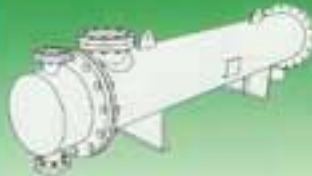
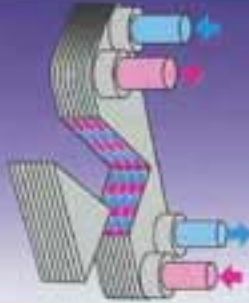


HEAT EXCHANGERS



TAIBONG INDUSTRIES INC.

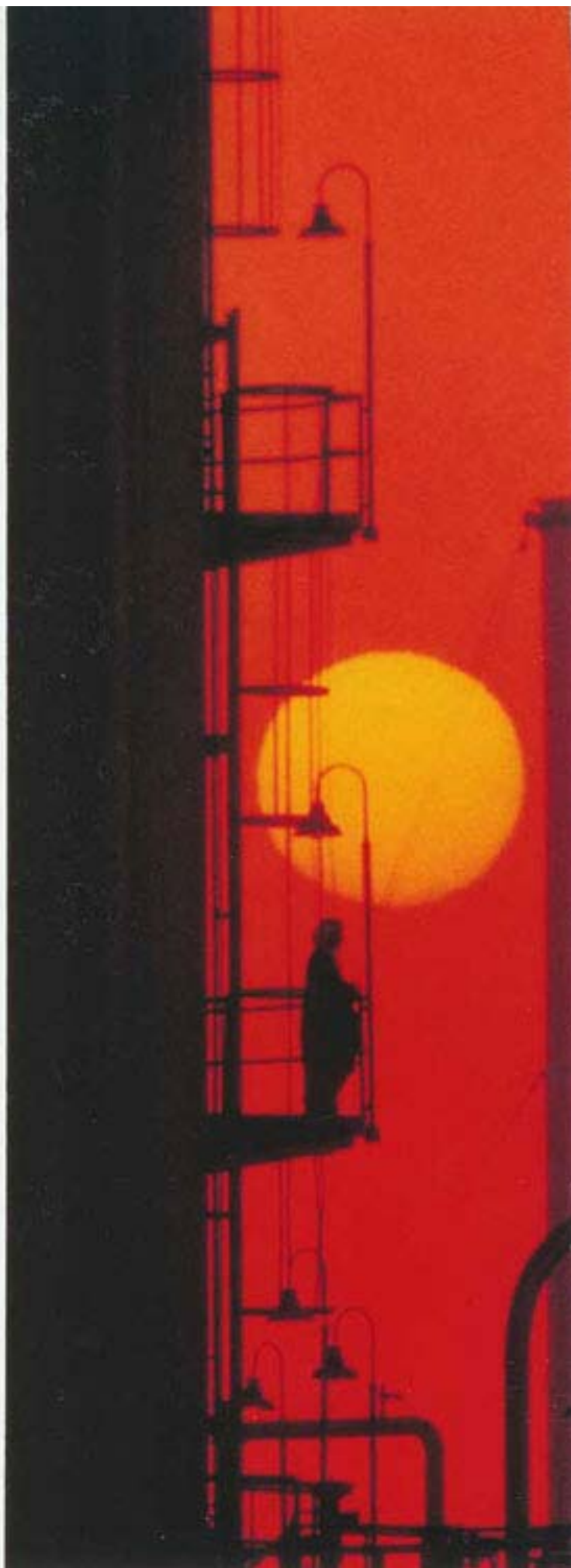
Cooling and Heating?
TAIBONG is ready to help you.

There are many heat exchanging process in various industrial fields.

From small residential heating to total plant cooling, compact and efficient heat exchanging is essential for economic investment and convenient operations.

TAIBONG'S range of products are distinguished by high efficiency and compactness for extensive range of thermal duties.

When you require new heat exchanging process or improve thermal operations, we are always ready to help you.



PRODUCTS

PLATE

- PLATE (HERRINGBONE) TYPE
- BRAZED TYPE

TUBULAR

- SHELL & TUBE TYPE
- DOUBLE PIPE TYPE

FINNED TUBE

- AIR COOLED TYPE
- GAS HEATER & COOLER
- CONDENSER

SPECIAL

- SPIRAL TYPE
- GAS TO GAS HEAT EXCHANGER

PLANT

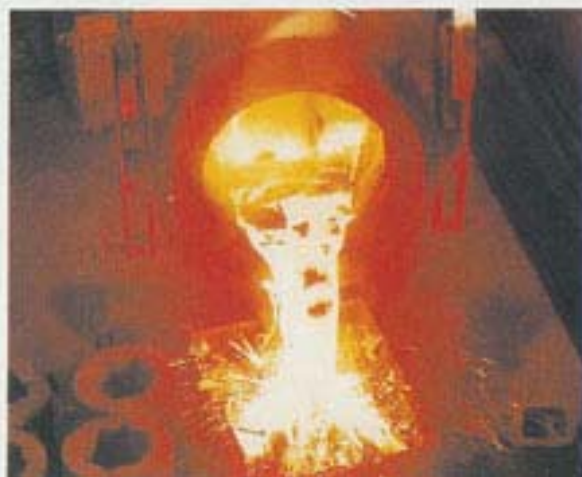
- HEATING & COOLING
- UHT & H.T.S.T
- D.I WATER SYSTEM
- HOT WATER GENERATOR
- HEAT RECOVERY SYSTEM



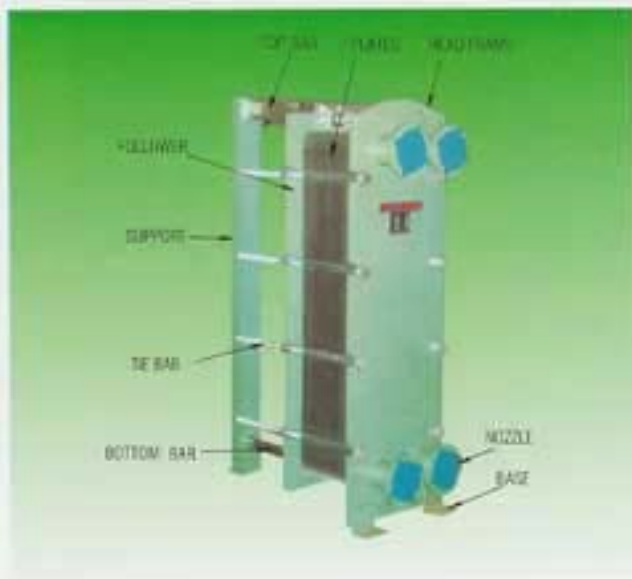
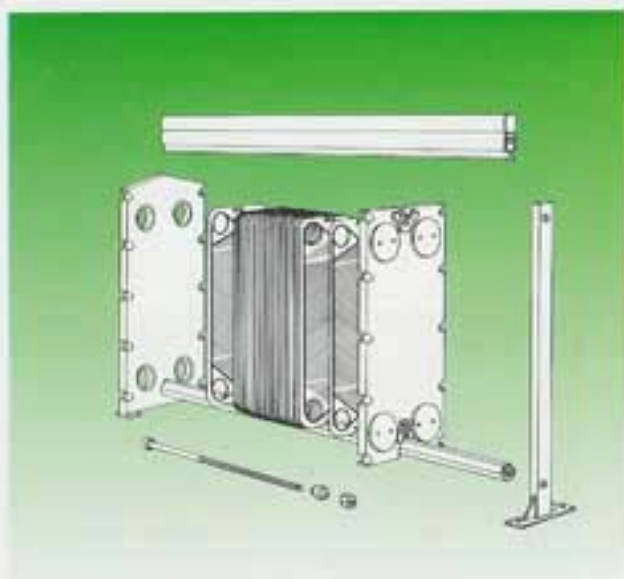
**The HISTORY OF TAIBONG is
Our Engineers's Enthusiastic Effort to be
Specialists in Heat Exchangers**

- JUN 1982 TAIBONG Industries Inc. was founded as a Plate Heat Exchanger manufacturer in Seoul, Korea
- JUL 1983 Began manufacturing of Plate Heat Exchanger
- MAY 1985 Developed the Thermal Design Program of Plate Heat Exchanger
- OCT 1986 Converted the company type as a Limited Company with capital ₩50,000,000.
- DEC 1986 Began an application of up-to-date CAD & CAM Facility for Manufacturing of press mould, tube sheet, and precision core appurtenances of heat exchangers
- JAN 1987 Began manufacturing of 14 models of Plate Coils, which are the direct submerged heating & cooling units comparatively in small heat load and 32 sets of Plate Coils had been installed in Asia Motor Company, Daewoo Motor Company, Kia Motor Company, SsangYong Motor Company.
- FEB 1987 Opened Pusan Office
- DEC 1987 Obtained the Type Approval Lube Oil Cooler from DNV for shipbuilding industry application
- SEP 1988 Built Pucheon works in Pucheon-shi, Kyonggi-do, Korea (Now Head Office : Land Space 1453M², Floor Space 1980M²)
- FEB 1991 Began manufacturing of Shell & Tube Heat Exchanger, and had successfully completed start-up operation of 16 sets of units in process of pretreatment, phosphating, metal coating, and painting at Hyundai Motor Company in Ulsan, SsangYong Motor Company in Pyeongyang, Kia Motor Company in Asan, Daewoo Motor Company in Kunsan.

- MAR1993 Began manufacturing of Spiral Plate Heat Exchanger, and completed successfully commissioning & start-up operation with engineers of LG Construction Co., Ltd. at Hoesung Petrochemical Co., Ltd. in Yeochun
- JUL 1993 Began manufacturing of Brazed Plate Heat Exchanger
- MAY1994 Obtained the permission of manufacturing of Pressure Vessel from the government
- JUL 1994 Equipped with the Test Facility for Heat Transfer Rating of heat exchanger
- AUG1994 Began marketing of Fin-Tube Heat Exchanger on a full scale. Since 1991 Taibong Engineers started the design of Air Cooled & Fin Tube heat Exchanger from in 1991 to in 1995 Taibong had commissioned the Fin Tube Heat Exchanger successfully in all aspects of thermal and mechanical design, manufacturing, commissioning, start-up operation, and supervising in major cities the Solid Wastes Incineration and Petrochemical Plant with the sophisticated engineers of Halla Heavy Industry Co., Ltd., Daewoo Corp., Shinsaeng Plant & Engineering Co., Ltd., Toyo Engineering Co., Ltd.
- FEB 1995 Began Exporting Lube Oil Coolers and Fresh Water Coolers in Japan Shipbuilding Market



PLATE



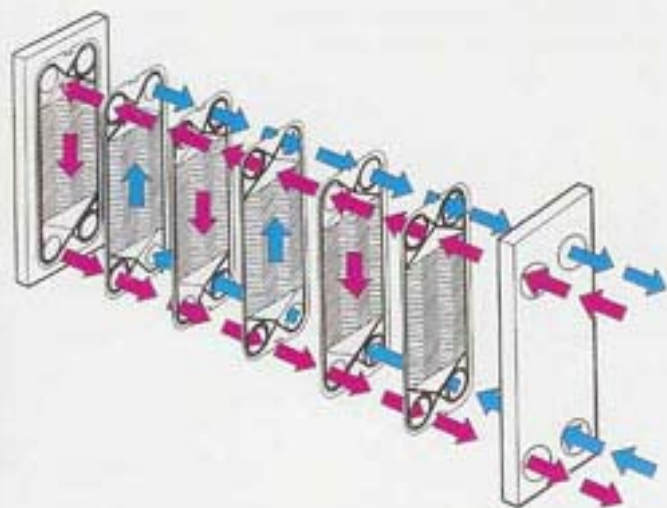


PLATE TYPE

Plate Type Heat Exchanger has the most extensive range of application.

In 1983 the 1st Plate Heat Exchanger was manufactured, TAIBONG have supplied with our clients with over 10,000 units in domestic and abroad.

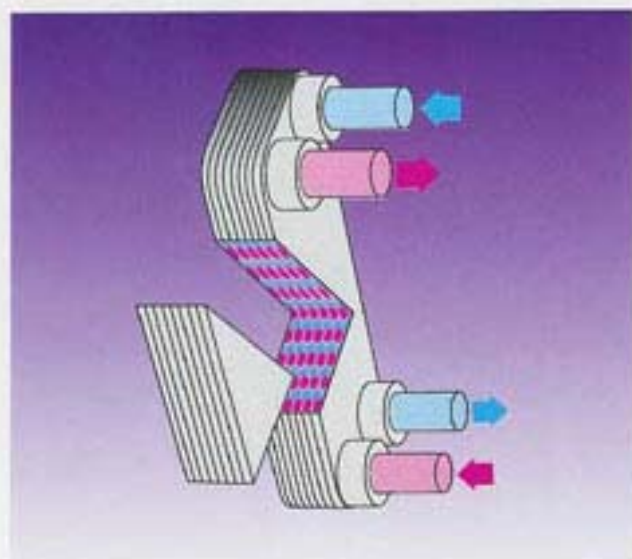
The merits of Plate Heat Exchanger are high heat transfer coefficients, easy operation & maintenance, low fouling factor and economies in installation and space.

■ Application

- Chemical & Petrochemical Plant
- District Floor Heating & Hot Water Generating in Co-Generation Power Plant
- Shipbuilding Industry
- Iron & Steel Industry
- Semi-Conductor & Electronics
- Chiller-Free Cooling System & Ice Storage System in Air Conditioning
- Fishery Industry
- Beverage & Food Industry

■ Design Condition

- Pressure : Up to 25 Kg/cm²
- Temperature : Up to 160 °C



BRAZED TYPE

Brazed Heat Exchanger is one of the most compact type heat exchanger unit among heat exchangers have ever developed. This units can be installed in the low fouling liquid process with hermetic sealing requirement. The flow pattern of Brazed Units has the same principle of identity with that of Plate units, but the function of Copper Welding between Plates replaced that of Gasket Sealing of Plate units as a sealing means.

■ Application

- Floor Heating & Hot Water Generating
- Evaporator & Condenser in Chiller
- Oil Cooler in Packaged Machinery like a Plastic Injector

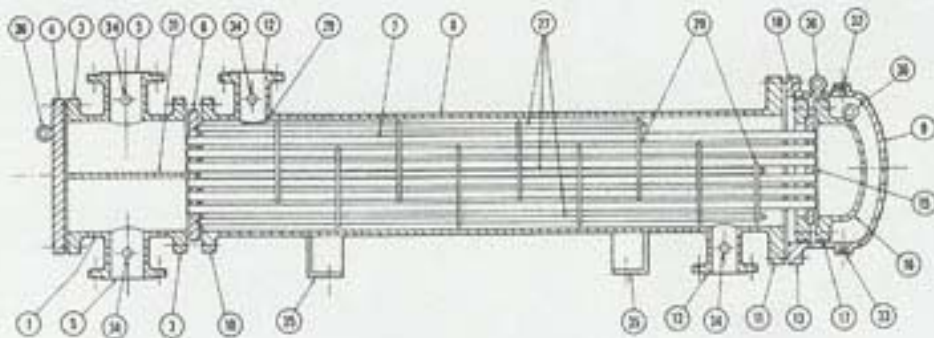
■ Design Condition

- Pressure : Up to 30Kg/cm²
- Temperature : Up to 180 °C

TUBULAR

SHELL & TUBE TYPE

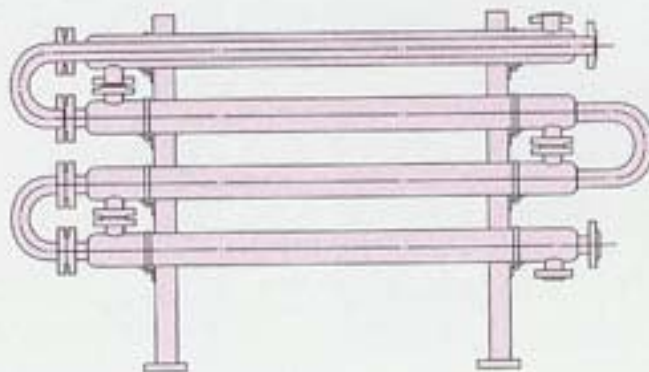
Shell & Tube Heat Exchanger is little limited on pressure, temperature in design and its the wide range of applications in cooling, heating, evaporating, and condensing made Shell & Tube units be a Synonym for Heat Exchangers.



- | | | |
|---|----------------------------------|---------------------------------------|
| 1. Stationary Head Channel | 13. Shell Cover Flange | 27. Tirods and Spacers |
| 2. Stationary Head-Bonnet | 14. Expansion Joint | 28. Reverse Baffles or Support Plates |
| 3. Stationary Head-Flange Channel or Bonnet | 15. Floating Tubesheet | 29. Impingement Plate |
| 4. Channel Cover | 16. Floating Head Cover | 30. Longitudinal Baffle |
| 5. Stationary Head-Channel Nozzle | 17. Floating Head Cover Flange | 31. Pass Partition |
| 6. Stationary Tubesheet | 18. Floating Head Backing Device | 32. Vent Connection |
| 7. Tubes | 19. Split Shear Ring | 33. Drain Connection |
| 8. Shell | 20. Slip-on Backing Flange | 34. Instrument Connection |
| 9. Shell Cover | 21. Floating Head Cover-External | 35. Support Saddle |
| 10. Shell Flange-Stationary Head End | 22. Floating Tubesheet Skirt | 36. Lifting Lug |
| 11. Shell Flange-Rear Head End | 23. Packing Box | 37. Support Bracket |
| 12. Shell Nozzle | 24. Packing | 38. weir |
| | 25. Packing Gland | 39. Liquid Level Connection |
| | 26. Lantern Ring | |

DOUBLE PIPE TYPE

Two kinds of liquids flow the heat transfer pipe inside and outside respectively. This units has a simple structure and have been installed in Waste and Fouled Liquids, which should have the consideration of a big fouling factor.

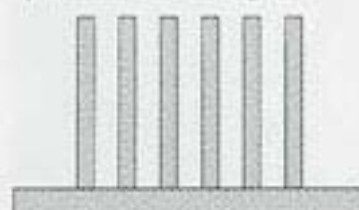


FINNED TUBE

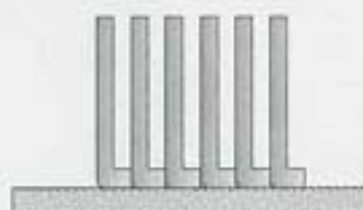
FINNED TUBE TYPE

Fin Tube Heat Exchangers are used to be usually installed in a different two phase flow media or low density flow media heat exchanging process such as Liquid to Gas, Steam to Gas, Air to Gas etc.

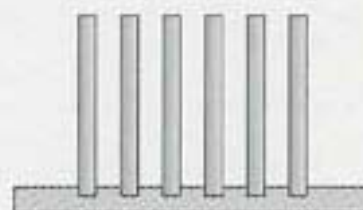
It means that this unit has so a big difference of film coefficients between two flow media that improved in heat transfer efficiency by means of fin adhering to tube.



HIGH FREQUENCY WELDED TYPE
(DESIGN TEMP: NO LIMITED)

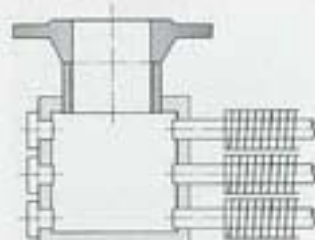


WRAPPED ON TYPE(L-FIN)
DESIGN TEMP: Up to 145°C

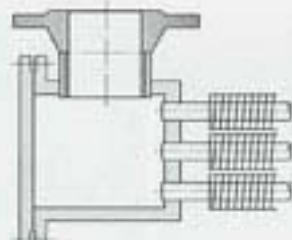


EMBEDDED TYPE
(DESIGN TEMP: Up to 400°C)

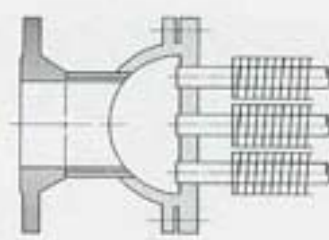
HEADER TYPE



PLUG



COVER PLATE



BONNET



AIR-COOLED TYPE

Air-Cooled Heat Exchanger include Tubes, Bundles, which generally has spiral-wound Fins upon the tubes, and a fan, which moves air across the Tubes.

The inside liquid of Fin Tube unit is cooled by the Forced Air Blasting originated from Electric Motor Fan.

The Cooling Tower installation is not required in this unit because the air is cooling heat source and so, water consumption in cooling tower evaporation can be eliminated. Since 1970s the use of Air-Cooled type heat exchangers grew rapidly all over the world. The increased use of Air-Cooled heat exchangers has resulted from areas of water scarcity, significant increase in water cost, and human concern for water pollution.

■ Application

- Condenser (Water to Vapor)
- Cooler (Gas to Liquid)

■ Design Condition

- Pressure : Up to 50 Kg/cm²
- temperature : Up to 900 °C

SPECIAL

SPIRAL TYPE

Spiral Plate Heat Exchanger is our Order-Made product which consists of covers, plain plate rolled spirally, and pins.

This unit is used to be designed for the long thermal length duty, the high viscosity liquid, and the highly fouled liquid process.

■ Application

- Condenser & Evaporator (Gas to Air, Air to Liquid)
- Cooler & Heater (Liquid to Liquid, Liquid to Air)

■ Design Condition

- Pressure : Up to 18Kg/cm²
- Temperature : Up to 400 °C

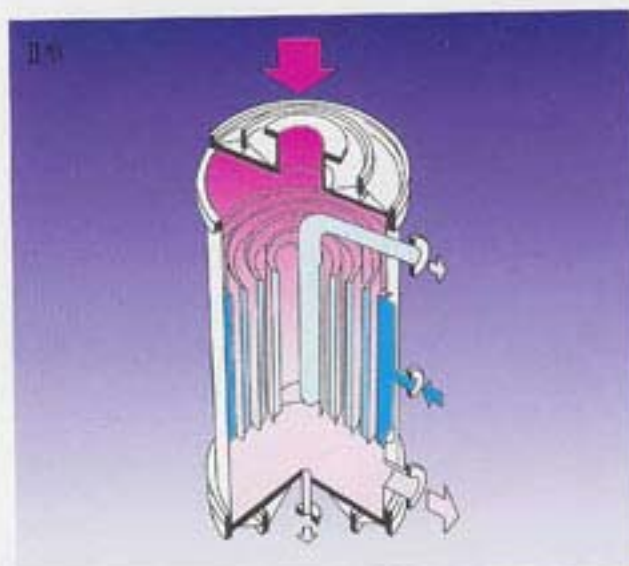


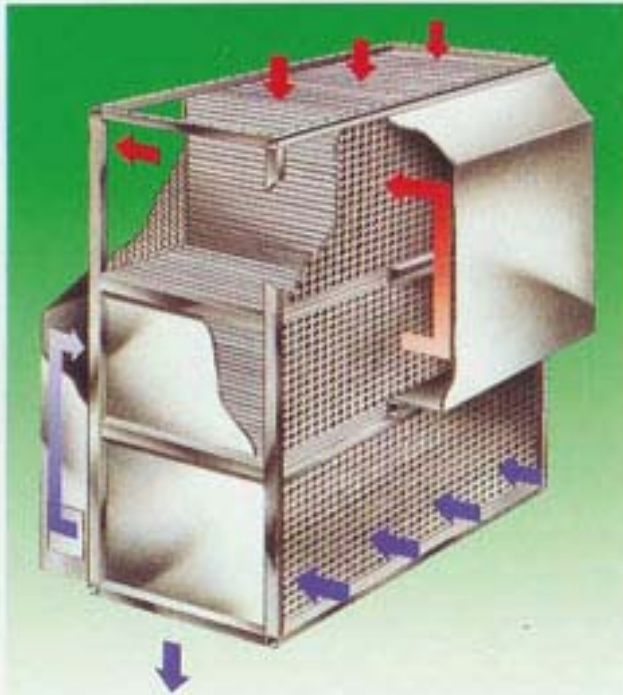
PLATE COIL

Plate Coil was developed to cover the small heat load of various chemical Tanks in heating and cooling, to be submerged directly in reacting, rinsing, and shower tanks.

■ Application

- Cleaning, Coloring, ED Process in Anodizing
- Pre-Treatment Facility in Painting, Metal Coating
- Degreasing, Hot Water Cleaning, Phosphating and Various Chemical Tanks





TUBULAR TYPE (Multiple Counter-Crossflow)

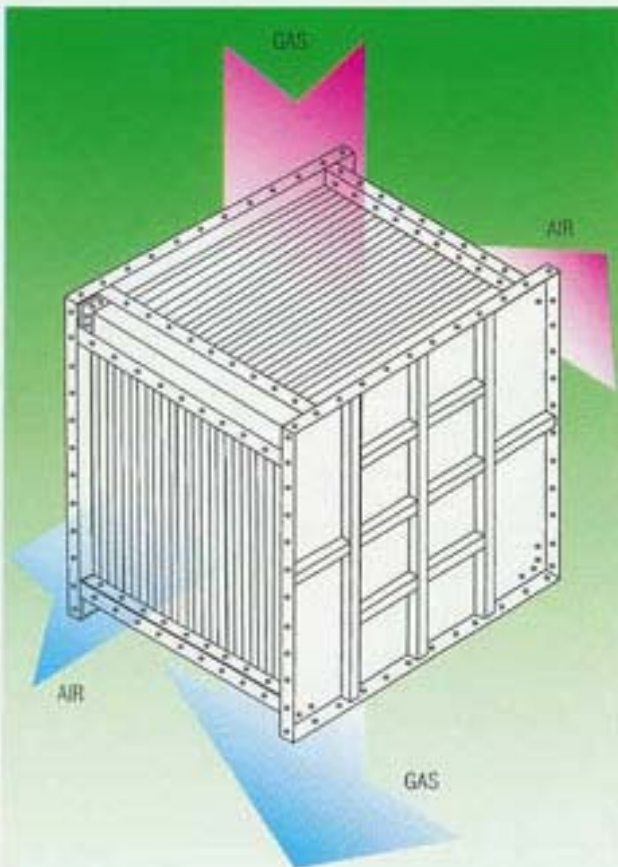
Tubular Heat Exchanger is used for Heating or Cooling gas with Gas, Steam, Water or other medium

■ Application

- Oil and Coal-Fired Power Plant and Co-Generation plant
- Industrial Combustion plant
- Refuse and Special Waste Incineration plant

■ Design Condition

- Pressure: Up to 1000mmAq
- Temperature: Up to 900 °C



PLAIN PLATE TYPE

Plain Plate Heat Exchanger is applicable to the low density Air to Air heat exchanging process because channel spacing is big. This unit consists of steel case, plain plate, and pins, which are stud-welded on the surface of plain plate to provide the regular distance intervals and to support the shear load in plate pack.

■ Application

- Oil and Coal-Fired Power Plant and Co-Generation plant
- Industrial Combustion plant
- Refuse and Special Waste Incineration plant

■ Design Condition

- Pressure : Up to 1000 mmAq
- Temperature : Up to 900 °C



TAIBONG INDUSTRIES INC.

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