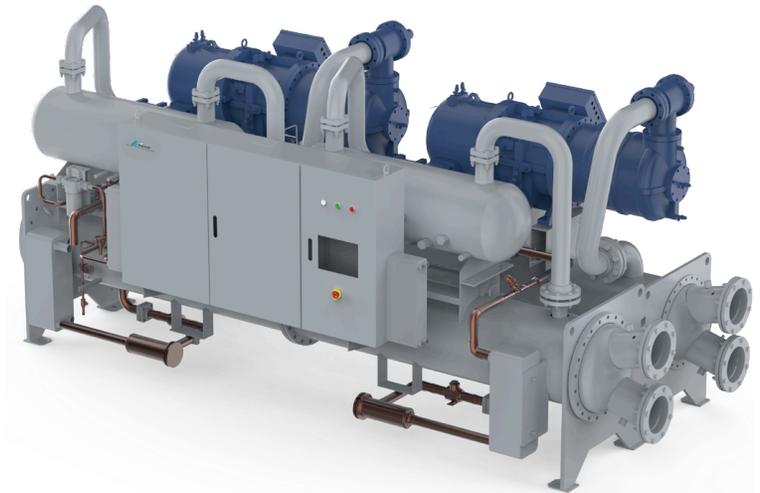
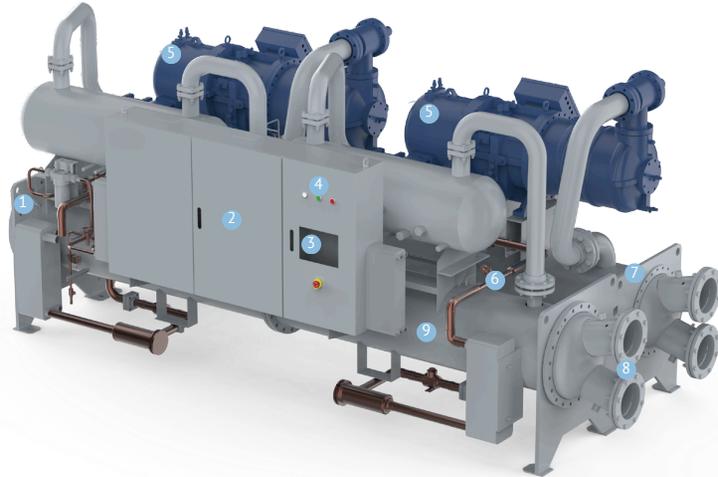


## HIGH TEMPERATURE SCREW TYPE WATER SOURCE HEAT PUMP UNIT



# High-temperature screw-type water source heat pump unit

Stable and efficient, energy-saving and environmentally friendly



## Product Structure

### 1 Lifting hole

Reserved lifting holes for easy handling and transportation

### 4 Microcomputer Control System

Equipped with functions such as self-diagnosis, automatic adjustment, safety protection, and remote control.

### 7 Evaporator

Designed with a uniform liquid distribution plate to optimize temperature distribution and enhance heat exchange efficiency

### 2 Electrical Control Cabinet

Mammoth's recessed design breaks the monotony of flat surfaces, creating a dynamic and futuristic aesthetic.

### 5 Compressor

Semi-hermetic screw compressor with a new rotor profile; enclosed motor cooled by refrigerant suction.

### 8 Same-side Inlet and Outlet Design

Easy installation, cleaning, and maintenance.

### 3 8"/10" color display screen

Unit status is clear at a glance, with easy operation and maintenance.

### 6 Electronic Expansion Valve (EEV)

Precise control optimizes system performance and accurately regulates outlet water temperature.

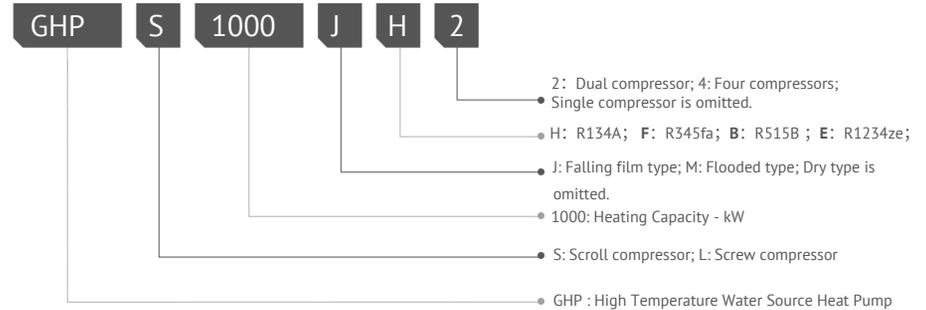
### 9 Shell-and-tube condenser

High heat exchange efficiency and excellent cooling performance.

## Product Overview

The industrial high-temperature heat pump utilizes waste heat to produce 80–125°C hot water or 0.04–0.20 MPa steam, improving energy efficiency and reducing thermal pollution. It replaces traditional oil/gas and electric boilers with a compact, energy-saving, safe, and easy-to-install solution. Ideal for industries such as lithium battery, oil refining, petrochemicals, food processing, textiles, and more.

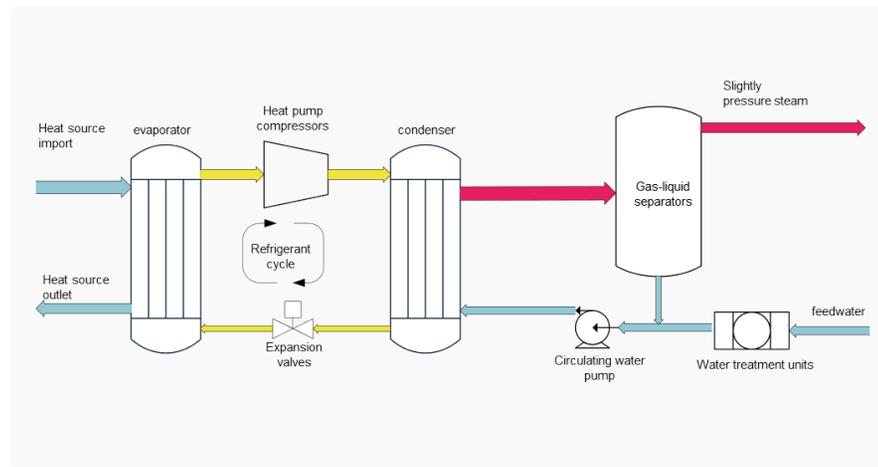
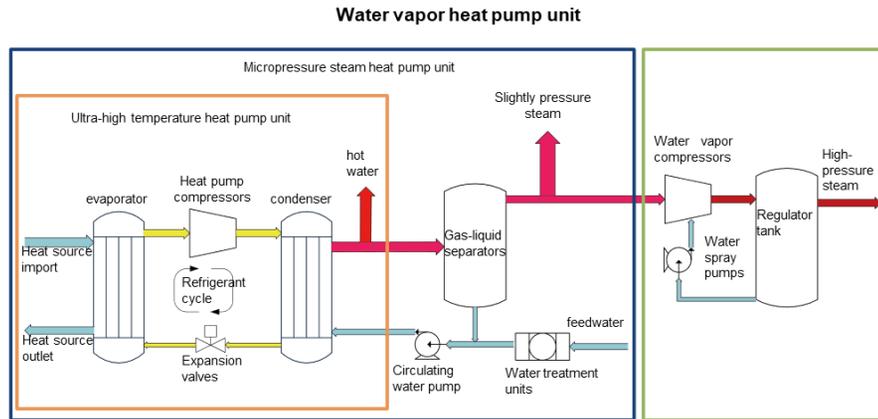
## Model Description



## Operating Range

| Project Name                       | Hot Water Side        |                                   | Source Water Side       |                                     |
|------------------------------------|-----------------------|-----------------------------------|-------------------------|-------------------------------------|
|                                    | Outlet Water Temp(°C) | Inlet-Outlet Water Temp Diff (°C) | Outlet Water Temp. (°C) | Inlet-Outlet Water Temp. Diff. (°C) |
| Medium Temperature Operating Range | 60~85                 | 3~30                              | 15~40                   | 3~15                                |
| High Temperature Operating Range   | 80~120                | 3~30                              | 40~80                   | 3~20                                |

## Working Principle of Steam Heat Pump



## Application Scenarios

### Liquor Industry



In the traditional solid-state liquor brewing process, steam at  $\geq 120^{\circ}\text{C}$  is typically generated by boilers for grain steaming and brewing. Meanwhile, processes like wine picking and cooling release large amounts of waste heat ( $\leq 90^{\circ}\text{C}$ ), leading to thermal and water pollution. By using a high-temperature steam heat pump unit to integrate waste heat with heating demand, a fully closed-loop heat recovery and reuse system can be achieved—enabling energy savings, emission reduction, carbon footprint reduction, and improved efficiency.

### Beer Industry



In the beer brewing process, steam ( $\leq 100^{\circ}\text{C}$ ) required for brewing, boiling, and related steps is typically produced by boilers, while the cooling stage generates a large amount of low-grade waste heat ( $\leq 50^{\circ}\text{C}$ ) that is discharged via cooling towers. A high-temperature steam heat pump unit can recover this waste heat and convert it into high-temperature steam, which is then used for saccharification and boiling, thereby enhancing the overall energy efficiency of the system.

### Textile Printing & Dyeing



Printing and dyeing plants discharge large volumes of effluent at roughly  $45^{\circ}\text{C}$  while printing, dyeing, and rinsing lines operate simultaneously. These processes need  $85\text{--}95^{\circ}\text{C}$  hot water, typically supplied by boilers. Installing high-temperature heat-pump units lets the wastewater's heat be reclaimed and upgraded, meeting hot-water demand while sharply cutting thermal discharge and humidity released to the environment. This approach significantly curbs fossil-fuel use and lowers soot,  $\text{SO}_2$ ,  $\text{NO}_x$ , and related emissions, delivering substantial environmental and social benefits for surrounding communities and industry stakeholders.

### Building Material Industry



In concrete pile production, steam below  $200^{\circ}\text{C}$  is needed after pouring to cure the concrete. Traditionally, this steam is generated by gas-fired boilers. During curing, wastewater at approximately  $55^{\circ}\text{C}$  is produced, contributing to both thermal and water pollution. A high-temperature steam heat pump system can recover this waste heat and reuse it to meet heating demands, thereby reducing primary energy consumption, lowering carbon emissions, and improving overall production efficiency.

### Dairy Industry



The yogurt production line requires high-temperature hot water at  $80\text{--}85^{\circ}\text{C}$  for cleaning, which is typically supplied by boilers. Meanwhile, during the initial cooling stage of pasteurized milk, a significant amount of waste heat at around  $37^{\circ}\text{C}$  is released. By using a high-temperature heat pump unit to recover and reuse this waste heat, energy consumption can be reduced, emissions lowered, and the overall energy efficiency of the system improved.

### Paper Industry



The dryer section of a paper machine in the paper industry requires steam below  $0.3\text{ MPa}$  ( $133.5^{\circ}\text{C}$ ) for pulp drying, typically generated by boilers and transported over long distances from power plants. During production, a large volume of high-temperature wastewater (around  $80^{\circ}\text{C}$ ) is cooled and discharged via cooling towers. Using high-temperature steam heat pump units to recover and reuse this waste heat can significantly reduce production costs.

### Ink Printing



The decorative roll printing machine requires high-temperature gas drying between  $150\text{--}170^{\circ}\text{C}$ . After printing, the coil surface emits exhaust gas at  $80\text{--}90^{\circ}\text{C}$ , resulting in substantial heat loss. A high-temperature steam heat pump unit can recover this waste heat and transfer it to the fresh gas stream needing heating, thereby reducing dependence on the main heat source and improving overall energy efficiency.

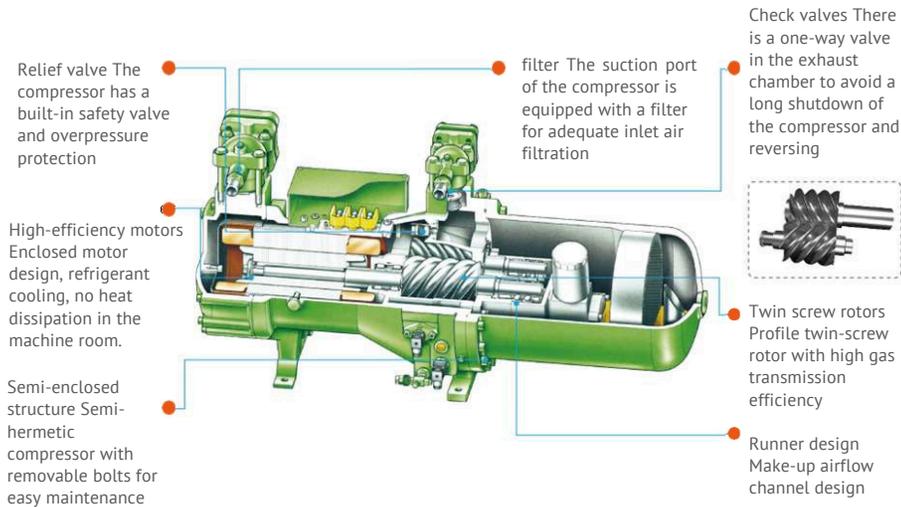
### Electronic Industry



In lithium battery production, 43% of the total energy consumption is used to dehumidify the environment. Currently, low dew point runner dehumidifiers require a large volume of high-temperature air ( $120\text{--}130^{\circ}\text{C}$ ) for regeneration, while the exhaust air (around  $65^{\circ}\text{C}$ ) is discharged directly outside, wasting heat. A high-temperature steam heat pump unit can recover this exhaust heat and combine it with the heating process, reducing fossil fuel use, improving energy efficiency, and lowering emissions.

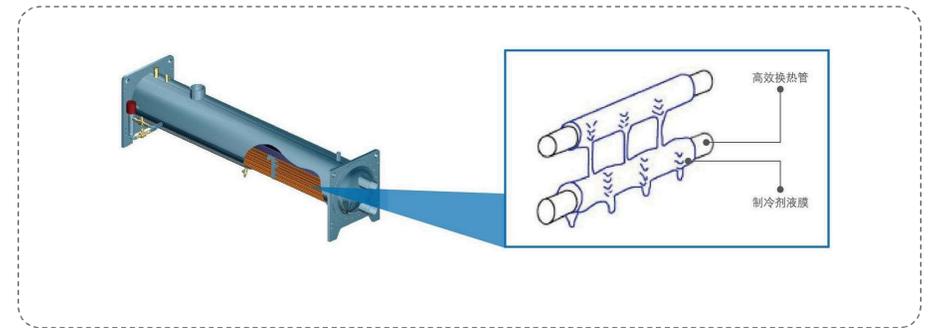
## Energy-efficient

Screw compressor technology Self-owned brand semi-hermetic twin-screw compressor, screw rotor with optimized compression process profile, processed by German KAPP tooth grinder, the surface is laser hardened, dynamic and static balance correction. The twin-screw rotor adopts a five-tooth to six-tooth asymmetrical design, with a machining accuracy of up to micron level, low noise and long life. The compressor adopts the international brand SKF ultra-long life bearing, which ensures the continuous operation time of the main engine for 50,000h.



## Full falling film evaporation technology

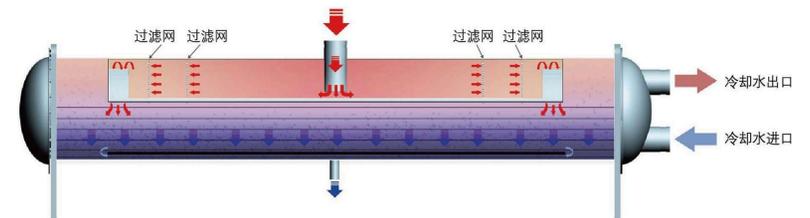
The full falling film evaporator is used to reduce the amount of refrigerant charge. Using the spray falling film technology, the refrigerant forms a liquid film on the surface of the high-efficiency heat exchange tube, thereby evaporating the membrane and greatly improving the heat exchange efficiency of the evaporator. In order to avoid uneven dispensing, the refrigerant distributor is designed to avoid local dry pipes.



## New condenser

- Double-sided strengthened high-efficiency condenser tube is adopted, and the tube bundle arrangement in the condenser is optimized designed.
- The newly designed multi-turbulent subcooler ensures that the subcooling degree is above 5°C\* through the countercurrent subcooling of the refrigerant, which makes the heat exchange performance better and further improves the heat exchange efficiency.

The data is based on nationally recognized laboratory test data



## Stable and reliable

### Enclosed design of the motor

- The compressor motor is arranged at the air inlet of the shrinking machine, and the refrigerant cooling method is adopted, and the inlet air channel design is matched to ensure that the motor is fully cooled. The motor does not dissipate heat from the machine room, so the ventilation of the machine room does not need to consider the heat dissipation of the chiller.
- The motor of the compressor is designed with large capacity, and the motor directly drives the rotor to run to improve efficiency.

### Reliable oil circuit system

The high-efficiency falling film screw chiller adopts the oil circuit control system to ensure the stable operation of the unit.



### Enclosed design of the motor Oil supply:

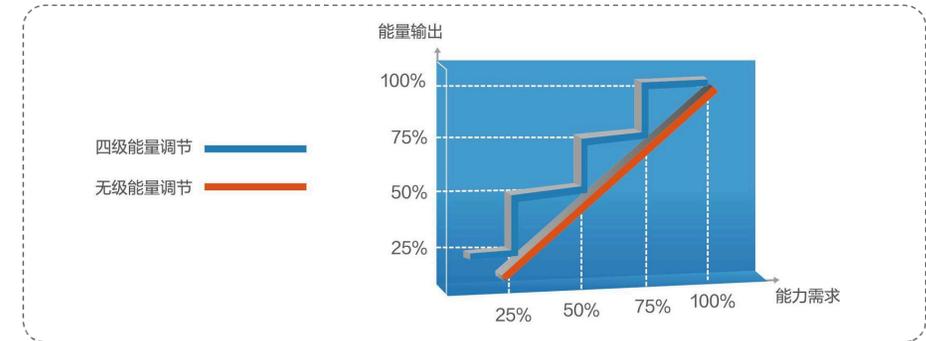
- Differential pressure oil supply is adopted, no external oil pump is required, and the moving parts in the compressor can maintain good lubrication effect. Oil return: The unit adopts oil separation and oil return system to ensure the stable operation of the unit.
- The first heavy oil separation: the compressor comes with a three-stage oil separator to ensure low oil loading.
- The second heavy oil separation, the condenser has a built-in high-efficiency oil separator, so that the system can return oil normally under the condition of partial load and full load, so that the system can operate reliably and stably, and the operating range of the unit is improved.
- Double oil return system: oil separation and venturi injection oil return, high-pressure gas venturi injection oil return, evaporator does not store oil, safe and reliable. The unit is equipped with an oil heater, and the control system will pre-heat the temperature of the lubricating oil according to the state of the unit, so that the oil can maintain excellent viscosity at any time to ensure excellent lubrication characteristics. At the same time, the external oil is involved in the device, which is easy to replace.

### Multiple protections

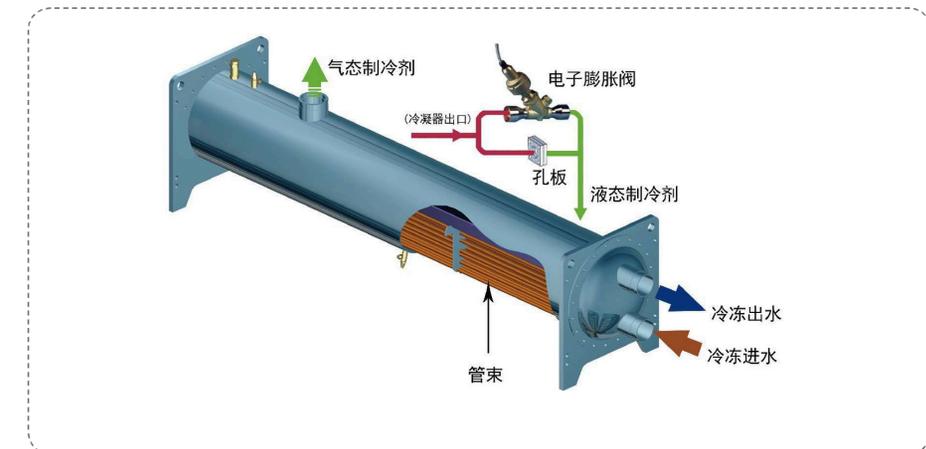
- Independent loop design, the system is more reliable The system adopts independent circuit design, especially the double compressor system, double independent circuit design, the system does not affect each other, reduces the impact of fault shutdown, and greatly improves the reliability of the unit.
- Powerful protection function for safer operation The unit has strong protection measures to ensure that the unit is more safe and reliable Strict factory testing
- Each unit is rigorously tested before leaving the factory, and only needs to connect the water pipe and power supply on site to operate.

## Can Be Adjusted Precisely

Stepless energy adjustment 25%-100% The capacity adjustment system is composed of a capacity adjustment spool valve, a capacity adjustment solenoid valve and a capacity adjustment hydraulic piston, and adopts a stepless adjustment control mode.



Precise cooling capacity adjustment The unit adopts the electronic expansion valve perforated plate to control the refrigerant of the evaporator, and the electronic expansion valve accurately controls the water temperature, with fast response speed, rapid adjustment and large energy adjustment range.



## Green and Environmentally Friendly

### Environmentally friendly refrigerant

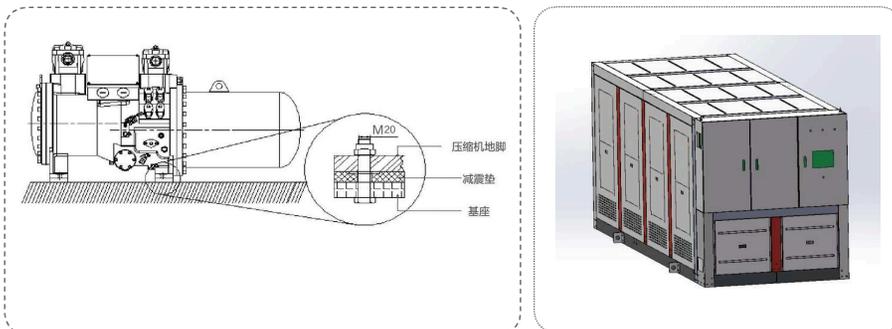
- The whole series of units adopts R134a environmentally friendly refrigerant, which has high refrigeration efficiency and no destructive effect on the atmospheric ozone layer.
- The whole series of units uses full falling film evaporation technology, which greatly improves the heat exchange efficiency of the unit, reduces the amount of refrigerant charge, and is more green and environmentally friendly.



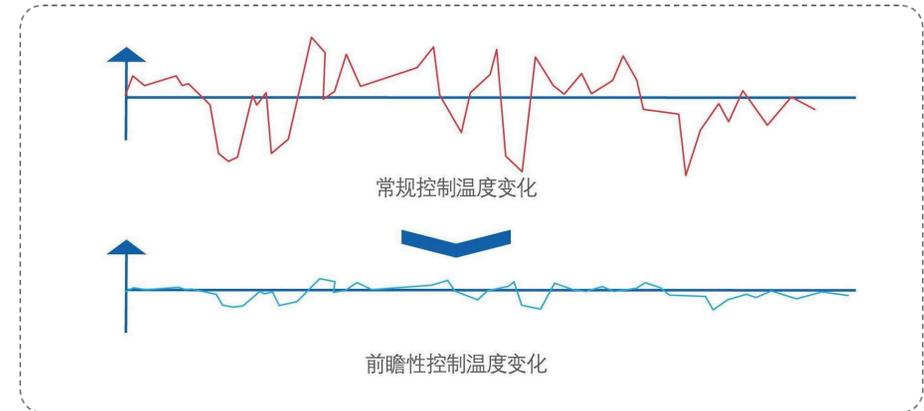
### Quiet Operation

The unit runs ultra-quietly and has low noise. The standard shock absorbing pad between the compressor foot and the metal bracket has a good shock absorption effect. The compressor has a built-in exhaust muffler that cuts off the transmission of sound from the source.

The sheet metal shell of the unit adopts egg surface sound insulation and noise reduction.



## Intelligent Control



### Interface display Interface display: 8/10 inch Touch

- screen communication interface:
- RS485 Communication protocol:
- Modbus-RTU Protection measures:
- more than 20 protections such as power supply, compressor, pressure, temperature, etc

## Medium temp. screw water source heat pump Tc=75

| Model                     |                               | 130  | 320  | 330   | 380   | 410   | 440   | 490   | 530   | 610   | 650   | 710   | 750   |     |
|---------------------------|-------------------------------|--|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| Heating Conditions        | KW                            | 127  | 318  | 327   | 382   | 406   | 441   | 485   | 534   | 606   | 654   | 712   | 751   |     |
|                           | x10%Kca/h                     | 110  | 273  | 281   | 329   | 349   | 379   | 417   | 459   | 521   | 562   | 612   | 645   |     |
|                           | Ton                           | 36   | 91   | 94    | 109   | 116   | 126   | 139   | 152   | 173   | 187   | 203   | 214   |     |
|                           | Rated power                   | kW   | 42   | 97    | 100   | 114   | 122   | 131   | 142   | 158   | 178   | 194   | 208   | 215 |
|                           | Coefficient of performanceCOP | w/w  | 3.1  | 3.3   | 3.3   | 3.4   | 3.3   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.5   |     |
| Current rating            | A                             | 71   | 166  | 171   | 195   | 208   | 224   | 242   | 269   | 303   | 331   | 356   | 367   |     |
| Maximum operating current | A                             | 81   | 189  | 194   | 223   | 237   | 256   | 275   | 307   | 346   | 377   | 406   | 417   |     |
| Power supply type         |                               | 380V/3N-50Hz   |      |       |       |       |       |       |       |       |       |       |       |     |
| Load control range        |                               | 25%-100% segmented or segmentless control                                    |      |       |       |       |       |       |       |       |       |       |       |     |
| version                   |                               | Semi-Hermetic Screw Compressor   |      |       |       |       |       |       |       |       |       |       |       |     |
| Startup mode              |                               | Y-△  |      |       |       |       |       |       |       |       |       |       |       |     |
| quantity                  | 台                             | 1  | 1    | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |     |
| version                   |                               | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |      |       |       |       |       |       |       |       |       |       |       |     |
| Water flow                | m3/h                          | 14   | 35   | 36    | 43    | 45    | 50    | 55    | 60    | 68    | 73    | 80    | 86    |     |
| Water resistance          | kPa                           | 52   | 52   | 54    | 54    | 55    | 57    | 57    | 58    | 58    | 62    | 62    | 62    |     |
| Piping specifications     |                               | DN50   | DN80 | DN100 | DN100 | DN100 | DN100 | DN100 | DN125 | DN125 | DN125 | DN125 | DN125 |     |
| version                   |                               | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |      |       |       |       |       |       |       |       |       |       |       |     |
| Water flow                | m3/h                          | 20.8   | 51.9 | 53.5  | 62.4  | 66.4  | 72.1  | 79.3  | 87.2  | 99.1  | 106.8 | 116.3 | 122.6 |     |
| Water resistance          | kPa                           | 45   | 45   | 45    | 45    | 48    | 48    | 48    | 52    | 52    | 52    | 52    | 52    |     |
| Piping specifications     |                               | DN50   | DN80 | DN100 | DN100 | DN100 | DN100 | DN100 | DN125 | DN125 | DN125 | DN125 | DN125 |     |
| Class                     |                               | R134A  |      |       |       |       |       |       |       |       |       |       |       |     |
| Charge                    | kg                            | 15   | 36   | 37    | 44    | 46    | 50    | 55    | 61    | 69    | 75    | 81    | 86    |     |
| Throttling device         |                               | Electronic expansion valves  |      |       |       |       |       |       |       |       |       |       |       |     |
| Long                      | mm                            | 2870   | 2870 | 2870  | 2870  | 3000  | 3000  | 3000  | 3000  | 3300  | 3300  | 3300  | 3600  |     |
| Wide                      | mm                            | 800  | 800  | 800   | 800   | 800   | 800   | 1100  | 1100  | 1100  | 1100  | 1100  | 1400  |     |
| High                      | mm                            | 1650   | 1650 | 1650  | 1700  | 1700  | 1700  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  |     |
| Shipping Weight           | kg                            | 1620   | 1850 | 2100  | 2450  | 2560  | 2660  | 2730  | 2880  | 3000  | 3150  | 3300  | 3450  |     |
| Running weight            | kg                            | 1720   | 1955 | 2230  | 2600  | 2710  | 2820  | 2900  | 3060  | 3200  | 3360  | 3540  | 3700  |     |

| Model                     |                               | 800  | 920   | 1010  | 1090  | 1270  | 1450  | 1830  | 2030  | 2190  | 2560  | 2910  | 3670  |      |
|---------------------------|-------------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Heating Conditions        | kw                            | 797  | 917   | 1013  | 1088  | 1271  | 1449  | 1827  | 2032  | 2189  | 2556  | 2909  | 3667  |      |
|                           | x10%3Kca/h                    | 685  | 788   | 871   | 936   | 1092  | 1246  | 1571  | 1747  | 1883  | 2198  | 2502  | 3153  |      |
|                           | Ton                           | 228  | 262   | 289   | 311   | 363   | 414   | 522   | 580   | 626   | 730   | 831   | 1048  |      |
|                           | Rated power                   | kW   | 232   | 266   | 289   | 316   | 367   | 415   | 513   | 568   | 722   | 838   | 944   | 1170 |
|                           | Coefficient of performanceCOP | w/w  | 3.4   | 3.4   | 3.5   | 3.4   | 3.5   | 3.5   | 3.6   | 3.1   | 3.0   | 3.1   | 3.1   |      |
| Current rating            | A                             | 397  | 454   | 494   | 539   | 627   | 708   | 877   | 1126  | 1232  | 1432  | 1612  | 1998  |      |
| Maximum operating current | A                             | 453  | 518   | 563   | 616   | 716   | 806   | 999   | 1192  | 1304  | 1514  | 1706  | 2116  |      |
| Power supply type         |                               | 380V/3N-50Hz   |       |       |       |       |       |       |       |       |       |       |       |      |
| Load control range        |                               | 25%-100% segmented or segmentless control                                    |       |       |       |       |       |       |       |       |       |       |       |      |
| version                   |                               | Semi-Hermetic Screw Compressor   |       |       |       |       |       |       |       |       |       |       |       |      |
| Startup mode              |                               | Y-△  |       |       |       |       |       |       |       |       |       |       |       |      |
| quantity                  | 台                             | 1  | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 2     | 2     |      |
| version                   |                               | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |       |       |       |       |       |       |       |       |       |       |       |      |
| Water flow                | m3/h                          | 90   | 104   | 116   | 123   | 144   | 165   | 210   | 109   | 117   | 137   | 157   | 199   |      |
| Water resistance          | kPa                           | 62   | 68    | 68    | 68    | 72    | 72    | 75    | 75    | 75    | 75    | 75    | 75    |      |
| Piping specifications     |                               | DN125  | DN125 | DN150 |      |
| version                   |                               | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |       |       |       |       |       |       |       |       |       |       |       |      |
| Water flow                | m3/h                          | 130.2  | 149.8 | 165.4 | 177.8 | 207.6 | 236.8 | 298.5 | 166.0 | 178.8 | 208.8 | 237.7 | 299.6 |      |
| Water resistance          | kPa                           | 56   | 56    | 56    | 56    | 64    | 64    | 64    | 68    | 68    | 68    | 68    | 68    |      |
| Piping specifications     |                               | DN125  | DN125 | DN150 |      |
| Class                     |                               | R134A  |       |       |       |       |       |       |       |       |       |       |       |      |
| Charge                    | kg                            | 91   | 105   | 115   | 124   | 145   | 165   | 208   | 2x116 | 2x125 | 2x146 | 2x166 | 2x199 |      |
| Throttling device         |                               | Electronic expansion valves  |       |       |       |       |       |       |       |       |       |       |       |      |
| Long                      | mm                            | 3600   | 3600  | 3600  | 3600  | 3650  | 3650  | 3650  | 4650  | 4650  | 5050  | 5200  | 5200  |      |
| Wide                      | mm                            | 1400   | 1400  | 1650  | 1650  | 1650  | 1720  | 1720  | 1720  | 1850  | 1850  | 1850  | 1850  |      |
| High                      | mm                            | 2000   | 2000  | 2100  | 2100  | 2200  | 2200  | 2100  | 2100  | 2250  | 2300  | 2300  | 2300  |      |
| Shipping Weight           | kg                            | 3760   | 3950  | 4200  | 4430  | 4650  | 5050  | 5300  | 6000  | 6700  | 7520  | 7900  | 7900  |      |
| Running weight            | kg                            | 4015   | 4230  | 4500  | 4730  | 4980  | 5380  | 5650  | 6360  | 7080  | 7300  | 7930  | 8350  |      |

Description: 1. The inlet water temperature on the source water side is 30°C, the outlet water temperature on the source water side is 25°C, the inlet water temperature on the hot water side is 70°C, and the outlet water temperature on the hot water side is 75°C. 2. Allowable voltage fluctuation ±10%; 3. Due to the continuous improvement of the product, please refer to the product nameplate parameters and the actual product.

## Medium temp. screw water source heat pump Tc=80

| Model                     |                               | 130  | 320  | 330   | 380   | 410   | 450   | 490   | 540   | 610   | 660   | 720   | 750   |     |
|---------------------------|-------------------------------|--|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| Heating Conditions        | kw                            | 129  | 321  | 330   | 385   | 409   | 445   | 488   | 538   | 611   | 658   | 716   | 754   |     |
|                           | x10%3Kca/h                    | 111  | 276  | 284   | 331   | 352   | 383   | 420   | 463   | 525   | 566   | 615   | 648   |     |
|                           | Ton                           | 37   | 92   | 94    | 110   | 117   | 127   | 140   | 154   | 174   | 188   | 205   | 215   |     |
|                           | Rated power                   | kW   | 47   | 111   | 114   | 131   | 139   | 150   | 162   | 180   | 203   | 221   | 238   | 245 |
|                           | Coefficient of performanceCOP | w/w  | 2.8  | 2.9   | 2.9   | 2.9   | 2.9   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.1 |
| Current rating            | A                             | 81   | 189  | 194   | 223   | 237   | 257   | 276   | 307   | 346   | 377   | 406   | 417   |     |
| Maximum operating current | A                             | 85   | 200  | 205   | 236   | 251   | 271   | 292   | 325   | 366   | 399   | 430   | 442   |     |
| Power supply type         |                               | 380V/3N-50Hz   |      |       |       |       |       |       |       |       |       |       |       |     |
| Load control range        |                               | 25%-100% segmented or segment less control                                   |      |       |       |       |       |       |       |       |       |       |       |     |
| version                   |                               | Semi-Hermetic Screw Compressor   |      |       |       |       |       |       |       |       |       |       |       |     |
| Startup mode              |                               | Y-△  |      |       |       |       |       |       |       |       |       |       |       |     |
| quantity                  | 台                             | 1  | 1    | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |     |
| version                   |                               | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |      |       |       |       |       |       |       |       |       |       |       |     |
| Water flow                | m3/h                          | 13   | 33   | 34    | 40    | 43    | 47    | 52    | 57    | 65    | 69    | 76    | 81    |     |
| Water resistance          | kPa                           | 52   | 52   | 54    | 54    | 55    | 57    | 57    | 58    | 58    | 62    | 62    | 62    |     |
| Piping specifications     |                               | DN50   | DN80 | DN100 | DN100 | DN100 | DN100 | DN100 | DN125 | DN125 | DN125 | DN125 | DN125 |     |
| version                   |                               | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |      |       |       |       |       |       |       |       |       |       |       |     |
| Water flow                | m3/h                          | 21.2   | 52.5 | 53.9  | 62.9  | 66.9  | 72.7  | 79.8  | 87.9  | 99.7  | 107.5 | 116.9 | 123.1 |     |
| Water resistance          | kPa                           | 45   | 45   | 45    | 45    | 48    | 48    | 48    | 52    | 52    | 52    | 52    | 52    |     |
| Piping specifications     |                               | DN50   | DN80 | DN100 | DN100 | DN100 | DN100 | DN100 | DN125 | DN125 | DN125 | DN125 | DN125 |     |
| Class                     |                               | R134A  |      |       |       |       |       |       |       |       |       |       |       |     |
| Charge                    | kg                            | 15   | 37   | 38    | 44    | 47    | 51    | 56    | 61    | 70    | 75    | 82    | 86    |     |
| Throttling device         |                               | Electronic expansion valves  |      |       |       |       |       |       |       |       |       |       |       |     |
| Long                      | mm                            | 2870   | 2870 | 2870  | 2870  | 3000  | 3000  | 3000  | 3000  | 3300  | 3300  | 3300  | 3600  |     |
| Wide                      | mm                            | 800  | 800  | 800   | 800   | 800   | 1100  | 1100  | 1100  | 1100  | 1100  | 1100  | 1400  |     |
| High                      | mm                            | 1650   | 1650 | 1650  | 1700  | 1700  | 1700  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  |     |
| Shipping Weight           | kg                            | 1620   | 1850 | 2100  | 2450  | 2560  | 2660  | 2730  | 2880  | 3000  | 3150  | 3300  | 3450  |     |
| Running weight            | kg                            | 1720   | 1955 | 2230  | 2600  | 2710  | 2820  | 2900  | 3060  | 3200  | 3360  | 3540  | 3700  |     |

| Model                     |                               | 800  | 920   | 1020  | 1090  | 1280  | 1450  | 1830  | 2030  | 2190  | 2560  | 2910  | 3670  |      |
|---------------------------|-------------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Heating Conditions        | kw                            | 802  | 922   | 1016  | 1095  | 1278  | 1455  | 1834  | 2032  | 2189  | 2556  | 2909  | 3667  |      |
|                           | x10%3Kca/h                    | 690  | 793   | 873   | 941   | 1099  | 1251  | 1577  | 1747  | 1883  | 2198  | 2502  | 3153  |      |
|                           | Ton                           | 229  | 263   | 290   | 313   | 365   | 416   | 524   | 580   | 626   | 730   | 831   | 1048  |      |
|                           | Rated power                   | kW   | 265   | 304   | 329   | 361   | 419   | 472   | 585   | 658   | 722   | 838   | 944   | 1170 |
|                           | Coefficient of performanceCOP | w/w  | 3.0   | 3.0   | 3.1   | 3.0   | 3.0   | 3.1   | 3.1   | 3.1   | 3.0   | 3.0   | 3.1   |      |
| Current rating            | A                             | 453  | 518   | 563   | 616   | 716   | 806   | 999   | 1126  | 1232  | 1432  | 1612  | 1998  |      |
| Maximum operating current | A                             | 479  | 549   | 596   | 652   | 757   | 853   | 1058  | 1192  | 1304  | 1514  | 1706  | 2116  |      |
| Power supply type         |                               | 380V/3N-50Hz   |       |       |       |       |       |       |       |       |       |       |       |      |
| Load control range        |                               | 25%-100% segmented or segmentless control                                    |       |       |       |       |       |       |       |       |       |       |       |      |
| version                   |                               | Semi-Hermetic Screw Compressor   |       |       |       |       |       |       |       |       |       |       |       |      |
| Startup Mode              |                               | Y-△  |       |       |       |       |       |       |       |       |       |       |       |      |
| quantity                  | 台                             | 1  | 1     | 1     | 1     | 1     | 1     | 2     | 2     | 2     | 2     | 2     | 2     |      |
| version                   |                               | Falling film shell and tube heat exchanger (design water pressure 1.0MPa)    |       |       |       |       |       |       |       |       |       |       |       |      |
| Water Flow                | m3/h                          | 85   | 98    | 109   | 117   | 137   | 157   | 199   | 109   | 117   | 137   | 157   | 199   |      |
| Water Resistance          | kPa                           | 62   | 68    | 68    | 68    | 72    | 72    | 75    | 75    | 75    | 75    | 75    | 75    |      |
| Piping Specifications     |                               | DN125  | DN125 | DN150 |      |
| Type                      |                               | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |       |       |       |       |       |       |       |       |       |       |       |      |
| Water Flow                | m3/h                          | 131.0  | 150.6 | 166.0 | 178.8 | 208.8 | 237.7 | 299.6 | 166.0 | 178.8 | 208.8 | 237.7 | 299.6 |      |
| Water resistance          | kPa                           | 56   | 56    | 56    | 64    | 64    | 64    | 68    | 68    | 68    | 68    | 68    | 68    |      |
| Piping specifications     |                               | DN125  | DN125 | DN150 |      |
| Class                     |                               | R134A  |       |       |       |       |       |       |       |       |       |       |       |      |
| Charge                    | kg                            | 91   | 105   | 116   | 125   | 146   | 166   | 209   | 2x116 | 2x125 | 2x146 | 2x166 | 2x209 |      |
| Throttling device         |                               | Electronic expansion valves  |       |       |       |       |       |       |       |       |       |       |       |      |
| Long                      | mm                            | 3600   | 3600  | 3600  | 3600  | 3650  | 3650  | 3650  | 4650  | 4650  | 5050  | 5200  | 5200  |      |
| Wide                      | mm                            | 1400   | 1400  | 1650  | 1650  | 1650  | 1720  | 1720  | 1720  | 1850  | 1850  | 1850  | 1850  |      |
| High                      |                               |  |       |       |       |       |       |       |       |       |       |       |       |      |

## Medium temp water source heat pump unit Tc=85

| Model                     |  | 150  | 380   | 400   | 460   | 490   | 530   | 590   | 650   | 730   | 790   | 860   | 910   |
|---------------------------|--|------|-------|-------|-------|-------|---|-------|-------|-------|-------|-------|-------|
| Heating Conditions        | kw   | 154  | 385   | 396   | 462   | 492   | 534   | 587   | 645   | 734   | 789   | 861   | 907   |
|                           | x1.0% Kcal/h   | 132  | 331   | 340   | 397   | 423   | 459   | 505   | 555   | 631   | 679   | 740   | 780   |
|                           | Ton  | 44   | 110   | 113   | 132   | 140   | 152   | 168   | 184   | 210   | 226   | 246   | 259   |
|                           | Rated power  | kw   | 50    | 117   | 120   | 138   | 147   | 159   | 171   | 190   | 215   | 233   | 252   |
|                           | Coefficient of performance COP   | w/w  | 3.1   | 3.3   | 3.3   | 3.3   | 3.3   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   | 3.4   |
|                           | Current rating   | A    | 85    | 200   | 206   | 236   | 252   | 271   | 292   | 324   | 366   | 398   | 430   |
| Maximum operating Current | A  | 90   | 212   | 217   | 249   | 266   | 286   | 309   | 343   | 388   | 422   | 455   | 468   |
| Power supply type         | 380V/3N-50Hz   |      |       |       |       |       |   |       |       |       |       |       |       |
| Load control range        | 25%-100% segmented or segment less control                                   |      |       |       |       |       |   |       |       |       |       |       |       |
| version                   | Semi-Hermetic Screw Compressor   |      |       |       |       |       |   |       |       |       |       |       |       |
| Startup mode              | Y-Δ  |      |       |       |       |       |   |       |       |       |       |       |       |
| quantity                  | Unit   | 1    | 1     | 1     | 1     | 1     | 1   | 1     | 1     | 1     | 1     | 1     | 1     |
| version                   | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |      |       |       |       |       | Falling film shell and tube heat exchanger (design water pressure 1.0MPa) |       |       |       |       |       |       |
| Water flow                | m <sup>3</sup> /h  | 17   | 43    | 44    | 52    | 55    | 60  | 67    | 73    | 83    | 89    | 97    | 104   |
| Water resistance          | kPa  | 52   | 52    | 54    | 54    | 55    | 57  | 57    | 58    | 58    | 62    | 62    | 62    |
| Piping specifications     | DN50   | DN80 | DN100 | DN100 | DN100 | DN100 | DN100   | DN125 | DN125 | DN125 | DN125 | DN125 | DN125 |
| version                   | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |      |       |       |       |       |   |       |       |       |       |       |       |
| Water flow                | m <sup>3</sup> /h  | 25   | 63    | 65    | 76    | 80    | 87  | 96    | 105   | 120   | 129   | 141   | 148   |
| Water resistance          | kPa  | 45   | 45    | 45    | 45    | 48    | 48  | 48    | 52    | 52    | 52    | 52    | 52    |
| Piping specifications     | DN50   | DN80 | DN100 | DN100 | DN100 | DN100 | DN100   | DN125 | DN125 | DN125 | DN125 | DN125 | DN125 |
| class                     | R134A  |      |       |       |       |       |   |       |       |       |       |       |       |
| Charge                    | kg   | 18   | 44    | 45    | 53    | 56    | 61  | 67    | 74    | 84    | 90    | 98    | 103   |
| Throttling device         | Electronic expansion valves  |      |       |       |       |       |   |       |       |       |       |       |       |
| long                      | mm   | 2870 | 2870  | 2870  | 2870  | 3000  | 3000  | 3000  | 3000  | 3300  | 3300  | 3300  | 3600  |
| wide                      | mm   | 800  | 800   | 800   | 800   | 800   | 800   | 1100  | 1100  | 1100  | 1100  | 1100  | 1400  |
| high                      | mm   | 1650 | 1650  | 1650  | 1700  | 1700  | 1700  | 1800  | 1800  | 1800  | 1800  | 1800  | 1800  |
| Shipping Weight           | kg   | 1620 | 1850  | 2100  | 2450  | 2560  | 2660  | 2730  | 2880  | 3000  | 3150  | 3300  | 3450  |
| Running weight            | kg   | 1720 | 1955  | 2230  | 2600  | 2710  | 2820  | 2900  | 3060  | 3200  | 3360  | 3540  | 3700  |

| Model                     |  | 970   | 1110  | 1220  | 1320  | 1540  | 1750                                     | 2210  | 2450  | 2630  | 3070  | 3510  | 4420  |      |
|---------------------------|--|-------|-------|-------|-------|-------|--|-------|-------|-------|-------|-------|-------|------|
| Heating Conditions        | kw   | 965   | 1109  | 1224  | 1517  | 1537  | 1753                                     | 2212  | 2448  | 2634  | 3074  | 3505  | 4423  |      |
|                           | x1.0% Kcal/h   | 830   | 954   | 1053  | 1132  | 1321  | 1507                                     | 1902  | 2105  | 2265  | 2643  | 3014  | 3803  |      |
|                           | Ton  | 276   | 317   | 350   | 376   | 439   | 501                                      | 632   | 700   | 752   | 878   | 1002  | 1264  |      |
|                           | Rated power  | kw    | 281   | 321   | 349   | 381   | 443                                      | 500   | 620   | 698   | 762   | 886   | 1000  | 1240 |
|                           | Coefficient of performance COP   | w/w   | 3.4   | 3.5   | 3.5   | 3.5   | 3.5                                      | 3.5   | 3.6   | 3.5   | 3.5   | 3.5   | 3.5   |      |
|                           | Current rating   | A     | 479   | 547   | 595   | 651   | 756                                      | 853   | 1058  | 1190  | 1302  | 1512  | 1706  | 2116 |
| Maximum operating current | A  | 508   | 580   | 631   | 690   | 801   | 904                                      | 1117  | 1262  | 1380  | 1602  | 1808  | 2234  |      |
| Power supply type         | 380V/3N-50Hz   |       |       |       |       |       |  |       |       |       |       |       |       |      |
| Load control range        | 25%-100% segmented or segmentless control                                    |       |       |       |       |       | 12.5%-100% segmented or stepless control |       |       |       |       |       |       |      |
| version                   | Semi-Hermetic Screw Compressor   |       |       |       |       |       |  |       |       |       |       |       |       |      |
| Startup mode              | Y-Δ  |       |       |       |       |       |  |       |       |       |       |       |       |      |
| quantity                  | Unit   | 1     | 1     | 1     | 1     | 1     | 1  | 1     | 2     | 2     | 2     | 2     | 2     |      |
| version                   | Falling film shell and tube heat exchanger (design water pressure 1.0MPa)    |       |       |       |       |       |  |       |       |       |       |       |       |      |
| Water flow                | m <sup>3</sup> /h  | 109   | 126   | 140   | 150   | 175   | 200                                      | 255   | 140   | 150   | 175   | 200   | 255   |      |
| Water resistance          | kPa  | 62    | 68    | 68    | 68    | 72    | 72                                       | 72    | 75    | 75    | 75    | 75    | 75    |      |
| Piping specifications     | DN125  | DN125 | DN150 | DN150 | DN150 | DN150 | DN150                                    | DN150 | DN150 | DN150 | DN150 | DN150 | DN150 |      |
| version                   | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |       |       |       |       |       |  |       |       |       |       |       |       |      |
| Water flow                | m <sup>3</sup> /h  | 158   | 181   | 200   | 215   | 251   | 286                                      | 361   | 200   | 215   | 251   | 286   | 361   |      |
| Water resistance          | kPa  | 56    | 56    | 56    | 56    | 64    | 64                                       | 64    | 68    | 68    | 68    | 68    | 68    |      |
| Piping specifications     | DN125  | DN125 | DN150 | DN150 | DN150 | DN150 | DN150                                    | DN150 | DN150 | DN150 | DN150 | DN150 | DN150 |      |
| class                     | R134A  |       |       |       |       |       |  |       |       |       |       |       |       |      |
| Charge                    | kg   | 110   | 126   | 140   | 150   | 175   | 200                                      | 252   | 2x116 | 2x125 | 2x146 | 2x166 | 2x209 |      |
| Throttling device         | Electronic expansion valves  |       |       |       |       |       |  |       |       |       |       |       |       |      |
| long                      | mm   | 3600  | 3600  | 3600  | 3600  | 3650  | 3650                                     | 3650  | 4650  | 4650  | 5050  | 5200  | 5200  |      |
| wide                      | mm   | 1400  | 1400  | 1650  | 1650  | 1650  | 1720                                     | 1720  | 1720  | 1850  | 1850  | 1850  | 1850  |      |
| high                      | mm   | 2000  | 2000  | 2100  | 2100  | 2200  | 2200                                     | 2100  | 2100  | 2250  | 2300  | 2300  | 2300  |      |
| Shipping Weight           | kg   | 3760  | 3950  | 4200  | 4430  | 4650  | 5050                                     | 5300  | 6000  | 6700  | 6900  | 7520  | 7900  |      |
| Running weight            | kg   | 4015  | 4250  | 4500  | 4730  | 4980  | 5380                                     | 5650  | 6360  | 7080  | 7300  | 7930  | 8350  |      |

Description: 1. The inlet water temperature on the source water side is 40 °C, the outlet water temperature on the source water side is 30 °C, the inlet water temperature on the hot water side is 80 °C, and the outlet water temperature on the hot water side is 85 °C. 2. Allowable voltage fluctuation ±10%; 3. Due to the continuous improvement of the product, please refer to the product nameplate parameters and the actual product.

## High temp. screw water source heat pump Tc=100

| Model                          |  | 410   | 440   | 470   | 490   | 570    | 630   | 680    | 760   |     |
|--------------------------------|--|-------|-------|-------|---|--------|-------|--------|-------|-----|
| Heating Conditions             | amount of calories   | 352   | 379   | 410   | 428   | 497    | 550   | 590    | 659   |     |
|                                | kw   | 85    | 91    | 99    | 103   | 120    | 132   | 141    | 158   |     |
|                                | Rated power  | kw    | 4.1   | 4.2   | 4.1   | 4.2    | 4.1   | 4.2    | 4.2   | 4.2 |
|                                | Coefficient of performance COP   | W/W   | 4.1   | 4.2   | 4.1   | 4.2    | 4.1   | 4.2    | 4.2   | 4.2 |
|                                | amount of calories   | kw    | 405   | 436   | 471   | 492    | 571   | 633    | 678   | 758 |
|                                | Rated power  | kw    | 86    | 93    | 102   | 105    | 122   | 135    | 145   | 161 |
| Coefficient of performance COP | W/W  | 4.7   | 4.7   | 4.6   | 4.7   | 4.7    | 4.7   | 4.7    | 4.7   |     |
| amount of calories             | kw   | 465   | 500   | 541   | 565   | 656    | 727   | 778    | 870   |     |
| Rated power                    | kw   | 88    | 96    | 104   | 108   | 125    | 138   | 148    | 165   |     |
| Coefficient of performance COP | W/W  | 5.3   | 5.2   | 5.2   | 5.2   | 5.2    | 5.3   | 5.3    | 5.3   |     |
| Rated operating current        | A  | 151   | 163   | 177   | 184   | 213    | 236   | 252    | 282   |     |
| Power supply type              | 380V/3N-50Hz   |       |       |       |   |        |       |        |       |     |
| Load control range             | 25%-100% segmented or segmentless control                                    |       |       |       |   |        |       |        |       |     |
| version                        | Semi-Hermetic Screw Compressor   |       |       |       |   |        |       |        |       |     |
| Startup mode                   | Y-Δ  |       |       |       |   |        |       |        |       |     |
| quantity                       | Unit   | 1     | 1     | 1     | 1   | 1      | 1     | 1      | 1     |     |
| version                        | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |       |       |       | Falling film shell and tube heat exchanger (design water pressure 1.0MPa) |        |       |        |       |     |
| Water flow                     | m <sup>3</sup> /h  | 46    | 50    | 53    | 56  | 65     | 72    | 77     | 86    |     |
| Water resistance               | kPa  | 54    | 54    | 54    | 57  | 57     | 57    | 57     | 60    |     |
| Piping specifications          | DN100  | DN100 | DN100 | DN100 | DN125   | DN125  | DN125 | DN125  | DN125 |     |
| version                        | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |       |       |       |   |        |       |        |       |     |
| Water flow                     | m <sup>3</sup> /h  | 61    | 65    | 71    | 74  | 85     | 95    | 101    | 113   |     |
| Water resistance               | kPa  | 50    | 50    | 50    | 52  | 52     | 52    | 52     | 56    |     |
| Piping specifications          | DN100  | DN100 | DN100 | DN100 | DN125   | DN125  | DN125 | DN125  | DN125 |     |
| class                          | R245fa   |       |       |       |   |        |       |        |       |     |
| Charge                         | kg   | 17    | 190   | 205   | 214   | 249    | 275   | 29     | 33    |     |
| Throttling device              | Electronic expansion valves  |       |       |       |   |        |       |        |       |     |
| long                           | mm   | 3350  | 3350  | 3350  | 3350  | 3550   | 3550  | 3680   | 3680  |     |
| wide                           | mm   | 1350  | 1350  | 1350  | 1500  | 1700   | 1700  | 1780   | 1780  |     |
| high                           | mm   | 1650  | 1650  | 1650  | 1700  | 1780   | 1780  | 1780   | 1780  |     |
| Shipping Weight                | kg   | 2750  | 2975  | 2940  | 3080  | 3847   | 4130  | 4253   | 4340  |     |
| Running weight                 | kg   | 2880  | 3125  | 3090  | 3230  | 4066.5 | 4350  | 4472.5 | 4640  |     |

| Model                          |  | 850   | 940   | 980   | 1140   | 1270  | 1360   | 1520  | 1710  |      |
|--------------------------------|--|-------|-------|-------|--------|-------|--------|-------|-------|------|
| Heating Conditions             | Customized calorific kW  | 743   | 820   | 856   | 994    | 1100  | 1180   | 1318  | 1486  |      |
|                                | Rated power  | kw    | 177   | 198   | 206    | 240   | 264    | 282   | 316   | 354  |
|                                | Coefficient of performance COP   | W/W   | 4.2   | 4.1   | 4.2    | 4.1   | 4.2    | 4.2   | 4.2   | 4.2  |
|                                | amount of calories   | kw    | 854   | 942   | 984    | 1142  | 1266   | 1356  | 1516  | 1708 |
|                                | Rated power  | kw    | 181   | 204   | 210    | 244   | 270    | 290   | 322   | 362  |
|                                | Coefficient of performance COP   | W/W   | 4.7   | 4.6   | 4.7    | 4.7   | 4.7    | 4.7   | 4.7   | 4.7  |
| amount of calories             | kw   | 981   | 1082  | 1150  | 1312   | 1454  | 1556   | 1740  | 1962  |      |
| Rated power                    | kw   | 185   | 208   | 216   | 250    | 276   | 296    | 330   | 370   |      |
| Coefficient of performance COP | W/W  | 5.3   | 5.2   | 5.2   | 5.2    | 5.3   | 5.3    | 5.3   | 5.3   |      |
| Rated operating current        | A  | 316   | 354   | 368   | 426    | 472   | 504    | 564   | 632   |      |
| Power supply type              | 380V/3N-50Hz   |       |       |       |        |       |        |       |       |      |
| Load control range             | 25%-100% segmented or segmentless control                                    |       |       |       |        |       |        |       |       |      |
| version                        | Semi-Hermetic Screw Compressor   |       |       |       |        |       |        |       |       |      |
| Startup mode                   | Y-Δ  |       |       |       |        |       |        |       |       |      |
| quantity                       | 台  | 1     | 2     | 2     | 2      | 2     | 2      | 2     | 2     |      |
| version                        | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |       |       |       |        |       |        |       |       |      |
| Water flow                     | m <sup>3</sup> /h  | 97    | 107   | 112   | 130    | 144   | 154    | 172   | 195   |      |
| Water resistance               | kPa  | 60    | 54    | 57    | 57     | 57    | 57     | 60    | 60    |      |
| Piping specifications          | DN125  | DN125 | DN125 | DN125 | DN150  | DN150 | DN150  | DN150 | DN150 |      |
| version                        | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |       |       |       |        |       |        |       |       |      |
| Water flow                     | m <sup>3</sup> /h  | 128   | 141   | 147   | 171    | 189   | 203    | 227   | 256   |      |
| Water resistance               | kPa  | 56    | 50    | 52    | 52     | 52    | 52     | 56    | 56    |      |
| Piping specifications          | DN125  | DN125 | DN125 | DN125 | DN150  | DN150 | DN150  | DN150 | DN150 |      |
| class                          | R245fa   |       |       |       |        |       |        |       |       |      |
| Charge                         | kg   | 372   | 2x179 | 2x186 | 2x216  | 2x239 | 2x256  | 2x28  | 2x32  |      |
| Throttling device              | Electronic expansion valves  |       |       |       |        |       |        |       |       |      |
| long                           | mm   | 3680  | 4150  | 4150  | 4150   | 4660  | 4660   | 4660  | 5000  |      |
| wide                           | mm   | 1850  | 1350  | 1500  | 1700   | 1700  | 1780   | 1780  | 1850  |      |
| high                           | mm   | 1850  | 1650  | 1700  | 1780   | 1780  | 1780   | 1780  | 1850  |      |
| Shipping Weight                | kg   | 5390  | 4620  | 4840  | 6045   | 6490  | 6683   | 6820  | 8470  |      |
| Running weight                 | kg   | 5690  | 4920  | 5140  | 6344.5 | 6840  | 7032.5 | 7220  | 8870  |      |

## High temp. screw water source heat pump Tc=110

| Model              |                              | 380  | 400                                      | 440   | 460    | 530   | 590    | 630   | 700   |     |
|--------------------|------------------------------|--|--|-------|--------|-------|--------|-------|-------|-----|
| Heating Conditions | 50                           | Customized calorific kW  | 328                                      | 354   | 383    | 399   | 464    | 513   | 550   | 614 |
|                    |                              | Rated power kW   | 101                                      | 109   | 119    | 123   | 143    | 158   | 169   | 189 |
|                    |                              | COP W/W  | 3.2                                      | 3.2   | 3.2    | 3.2   | 3.2    | 3.2   | 3.2   | 3.2 |
|                    |                              | amount of calories kW  | 375                                      | 404   | 437    | 457   | 530    | 587   | 628   | 702 |
|                    | 55                           | Rated power kW   | 103                                      | 111   | 121    | 125   | 146    | 161   | 172   | 192 |
|                    |                              | COP W/W  | 3.6                                      | 3.6   | 3.6    | 3.7   | 3.6    | 3.6   | 3.7   | 3.7 |
|                    |                              | amount of calories kW  | 429                                      | 462   | 500    | 522   | 606    | 671   | 718   | 803 |
|                    | 60                           | Rated power kW   | 105                                      | 113   | 123    | 128   | 148    | 164   | 175   | 196 |
|                    |                              | COP W/W  | 4.1                                      | 4.1   | 4.1    | 4.1   | 4.1    | 4.1   | 4.1   | 4.1 |
|                    |                              | Rated operating current A  | 179                                      | 193   | 210    | 218   | 253    | 280   | 299   | 334 |
|                    | Power supply type            |  | 380V/3N-50Hz                             |       |        |       |        |       |       |     |
|                    | Load control range           |  | 25%-100%Segmented or segmentless control |       |        |       |        |       |       |     |
| Compressor         | version                      | Semi-Hermetic Screw Compressor   |  |       |        |       |        |       |       |     |
|                    | Startup mode                 | Y- $\Delta$  |  |       |        |       |        |       |       |     |
|                    | quantity Unit                | 1  | 1  | 1     | 1      | 1     | 1      | 1     | 1     |     |
| Evaporator         | version                      | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |  |       |        |       |        |       |       |     |
|                    | Water flow m <sup>3</sup> /h | 39   | 42                                       | 45    | 47     | 55    | 61     | 66    | 73    |     |
|                    | Water resistance kPa         | 54   | 54                                       | 54    | 57     | 57    | 57     | 57    | 60    |     |
|                    | Piping specifications        | DN100  | DN100                                    | DN100 | DN100  | DN125 | DN125  | DN125 | DN125 |     |
| Condenser          | version                      | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |  |       |        |       |        |       |       |     |
|                    | Water flow m <sup>3</sup> /h | 56   | 61                                       | 66    | 69     | 80    | 88     | 95    | 106   |     |
|                    | Water resistance kPa         | 50   | 50                                       | 50    | 52     | 52    | 52     | 52    | 56    |     |
|                    | Piping specifications        | DN100  | DN100                                    | DN100 | DN100  | DN125 | DN125  | DN125 | DN125 |     |
| Refrigerant        | class                        | R245fa   |  |       |        |       |        |       |       |     |
|                    | Charge kg                    | 164  | 177                                      | 192   | 200    | 232   | 257    | 275   | 307   |     |
|                    | Throttling device            | Electronic expansion valves  |  |       |        |       |        |       |       |     |
| Dimensions Weight  | long mm                      | 3350   | 3350                                     | 3350  | 3350   | 3550  | 3550   | 3680  | 3680  |     |
|                    | wide mm                      | 1350   | 1350                                     | 1350  | 1500   | 1700  | 1700   | 1780  | 1780  |     |
|                    | high mm                      | 1650   | 1650                                     | 1650  | 1700   | 1780  | 1780   | 1780  | 1780  |     |
|                    | Shipping Weight kg           | 2730   | 2975                                     | 2940  | 3080   | 3847  | 4130   | 4253  | 4340  |     |
| Running weight kg  | 2880                         | 3125   | 3090                                     | 3230  | 4066.5 | 4350  | 4472.5 | 4640  |       |     |

| Model              |                              | 790  | 870                                      | 910    | 1060  | 1170   | 1260  | 1400  | 1580  |      |
|--------------------|------------------------------|--|--|--------|-------|--------|-------|-------|-------|------|
| Heating Conditions | 50                           | amount of calories kW  | 692                                      | 766    | 798   | 928    | 1026  | 1100  | 1228  | 1384 |
|                    |                              | Rated power kW   | 212                                      | 238    | 246   | 286    | 316   | 338   | 378   | 424  |
|                    |                              | COP W/W  | 3.3                                      | 3.2    | 3.2   | 3.2    | 3.2   | 3.3   | 3.2   | 3.3  |
|                    |                              | amount of calories kW  | 791                                      | 874    | 914   | 1060   | 1174  | 1256  | 1404  | 1582 |
|                    | 55                           | Rated power kW   | 216                                      | 242    | 250   | 292    | 322   | 344   | 384   | 432  |
|                    |                              | COP W/W  | 3.7                                      | 3.6    | 3.7   | 3.6    | 3.6   | 3.7   | 3.7   | 3.7  |
|                    |                              | amount of calories kW  | 905                                      | 1000   | 1044  | 1212   | 1342  | 1436  | 1606  | 1810 |
|                    | 60                           | Rated power kW   | 220                                      | 246    | 256   | 296    | 328   | 350   | 392   | 440  |
|                    |                              | COP W/W  | 4.1                                      | 4.1    | 4.1   | 4.1    | 4.1   | 4.1   | 4.1   | 4.1  |
|                    |                              | Rated operating current A  | 375                                      | 420    | 436   | 506    | 560   | 598   | 668   | 750  |
|                    | Power supply type            |  | 380V/3N-50Hz                             |        |       |        |       |       |       |      |
|                    | Load control range           |  | 25%-100%Segmented or segmentless control |        |       |        |       |       |       |      |
| Compressor         | version                      | Semi-Hermetic Screw Compressor   |  |        |       |        |       |       |       |      |
|                    | Startup mode                 | Y- $\Delta$  |  |        |       |        |       |       |       |      |
|                    | quantity Unit                | 1  | 2  | 2      | 2     | 2      | 2     | 2     | 2     |      |
| Evaporator         | version                      | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |  |        |       |        |       |       |       |      |
|                    | Water flow m <sup>3</sup> /h | 83   | 91                                       | 95     | 110   | 122    | 131   | 146   | 165   |      |
|                    | Water resistance kPa         | 60   | 54                                       | 57     | 57    | 57     | 57    | 60    | 60    |      |
|                    | Piping specifications        | DN125  | DN125                                    | DN125  | DN125 | DN150  | DN150 | DN150 | DN150 |      |
| Condenser          | version                      | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |  |        |       |        |       |       |       |      |
|                    | Water flow m <sup>3</sup> /h | 119  | 132                                      | 137    | 160   | 176    | 189   | 211   | 238   |      |
|                    | Water resistance kPa         | 56   | 50                                       | 52     | 52    | 52     | 52    | 56    | 56    |      |
|                    | Piping specifications        | DN125  | DN125                                    | DN125  | DN125 | DN150  | DN150 | DN150 | DN150 |      |
| Refrigerant        | class                        | R245fa   |  |        |       |        |       |       |       |      |
|                    | Charge kg                    | 346  | 2x179                                    | 2x186  | 2x216 | 2x239  | 2x256 | 2x286 | 2x322 |      |
|                    | Throttling device            | Electronic expansion valves  |  |        |       |        |       |       |       |      |
| Dimensions Weight  | long mm                      | 3680   | 4150                                     | 4150   | 4150  | 4660   | 4660  | 4660  | 5000  |      |
|                    | wide mm                      | 1850   | 1350                                     | 1500   | 1700  | 1700   | 1780  | 1780  | 1850  |      |
|                    | high mm                      | 1850   | 1650                                     | 1700   | 1780  | 1780   | 1780  | 1780  | 1850  |      |
|                    | Shipping Weight kg           | 5390   | 4620                                     | 4840   | 6045  | 6490   | 6683  | 6820  | 8470  |      |
| Running weight kg  | 5690                         | 4920   | 5140                                     | 6344.5 | 6840  | 7032.5 | 7220  | 8870  |       |      |

## High temp. screw water source heat pump Tc=120

| Model              |                              | 350  | 370                                      | 410   | 420    | 490   | 540    | 580   | 650   |     |
|--------------------|------------------------------|--|--|-------|--------|-------|--------|-------|-------|-----|
| Heating Conditions | 50                           | amount of calories kW  | 306                                      | 330   | 357    | 372   | 432    | 478   | 512   | 572 |
|                    |                              | Rated power kW   | 121                                      | 131   | 143    | 148   | 172    | 190   | 203   | 226 |
|                    |                              | COP W/W  | 2.5                                      | 2.5   | 2.5    | 2.5   | 2.5    | 2.5   | 2.5   | 2.5 |
|                    |                              | amount of calories kW  | 347                                      | 374   | 405    | 422   | 490    | 543   | 581   | 649 |
|                    | 55                           | Rated power kW   | 123                                      | 133   | 145    | 150   | 174    | 193   | 206   | 230 |
|                    |                              | COP W/W  | 2.8                                      | 2.8   | 2.8    | 2.8   | 2.8    | 2.8   | 2.8   | 2.8 |
|                    |                              | amount of calories kW  | 394                                      | 425   | 460    | 480   | 557    | 617   | 660   | 738 |
|                    | 60                           | Rated power kW   | 125                                      | 135   | 147    | 152   | 177    | 196   | 209   | 233 |
|                    |                              | COP W/W  | 3.2                                      | 3.1   | 3.1    | 3.2   | 3.1    | 3.1   | 3.2   | 3.2 |
|                    |                              | Rated operating current A  | 214                                      | 231   | 251    | 260   | 302    | 334   | 357   | 398 |
|                    | Power supply type            |  | 380V/3N-50Hz                             |       |        |       |        |       |       |     |
|                    | Load control range           |  | 25%-100%Segmented or segmentless control |       |        |       |        |       |       |     |
| Compressor         | version                      | Semi-Hermetic Screw Compressor   |  |       |        |       |        |       |       |     |
|                    | Startup mode                 | Y- $\Delta$  |  |       |        |       |        |       |       |     |
|                    | quantity Unit                | 1  | 1  | 1     | 1      | 1     | 1      | 1     | 1     |     |
| Evaporator         | version                      | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |  |       |        |       |        |       |       |     |
|                    | Water flow m <sup>3</sup> /h | 39   | 42                                       | 45    | 47     | 55    | 61     | 66    | 73    |     |
|                    | Water resistance kPa         | 54   | 54                                       | 54    | 57     | 57    | 57     | 57    | 60    |     |
|                    | Piping specifications        | DN100  | DN100                                    | DN100 | DN100  | DN125 | DN125  | DN125 | DN125 |     |
| Condenser          | version                      | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |  |       |        |       |        |       |       |     |
|                    | Water flow m <sup>3</sup> /h | 32   | 34                                       | 37    | 39     | 45    | 50     | 53    | 60    |     |
|                    | Water resistance kPa         | 54   | 54                                       | 54    | 57     | 57    | 57     | 57    | 60    |     |
|                    | Piping specifications        | DN100  | DN100                                    | DN100 | DN100  | DN125 | DN125  | DN125 | DN125 |     |
| Refrigerant        | class                        | R245fa   |  |       |        |       |        |       |       |     |
|                    | Charge kg                    | 15   | 165                                      | 179   | 186    | 216   | 239    | 256   | 286   |     |
|                    | Throttling device            | Electronic expansion valves  |  |       |        |       |        |       |       |     |
| Dimensions Weight  | long mm                      | 3550   | 3350                                     | 3350  | 3350   | 3550  | 3550   | 3680  | 3680  |     |
|                    | wide mm                      | 1350   | 1350                                     | 1350  | 1500   | 1700  | 1700   | 1780  | 1780  |     |
|                    | high mm                      | 1650   | 1650                                     | 1650  | 1700   | 1780  | 1780   | 1780  | 1780  |     |
|                    | Shipping Weight kg           | 2730   | 2975                                     | 2940  | 3080   | 3847  | 4130   | 4253  | 4340  |     |
| Running weight kg  | 2880                         | 3125   | 3090                                     | 3230  | 4066.5 | 4350  | 4472.5 | 4640  |       |     |

| Model              |                              | 730  | 810                                      | 840    | 980   | 1090   | 1160  | 1300  | 1460  |      |
|--------------------|------------------------------|--|--|--------|-------|--------|-------|-------|-------|------|
| Heating Conditions | 50                           | amount of calories kW  | 644                                      | 714    | 744   | 864    | 956   | 1024  | 1144  | 1288 |
|                    |                              | Rated power kW   | 254                                      | 286    | 296   | 344    | 380   | 406   | 452   | 508  |
|                    |                              | COP W/W  | 2.5                                      | 2.5    | 2.5   | 2.5    | 2.5   | 2.5   | 2.5   | 2.5  |
|                    |                              | amount of calories kW  | 731                                      | 810    | 844   | 980    | 1086  | 1162  | 1298  | 1462 |
|                    | 55                           | Rated power kW   | 258                                      | 290    | 300   | 348    | 386   | 412   | 460   | 516  |
|                    |                              | COP W/W  | 2.8                                      | 2.8    | 2.8   | 2.8    | 2.8   | 2.8   | 2.8   | 2.8  |
|                    |                              | amount of calories kW  | 831                                      | 920    | 960   | 1114   | 1234  | 1320  | 1476  | 1662 |
|                    | 60                           | Rated power kW   | 262                                      | 294    | 304   | 354    | 392   | 418   | 466   | 524  |
|                    |                              | COP W/W  | 3.2                                      | 3.1    | 3.2   | 3.1    | 3.1   | 3.2   | 3.2   | 3.2  |
|                    |                              | Rated operating current A  | 447                                      | 502    | 520   | 604    | 668   | 714   | 796   | 894  |
|                    | Power supply type            |  | 380V/3N-50Hz                             |        |       |        |       |       |       |      |
|                    | Load control range           |  | 25%-100%Segmented or segmentless control |        |       |        |       |       |       |      |
| Compressor         | version                      | Semi-Hermetic Screw Compressor   |  |        |       |        |       |       |       |      |
|                    | Startup mode                 | Y- $\Delta$  |  |        |       |        |       |       |       |      |
|                    | quantity Unit                | 1  | 2  | 2      | 2     | 2      | 2     | 2     | 2     |      |
| Evaporator         | version                      | Dry shell and tube heat exchanger (design water pressure 1.0MPa)             |  |        |       |        |       |       |       |      |
|                    | Water flow m <sup>3</sup> /h | 67   | 74                                       | 77     | 89    | 99     | 106   | 119   | 134   |      |
|                    | Water resistance kPa         | 60   | 54                                       | 57     | 57    | 57     | 57    | 60    | 60    |      |
|                    | Piping specifications        | DN125  | DN125                                    | DN125  | DN125 | DN150  | DN150 | DN150 | DN150 |      |
| Condenser          | version                      | High-efficiency shell-and-tube heat exchanger (design water pressure 1.0MPa) |  |        |       |        |       |       |       |      |
|                    | Water flow m <sup>3</sup> /h | 111  | 123                                      | 128    | 149   | 164    | 176   | 197   | 221   |      |
|                    | Water resistance kPa         | 56   | 50                                       | 52     | 52    | 52     | 52    | 56    | 56    |      |
|                    | Piping specifications        | DN125  | DN125                                    | DN125  | DN125 | DN150  | DN150 | DN150 | DN150 |      |
| Refrigerant        | class                        | R245fa   |  |        |       |        |       |       |       |      |
|                    | Charge kg                    | 322  | 2x179                                    | 2x186  | 2x216 | 2x239  | 2x256 | 2x286 | 2x322 |      |
|                    | Throttling device            | Electronic expansion valves  |  |        |       |        |       |       |       |      |
| Dimensions Weight  | long mm                      | 3680   | 4150                                     | 4150   | 4150  | 4660   | 4660  | 4660  | 5000  |      |
|                    | wide mm                      | 1850   | 1350                                     | 1500   | 1700  | 1700   | 1780  | 1780  | 1850  |      |
|                    | high mm                      | 1850   | 1650                                     | 1700   | 1780  | 1780   | 1780  | 1780  | 1850  |      |
|                    | Shipping Weight kg           | 5390   | 4620                                     | 4840   | 6045  | 6490   | 6683  | 6820  | 8470  |      |
| Running weight kg  | 5690                         | 4920   | 5140                                     | 6344.5 | 6840  | 7032.5 | 7220  | 8870  |       |      |