

HEAT PUMPS

*HERO***X**
NEW GEN

Welcome to Sendo world – a place where INNOVATION meets Comfort!

We proudly present to the market, our newest additions in our **HEAT PUMP** family of products, **HeroXR** και **HeroXs**.

Designed with cutting-edge technology, aiming at the greatest levels of efficiency, **HeroX** heat pumps re-define the Heating / Cooling / Water standards at both Domestic & Corporate levels.

HeroX heat pumps are the epitome of performance and power. Baring advanced specs and smart controls, offer to their user outstanding efficiency in both Cooling and Heating, minimizing at the same time electricity consumption.

Time to farewell high electricity bills and be welcomed to an affordable and efficient world.





Unleash the style of HeroX Heat Pumps:

Standard features of Sendo HeroXR και HeroXs Heat pumps:

Smart Technology: HeroXR και HeroXs Heat pumps are equipped with smart controls, allowing the user to remotely set temperature, time schedules and energy saving parameters, from the convenience of his phone / tablet.

Energy Efficiency: Designed with a focus on efficiency, HeroX Heat Pumps, maximize energy saving, minimize carbon footprint, providing its users with unparalleled savings on their utility bills.

Whisper-Quiet Operation: You can enjoy the tranquility of your place, undisturbed from outside noises. HeroX heat pumps provide quiet operation and cordial comfort.

Any Climate efficiency: From warm summers to cold winters, HeroX heat pumps provide remarkable efficiency in any climate condition, offering to their user stable and comfortable environment all year around.

Easy Installation and Maintenance: Sendo prioritizes your convenience. HeroX heat pumps have been designed to be easy-installed and easy-maintained. Less time configuring equals more time to enjoy the benefits of it.





Sendo – Comfort and Empowerment of your life.

Upgrade your comfort level with the **Sendo HeroXR & HeroXs** heat pumps.

Embrace innovation, efficiency and style, all packaged in a single unit. Contact with Sendo and discover the ideal solution for your home or business environment.



Heat Pumps - Monoblock

Sendo HeroX_R

8 /13 kW
220V/50Hz/1Phase

13 kW
380V/50Hz/3Phase

1 x Fans



- Compressor DC inverter Panasonic R32
- Monoblock Type
- Complete Cooling and Hydro system. (except closed water tank)
- Minimal space / footprint requirement
- Chassis Insulation for quiet operation).
- Medium Temp. Water output at 55 degrees.

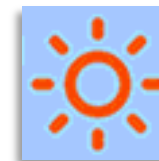
18/23kW
380V/50Hz/3Phase
2 x Fans



Cooling | Heating | Sanitary Hot Water



Only heating



Only cooling



Only DHW



Heating+DHW



Cooling+DHW





Series	Gas	Mode	Heating Capacity 7°C/35C	ERP Level
HEROXR	R32	1P	8.4kW	A+++
		1P/3P	13.0kW	A+++
		1P/3P	18.2kW	A+++
		3P	23.0kW	A+++
		3P	28.0kW	A+++

Indicative table - Area coverage for SENDO HEROX_R

Square meters	With few thermal losses	With large thermal losses
Up to 70 m ²	8 KW	13 KW
70 - 80 m ²	8 KW	13 KW
90 - 110 m ²	13 KW	18 KW
110 - 130 m ²	18 KW	23 KW

Calculation is indicative and an engineering inspection is required to determine the correct amount of kW required, per case.

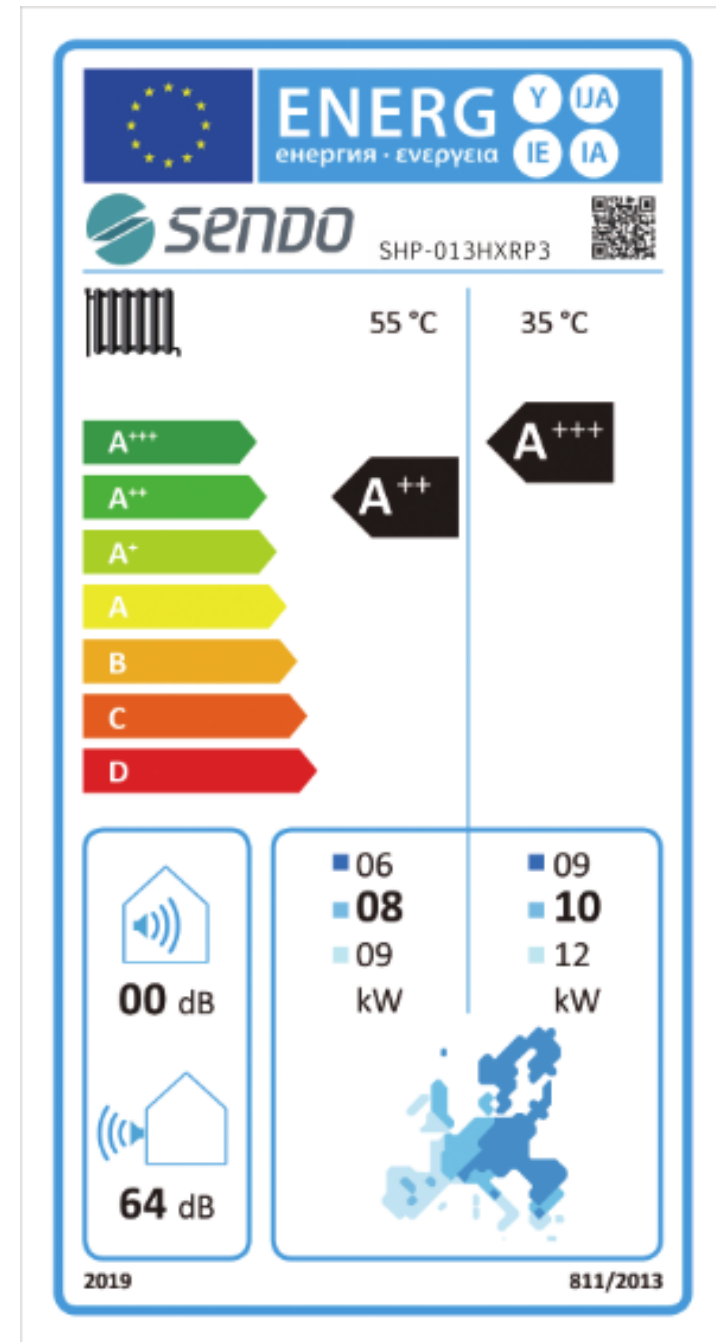


Energy Label (HeroX_R)

SENDO HEROX_R heat pumps earned the highest energy rating **A+++**, succeeding all **ERP tests**, conducted and certified by **TUV SUD**.

R32 Low GWP Refrigerant

Measures against Global Warming and Carbon footprint reductions are a fundamental part of **SENDO's** philosophy. R32 refrigerant used in all **HEROX_R** heat pumps, requires 30% less quantity, compared to previously used R410a refrigerant.





R290 SERIES
Full DC Inverter Heat Pump
Heating•Cooling•Domestic Hot Water



Environmental Refrigerant R290



To even further contribute in reducing the carbon emissions and limit, to the highest possible level, the global warming effects, SEND0 developed the newest member of our Heat pump family, **HeroXs R290 Full DC Inverter**.

Compared to R410a refrigerant with GWP 2100 & R32 with GWP 675, R290 refrigerant lands to GWP lower than 20 and it is recognized as the most upcoming and friendly to environment refrigerant.

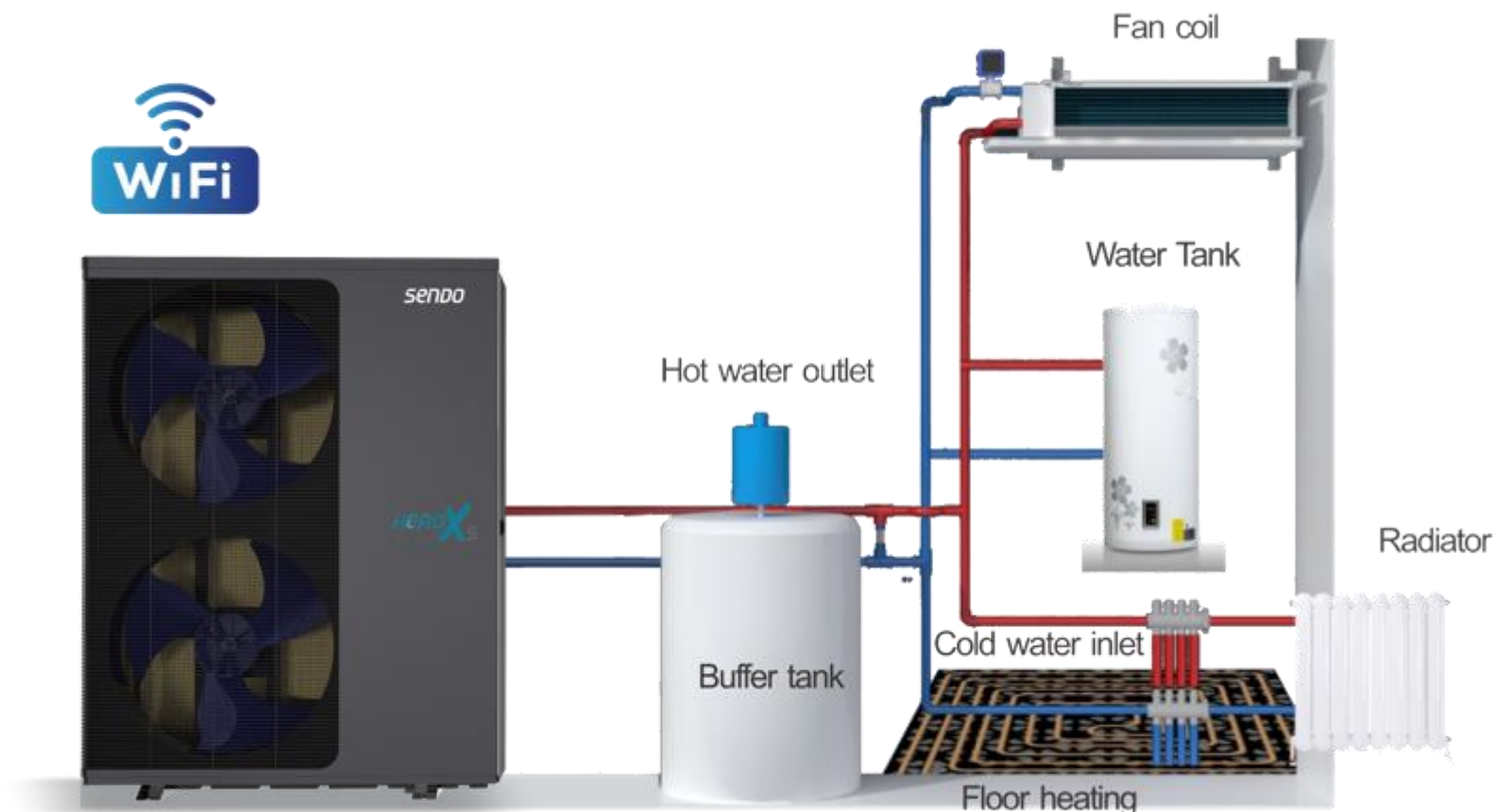


Multifunctional



The high efficiency of the R290 FULL DC INVERTER heat pump, easily covers any user need, in Cooling , Heating and Domestic Hoter water supply, throughout the year (with the use of a 3-way Valve)

- Heating Only
- Cooling Only
- Domestic Hot Water Only
- Heating+ DHW (Priority)
- Cooling+ DHW (Priority)



Highly Compressor



Brushless DC Inverter Motor



SHIMGE DC Inverter Silent Circulation Pump(Built-in)



Plate Heat Exchanger



Crankshaft Heater



Silent Fan

Reliable & Stable



In a low temperature environment, the efficiency and reliability of normal Heat Pumps is compromised, resulting to limited efficiency and below expectations operations.

SEND0's HeroXs R290 FULL DC INVERTER heat pumps can operate efficiently even in the coldest environments, at -25°C , without EVI technology, retaining a high COP rating and provision of $+75^{\circ}\text{C}$ Hot Water, ensuring the proper Heating / Cooling requirement of the user, as well as the simultaneous provision of Domestic Hot Water.

75°C
Hot Water

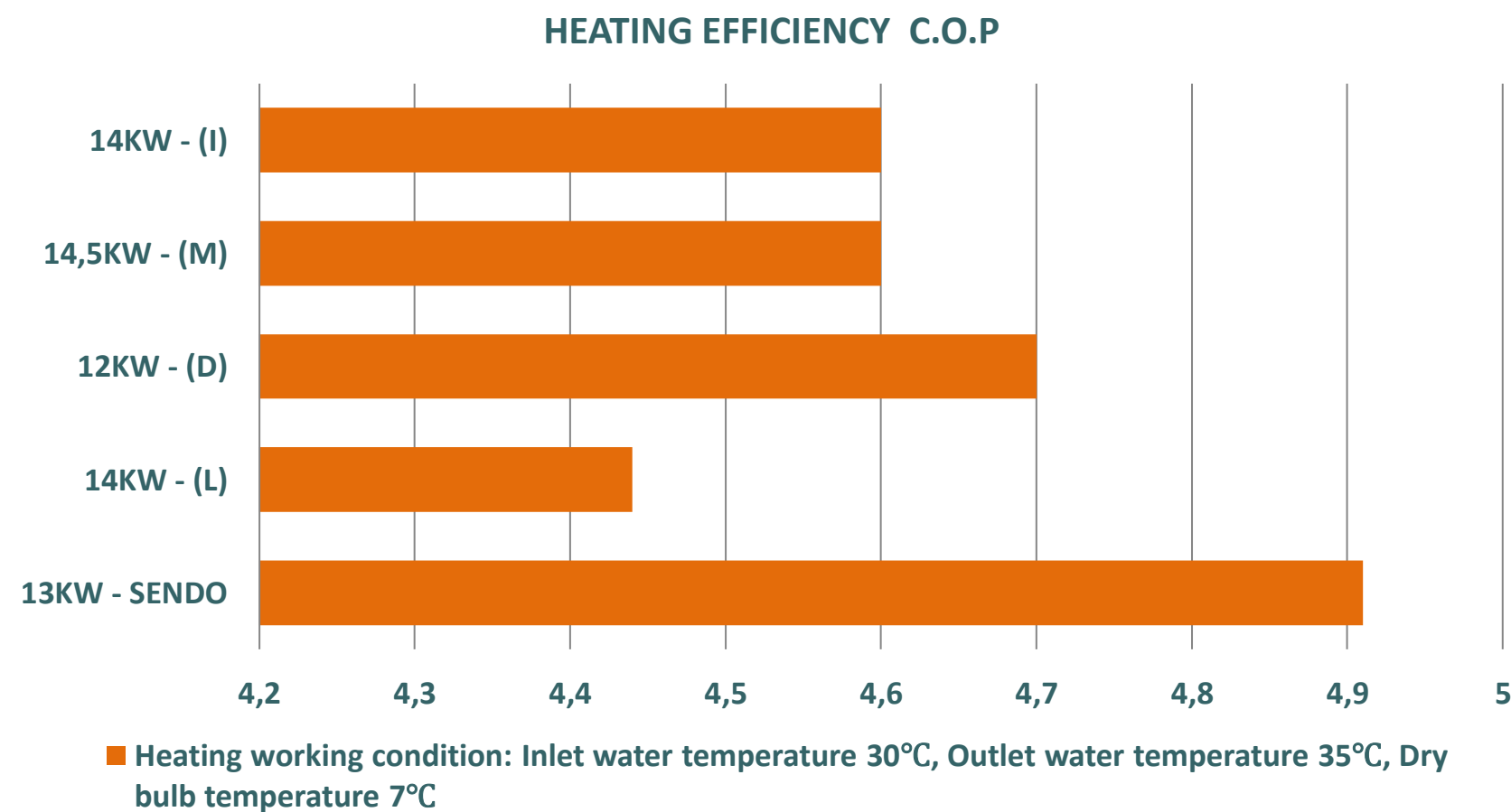
-25°C
**Outdoor
Temps**

**Powerful
Heating**

Comparison



	13KW – SEND0	14KW – (L)	12KW – (D)	14,5KW – (M)	14KW – (I)
C.O.P	4,91	4,44	4,7	4,6	4,6



Heat Pumps - Monoblock Sendo HeroXs

8/12/15KW
220V/50Hz/1Phase

15 Kw
380V/50Hz/3Phase /1 Fan



- Compressor DC inverter Panasonic R32
- Monoblock Type
- Complete Cooling / Hydro System (except closed Expansion tank)
- Minimal space / footprint requirement
- Chassis Insulation for quiet operation).
- High Temp. Water output at +75 degrees.

22kW
380V/50Hz/3Phase
2 fans



Cooling | Heating | Sanitary Hot Water



Only heating



Only cooling



Only DHW



Heating+DHW



Cooling+DHW





Series	Gas	Mode	Heating Capacity 7°C/35C	ERP Level
HEROXS	R32	1Phase	8.4kW	A+++
		1P/3P	12.0kW	A+++
		1P/3P	18.2kW	A+++
		3phase	22.0kW	A+++

Indicative table - Area coverage for SEND0 HEROXR

Square meters	With few thermal losses	With large thermal losses
Up to 70 m ²	8 KW	12 KW
70 - 80 m ²	12 KW	12 KW
90 - 110 m ²	12 KW	15 KW
110 - 130 m ²	15 KW	22 KW

Calculation is indicative and an engineering inspection is required to determine the correct amount of kW required, per case.

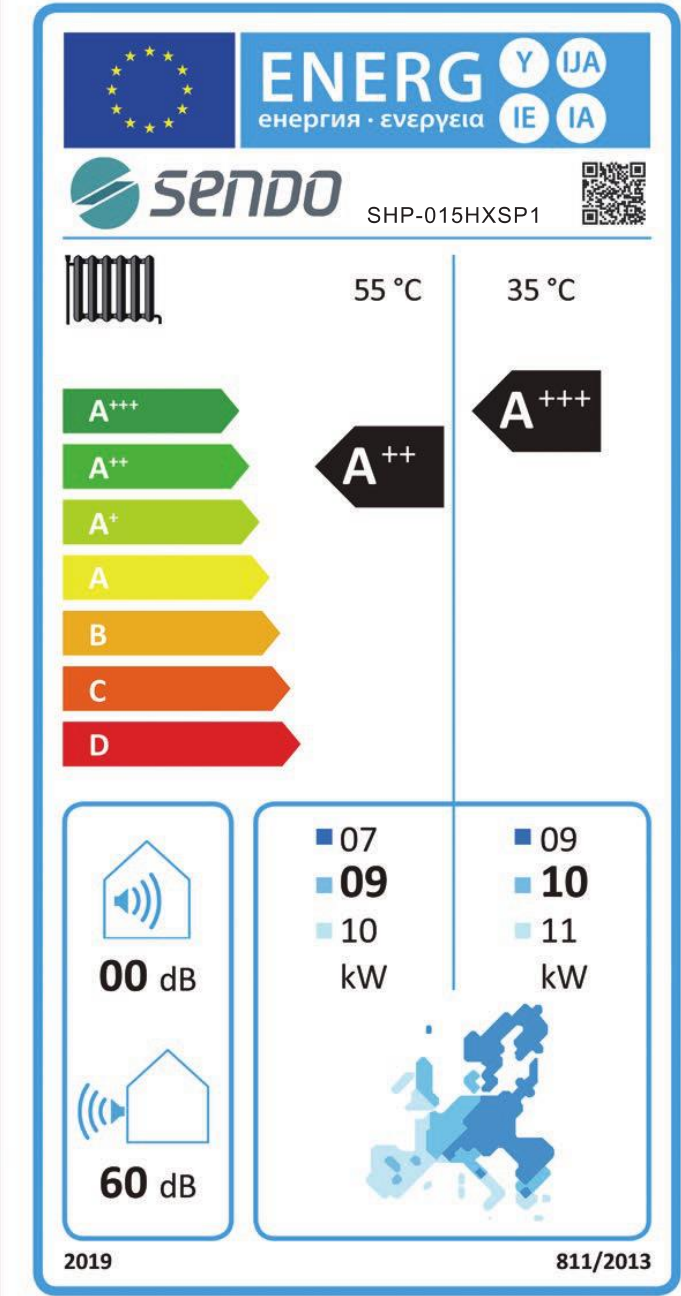


Energy Label (HeroXs)

SENDO HEROXs heat pumps earned the highest energy rating **A+++**, succeeding all **ERP tests**, conducted and certified by **TUV SUD**.

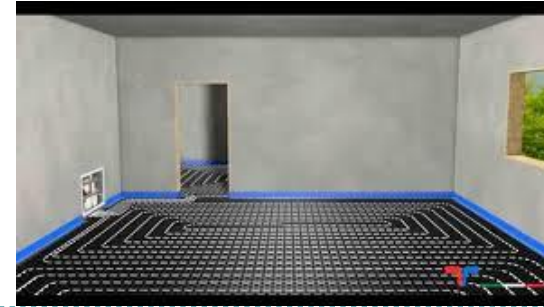
R290 (Propane) Low GWP Refrigerant

Measures against Global Warming and Carbon footprint reductions are a fundamental part of **SENDO's** philosophy. R290 refrigerant used in **HEROXs** lands a GWP : 3 compared to R32 which lands at 675.



Heat Pump combinations with Indoor units

- Floor Heating (**Heating** - Light Cooling)



- Fan Coil Units (**Heating** - Cooling)
- Floor-ceiling
- Wall Type (split- water)
- Duct (water)
- Cassettes (water)
- Concealed (water)



- Radiators (**Heating**)
- Aluminum
- Steel



Ideal solution for Villas,
Apartments, Hotels.





TECHNICAL SPECIFICATIONS

Heat Pumps HeroXS – HeroXR

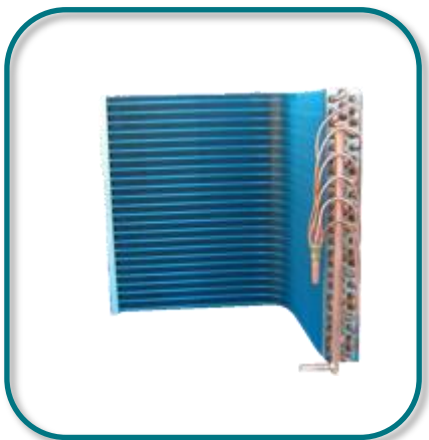
Cooling / Heating / Hot Water



Sendo HeroX_R

PARTS

High efficiency
hydrophilic
coated
finned heat
exchange



High
Quality
Heat
Exchanger



BLDC
Motor



5" Color
Control Monitor



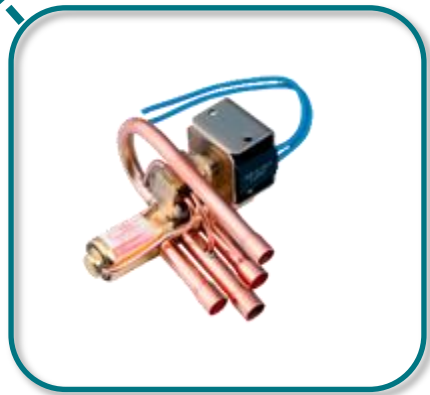
Intelligent electronic
control system



Panasonic Twin-Rotary
EVI Compressor



Shinge Water
Pump



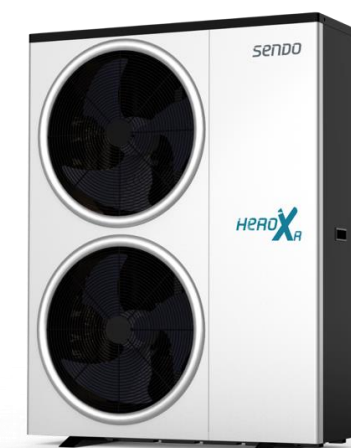
Well-known brands
Four-way valves

Parameter Table

HeroXR Easylife DC Inverter EVI Heat Pump series is a multifunctional (Cooling/Heating/DHW) unit, creatively combining the friendly to environment R32 refrigerant, with the highly efficient alternate frequency VI technology, resulting to a A+++ ERP energy label ranking, operating seamlessly in extreme cold conditions, up to -30°C.

The coloured touch operating panel, the standard WiFi function via Sendo Smart app, and the precise temperature control, in +0,1°C increments, result to the ultimate Smart Home experience for the user.

DC Inverter Heat Pump for cooling heating and DHW (R32)						
Model	SHP-08HXRP1	SHP-013HXRP1	SHP-018HXRP1	SHP-013HXRP3	SHP-018HXRP3	SHP-023HXRP3
Heating Condition - Ambient Temp. DB/WB) : 7/6°C, Water Temp. (In/Out) : 30/35°C						
Heating Capacity Range (kW)	1.57~8.40	4.40~13.00	5.9~18.2	4.40~13.00	5.9~18.2	7.5~23.0
Heating Power Input Range(kW)	0.37~1.97	0.95~3.12	1.28~4.26	0.95~3.12	1.28~4.26	1.61~5.38
COP Range	4.26~4.24	4.17~4.63	4.27~4.61	4.17~4.63	4.27~4.61	4.28~4.66
DHW Condition-Ambient Temp. (DB/WB) : 7/6°C, Water Temp. (In/Out) : 15/55°C						
Heating Capacity Range (kW)	1.28~6.81	3.52~10.50	4.80~14.72	3.52~10.50	4.80~14.72	6.1~18.5
Heating Power Input Range(kW)	0.36~2.23	0.93~3.49	1.25~4.75	0.93~3.49	1.25~4.75	1.61~6.12
COP Range	3.05~3.56	3.01~3.78	3.10~3.84	3.01~3.78	3.10~3.84	3.02~3.79
Cooling Condition - Ambient Temp. (DB/WB) :35/24°C, Water Temp. (In/Out) : 12/7°C						
Cooling Capacity Range (kW)	0.99~6.22	2.80~8.20	3.81~11.53	2.80~8.20	3.81~11.53	4.73~14.6
Cooling Power Input Range(kW)	0.34~2.28	0.90~3.41	1.19~4.20	0.90~3.41	1.19~4.20	1.47~5.29
EER Range	2.73~2.91	2.40~3.11	2.75~3.20	2.40~3.11	2.75~3.20	2.76~3.22
ErP Level (35°C)	A+++	A+++	A+++	A+++	A+++	A+++
ErP Level (55°C)	A++	A++	A++	A++	A++	A++
Power supply	230V/1Ph/50Hz/60Hz			380V/3Ph/50-60Hz		
Diameter of pipe (mm)	DN25	DN25	DN25	DN25	DN25	DN25
Water Flow(m3/h)	1,5	2,2	3,2	2,2	3,2	3,9
Water Pressure Drop max) kPa	30	35	40	35	40	45
Water pump (m)	9	9	12	9	12	12
Noise dB(A)	≤53	≤55	≤57	≤55	≤57	≤58
Net Weight (kg)	105	115	160	115	160	165
Net Dimension (L/W/H) m	970×475×820	1100×475×970	1050×480×1380	1100×475×970	1050×480×1380	1050×480×1380
Operation Ambient Temp. (°C)	-30~43°C					
Operating water Temp. (°C)	20~55°C (DHW)					
Operating water Temp. (°C)	20~50°C (Heating)					
Operating water Temp. (°C)	7~35°C (Cooling)					

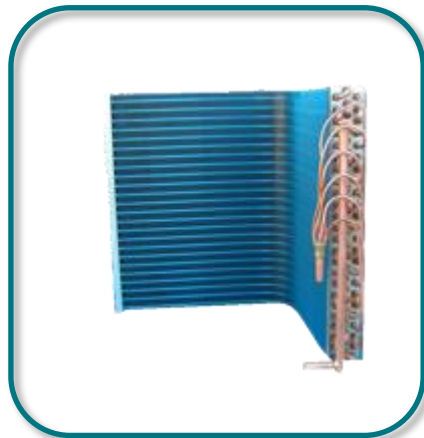


Sendo HeroXs

Parts

Basic Parts

High efficiency
hydrophilic
coated (gold fin)
heat
exchanger



High
Quality
Heat
Exchanger



BLDC
Motor



5" Color
Control Monitor



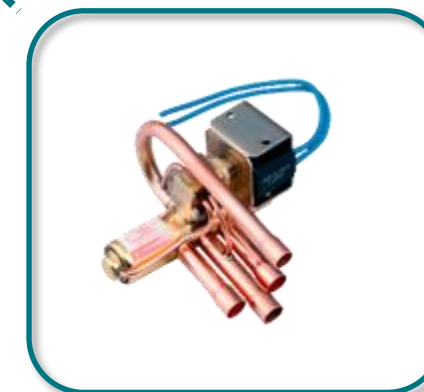
Intelligent electronic
control system



HIGHLY R290
Inverter Compressor



Shimge Water
Pump



Well-known brands
Four-way valves

Parameter Table

HeroXs Easylife DC Inverter EVI Heat Pump series is a multifunctional (Cooling/Heating/DHW) unit, creatively combining the friendly to environment R32 refrigerant, with the highly efficient alternate frequency VI technology, resulting to a A+++ ERP energy label ranking, operating seamlessly in extreme cold conditions, up to -30°C.

The 7" coloured touch operating panel, the standard WiFi function via Sendo Smart app, and the precise temperature control, in +0,1°C increments, result to the ultimate Smart Home experience for the user.

DC Inverter Heat Pump for cooling heating and DHW (R290)					
Model	SHP-08HXSP1	SHP-012HXSP1	SHP-015HXSP1	SHP-015HXSP3	SHP-022HXSP3
Heating Condition - Ambient Temp. DB/WB) : 7/6°C, Water Temp. (In/Out) : 30°C/35°C					
Heating Capacity Range (kW)	3.3~8.3	4.5~11.4	5.9~14.8	5.9~14.8	8.8~22.0
Heating Power Input Range (kW)	0.64~2.18	0.85~2.95	1.13~3.83	1.13~3.83	1.68~5.77
COP Range	3.81~5.17	3.86~5.29	3.86~5.22	3.86~5.22	3.81~5.24
DHW Condition-Ambient Temp. (DB/WB) : 7/6°C, Water Temp. (In/Out) : 15°C/55°C					
Heating Capacity Range (kW)	2.4~5.8	3.3~8.2	4.3~10.8	4.3~10.8	6.2~15.3
Heating Power Input Range. (kW)	0.79~2.19	1.08~3.07	1.39~3.99	1.39~3.99	1.99~5.60
COP Range	2.65~3.04	2.67~3.06	2.71~3.10	2.71~3.10	2.73~3.12
Cooling Condition - Ambient Temp. (DB/WB) :12/7°C, Water Temp. (In/Out) : 35°C/24°C					
Cooling Capacity Range (kW)	2.4~5.8	3.3~8.2	4.3~10.8	4.3~10.8	6.2~15.3
Cooling Power Input Range(kW)	0.79~2.19	1.08~3.07	1.39~3.99	1.39~3.99	1.99~5.60
EER Range	2.65~3.04	2.67~3.06	2.71~3.10	2.71~3.10	2.73~3.12
ErP Level (35°C)	A+++	A+++	A+++	A+++	A+++
Refrigerant	R290	R290	R290	R290	R290
Power supply	230V/1Ph/50Hz/60Hz			380V/3Ph/50-60Hz	
Diameter of pipe (mm)	DN25	DN25	DN25	DN25	DN25
Water Flow(m3/h)	1,5	2,2	3,2	2,2	3,2
Water Pressure Drop (max) kPa	30	35	40	35	40
Water pump (m)	9	9	12	9	12
Noise dB(A)	≤47	≤50	≤52	≤50	≤52
Net Weight (kg)	106	115	160	115	160
Net Dimension (L/W/H) mm	1080×460×820	1080×460×960	1080×480×1060	1080×480×1060	1080×480×1372
Operation Ambient Temp (°C)	-25~43°C				
Operating water Temp (°C)	20~65°C (DHW)				
Operating water Temp. (°C)	20~70°C (Heating)				
Operating water Temp. (°C)	7~35°C (Cooling)				



**More
Features**

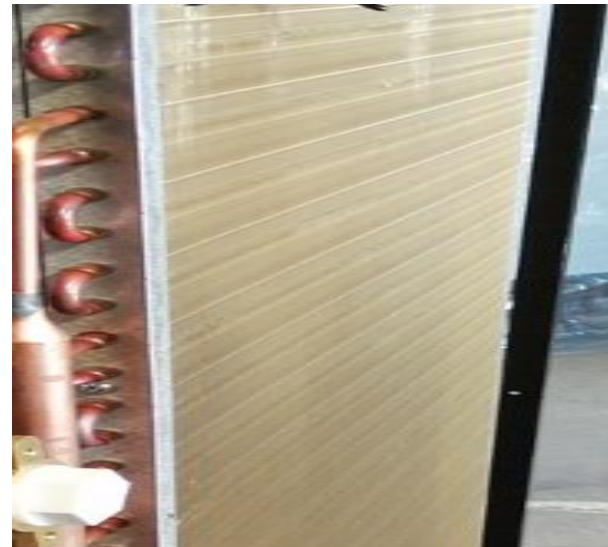
Heat Pump - Monoblock

Sendo HeroX_R & X_S



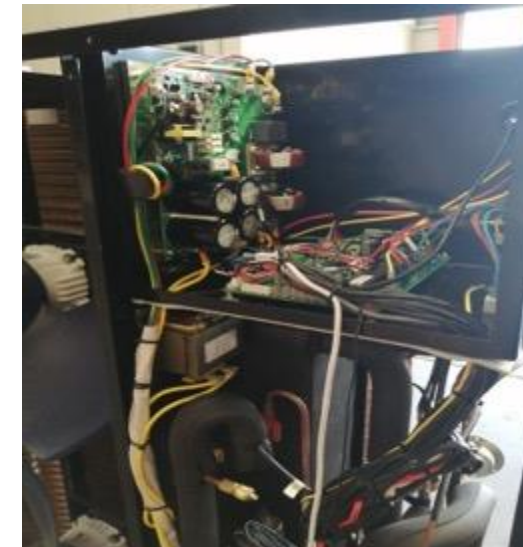
Fully insulated Cooling/hydro System.

- Insulation at throughout the entire Cooling/Hydro system
- Minimizing energy loss, ensuring efficiency and savings



Anti – Rust Protection (Golden Fin).

- Extra anti rust protection against salty and humid conditions
- Improving Heat transfer
- Reducing Defrost time.



CONTROL BOX

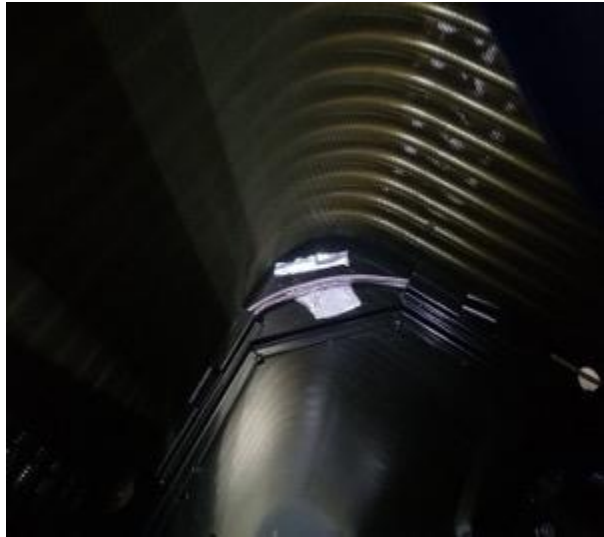
Closed type control box
Protecting electronic boards from humid environments



Cooler board

Large and powerful Cooler,
avoiding overheating of electronic boards.

Αντλίες Θερμότητας Monoblock *Sendo HeroX_R & X_S*



Wired Electric Heater at Condenser

Electric Heater placed at the bottom of condenser

Protecting the compressor from harsh conditions. .

Avoiding ice creation



FLOW SWITCH

Embedded Flow Switch

Preventing from the dry operation,
of the Exchanger that leads to
damagingr



Metallic Chassis

Metallic, double electrostatic painted chassis, with maximum anti-corrosive protection.

Simple and robust built, with minimal screws for easy assembly / reassembly of unit.



EXTRA Insulation

Enhanced metallic parts.

Extra internal insulation of metallic covers, resulting to silent operation.

The control is on your hands



Wired Control

HeroXR



5" Touch Panel

HeroXs



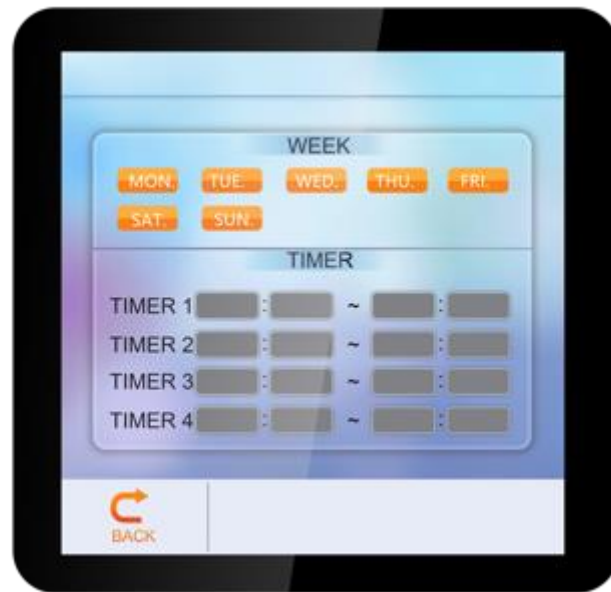
7" Touch Panel

Touch Control Panel, for easy operation of the Heat Pump.

User Access to a number of functions and reporting screens for better management and energy savings.

Wired Control - Functions

HeroXR



5" Touch Panel

1. **"Smart"** – Energy Saving mode.
2. **"Silent"** – Silent operation Mode.

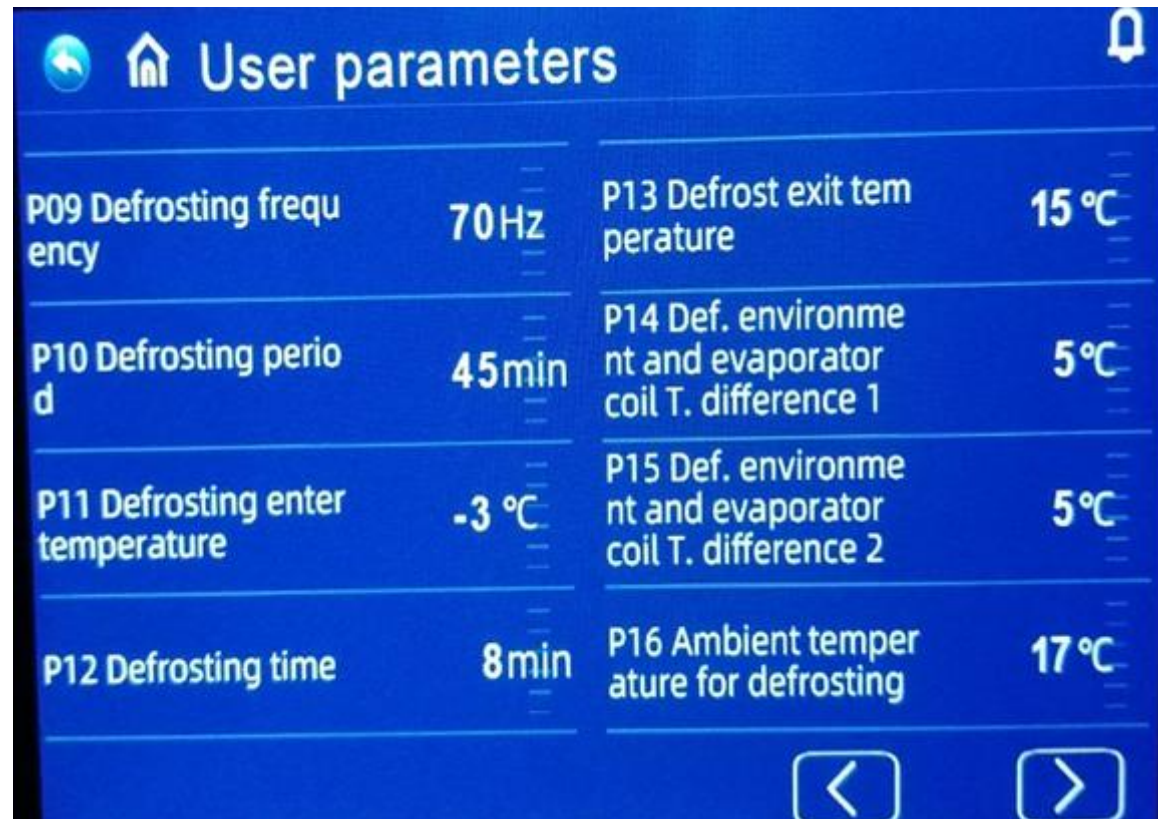
HeroXs



7" Touch Panel

3. **"Power"** – Dynamic function mode.
4. **"Vacation"** – Vacation Mode.

Wired Control - Parameters



User parameters			
P09 Defrosting frequency	70Hz	P13 Defrost exit temperature	15 °C
P10 Defrosting period	45min	P14 Def. environment and evaporator coil T. difference 1	5 °C
P11 Defrosting enter temperature	-3 °C	P15 Def. environment and evaporator coil T. difference 2	5 °C
P12 Defrosting time	8min	P16 Ambient temperature for defrosting	17 °C

- ✓ Easy access to parameters.
- ✓ Easy and quick information.
- ✓ Simple and rich parameters setting screen.



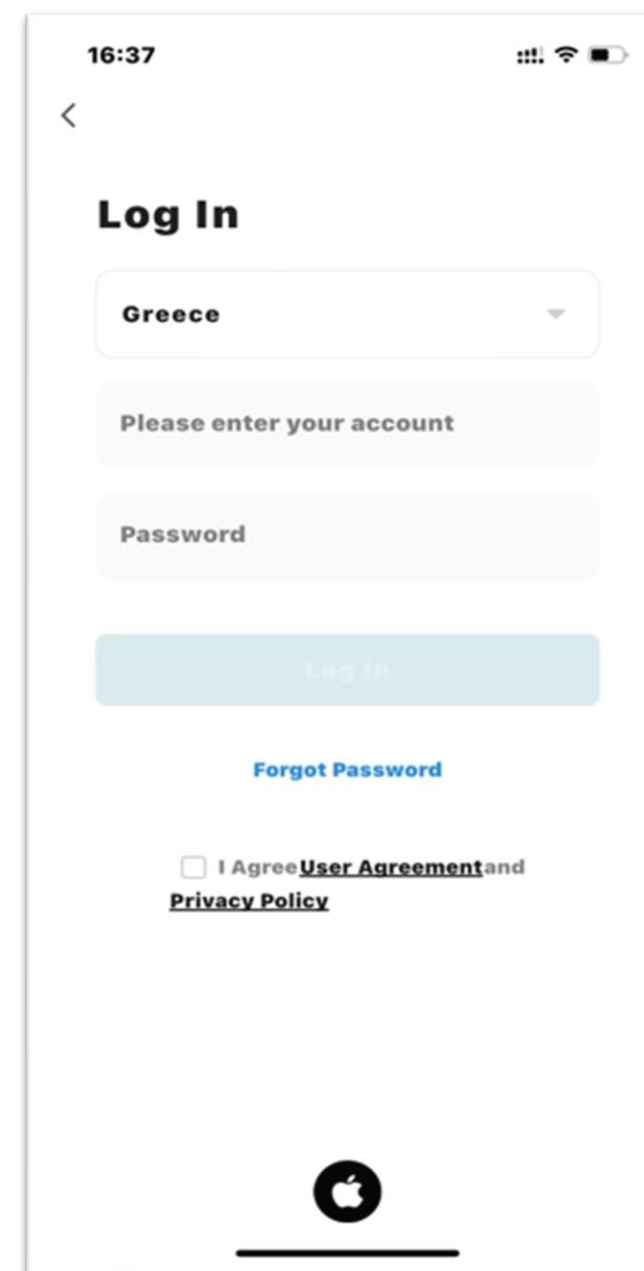
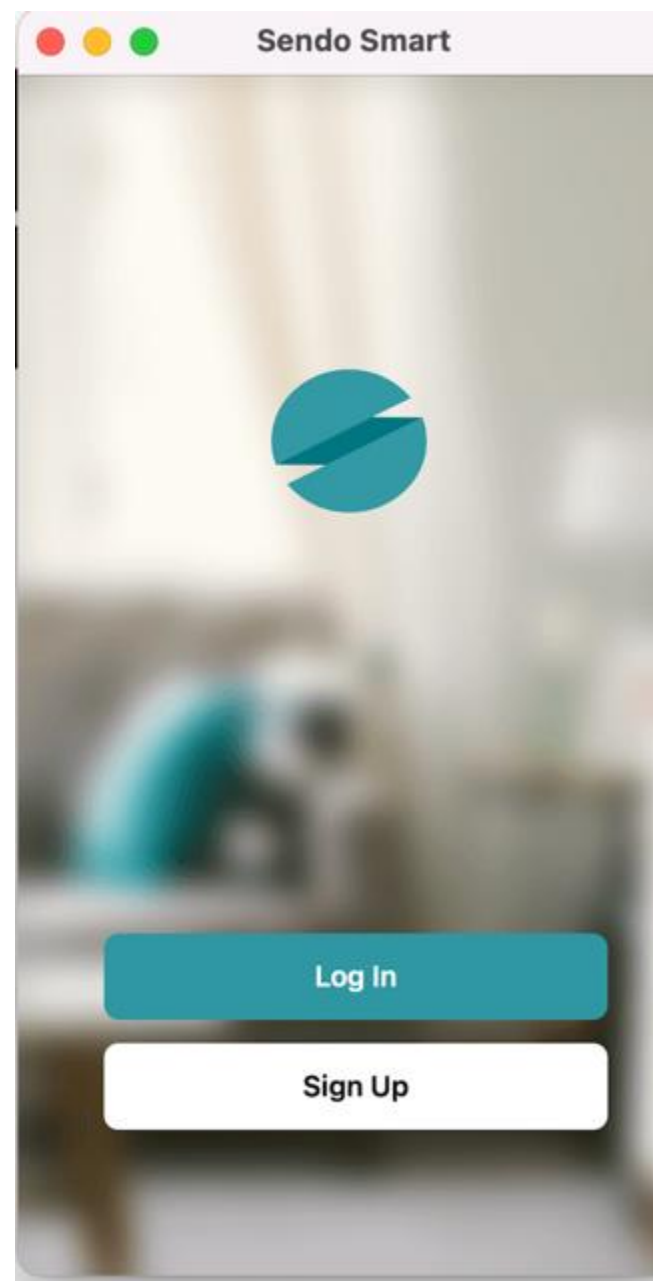
connectivity

Heat Pumps HeroXR - HeroXs

Cooling / Heating / Hot Water



Sendo Smart app



IoT & Cloud Connectivity

Smart control & IOT

WIFI & RS485

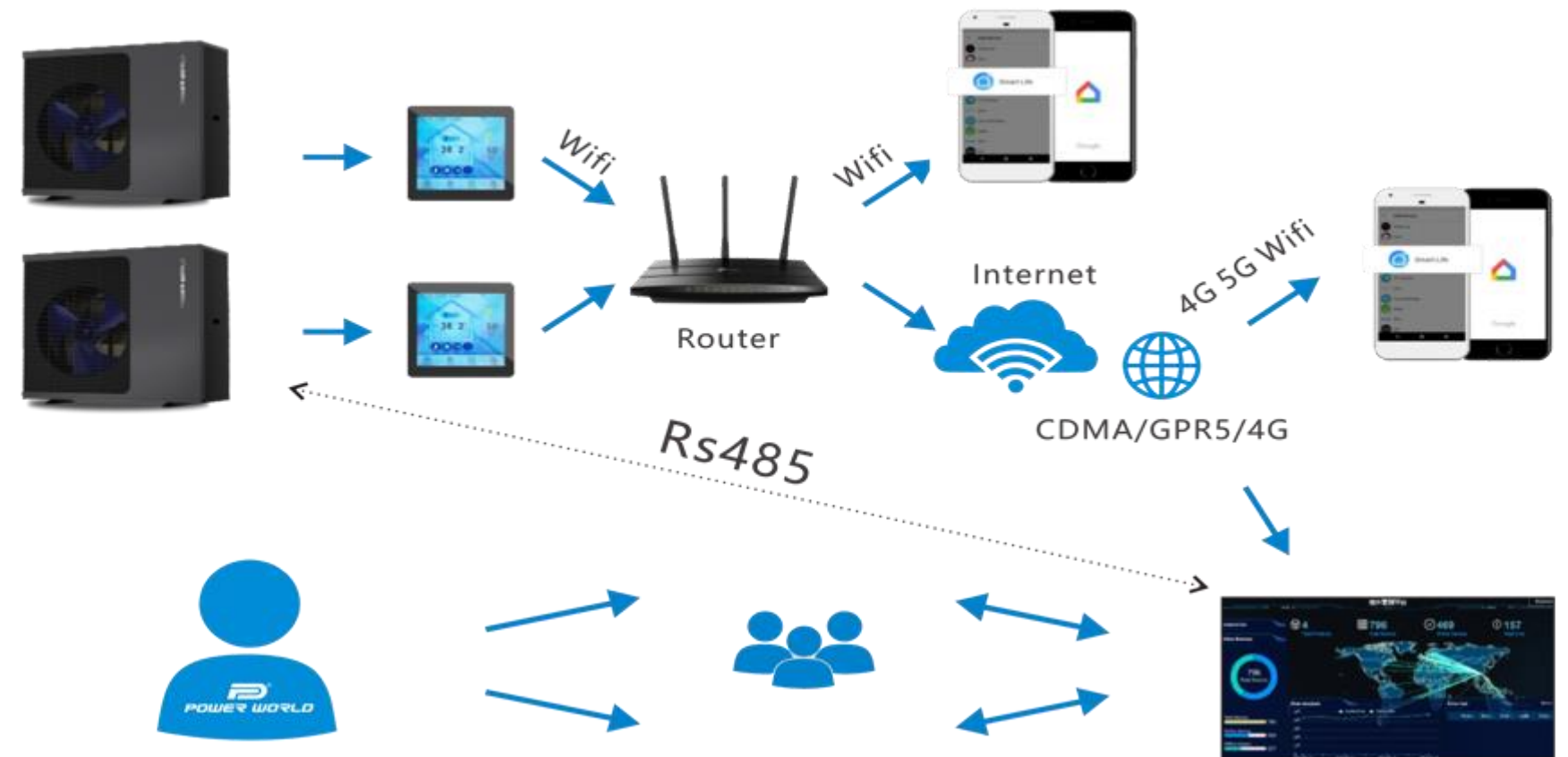
Embedded WiFi| HERO Heat Pumps connect directly to Sendo App through the local Wireless network.

Users don't need to buy extra WiFi modules, they can control, function and monitor the operation of the Heat pump, directly from their smartphone.

IoT Platform

IoT Cloud platform from Sendo can connect remotely via Wi-Fi or DTU to real-time monitor the operations data.

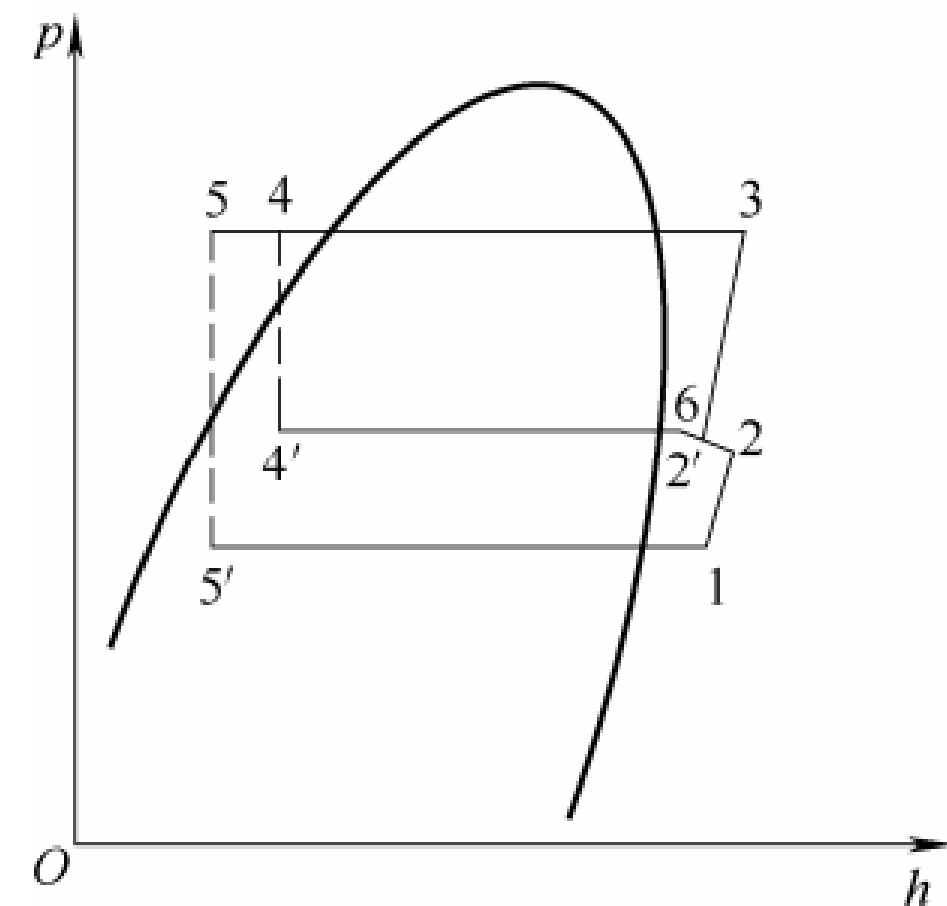
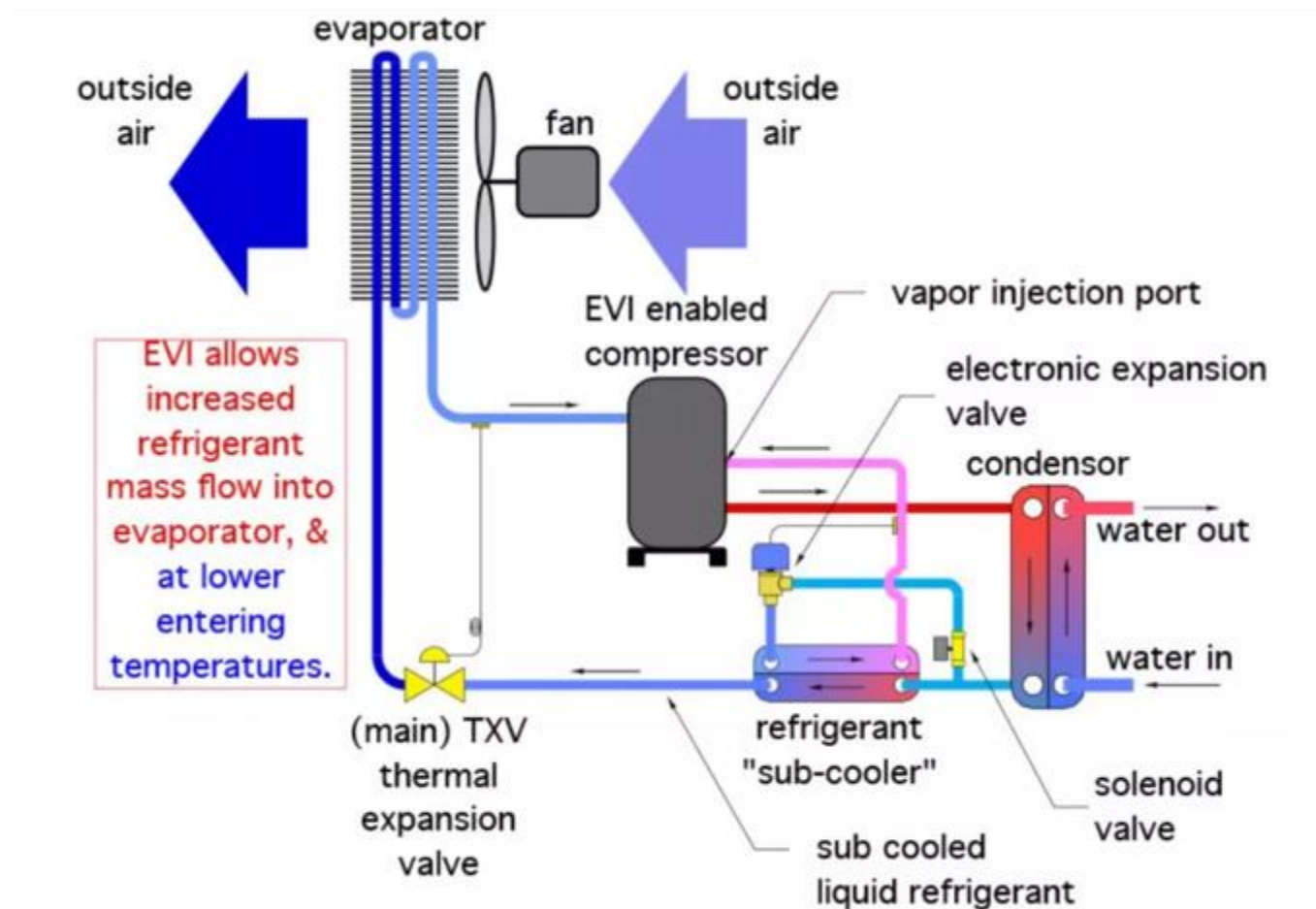
In the event of a fault the automatic fault reporting will update in real time, the Heat Pump status on Sendo's control centre, ensuring the immediate actions to solve any problems.



Extra Features

EVI Technology

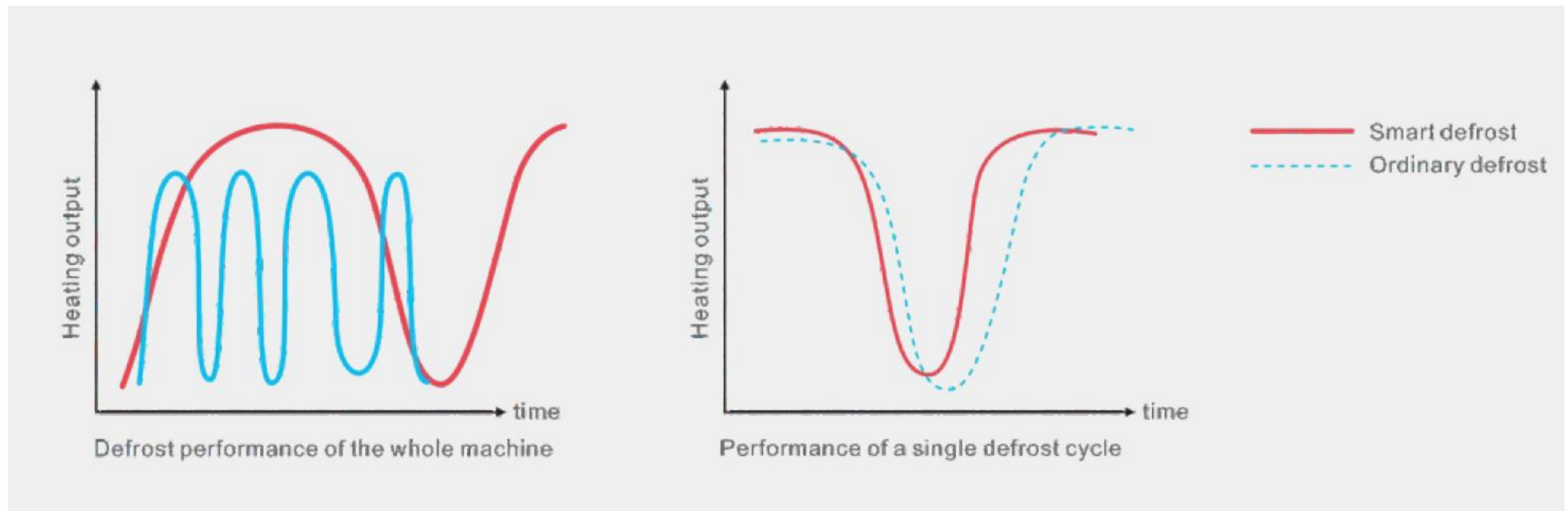
Adopting the most advanced double-rotation technology, Panasonic EVI Compressor. Sendo HeroXR EVI Heat pump, is optimised further to allow the unit to produce effective DHW temperatures up to 60 °C, at lower environment temperatures of -30 °C.



Intelligent Defrost Technology

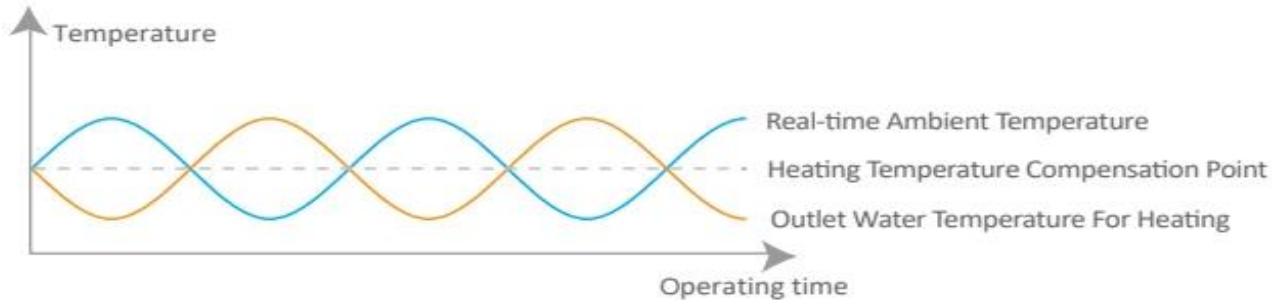
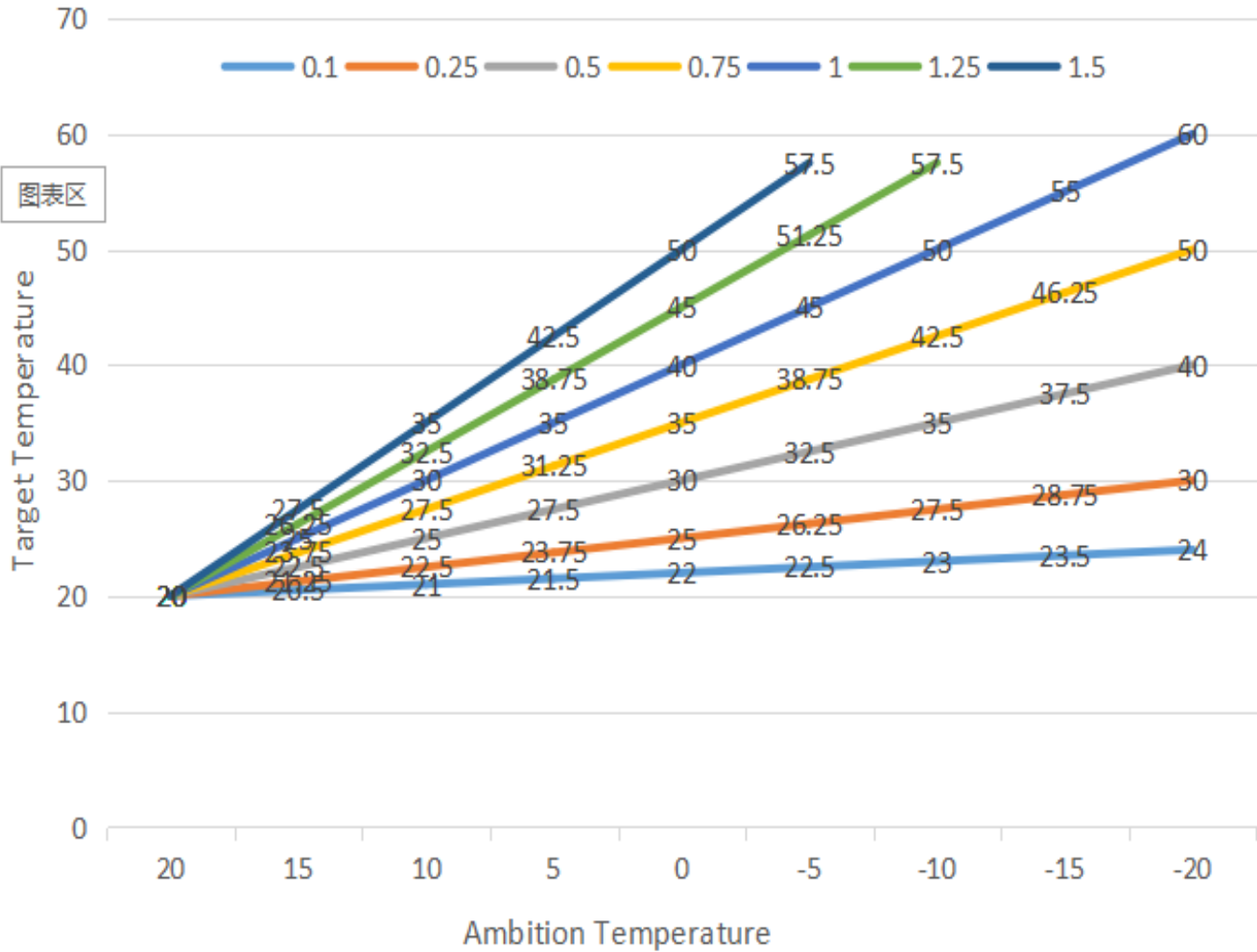
Armed with automated, valve-reversed defrosting system, HERO heat pumps may operate seamlessly at -30 C.

The system will automatically take the right decisions on when is the best time to perform defrosting cycles, ensuring the maximum efficiency and energy saving at all times.



SENDO HeroXR & HeroXs – Auto Adjustment Logic

- Target Temperature – Auto Adjustment Logic



Increasing / decreasing the power of the Heat Pump, taking into consideration the environmental conditions, depending current outdoor temperatures.

Water Temperature adjustment based on Outdoor temperatures.

✓ Up to **35% energy savings**

SENDO HeroXR & HeroXs



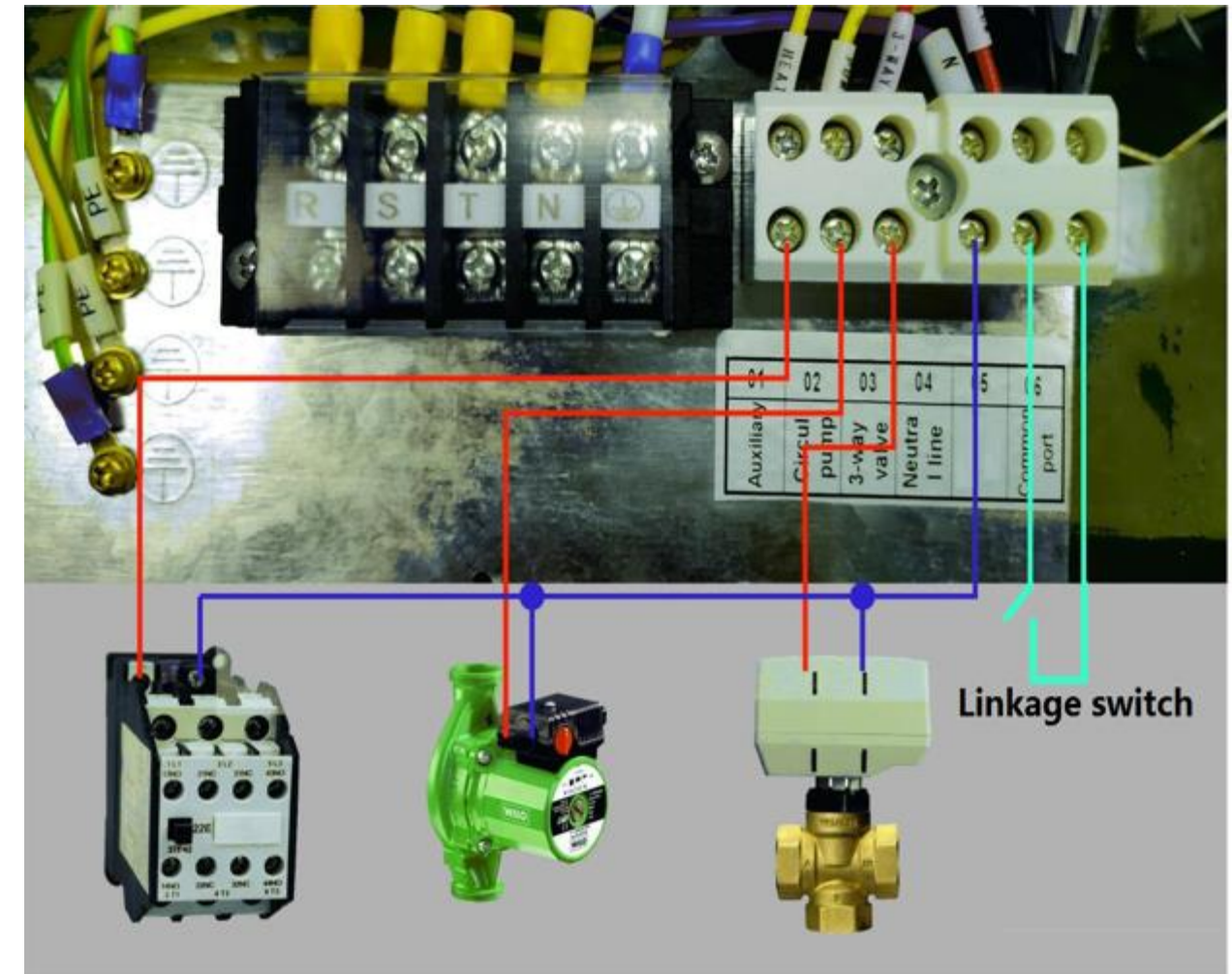
Domestic Hot Water (3-way Valve with Motor)

Provision of DHW around the clock.

Producing DHW with maximum efficiency and energy savings .

Reduction of operating expenses for Commercial applications that reach 70%.

Maximum energy saving due to high efficiency rating (ave. COP=3,5)

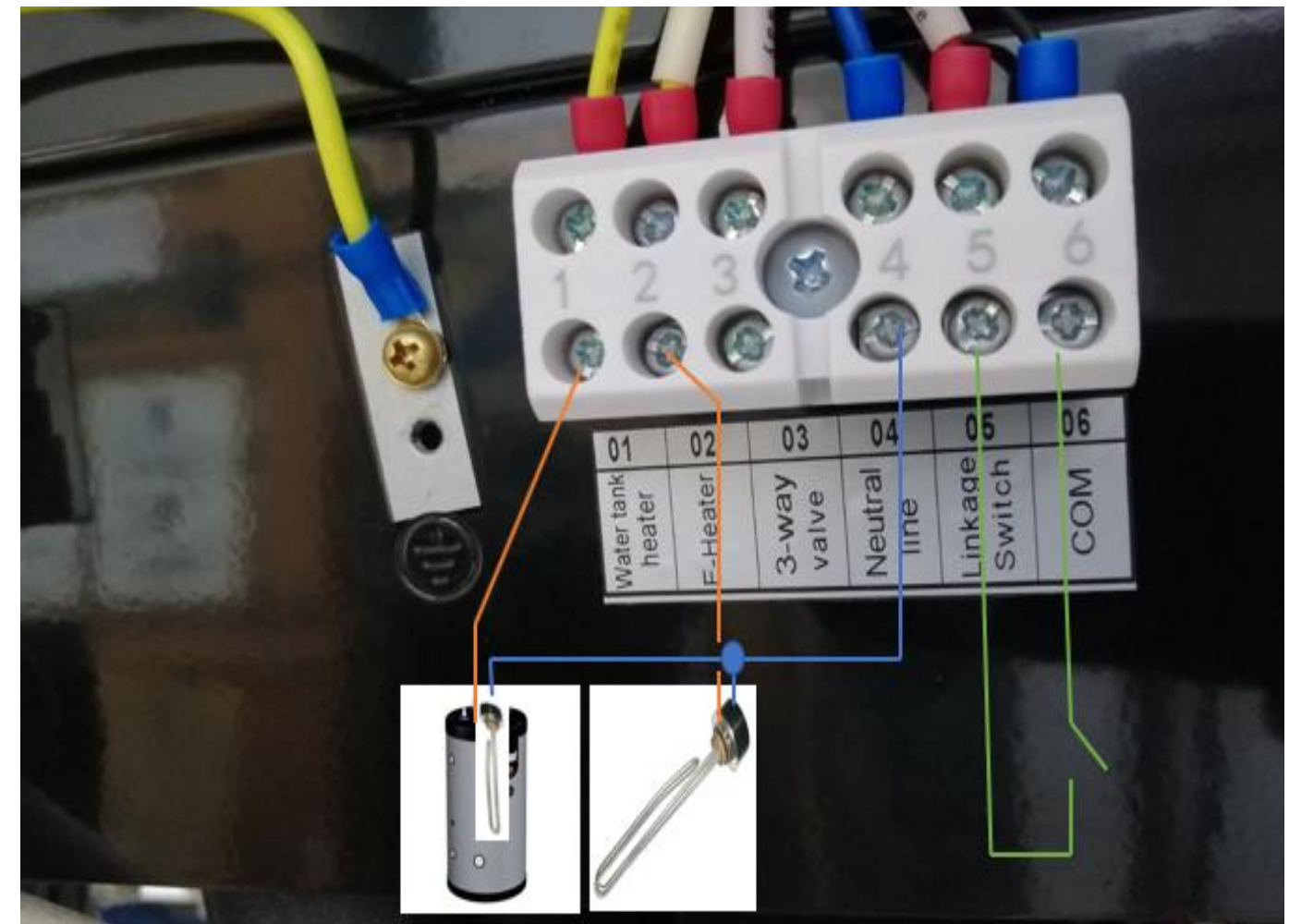


SENDO HeroXR & HeroXs



Possibility for Auxiliary power source.

Possibility of installing additional heating and controls for the DHW boiler, to assist in quick production of desired water temperature, as well the possibility to install additional auxiliary electric resistance.



Connecting Multiple Heat Pumps in Cascade mode

HeroXS Heat Pumps may connect in cascade mode, up to 8 units

Master
Unit



Slave unit 1



Slave unit 2



Slave unit 3



Slave unit 4



Slave unit 5



Slave unit 6



Slave unit 7



ON LINE TECHNICAL SUPPORT

- ✓ Solving Issues.
- ✓ Advice and recommendations on proper installation, set up and operations of the Heat Pump.
- ✓ Technical Documentation and Installation manuals.
- ✓ Advice on Technical designs, adjusted to each individual case.
- ✓ Full Inventory of Spare Parts



Sendo for life





VISIT US: [SENDO.WORLD](https://sendo.world)