

Hexnovo
Heat Transfer Solution

Hexnovo is the global supplier of brazed plate heat exchanger. The products are widely used in refrigeration, air condition, heat pump, heating and process cooling.

Hexnovo provide three core value for our customers:

Product: Focus product innovation, and high quality

Solution: with our wide application experience, we optimize the heat exchanger solution for our customer

Service: provide fast, and easy service for our customer.



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Declaration

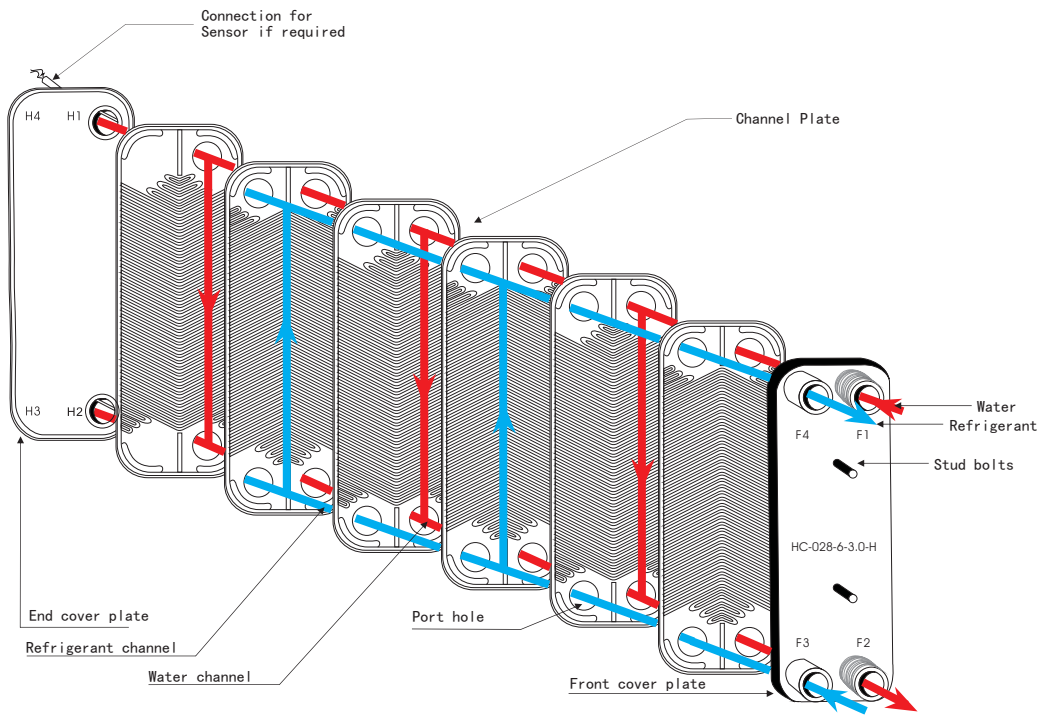
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Brazed Plate Heat Exchanger

• Brazed Plate Heat Exchanger(BPHE)

Brazed Plate Heat Exchanger Concept

The state to art Brazed Plate Heat Exchanger(BPHE) consists of a package of thin, corrugated plates that are brazed together by copper (or nickel) in the vacuum brazing furnace. It has high pressure rating and tight sealing. The corrugated plate pattern increase the turbulence of flow, then enhance the heat transfer efficiency. It is an ideal solution for air condition, heat pump, refrigeration and processing cooling,etc.



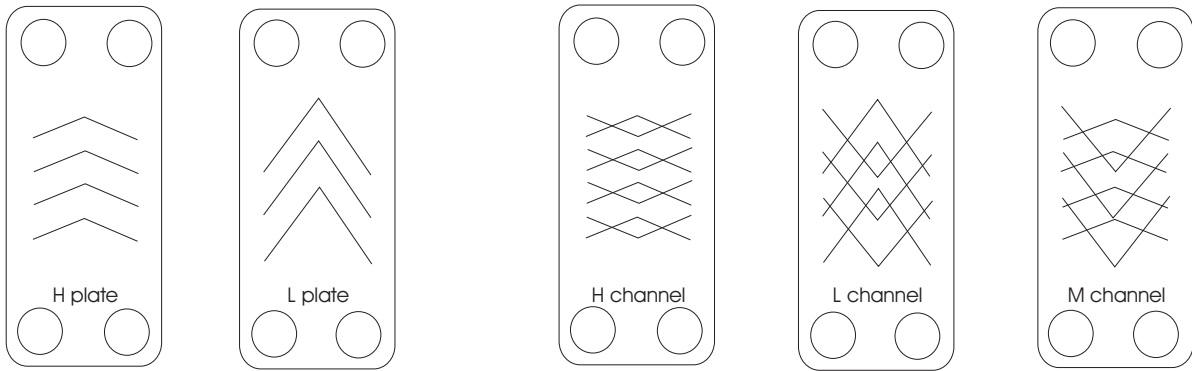
Our Brazed Plate Heat Exchanger (BPHE)

Hexnovo is focused on the brazed plate exchanger's technology. With wide application knowledge,we offer what our customer asked for. Our BPHE offers:

- Flexible Design: Customized solution, easy installation
- Optimized performance:optimized design according to system parameter, stable operation, minimize the cost
- Fast delivery: help our customer to increase turnover
- 100% product test: 100% pressure and leakage test, high reliability
- Fully product range: copper and nickel brazing, single, dual system and double wall product
- Approval: UL,PED, KRAIA
- Compact: less space, easy installation
- Small hold up volume: less refrigerant charge, low carbon footprint
- High design pressure: 45bar design pressure, excellent solution for R410A, etc new refrigerant

• Design and Nomination of BPHEs

Plate and Channel type



Our BPHE have H and L two plate design, and get H,M and L three channel type;

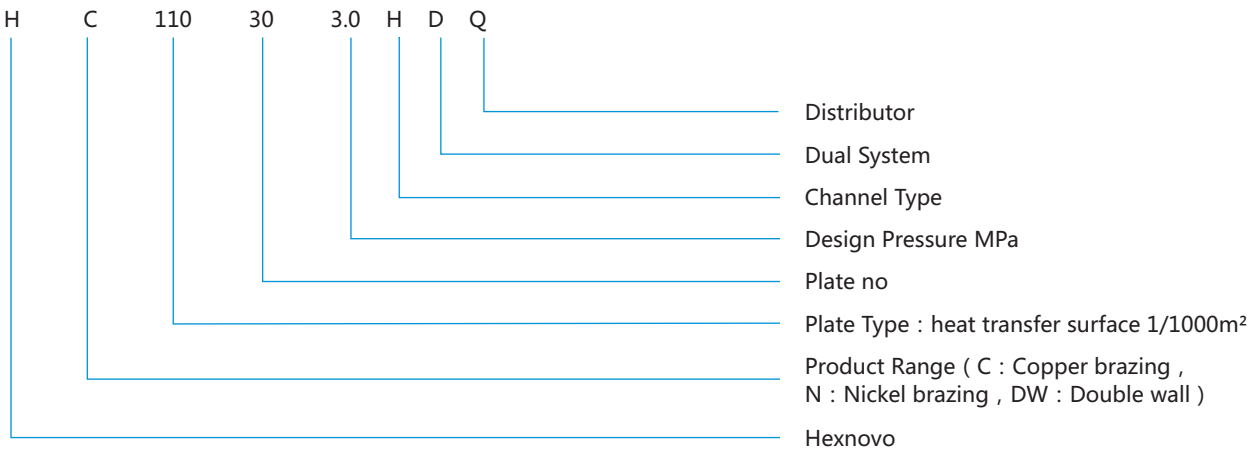
H Channel:High heat transfer coefficient, high pressure drop

L channel: Low heat transfer coefficient , low pressure drop

M channel: Combination of H and L plates. The pressure drop and heat transfer coefficient are between that of H and L channel.

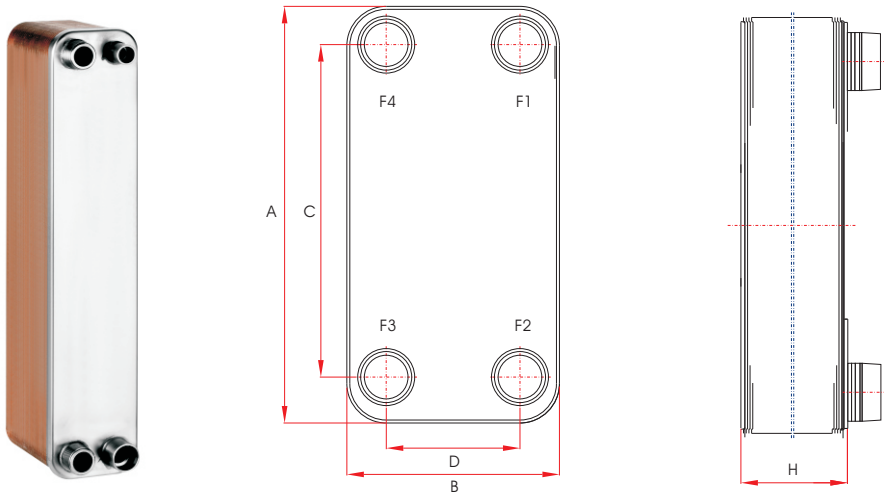
The channel will be selected according to the optimization of system parameter

Product Nomination



• HC series Copper Brazed Plate Heat Exchanger

- Based on well proven plate technology, High performance and High reliability
- Modular design, Fast delivery
- Back to Back design for double system
- Patented distributor design. Improve the refrigerant distribution, enhance the heat transfer and stabilize the system operation
- Widely used in AC, heat pump and refrigeration unit with HFC and HCFC, such as R22, R410A, etc.

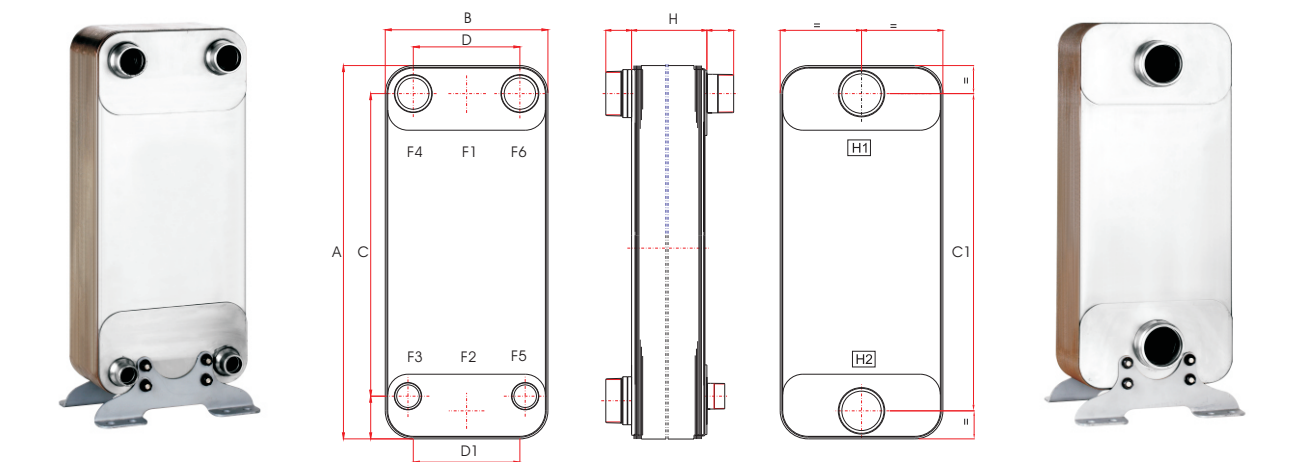


| Type | | HC012 | HC014 | HC014B | HC014C | HC018 | HC022 | HC028 | HC030 | HC052 | HC095 | HC095B | HC136 | HC210 | HC310 |
|-----------------------|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| A | mm | 192 | 203 | 193 | 193 | 230 | 316 | 311 | 325 | 527 | 617 | 608 | 490 | 739 | 985 |
| B | mm | 73 | 73 | 84 | 84 | 89 | 73 | 111 | 95 | 111 | 190 | 182 | 250 | 322 | 373 |
| C | mm | 154 | 172 | 154 | 154 | 182 | 278 | 250 | 269 | 466 | 515 | 519 | 378 | 603 | 815 |
| D | mm | 40 | 42 | 42 | 42 | 43 | 42 | 50 | 39 | 50 | 98 | 92 | 138 | 188 | 200 |
| H | mm(25bar) | — | — | — | — | — | — | — | — | — | — | — | — | — | 20+2.85*N |
| | mm(30bar) | 9+2.3*N | 9+2.3*N | 9+2.3*N | 9+2.3*N | 9+2.3*N | 9+2.3*N | 9+2.4*N | 9+1.55*N | 9+2.4*N | 11+2.4*N | 11+2.8*N | 13+2.85*N | 13+2.85*N | — |
| | mm(45bar) | — | 11+2.3*N | — | — | 11+2.3*N | 11+2.3*N | 11+2.4*N | 11+1.55*N | 11+2.4*N | 15+2.4*N | 15+2.8*N | 15+2.85*N | 17+2.85*N | — |
| Volume | L(Primary side) | 0.018*N/2 | 0.020*N/2 | 0.022*N/2 | 0.022*N/2 | 0.036*N/2 | 0.040*N/2 | 0.050*N/2 | 0.028*N/2 | 0.094*N/2 | 0.210*N/2 | 0.250*N/2 | 0.250*N/2 | 0.400*N/2 | 0.650*N/2 |
| | L(Secondary side) | 0.018*(N-2)/2 | 0.020*(N-2)/2 | 0.022*(N-2)/2 | 0.022*(N-2)/2 | 0.036*(N-2)/2 | 0.040*(N-2)/2 | 0.050*(N-2)/2 | 0.028*(N-2)/2 | 0.094*(N-2)/2 | 0.210*(N-2)/2 | 0.250*(N-2)/2 | 0.250*(N-2)/2 | 0.400*(N-2)/2 | 0.650*(N-2)/2 |
| Weight | kg | 0.4+0.044*N | 0.5+0.050*N | 0.4+0.050*N | 0.4+0.050*N | 1.1+0.055*N | 0.7+0.070*N | 1.2+0.100*N | 1.0+0.090*N | 1.8+0.230*N | 4.6+0.440*N | 4.6+0.440*N | 6.5+0.420*N | 13.0+0.820*N | 31.0+1.200*N |
| Heat Transfer Surface | m² | (N-2)*0.012 | (N-2)*0.014 | (N-2)*0.014 | (N-2)*0.014 | (N-2)*0.018 | (N-2)*0.022 | (N-2)*0.028 | (N-2)*0.030 | (N-2)*0.052 | (N-2)*0.095 | (N-2)*0.095 | (N-2)*0.136 | (N-2)*0.210 | (N-2)*0.310 |
| Max. Plate No. | | 50 | 60 | 60 | 60 | 60 | 60 | 150 | 150 | 150 | 250 | 250 | 250 | 250 | 300 |
| Channel Type | | H | H,M,L | H | H | H | H,M,L | H,M,L | H | H,M,L | H,M,L | H | H,M,L | H | H |
| Distributor | | — | — | — | — | — | — | — | Q | Q | Q | — | Q | Q | — |
| Flow | | parallel | parallel | parallel | Cross | Parallel | Parallel | Parallel | Parallel | Parallel | Parallel | Parallel | Parallel | Parallel | Parallel |
| Max Connection | | 3/4" | 3/4" | 3/4" | 3/4" | 3/4" | 3/4" | 1-1/4" | 1-1/4" | 1-1/4" | 2" | 2" | 3" | 4" | 5" |
| Max. Flow Rate | m³/h | 4 | 4 | 4 | 4 | 6 | 4 | 18 | 18 | 18 | 35 | 42 | 70 | 105 | 150 |
| Plate Material | | 304 | 304或316L | 304 | 304 | 304or316L | 304or316L | 304or316L | 316L | 304or316L | 304or316L | 304or316L | 304or316L | 304or316L | 304or316L |
| Plate Thickness | mm | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 | 0.4 |

Design Pressure : 30or45bar Test Pressure : 45or67bar Design Temperature : -196~+200℃

● HC series Dual Circuit Brazed Plate Heat Exchanger

Dual circuit brazed plate heat exchanger is an optimized design for double system. Higher performance at part load and minimize the risk of freezing.

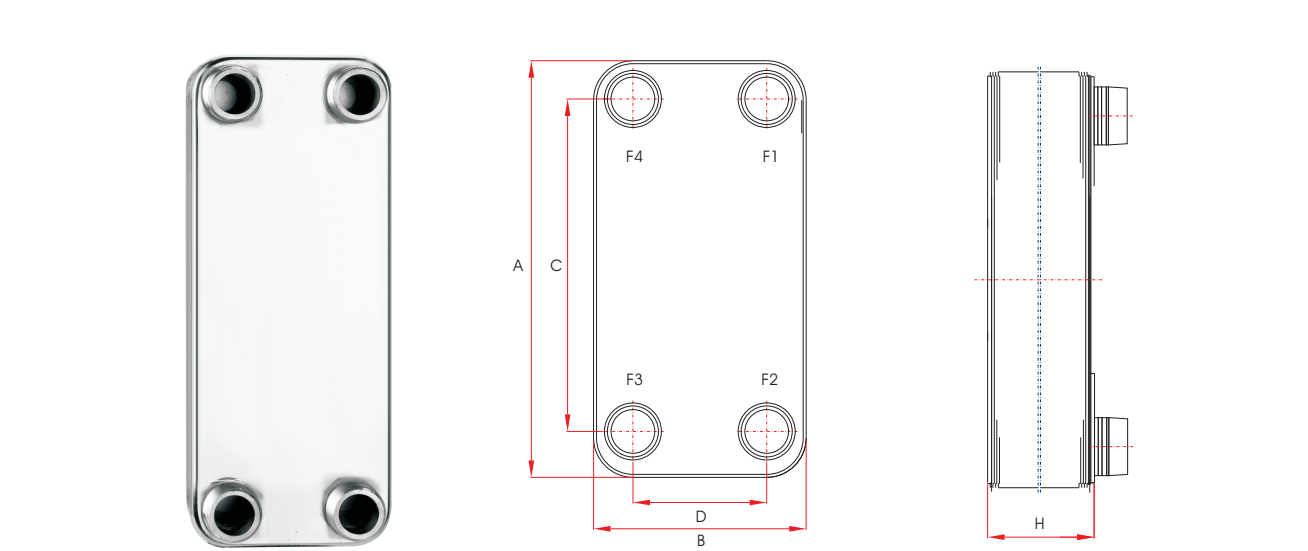


| Type | | HC110 | HC210 |
|-----------------------|-------------------|---------------|---------------|
| A | mm | 490 | 732 |
| B | mm | 250 | 322 |
| C | mm | 391 | 599 |
| C1 | mm | 397 | 628 |
| D | mm | 157 | 211 |
| D1 | mm | 164 | 232 |
| H | mm(30bar) | 11+2.3*N | 13+2.85*N |
| | mm(45bar) | 15+2.3*N | 17+2.85*N |
| Volume | L(Primary side) | 0.160*N/2 | 0.400*N/2 |
| | L(Secondary side) | 0.160*(N-2)/2 | 0.400*(N-2)/2 |
| Weight | kg | 6.5+0.420*N | 13+0.820*N |
| Heat Transfer Surface | m² | (N-2)*0.110 | (N-2)*0.210 |
| Max. Plate No. | | 198 | 300 |
| Channel Type | | HD | HD |
| Distributor | | Q | Q |
| Flow | | Parallel | Parallel |
| Max Connection | | 2-1/2" | 3-1/8" |
| Max. Flow Rate | m³/h | 62 | 105 |
| Plate Material | | 316L | 316L |
| Plate Thickness | mm | 0.4 | 0.4 |

Design Pressure : 30or45bar Test Pressure : 45or67bar Design Temperature : -196~+200℃

● HN series Nickel Brazed Plate Heat Exchanger

The HN products are nickel brazed. It has high working temperature and high corrosion resistance. It is widely used in process cooling, such as laser machine,etc.

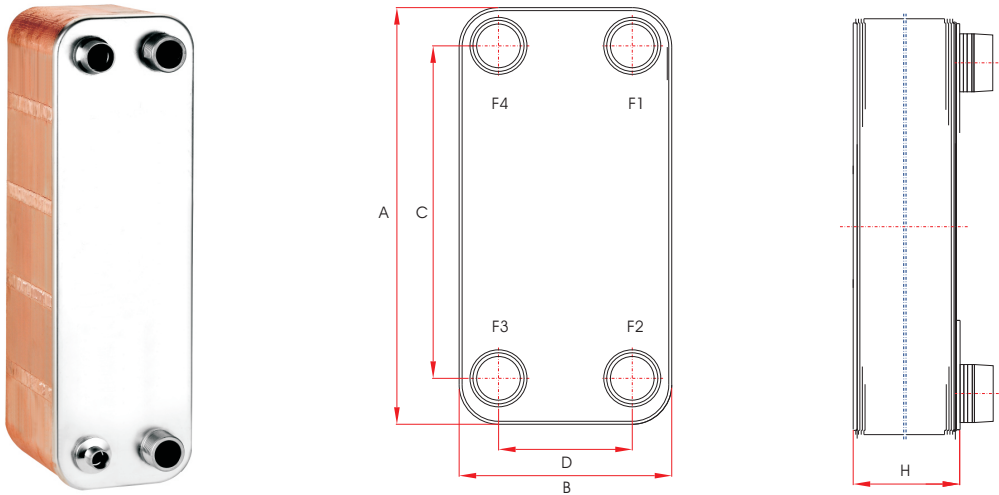


| Type | | HN012A | HN014 | HN023A | HN027A | HN052A | HN095A |
|-----------------------|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| A | mm | 192 | 208 | 315 | 286 | 523 | 616 |
| B | mm | 73 | 73 | 73 | 116 | 107 | 191 |
| C | mm | 154 | 172 | 278 | 234 | 466 | 519 |
| D | mm | 40 | 40 | 40 | 63 | 50 | 92 |
| H | mm(10bar) | 7+2.24*N | 7+2.24*N | 7+2.24*N | 9+2.24*N | 7+2.4*N | 7+2.4*N |
| Volume | L(Primary side) | 0.018*N/2 | 0.022*N/2 | 0.040*N/2 | 0.050*N/2 | 0.094*N/2 | 0.210*N/2 |
| | L(Secondary side) | 0.018*(N-2)/2 | 0.022*(N-2)/2 | 0.040*(N-2)/2 | 0.050*(N-2)/2 | 0.094*(N-2)/2 | 0.210*(N-2)/2 |
| Weight | kg | 0.4+0.044*N | 0.4+0.048*N | 1.2+0.070*N | 1.3+0.125*N | 1.8+0.230*N | 7.8+0.420*N |
| Heat Transfer Surface | m² | (N-2)*0.012 | (N-2)*0.014 | (N-2)*0.023 | (N-2)*0.027 | (N-2)*0.052 | (N-2)*0.095 |
| Max. Plate No. | | 60 | 60 | 60 | 60 | 60 | 60 |
| Channel Type | | H | H | H | H | H | H |
| Distributor | | — | — | — | — | — | — |
| Flow | | Parallel | Parallel | Parallel | Parallel | Parallel | Parallel |
| Max Connection | | 3/4" | 3/4" | 3/4" | 1-1/4" | 1-1/4" | 2" |
| Max. Flow Rate | m³/h | 4 | 4 | 4 | 22 | 12 | 35 |
| Plate Material | | 304 | 304or316L | 304or316L | 304or316L | 304or316L | 304or316L |
| Plate Thickness | mm | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 |

Design Pressure : 10bar Test Pressure : 15bar Design Temperature : -196~+200℃

● HDW Double Wall Brazed Plate Heat Exchanger

HDW double wall unit is special designed for the applications where the leakage will be crucial. The leakage will be detected easily when it happens with HDW unit.

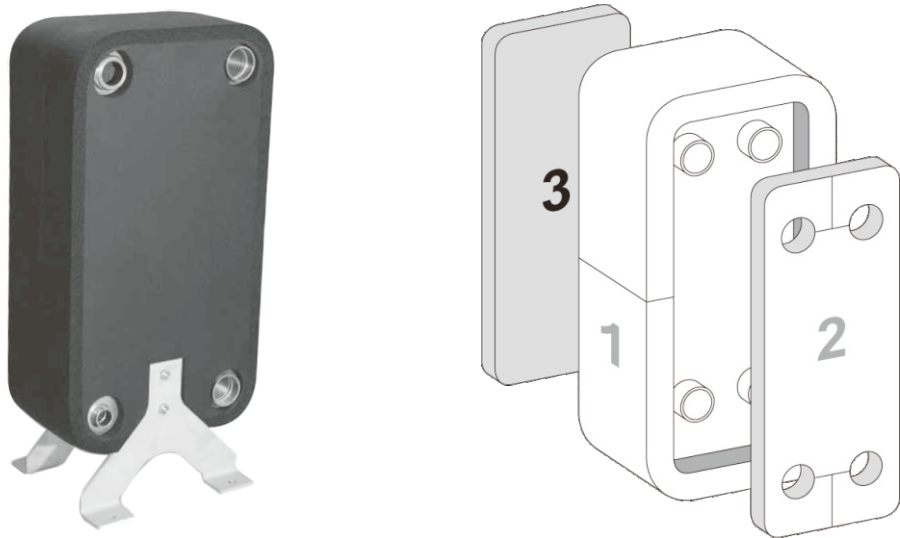


| Type | | HDW014 | HDW032 | HDW052 | HDW095 |
|-----------------------|-------------------|---------------|---------------|---------------|---------------|
| A | mm | 198 | 288 | 524 | 616 |
| B | mm | 88 | 188 | 108 | 191 |
| C | mm | 156 | 243 | 466 | 519 |
| D | mm | 46 | 72 | 50 | 92 |
| H | mm(30bar) | 7+2.35*N | 10+2.42*N | 20+2.5*N | 15+2.8*N |
| Volume | L(Primary side) | 0.022*N/2 | 0.050*N/2 | 0.094*N/2 | 0.210*N/2 |
| | L(Secondary side) | 0.022*(N-2)/2 | 0.050*(N-2)/2 | 0.094*(N-2)/2 | 0.210*(N-2)/2 |
| Weight | kg | 1.0+0.070*N | 1.5+0.190*N | 3.6+0.316*N | 8.0+0.580*N |
| Heat Transfer Surface | m² | (N-2)*0.014 | (N-2)*0.032 | (N-2)*0.052 | (N-2)*0.095 |
| Max. Plate no | | 60 | 120 | 120 | 120 |
| Channel Type | | H | H | H | H |
| Distributor | | — | — | — | — |
| Flow | | Parallel | Parallel | Parallel | Parallel |
| Max Connection | | 3/4" | 1-1/4" | 1-1/4" | 2" |
| Max Flow Rate | m³/h | 8 | 12 | 12 | 35 |
| Plate Material | | 304or316L | 304or316L | 304or316L | 304or316L |


Design Pressure : 30or45bar Test Pressure : 45or67bar Design Temperature : -196~+200°C

● Insulation

- Designed for BPHEs, Easy installation
- Full product range.
- PVC/NBR material,High thermal resistance,Reduce the capacity lost, Increase the COP of system
- 10mm thickness
- Temperature : -45-+100°C

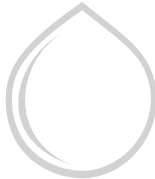


Application of BPHEs



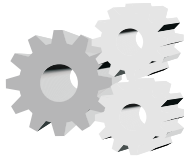
REFRIGERATION

- Condenser
- Evaporator
- Subcooler
- De-super heater
- Oil cooler
- Economizer
- Evap/Cond
- Air Dryer



HYDRONIC

- Beverage coolers
- Space heating
- Domestic hot water
- Radiant systems
- Heat reclaim
- District heating / cooling
- Pool heating
- Wall hung boilers
- Steam heating



INDUSTRIAL

- Power generation
- Mobile oil cooling
- Refrigeration oil cooling
- Cutting oils
- Hydraulic press
- CNC
- Laser cooling
- Petrochemical
- Industrial process

Design Parameter

| | | | | | | | |
|------------------|---------------------|--|------|-----------|---------------------|--|------|
| Company: | | | | E-Mail: | | | |
| Contact: | | | | Tel: | | | |
| One Phase Design | | | | | Capacity : | | Kw |
| Cold side | Fluid : | | | Hot side | Fluid : | | |
| | Inlet Temp. : | | °C | | Inlet Temp. : | | °C |
| | OutletTemp. : | | °C | | OutletTemp. : | | °C |
| | Flow Rate : | | m³/h | | Flow Rate : | | m³/h |
| | Max Pressure drop : | | kpa | | Max Pressure drop : | | kpa |
| Evapator Design | | | | | Capacity : | | Kw |
| Evap. side | Refrigerant : | | | Hot side | Fluid : | | |
| | Evaporating.Temp. : | | °C | | Inlet Temp. : | | °C |
| | Superheat : | | K | | Outlet Temp. : | | °C |
| | Flow Rate : | | kg/h | | Flow Rate : | | m³/h |
| | | | | | Max Pressure drop : | | kpa |
| Condenser Design | | | | | Capacity : | | Kw |
| Cond. side | Refrigerant : | | | Cold side | Fluid : | | |
| | Discharge. Temp. : | | °C | | Inlet Temp. : | | °C |
| | Condensing. Temp. : | | °C | | Outlet Temp. : | | °C |
| | Subcool : | | K | | Flow Rate : | | m³/h |
| | Flow Rate : | | kg/h | | Max Pressure drop : | | kpa |