side to facilitate the transfer of heat.

Single-Pass Design allows the two fluids to travel through the exchanger channels in counter flow. All connections are on fixed plates which allow the plates to be removed without affecting the existing pipe work.

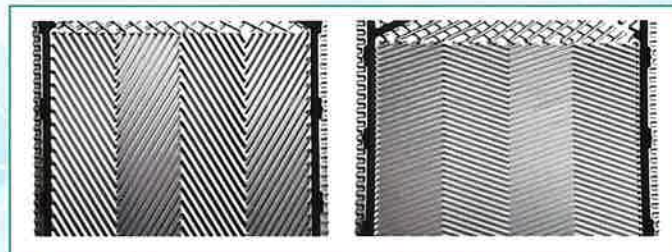
Multi-Pass design is also available in IES Plate design, which generates optimal thermal efficiency and replaces the need for multiple units.



- ① Fixed Plate ② Heat Transfer Plate ③ Gasket ④ Back Plate
- ⑤ Back Framework ⑥ Support Column ⑦ Lower Plate Guide Bar
- ⑧ Tightening Thread Rod ⑨ Top Bar ⑩ Connection Port

■ Plate Design

By adopting "Thermal Long" and "Thermal Short" designs, which allow fluids to distribute evenly over the heat plate, IES offers a wide range of plate patterns to meet different applications and specified heat transfer, flow distribution and pressure drop requirements. These plate patterns are designed to obtain a high thermal efficiency, create a higher turbulent flow behaviour, optimal self cleaning effect and reduce fouling.



■ Gasket Type



IES Gasket System is design for **rapid clip-on operation with long lifetime.**

Available Gasket Material includes NBR, EPDM, EPDM-HT, Viton, HNBR, FKM, BUTYL & Neoprene for different application.

Common Gaskets

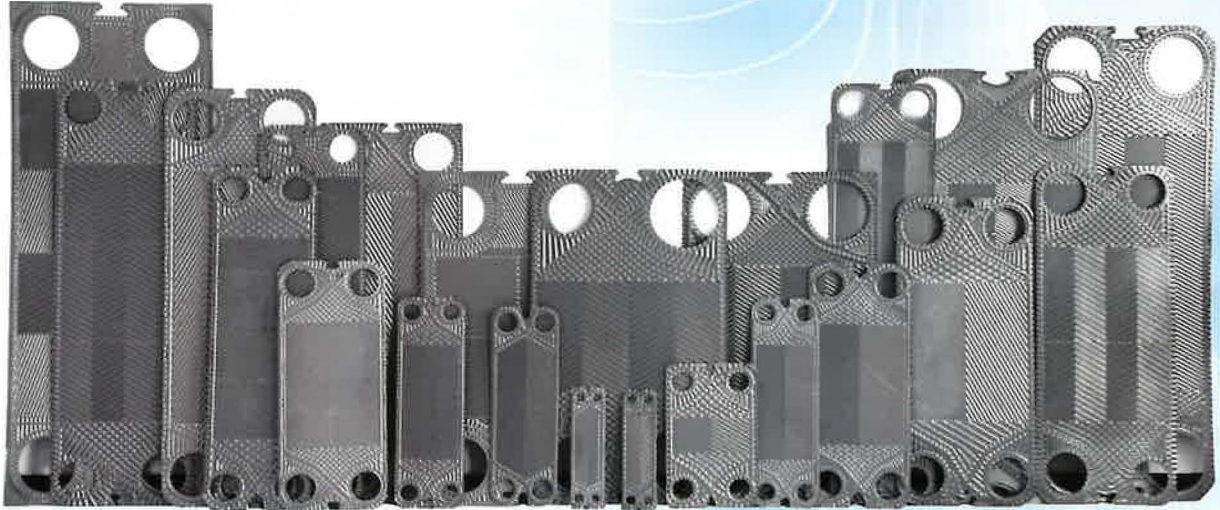
NBR - Application for Water, Lubricant, Refrigerant, Fuel, Brine water & etc...

Operating Temp: -25 to 100 °C

EPDM - Application for Water, Steam, Non-petroleum based lubricant, Acid & etc...

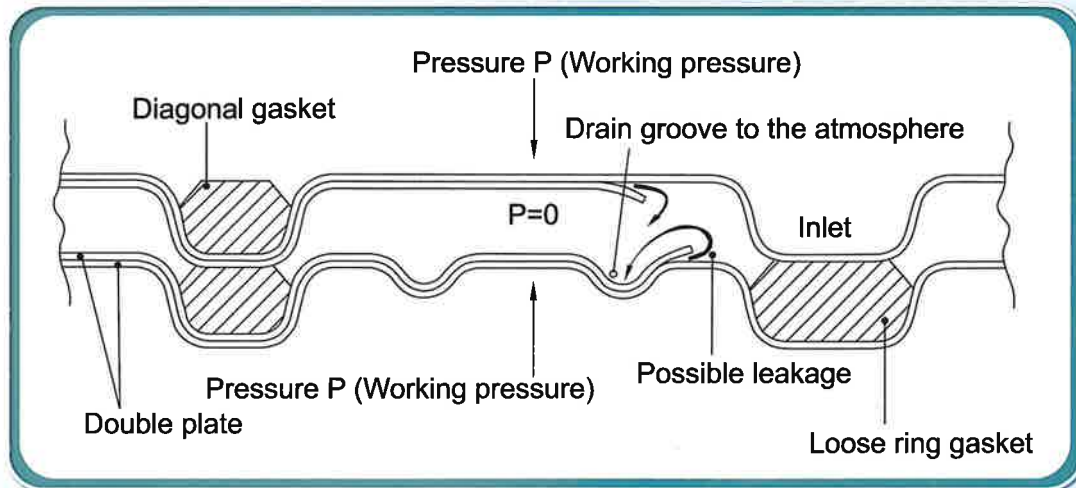
Operating Temp: -50 to 170 °C

■ PHE Model Family



	Model	Connection size	Max.Flow	Dimension		
				Width(W)	Height(H)	Length(L)
1	IR45	DN32	18m³/h	200	481	110 - 520
2	IR50	DN50	60m³/h	295	596	430 - 2055
3	IR80			300	994	430 - 3045
4	IR49	DN65	72m³/h	395	626	440 - 1045
5	IR82			395	946	440 - 1045
6	IR121	DN80	150m³/h	480	1511	435 - 4100
7	IR88H	DN100	160m³/h	500	1178	435 - 4120
8	IR88S			500	1178	435 - 4120
9	IR152			480	1824	435 - 4130
10	IR110	DN150	410m³/h	640	1550	685 - 6210
11	IR150			640	1952	675 - 6240
12	IR191			640	2354	690 - 6130
13	IR231			640	2754	690 - 6125
14	IR106	DN200	640m³/h	770	1506	667 - 4077
15	IR176			815	2200	655 - 6075
16	IR216			790	2656	655 - 6250
17	IR246			770	2950	810 - 6250
18	IR336			770	3850	810 - 6270
19	IR146	DN300	1440m³/h	990	1956	675 - 6240
20	IR187			990	2366	810 - 6260
21	IR251			1047	3049	850 - 6270
22	IR315			1050	3878	850 - 6270

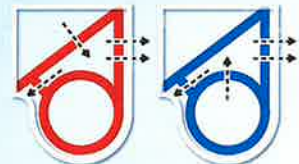
■ Double Wall Plate Design



"Double wall" consists of a twin-skinned seal, welded & pressed plates, which form a narrow safety gap. Each plate pair is fitted with a non-glued clip-on type gasket, which both seals and holds the pair together. If a leakage occurs, the process fluid will only be vented into the safety channel, preventing contamination of the secondary circuit.

"Double gasket"

design adopts "leak path design" to provide extra protection against cross contamination.



■ Benefits of IES Plate Heat Exchanger

Good performance
in heat transfer process

High Heat Transfer
Coefficient

Future expansion
for increasing capacity

Lower initial cost

Easy maintenance
with low cost

Plant space saving

Less operating weight

■ MATERIALS & CONFIGURATIONS

Max. Working Pressure

- Up to 25 Bar

Connection size

- DN32 to DN450

Heat Transfer Area

- Up to 2,400m²

Gaskets

- NBR, EPDM, FPM, Viton, Silicon

Plates

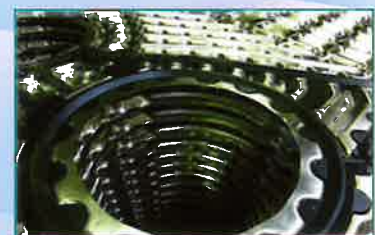
- Stainless steel AISI 304, AISI 316L, Titanium and Alloy 254 SMO
- Various thickness from 0.4~0.8mm

Connection Material

- Epoxy carbon steel, stainless steel, titanium, rubber

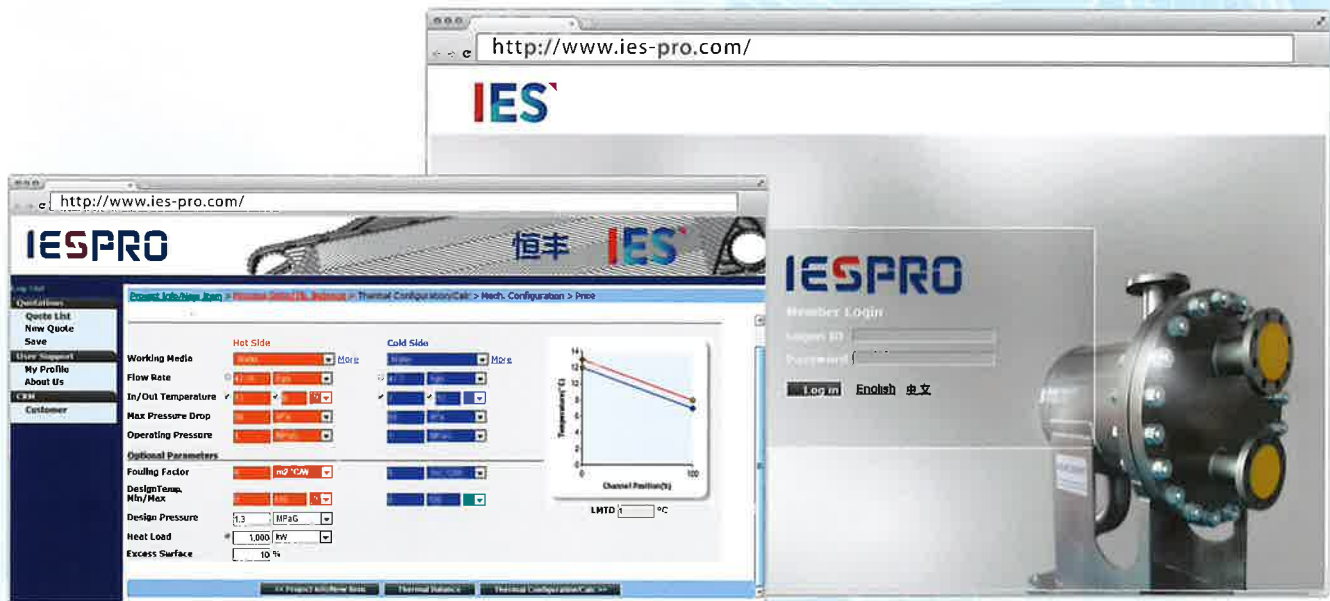
Frames

- Mild steel with epoxy painted, Stainless steel



Intelligent Selection Software - IESPRO

IESPRO is the state-of-the-art design software used to select Plate Heat Exchangers. By inputting the desired data, such as heat transfer, flow distribution or pressure drop, IESPRO immediately identifies the optimal heat exchangers to satisfy the unique requirements and applications for users. IESPRO can also provide to 6 alternative models for users to choose from. Users may also choose their own priority for selection such as price, height or weight. IESPRO is an online real-time Windows-based platform which can be accessed through the internet. Users will always receive the latest product range and up-to-date plate heat designs once they log-in to IESPRO.




Result Summary for:									
Hot Side					Cold Side				
K Required / K-Calculated					5,741.02 / 6,329.28				
Plate Thickness					0.50				
Area Provided / Area Calculated					174.22 / 158.03				
Excess Area					10.25				
Nozzle velocity In/Out					2.82 / 2.81				
Empty/Flooded Weight					1,150.31 / 1,604.48				
Estimated Sales Price					RMB 81,819.04				



www.ies-pro.com

Technical data sheets can be printed out or saved into your own project folder for easy reference.

Costing and budgeting functions are also provided by IESPRO for different users like developers, consultants and trading companies.

IESPRO can be accessed by authorized users through the internet without software installed.

Dimension drawings will also be provided for print out during the selection process. Users can convert the drawing into PDF files for easy reference.

■ IES Insulation Box

IES Cooling Insulation Box

Cooling Insulation Jacket consists of 50mm-100mm PU foam, phenolic foam or elastomeric foam with 0.8mm aluminum/stainless steel sheet. It is used to minimize the waste of energy and avoid condensation.



[Double skin thermal insulation jacket] [Elastomeric thermal insulation]

IES Thermal Insulation Box

Thermal Insulation Box consists of 50mm fiberglass or mineral wool with 0.8mm aluminum/stainless steel sheet. The aluminum sheet is clip locks design and can be possible to be dismantled for servicing.



■ Hydraulic Torque Unit

- **IES' s Hydraulic Torque Unit (HTU)** is designed for assembling and dismantling plate heat exchangers in a high efficiency and safe way.
- **Hydraulic Torque Unit** is recommended for use in assembling and dismantling any heat exchangers larger than DN100mm.
- Pressurized by electric pump, Hydraulic Cylinders compress the plates together to achieve proper tightening or loosening of gaps between the channels of the exchangers. It provides sufficient torque to assemble or dismantle the heat exchanger without damaging the flow plates with uneven torque.



Advantages of Hydraulic Torque Unit:

- Good reliability for loosen and tighten the thread rod
- Precise torque output
- Avoid damaging heat transfer plate
- No hammering effect
- User friendly and save operation time
- Safe in operation



[Electric Pump]



[Hand Pump]



[Hydraulic Cylinder]

■ Various Kind of Heat Exchangers

[Plate & Shell Heat Exchanger] ▶▶

A new trend of heat exchanger that combines the plate heat exchanger with shell & tube heat exchanger technologies. Plate & Shell Heat Exchangers are very versatile and are suited for higher-pressure applications of up to 50 bar.



◀◀ [Shell & Tube Heat Exchanger]

With traditional one-pass or two-pass designs, Shell & Tube Heat Exchangers are widely used in different industries including oil refineries and other large chemical processes. Our tailor-made & designed exchanger is an ideal cooling/heating solution to meet any plant room limitation or unique customer needs.



[Storage / Semi-Storage Heat Exchangers] ▶▶

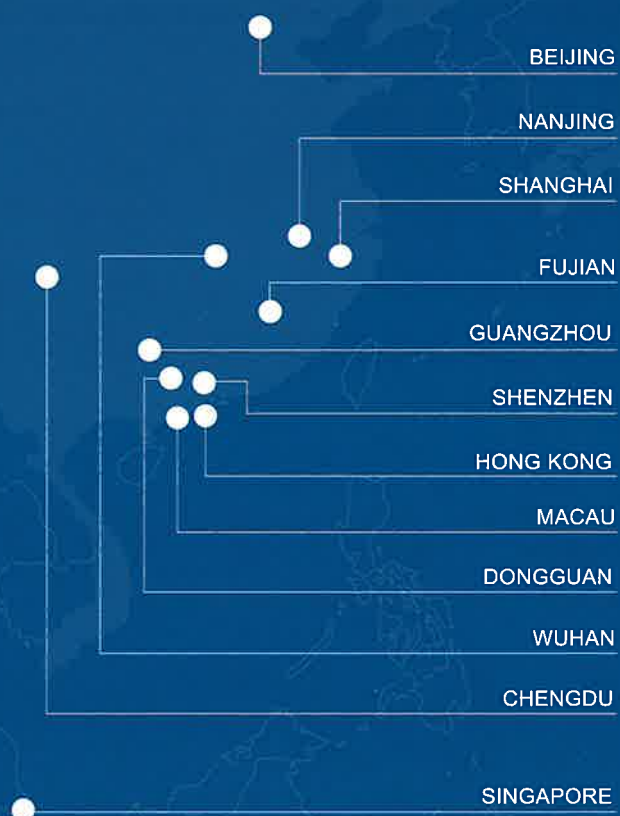
Different types of hot water calorifiers are designed for potable water application, especially for hygiene purposes and food industries. It can be coupled with any heat or renewable energy source or even with built-in electric heaters to provide sufficient and stable hot water supply in central hot water systems, boiler systems, heat pump systems and heat recovery systems.



◀◀ [Heat Transfer Station]

Heat Transfer Station is a total solution for the heat transfer process. Each station is equipped with heat exchangers, circulating pumps, temperature control, controlling valves and a built-in programmable logic controller.





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