

# HG SERIES I

## Structural Composition

The HG series I plate heat exchanger is composed of a set of herringbone metal corrugated plates with openings, which form a liquid flow channel, and heat will be transferred between the two liquids. This group of corrugated plates is assembled between a fixed plate and a movable compression plate, and is compressed by clamping bolts.

These plates are equipped with sealing gaskets, which seal the channels between the plates and allow liquid to flow alternately into adjacent channels. The plate and the movable plate are fixed between the upper and lower rods, and the guide rod is fixed on the upright column.

By means of counter-flow, the hot side medium transfers thermal to the cold side medium through plates between channels, and the media do not mix with each other. For the one pass solution design, all connections are on the fixed frame side which will easier the plate heat exchanger installation and disassembling. For cleaning and repair, only the heat exchanger needs to be disassembled for repair, not the pipes.

## Recommended Applications

HFM plate heat exchanger HA series II can be specially used for heating or cooling in some specific fields. For example, HG50D, HG100C, HG150B, HG250C and other models are very suitable for heating and cooling of HVAC, industrial circulating water, and HG50B, HG100A, HG150A and other models are very suitable for steam condensing conditions.

## Flow Plate

The plate design has two corrugated forms: horizontal corrugated and vertical corrugated. They can meet different pressure drop requirements and suit for different working conditions media.

The corrugated “herringbone” pattern makes more contact points between plates bearing more uniform pressure and ensures turbulent flow in the whole effective area.

The food-grade heat exchanger has a food-grade frame, which is safer and more hygienic.

Compared with traditional shell-and-tube heat exchangers, it has higher heat transfer efficiency and occupies less space.

Quality after-sales service.

## Technical Parameters

| Construction Standard        | Design Pressure (barg) | Max. Design Temperature °C | Construction Standard |
|------------------------------|------------------------|----------------------------|-----------------------|
| Carbon Steel/Stainless Steel | PED                    | 10.0/16.0                  | 180                   |
|                              | ASME                   | 10.0/16.0                  | 180                   |

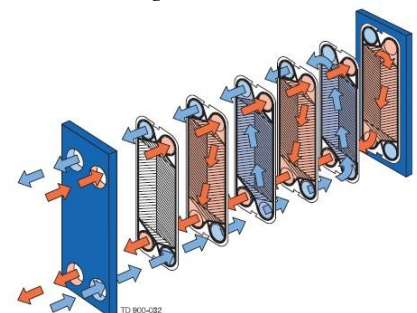
- Painted frame, color RAL 5002 (available in other colors)
  - Stainless steel frame, designed for the food and dairy industry.
- Both frames come with clamping bolts placed around the frame edge.



## Data Required for Correct Quotation

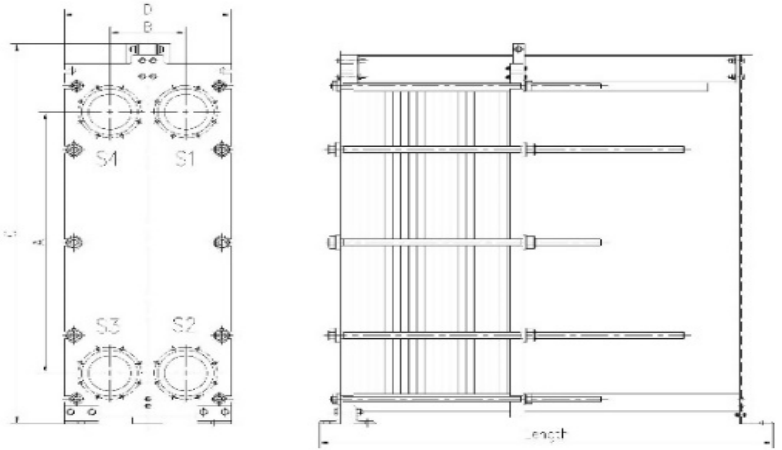
- Types of Media
- Working Pressure
- Pressure Loss
- Thermodynamic properties
- Temperatures
- Flow rates

*Above data determines the choice of heat exchanger.*



## Interface information

Metal bushings (stainless steel, titanium or other materials), welding flanges, threaded pipes, clamps, etc.  
Other forms of interfaces can be made according to



| Type   | Interface size | A/ mm | B/ mm | C/ mm | D/ mm | Length Max./ mm | Maximum flow / m3/h |
|--------|----------------|-------|-------|-------|-------|-----------------|---------------------|
| HG50B  | DN50           | 371   | 130   | 670   | 323   | 1045            | 40                  |
| HG50C  | DN50           | 743   | 130   | 1020  | 323   | 1045            | 40                  |
| HG50D  | DN50           | 1115  | 130   | 1390  | 323   | 1045            | 40                  |
| HG100A | DN100          | 708   | 262   | 1110  | 540   | 2286            | 140                 |
| HG100B | DN100          | 1113  | 262   | 1607  | 540   | 3196            | 140                 |
| HG100C | DN100          | 1519  | 262   | 2103  | 540   | 3196            | 140                 |
| HG150A | DN150          | 1092  | 314   | 1666  | 640   | 2596            | 280                 |
| HG150B | DN150          | 1572  | 314   | 2146  | 640   | 2596            | 280                 |
| HG250A | DN250          | 1406  | 420   | 2170  | 895   | 3217            | 280                 |
| HG250B | DN250          | 1703  | 420   | 2467  | 895   | 3817            | 800                 |
| HG250C | DN250          | 2000  | 420   | 2764  | 895   | 3817            | 800                 |
| HG350A | DN350          | 1698  | 565   | 2617  | 1136  | 4925            | 1700                |
| HG350B | DN350          | 2035  | 565   | 2954  | 1136  | 4925            | 1700                |

| Plate | Material         | Applicable Mediums  | Thickness     |
|-------|------------------|---|---------------|
|       | 304SS            | Pure water/ Edible oil/ Ethanol   | 0.4/ 0.5/ 0.6 |
|       | 316SS            | Water/ Edible oil/ Ethanol/ Carbonic acid/ 30% Sulphuric acid   | 0.4/ 0.5/ 0.6 |
|       | 254SMO           | Saline / Inorganic acid   | 0.6           |
|       | Titanium         | Sea water/ 130°C Chloride   | 0.5/ 0.6      |
|       | Hastello y C-276 | Organic acid / High temperature HF acid / Hydrochloric acid (< 40%) / Phosphoric acid (< 50%) / Chloride / Fluoride | 0.6           |
|       | Nickle 200/201   | High temperature 50~70% Alkali  | 0.6           |

| Gasket | Material                                 | Applicable Mediums  | Temperature/ °C |
|--------|--|---|-----------------|
|        | EPDM<br>Ethylene propylene diene monomer | Water/ Steam/ Edible oil  | -25-150         |
|        | NBR<br>Nitrile rubber                    | Water/ Edible oil/ Mineral oil/ Ethanol/ Ethylene glycol  | -25-130         |
|        | FPM/Viton<br>Fluoro rubber               | High concentration inorganic acid (oxidizing acid, etc.) / Hot water and steam / High temperature mineral oil | -20-180         |
|        | CR<br>Chloroprene rubber                 | Ammonia and various fluorine-containing refrigerants  | -40-125         |