



## **Hiseer DC Inverter Geothermal Heat Pump**

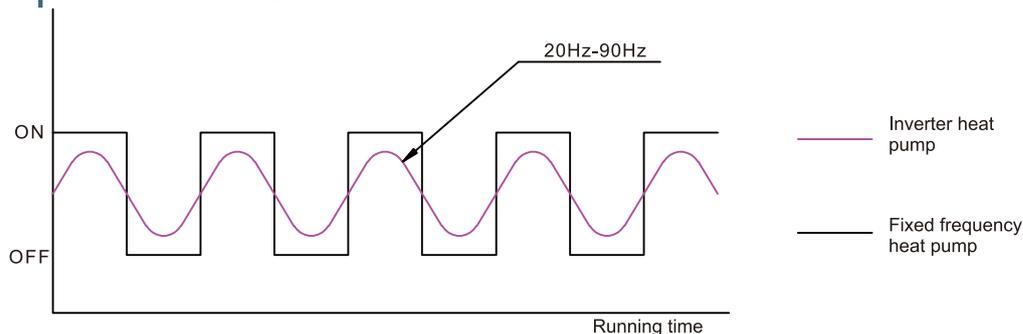
High efficiency  
More comfortable  
Energy saving  
Environment friendly



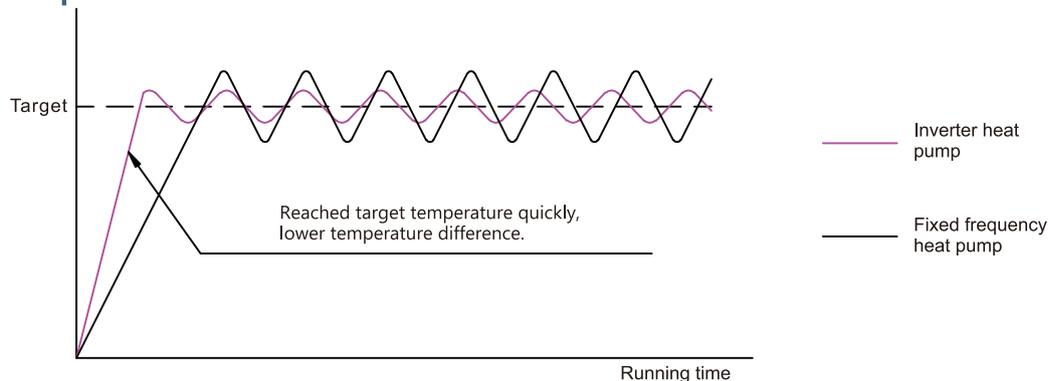
Hiseer DC inverter heat pump offers a wide heat output . It could adjust heat output automatically according to your house heating requirement . In winter , the inverter compressor will runs on high speed to provide more heating when ambient temperature is very low ; If your house need less heating , it will drop running frequency down to 20Hz in which condition the heat pump will consume less electric power .

Heat pump is not just a heating system for new buildings , it can also be integrated into existing buildings that already have heating systems easily . Irrespective of whether you have a gas , oil boiler or solar panels , the heat pump switches on the 2nd heat generator according to demand for keeping lowest heating costs.

## Compressor Control



## Temperature Control



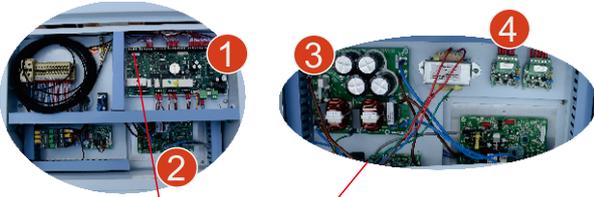
## Hiseer DC Inverter Heat Pump Advantages:

1. Save more than 30% energy than fixed frequency heat pump
2. Soft start to protect your electric network
3. Smooth temperature varies curve
4. Wide heating/cooling output range
5. Can be used in combination with heat generators such as gas ,oil or solar that existing in buildings
6. Easy Controller Operation.
7. Weather compensation function: heating / cooling curve
8. Heating, cooling and domestic hot water
9. SG Ready.
10. Flow feedback Grundfos circulation pump ,saving water flow switch.

## ■ Main Components



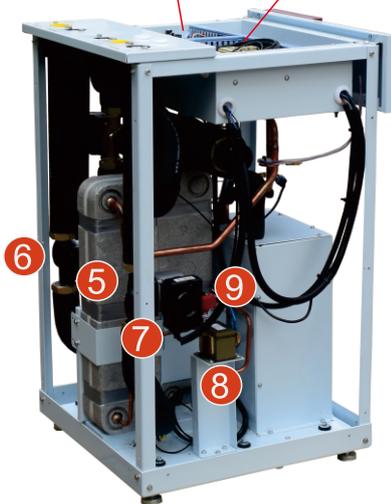
1 Carel Controller CPPB006DM0



2 Sanhua Inverter

3 Sanhua EMC Filter Board

4 Circulation Pump Flow Feedback Board  
(indoor / outdoor side)



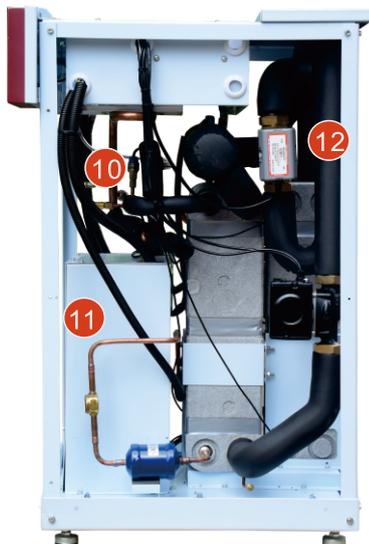
5 GEA / SWEP Plate Heat Exchanger  
(indoor / outdoor side)

6 Grundfos Circulation Pump  
(indoor side)

7 Grundfos Circulation Pump  
(outdoor side)

8 Sanhua Harmonic Filter

9 Carel Electronic Expansion Valve

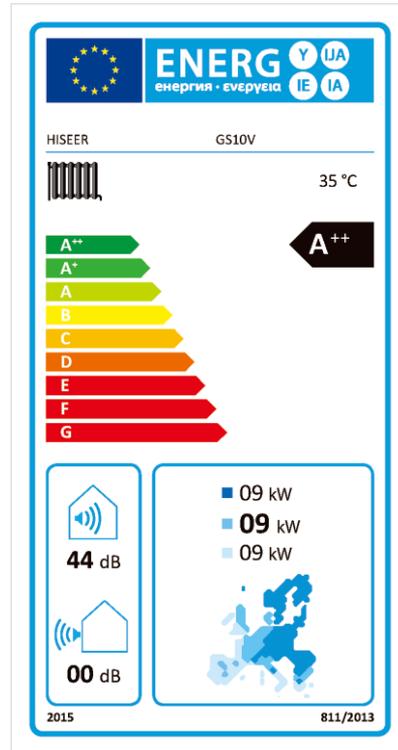


10 Sanhua High/Low Pressure Transducer

11 Mitsubishi Twin Rotary Compressor

12 Honeywell Three Way Valve

## Energy Labels



## Product Fiche

| Type  | Inverter Geothermal Heat Pump |                  |
|---|-------------------------------|------------------|
| Model   |                               | GS10V            |
| Temperature application   |                               | 35°C             |
| Seasonal space heating energy efficiency class, average climate     |                               | A <sup>++</sup>  |
| Rated heat output , average climate                                 | [KW]                          | 9                |
| Seasonal space heating energy efficiency $\eta_h$ , average climate |                               | 157%             |
| Annual energy consumption , average climate*                        | [KWh]                         | 4427             |
| Sound power level LWA, indoors                                      | [dB(A)]                       | 44               |
| SCOP, average climate   |                               | 4.13             |
| Refrigerant type  |                               | R410A            |
| Global Warming Potential (GWP)                                      |                               | 2088             |
| Heating Capacity at standard rating conditions**                    | [KW]                          | 8.11             |
| Power input at standard rating conditions**                         | [KW]                          | 2.05             |
| Dimension (H X W X D )  | [mm]                          | 1040 X 600 X 640 |
| Weight  | [kg]                          | 134              |
| Power source  |                               | 230V/1ph/50Hz    |

\* The annual energy consumption kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.

\*\* The standard rating conditions: brine inlet temp. 0°C, heating flow temp. 35°C, compressor speed 70Hz.

## Technical Data



|  |            |                                  |       |         |       |
|--|------------|----------------------------------|-------|---------|-------|
| Heat pump                                  |            |                                  | GS10V |         |       |
| Dimensions, weights, connection dimensions |            |                                  |       |         |       |
| Dimensions                                 | HxWxD      | 1040x600x640                     |       |         |       |
| Weight                                     | kg         | 134                              |       |         |       |
| Refrigerant                                | Type       | R410A                            |       |         |       |
| Filling weight                             | kg         | 1.5                              |       |         |       |
| Permissible operating pressure             | Mpa        | 3.8                              |       |         |       |
| Pipe connector-hot side                    | Inch       | G1 <sup>1</sup> / <sub>4</sub> " |       |         |       |
| Pipe connector-cold side                   | Inch       | G1 <sup>1</sup> / <sub>4</sub> " |       |         |       |
| Evaporator                                 | Type       | Braze plate heat exchanger       |       |         |       |
| Condenser                                  | Type       | Braze plate heat exchanger       |       |         |       |
| Compressor                                 |            | Mitsubishi Electric twin rotary  |       |         |       |
| Nominal running current at B0/W35          | A          | 7.9                              |       |         |       |
| Performance Heat pump                      |            |                                  |       |         |       |
| Heating performance                        |            |                                  | Min.  | Nominal | Max.  |
| Heat output                                | at B0/W35  | kW                               | 3.15  | 8.11    | 10.24 |
| Power consumption                          |            | kW                               | 0.74  | 2.05    | 2.80  |
| Performance factor                         |            |                                  | 4.24  | 3.96    | 3.65  |
| Indoor side volume flow                    |            | m <sup>3</sup> /h                | 0.56  | 1.36    | 1.74  |
| Indoor side pressure drop                  |            | kpa                              | 3     | 18      | 21    |
| Outdoor side volume flow                   |            | m <sup>3</sup> /h                | 0.92  | 1.81    | 1.91  |
| Outdoor side pressure drop                 |            | kpa                              | 7     | 22.0    | 27.0  |
| Heat output                                | at W10/W35 | kW                               | 4.09  | 10.98   | 14.16 |
| Power consumption                          |            | kW                               | 0.68  | 1.92    | 2.75  |
| Performance factor                         |            |                                  | 5.99  | 5.71    | 5.15  |
| Indoor side volume flow                    |            | m <sup>3</sup> /h                | 0.69  | 1.87    | 2.47  |
| Outdoor side volume flow                   |            | m <sup>3</sup> /h                | 0.89  | 2.59    | 3.07  |
| Power                                      | Type       | 230V/50Hz                        |       |         |       |
| Sound power level                          | dB(A)      | 44                               |       |         |       |

The above data is tested by EN14511 EN14825

B0/W35 means heating source brine inlet temp. 0°C, heating flow temp. 35°C

W10/W35 means heating source water inlet temp. 10°C, heating flow temp. 35°C

# Rated Speed Performance Curve

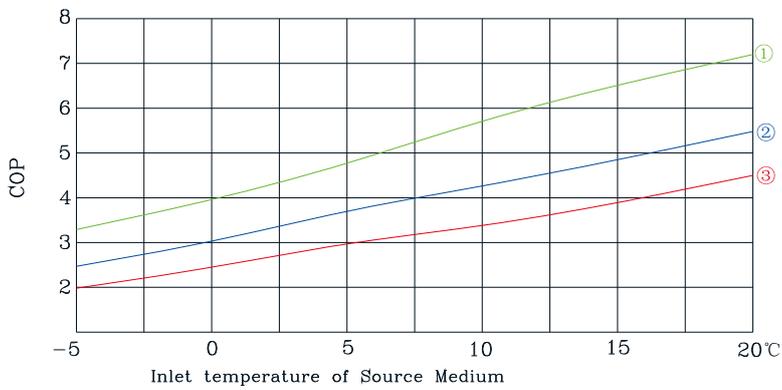
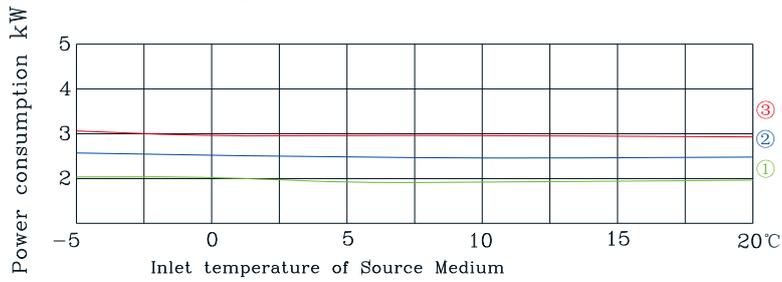
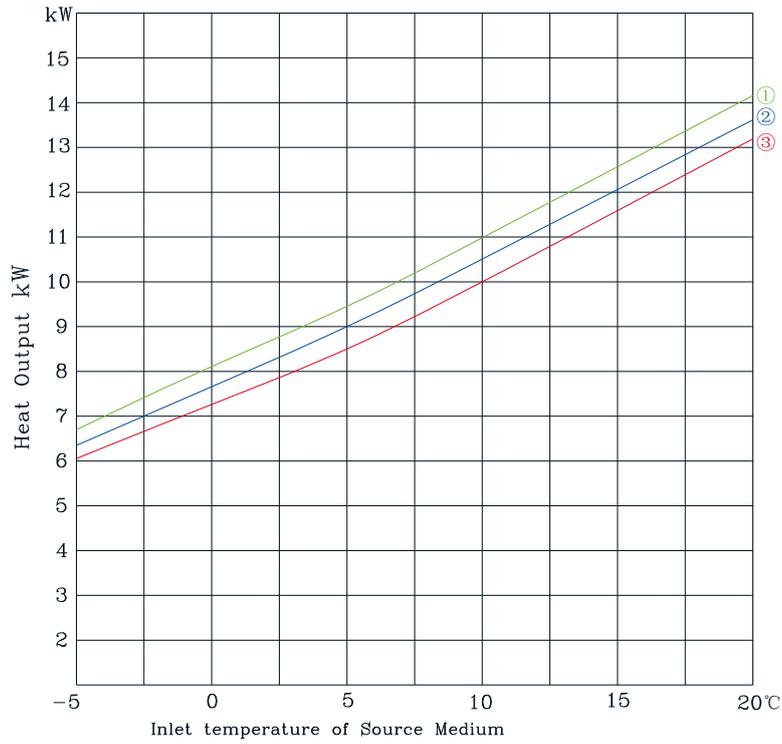
Model:GS10V

Heating performance curve

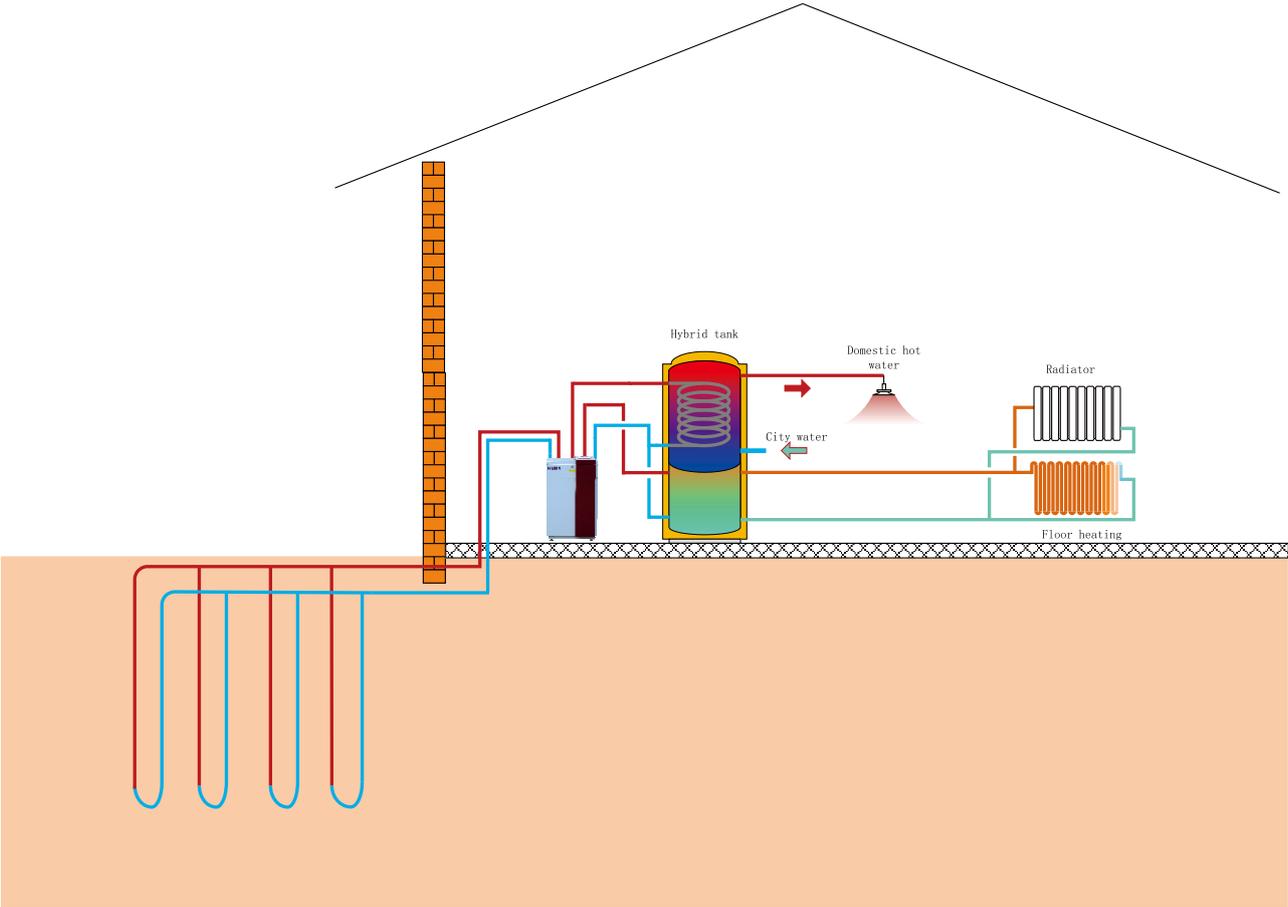
1=Flow temperature 35°C Full load

2=Flow temperature 45°C Full load

3=Flow temperature 55°C Full load

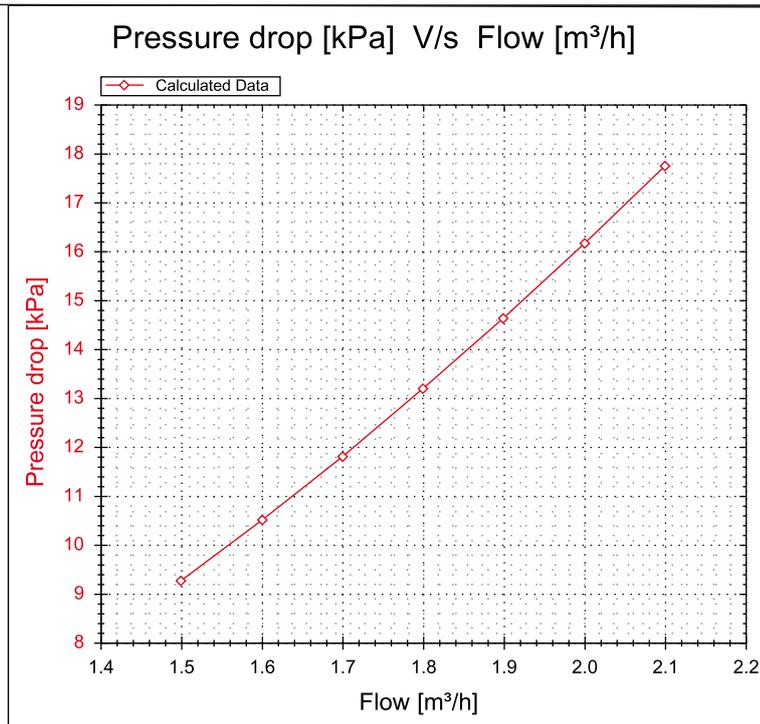


■ Typical application

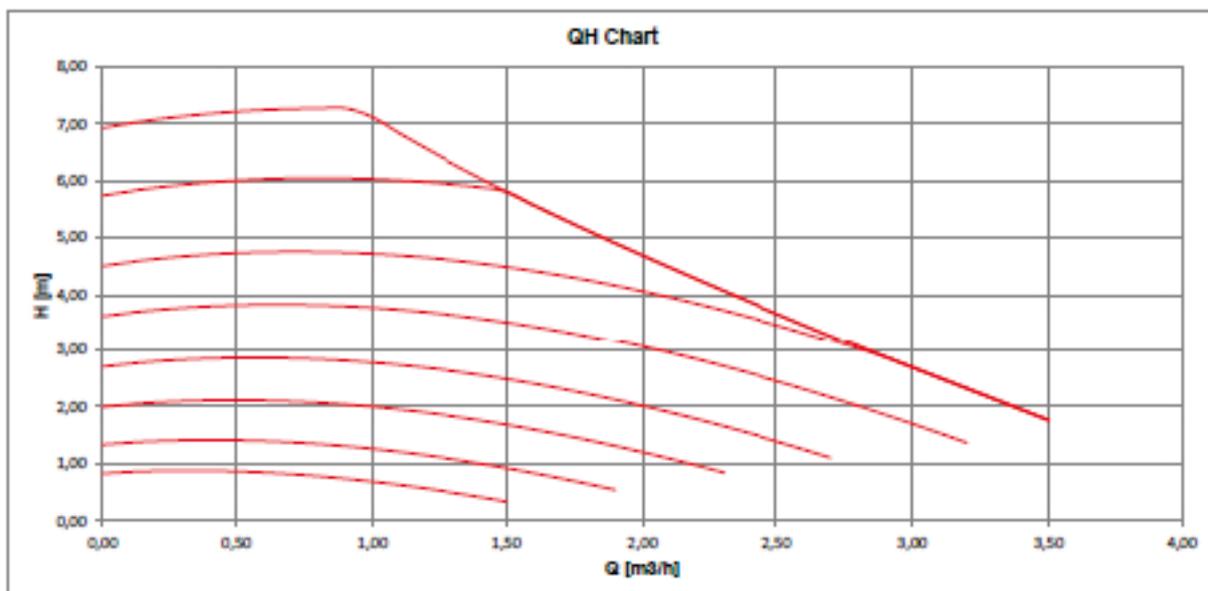


## ■ Plate Exchanger Pressure Drop Curve

GS10V



## ■ Internal Pump Grundfos UPM<sub>3</sub>K 25-75 Curve



## ■ Hiser DC Inverter Ground Source Heat Pump Dimension :

GS10V

