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FENECO

# Providing Powerful Heating Under -38℃ Temperature


## Low temperature full DC Inverter heat pump

Heating | Cooling | Hot water

**GuangDong Fineco New Energy Co., Ltd**
Air Source And Water Source Heat Pump As A One-Stop Solution Supplier

China • Foshan

# CONTENTS

# ENTERPRISE CULTURE

## MISSION

Make the world's best heat pump, make human life warmer!

## VISION

Let every family have a comfortable and healthy environment.

## CORE VALUES

Innovation, Honesty, Service,Gratitude.

# Company Profile

FENECO New Energy is a national high-tech enterprise specializing in the research and development, production, and sales of heat pumps and commercial air conditioners. The technical research and development team has over 15 years of industry experience, absorbing and introducing advanced technology from European heat pump manufacturing. The company's products include air source heat pumps, water source heat pumps, commercial air conditioners, etc. Mainly serving homes, schools, hotels, enterprises and institutions, it can simultaneously meet multiple needs such as domestic hot water, heating, and cooling. FENECO heat pump products have the characteristics of high energy efficiency, low noise, fast heating, ultra energy-saving, and intelligence. The products meet the requirements of strong heating at -38 ° C ultra-low temperature in winter and strong cooling at 52 ° C high temperature in summer.

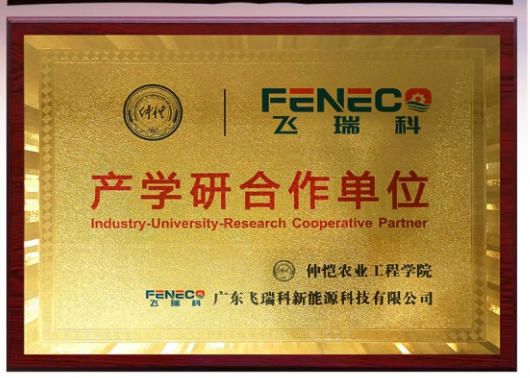

The company adheres to the principle of "technological innovation, leading service, integrity and win-win, and pursuit of excellence", and is committed to becoming the world's most energy-saving and environmentally friendly technology leading enterprise, making unremitting efforts to create world-class quality products!

The company's production base is located in Foshan, Guangdong, with three professional host production lines and an annual output of up to 80000 units. We also have professional inspection rooms, long-term fatigue operation laboratories at -30 ° C, and comprehensive testing laboratories for explosion-proof heat pumps at -40 ° C, among other advanced equipment in the industry, to ensure that the products developed and produced can receive comprehensive testing and full validation. The company has passed the export EU CE certification, ISO9001 quality management system certification, and EU Erp energy efficiency certification. Its products are mainly exported to 46 countries and regions such as Europe, the Americas, Australia, Africa, and Southeast Asia, and are highly welcomed and praised by the market and customers.

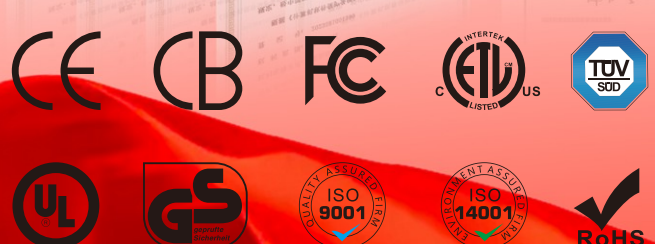
# Honorary Qualifications








**20+** Multiple patent certificates, EU CE certification, ISO9001 quality management system certification, etc.

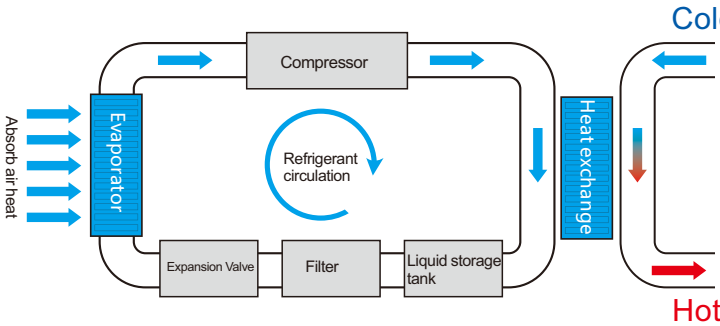




The product has been sold in 46 countries and regions

## European quality exportd to the world

GLOBAL SALES NETWORK

# Heat Pump Principle




- The refrigerant absorbs the free air source energy Q3 from the air by the evaporator.
- The compressor compress the refrigerant into high temperature and pressure refrigerant via electric energy Q1.
- The heat energy Q4 transmit to water in the heat exchanger.
- According to the law of conservation of energy, heat energy Q4 =air energy Q3+ electric energy Q1

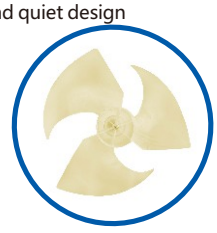

# Heat Pump Main Components

## Water pump
Imported brand water pump with built-in multi variable negative pressure water supply system.

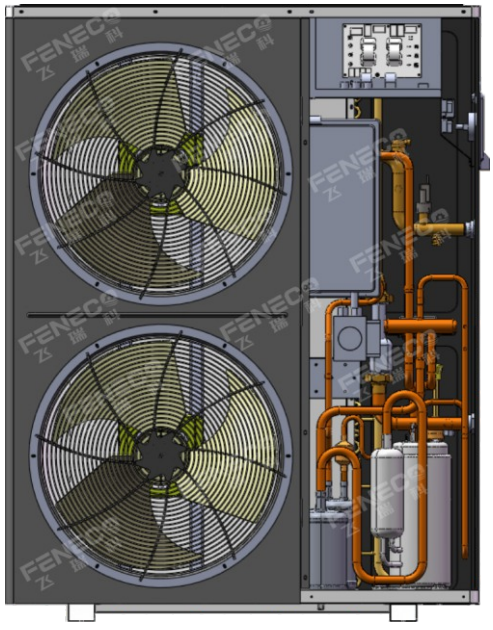
## Motor
DC inverter brushless motor

## Compressor
Adopting well-known brands such as Mitsubishi / Panasonic for DC variable frequency compressors, it has high efficiency, low noise, and long service life.

## Fan
Optimized duct and quiet design

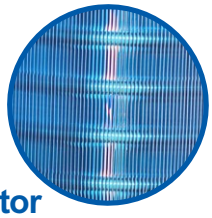


## Motherboard
Efficient operation intelligent control



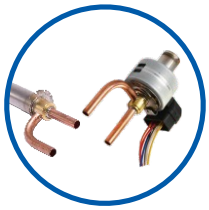
## Four-way valve
Famous brand, fully automatic

## Evaporator
High efficiencyhydrophilicAluminum foil finevaporator Large amount of air inlet




## Intelligent control
Full touch screen smart Controll + WIFI.More Convenient

## Contactor
Famous brands such as Schneider



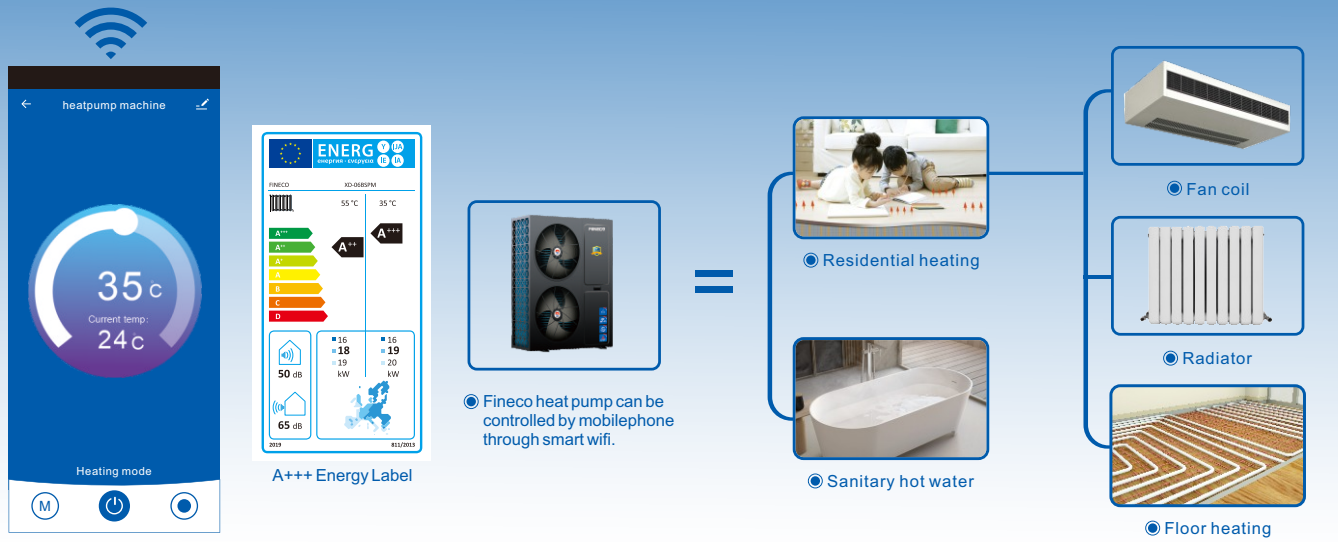
## Electronic expansion valve
EEV or TEV, Precise flow control Saginomiya,SANHUA etc.

## Heat exchanger
Famous brand High-efficiency Heat exchanger or Brazed plate Heat Exchanger

# Air source heat pump heating technology

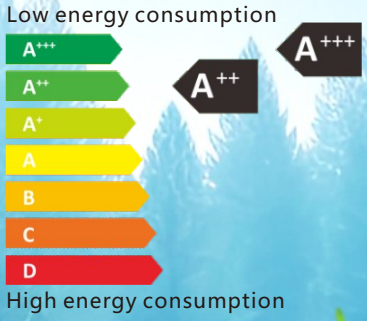
The air source heat pump heating system is composed of an outdoor air source host, an indoor installed floor heating system, and an intelligent controller. During heating operation, the air source heat pump absorbs energy from the outdoor air, heats up to the available heat for floor heating, and sends it indoors to achieve winter heating. The intelligent controller is an important component of controlling the operation of the system, achieving indoor heating, and achieving good economy.Due to the lack of combustion process in heat pump heating, it is an environmentally friendly technology. Compared with direct electric heating and gas wall mounted boilers, the Heat Pump can save energy up to 75%, which has good energy-saving performance.


**FENECO heat pump can be controlled by mobilephone.**
**Turning on dan off · adjusting temperature · switching running mode · setting timing clock**



# Leading brand of energy Saving heat pumps

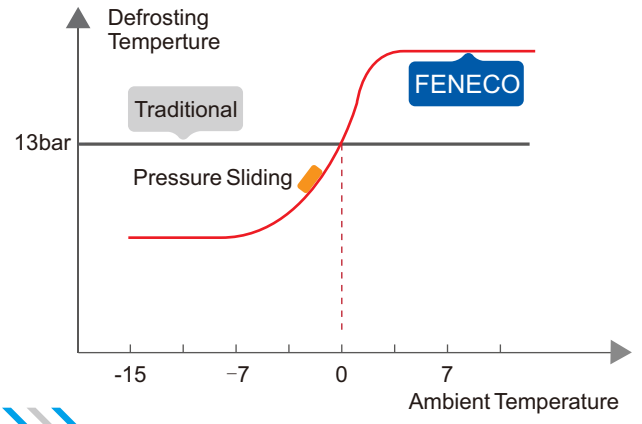
European A+++energy efficiency
Saving 75% electricity





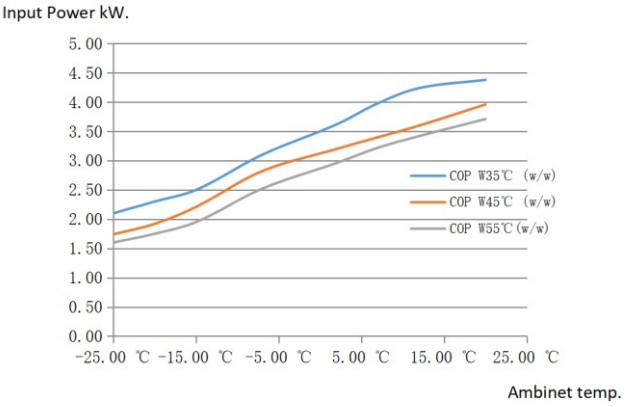
## Multiple protection functions

- Ground protection
- Overvoltage protection
- Leakage protection
- Temp differential protection
- High temp protection
- Lostiong-phase protection
- Low-voltage protection
- Dry heat protection
- Over-current protection
- Water flow protection
- Intelligent fault automatic detection
- High/low voltage protection
- Automatic monitoring
- Communication line fault protection
- Frost protection
- Temp sensor fault protection



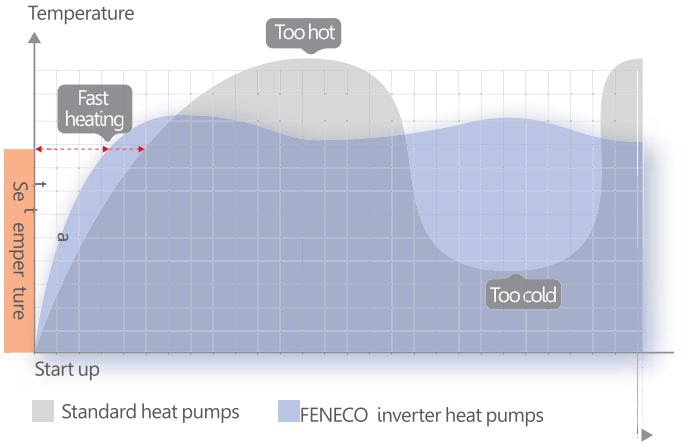

## Intelligent Defrosting Method

FENECO intelligent defrosting uses the pressure sliding defrosting technology to figure out the exact defrosting time and start pressure according to the real ambient temperature. It saves energy and makes the heat pump work in high efficiency.



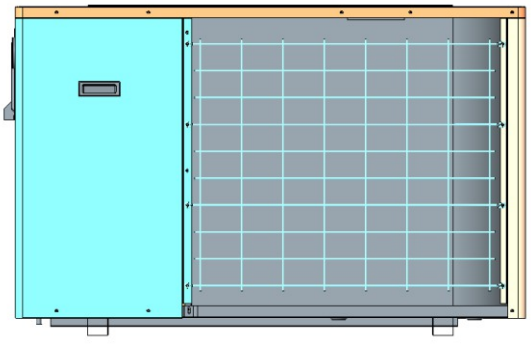

## Powerfull Heating at-30℃Ambient Temp

FENECO DC inverter heat pump adopts Panasonic / Mitsubishi high efficiency DC inverter compressor and DC inverter brushless motor, which combined with smart full DC controlling, assures the motor speed and refrigerant flow can be adjusted in real time according to the changes of environment and ensures the system can also provide powerful heating under severe cold climate.




## Speed Up Heating and Cooling Time

When there is a large difference between the actual temperature and the programmed temperature, the unit can run at a higher frequency to make fastheating or cooling to increase or decrease the temperature rapidly.



## No Frosting at the Bottom

With the use of the special liquid distribution technology, in heating mode, the temperature of refrigerant in the air exchanger's bottom copper tube will not decrease in order to ensure no frosting on it and smooth drainage. Then, there is one auxiliary electric heating belt on the base which can prevent water from freezing.

FENECO Make Life Warmer

# Polaris Series

HEATING | COOLING | HOT WATER

# BORN FOR LOW TEMPERATURE
# EXCELLENT HEATING & COOLING

Full DC Inverter | Smart Defrosting | Low Temperature EVI | Wifi intelligent control | Triple Antifreeze


CE CB RoHS TÜV SÜD GS ISO 9001 ISO 14001

# Polaris ultra-low temperature DC INVERTER heat pump

- 24-hour central hot water+refrigeration+heating
- Full DC frequency conversion
- Intelligent defrosting
- Ultra low temperature EVI enthalpy increase
- Triple antifreeze
- Efficient and energy-saving

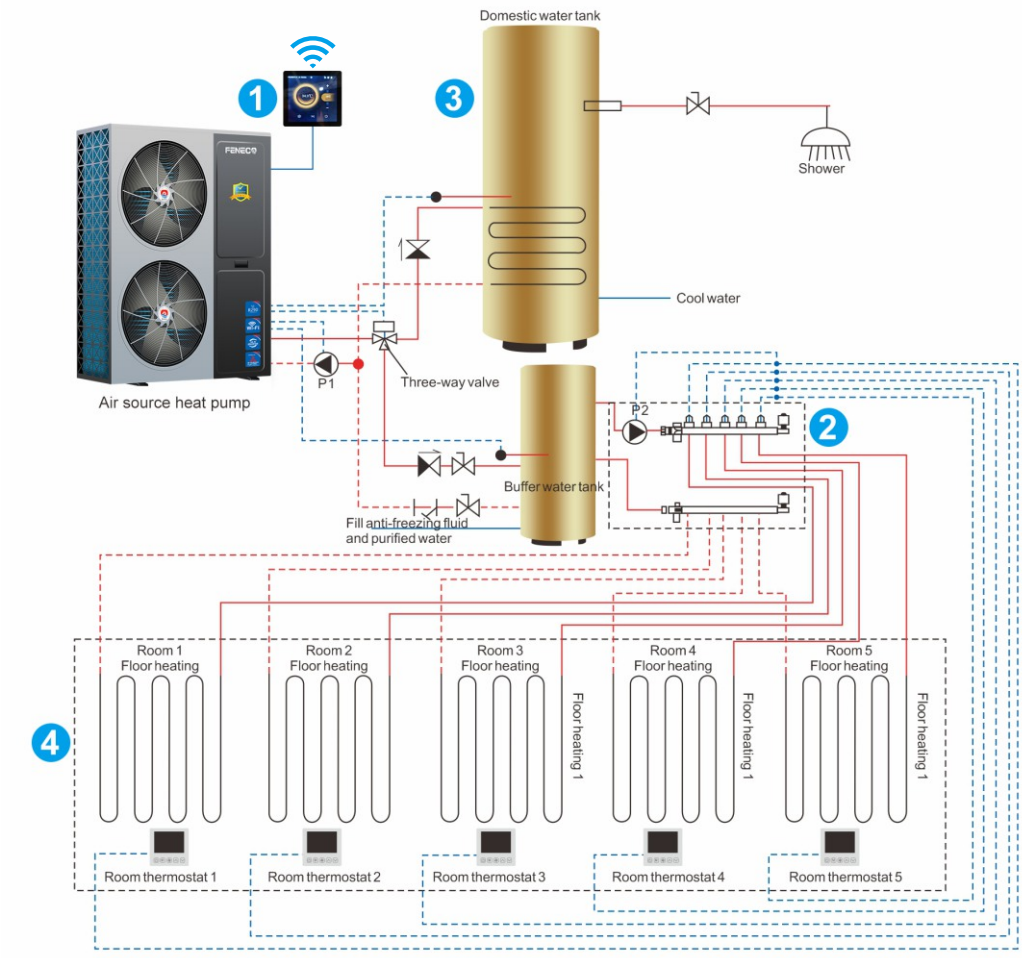

## Monoblock DC Inverter Heat Pump Parameter

| Model | | XD-03BPM (220V) | XD-04BPM (220V) | XD-05BPM (220V) | XD-06BPM (220V) | XD-05BPM (380V) | XD-06BPM (380V) | XD-08BPM (380V) | XD-10BPM (380V) |
|---|---|---|---|---|---|---|---|---|---|
| Power Supply | | 220-240V/1N～/50Hz | | | | 380-415V/3N～/50Hz | | | |
| Ambient Temperature Range | | -30－+43℃ | | | | -30－+43℃ | | | |
| Heating Capacity(kW/COP) | A7W35 | 8(2-9)/4.1 | 12(2-13)/4.2 | 15(3-17)/3.96 | 18(3-20/4.1 | 15(3-17)/4.2 | 18(3-20/4.15 | 24(4-26)/4.2 | 32(4-35)/4.1 |
| | A7W45 | 7.6/3.2 | 10.6/3.4 | 13.2/3.11 | 14.5/3.4 | 13.4/3.15 | 15/3.4 | 20.3/3.3 | 25.3/3.1 |
| | A2W35 | 6.4/3.58 | 9.4/3.62 | 12.6/3.58 | 14/3.44 | 12.5/3.56 | 14/3.44 | 20.2/3.3 | 25.6/3.1 |
| | A-15W35 | 4.8/1.97 | 7.0/2.17 | 8.7/2.12 | 11/2.5 | 9 / 2.22 | 11/2.5 | 16/2.4 | 20/2.57 |
| Domestic Hot Water(kW/COP) | A20W55 | 8.8/4.0 | 12.5/4.1 | 13.8/4.1 | 16.5/4.0 | 14 / 4.1 | 17/4.0 | 22/4.1 | 28/4.0 |
| | A7W55 | 7.0 /3.12 | 9.8 /3.2 | 12.5/3.1 | 14.2/3.0 | 13/3.0 | 14.5/3.0 | 19/3.0 | 26/3.1 |
| | A2W45 | 6.1/3.3 | 8.2/3.4 | 8.8/3.3 | 13.5/3.2 | 9/3.3 | 13.8/3.2 | 18.8/2.9 | 23/2.8 |
| DHW Input Power/Current （kW/A) | A7W55 | 2.22/9.5 | 2.9/13.2 | 4.1/18.6 | 5.2/ 21 | 4.3/7 | 5.1/ 8.1 | 6.5/10 | 8.4/13 |
| Rated Input Power/Current （kW/A) | A7W35 | 2.1/8.5 | 2.7/11.5 | 3.85/17.4 | 4.7/18 | 3.95/6.2 | 4.7/7.2 | 5.6/8.5 | 7.3/12.8 |
| Cooling Capacity(kW/EER) | A35W7 | 6.2/2.5-5.8 | 10.8/2.6-5.8 | 11/2.6-5.7 | 14/2.5-5.7 | 11/2.5-5.8 | 14/2.4-5.8 | 20/2.6 | 25/2.5 |
| Cooling Input Power(kW/A) | | 2.1/9.5 | 2.6/11.3 | 3.93/18 | 4.5/23 | 3.95/6.5 | 5.2/8.5 | 7.1/10.8 | 10/15 |
| Electric Shock Proof Grade | | Class I | | | | Class I | | | |
| Protection Grade | | IPX4 | | | | IPX4 | | | |
| Max. Working Power/Current(kW/A) | | 3.5/15 | 4.5/18 | 6.5/25 | 7.6/30 | 6.5/15 | 6.5/15 | 14/20 | 15/20 |
| Max./Min. Working Pressure(Mpa) | | 4.2/0.15 | | | | 4.2/0.15 | | | |
| Hot Water Tem. (℃) | | 25-60 | | | | 25-60 | | | |
| Water Yield(L/h) | | 1300 | 1500 | 2000 | 2500-3000 | 2000 | 2500-3000 | 3000-4000 | 4500-5500 |
| Refrigerant Type/Weight (kg) | | R32/1.25 | R32/1.4 | R32/1.7 | R32/1.9 | R32/1.6 | R32/1.9 | R32/2.5 | R32/2.9 |
| Noise (dB) | | 40-55 | 42-57 | 45-60 | 45-60 | 45-60 | 45-60 | 45-65 | 45-65 |
| Compressor | | Mitsubishi Panasonic/Dc Inverter compressor | | | | | | | |
| Dimension (L/W/H)mm | | 1120/430/775 | 1120/430/775 | 1060/440/1380 | 1060/440/1380 | 1060/440/1380 | 1060/440/1380 | 1150/450/1430 | 1150/450/1430 |
| Net Weight (kg) | | 65 | 75 | 115 | 125 | 115 | 125 | 200 | 220 |

Remarks:

a: Rated cooling conditions: ambient temperature 35°C, inlet water temperature 12°C, outlet water temperature 7°C;
b: A7W35 Rated heating conditions: dry bulb temperature 7°C, wet bulb temperature 6°C, inlet water temperature 30°C, outlet water temperature 35°C;
c: A7W45 Conditions: inlet air temperature 7°C, outlet air temperature 45°C

## Installation Diagrams




## Hot water • Heating • Cooling

# SPLIT TYPE FULL DC INVERTER HEAT PUMP


Full DC Inverter

Smart Defrosting

Low Temperature EVI

Wifi intelligent control

Triple Antifreeze

# Split DC Inverter Heat Pump Parameters

| DC INVERTER MULTI-FUNCTION HEAT PUMP(SPLIT TYPE) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MODEL | | XD-03BSPM | XD-04BSPM | XD-05BSPM | XD-06BSPM | XD-05BSPM | XD-06BSPM | XD-08BSPM |
| Working Temperature Range | | -30~43℃ | | | | | | |
| Power Supply | | 220-240V/1N~/50Hz | | | | 380-415V/3N~/50Hz | | |
| Heating Capacity (kW/COP) | A7W35 | 8(2-9)/4.1 | 12(2-13)/4.2 | 15(3-17)/3.96 | 18(3-20)/4.1 | 15(3-17)/4.2 | 18(3-20)/4.15 | 24(5-27) |
| | A7W45 | 7.6/3.2 | 10.6/3.4 | 13.2/3.11 | 14.5/3.4 | 13.4/3.15 | 15/3.4 | 21/3,2 |
| | A2W35 | 6.4/3.58 | 9.4/3.62 | 12.6/3.58 | 14/3.44 | 12.5/3.56 | 14/3.44 | 18.5/3.31 |
| | A-15W35 | 4.8/1.97 | 7.0/2.17 | 8.7/2.12 | 11/2.5 | 9/2.22 | 11/2.5 | 14.6/2.21 |
| Domestic Hot Water (kW/COP) | A20W55 | 8.8/4.0 | 12.5/4.1 | 13.8/4.1 | 16.5/4.0 | 14/4.1 | 17/4.0 | 21(5-21) |
| | A7W55 | 7.0/3.12 | 9.8/3.2 | 12.5/3.1 | 14.2/3.0 | 13/3.0 | 14.5/3.0 | 18/2.9 |
| | A2W45 | 6.1/3.3 | 8.2/3.4 | 8.8/3.3 | 13.5/3.2 | 9/3.3 | 13.8/3.2 | 17.2/3.0 |
| DHW Input Power/ Current (kW/A) | A7W35 | 2.22/9.5 | 2.9/13.2 | 4.1/18.6 | 5.2/21 | 4.3/7 | 5.1/8.1 | 6.6/10.5 |
| Rated Input Power/ Curren(tkW/A) | A7W35 | 2.1/8.5 | 2.7/11.5 | 3.85/17.4 | 4.7/18 | 3.95/6.2 | 4.7/7.2 | 19/2.7 |
| Cooling Capacity (kW/EER) | A35W7 | 6.2/2.5-5.8 | 10.8/2.6-5.8 | 11/2.6-5.7 | 14/2.5-5.7 | 11/2.5-5.8 | 14/2.4-5.8 | 19.8/3.2-7.2 |
| Cooling Input Power (kW/A) | | 2.1/9.5 | 2.6/11.3 | 3.93/18 | 4.5/23 | 3.95/6.5 | 5.2/8.5 | 6.8/11 |
| Heating Outlet hot water temperature range (℃) | | 25-60 | | | | | | |
| Cooling Outlet water temperature range (℃) | | 7-12 | | | | | | |
| IP Grade (Level of protection) | | IPX4 | | | | | | |
| Anti-electric shock Rate | | I | | | | | | |
| Noise (dB(A)) | | ≤52 | ≤55 | ≤60 | ≤60 | ≤60 | ≤60 | ≤65 |
| Diameter of pipe (DN) | | DN25 | | | | | | |
| Machine size | Outdoor unit (W*D*H) | 880*420*790 | 880*420*790 | 930*410*1270 | 1018*450*1366 | 930*410*1270 | 1018*450*1366 | 1150*540*1450 |
| | Indoor unit (W*D*H) | 380*330*685 | 380*330*685 | 380*330*685 | 380*330*685 | 380*330*685 | 380*330*685 | 450*330*810 |
| Packing size(W*D*H) | Outdoor unit (W*D*H) | 980*520*970 | 980*520*970 | 1030*480*1450 | 1120*550*1480 | 1030*510*1450 | 1120*550*1480 | 1180*600*1810 |
| | Indoor unit (W*D*H) | 420*450*720 | 420*450*720 | 420*450*720 | 420*450*720 | 420*450*720 | 420*450*720 | 520*410*910 |
| Compressor | | Panasonic Rotary EVI DC inverter / Mitsubishi Inverter | | | | | | |
| Refrigerant/Weight (Kg) | | R32/1.25 | R32/1.4 | R32/1.7 | R32/1.9 | R32/1.7 | R32/1.9 | R32/2.2 |
| Package | | Polywood packing | | | | | | |
| Weight | Outdoor unit (kg) | 64 | 68 | 95 | 105 | 95 | 105 | 135 |
| | Indoor unit (kg) | 28 | 30 | 37 | 40 | 37 | 40 | 50 |
| Loading quantity(20GP/40HQ) | | 50/100 | 50/100 | 24/50 | 24/50 | 24/50 | 24/50 | 22/46 |

Testing Condition:

A7/W35:outdoor air temperature(DB/WB)7℃/6℃, water inlet/outlet temperature 30℃/35℃

A2/W35:outdoor air temperature(DB/WB)2℃/1℃, water inlet/outlet temperature 30℃/35℃

A-15/W35:outdoor air temperature(DB/WB)-15℃/-14℃, water inlet/outlet temperature 30℃/35℃

# Product advantages

## Safe and reliable
Adopting air source heat pump technology, water and electricity separation, eliminating safety hazards!

## Intelligent control
The unit is controlled by a microcomputer and does not require dedicated management.

## Energy saving
An air source heat pump heats by absorbing the free energy of the surrounding air,Compared with traditional electric heating methods, it can save up to 80% energy.

## 24/7 operation
Safe operation 24/7 throughout the year, enjoying 24-hour central hot water.

## Protect the environment
No exhaust gas generation, reducing CO2 emissions, saving liquefied gas and power. Heat pump technology for protecting ecological sustainability.

## Featured
Domestic hot water, heating, and cooling; Industrial hot water, electroplating, bleaching and dyeingDrying, heating, etc.

## Widely used
Family, villa, school, hospital, factory dormitory, hotel, restaurantSwimming pools, industries, etc

## Easy to install
The unit has a compact structure and a small footprint, eliminating the need for a dedicated computer room.

## -38°C Powerful Heating · High Efficiency · Energy Saving

## Integrating globally renowned brand technology resources

Make the world's best heat pump, make human life warmer!

Panasonic

SANHUA

Schneider Electric

wilo

HITACHI Inspire the Next

FENECO Make Life Warmer

Copeland Scroll

Danfoss

SAGinoMIYA

EMERSON

SWEP A DOVER COMPANY

# After-sales Service System

Consulting

During the warranty period, free warranty will be implemented, and after the expiration of the warranty period, the company will still provide after-sales service for product equipment

Free installation and design guidance

24-hour service


## Service process

**Repair report**
If you encounter after-sales problems, please contact local service or call service hotline 4000-969819

**Response**
Within 30 minutes, the after-sales engineer will respond by phone and schedule a visit time

**Service**
Sales engineers provide on-site service according to the scheduled time

**Check and accept**
Confirmed and signed by the repair applicant for acceptance

**Call back**
Call you within 72 hours

**Finish**

FENECO

## VISION »

Let every family have a comfortable and healthy environment.

# PROJECT CASES » Global 100000+

Heating

Hot-Water

Cooling

Swimming Pool

Dry

## A one-stop solution for a comfortable and healthy environment system

FENECO


**Tel/whatsup**

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Official account

Official website