

The best all-year hot water solution

TROPICAL

HEAT PUMP WATER HEATER

190L-F

300L-F1



TROPICAL Combo



Product
Lineup



Easy
installation



Unique
Technology



Flexible Operation
& More Comfort



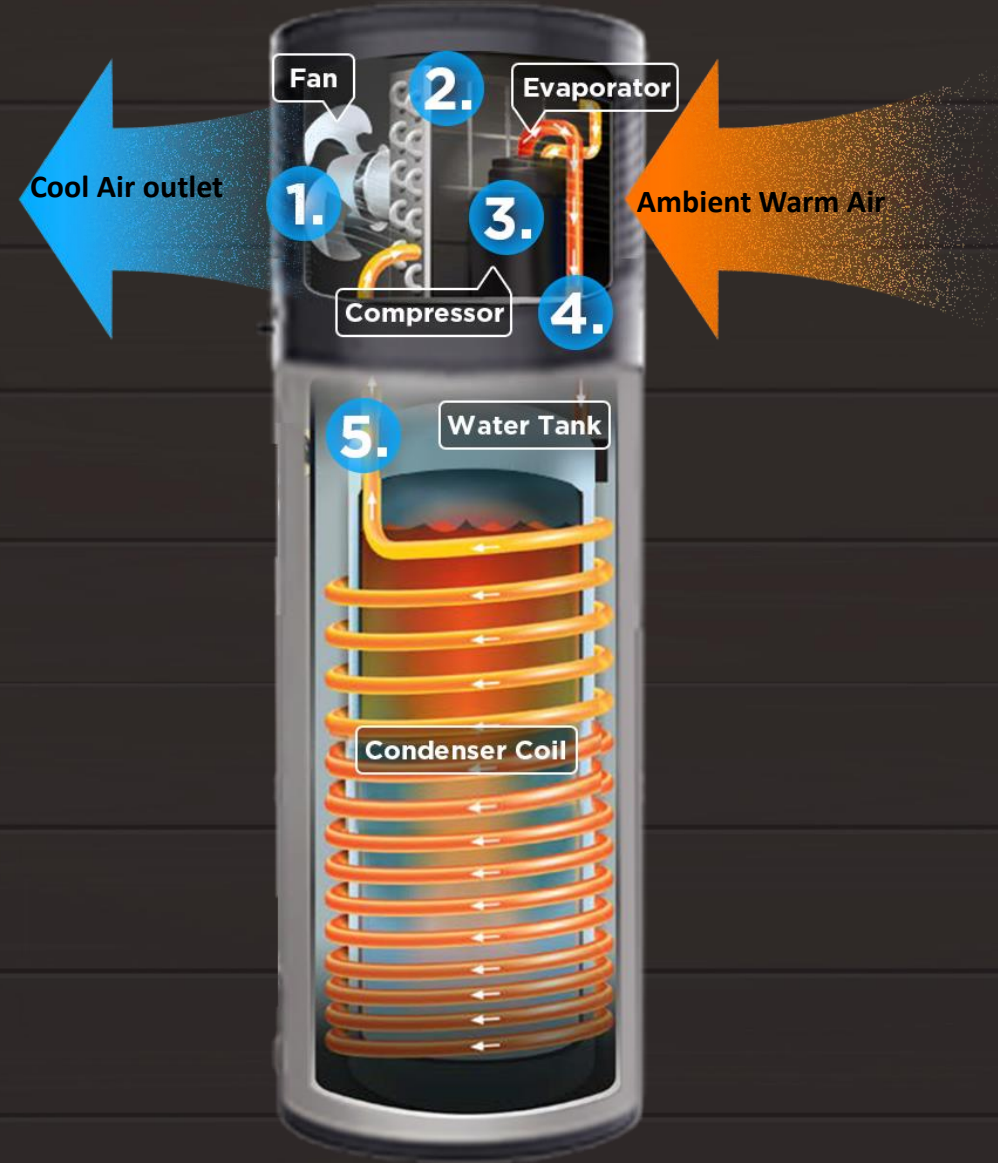
Self
Diagnosis

The Principle of HPWH

The heat pump water heater uses the operational principle of a heat pump, by absorbing heat in outdoor air and using the energy to heat water.

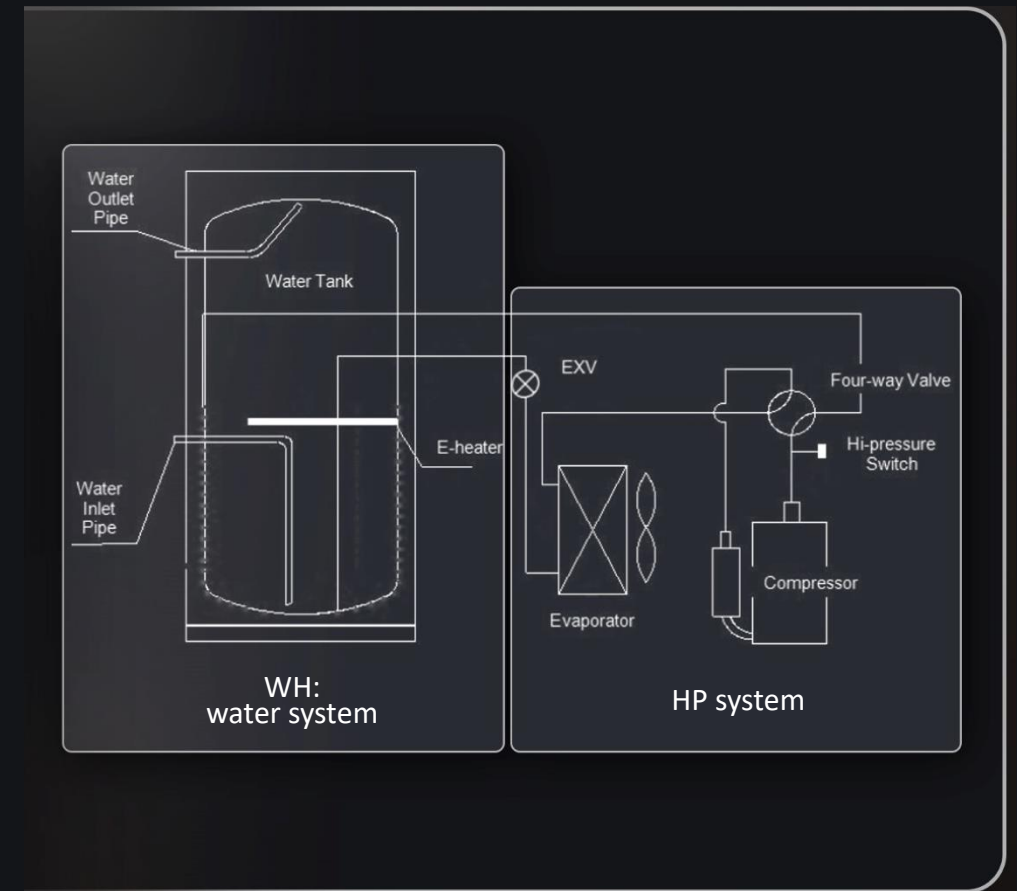
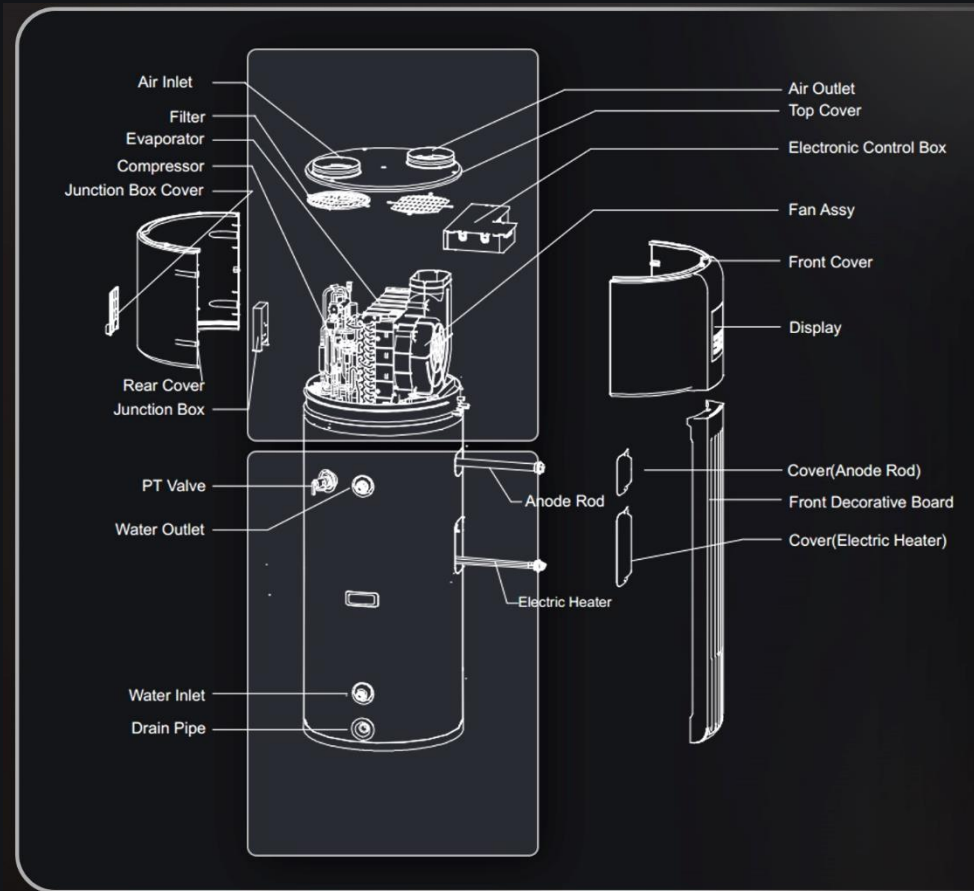
The fan inhales ambient warm air transferring its energy to the refrigerant agent in the evaporator thus changing from liquid to gas, absorbing heat from the ambient air.

The gas is further heated by compressor compression. In the condenser the gas transfers its accumulated heat to the water tank as it gets colder it transforms back to fluid.



The Principle of Combo HPWH

Combo combine the HP(HEAT PUMP)+WH(WATER HEATER) together in one box.

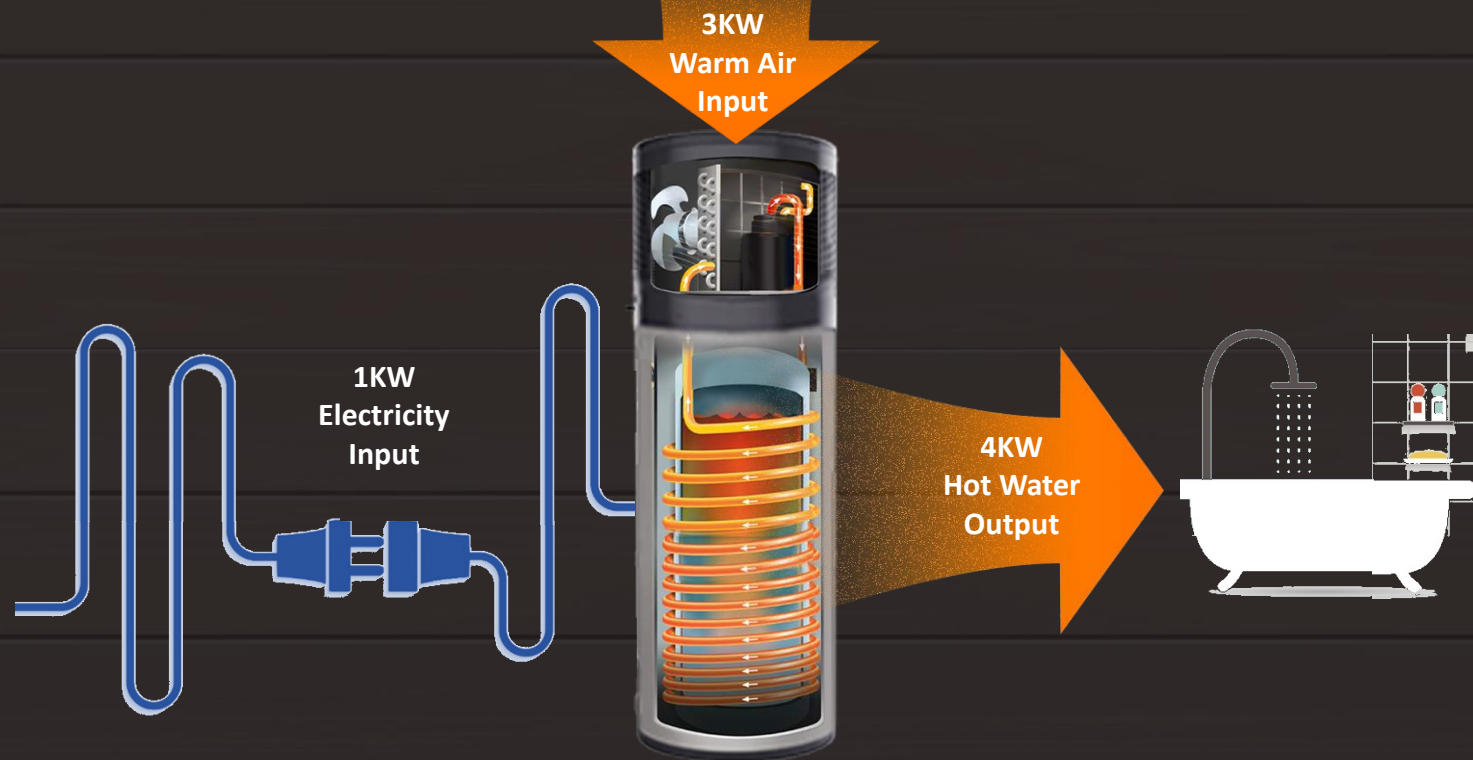


The Advantage of HPWH

Advantage of HPWH

High COP

Compressor (1KW power) pumps 3kW heat from outdoor air, the final output is 4kW to hot water.



Heat pump water heater can save up to 75% of electricity

The Advantage of TROPICAL COMBO HPWH

	HPWH	Gas Furnace	Electrical Water Heater	Diesel Boiler	Solar water heater
Engery Source	Air source and Electricity	LPG	Electricity	Diesel	Sun and electricity
Calorific value	860kcal/kWh	24,000kcal/m3	860kcal/kWh	10,200kcal/kg	860kcal/kWh
Average efficiency	4.0	0.8	0.95	0.7	2.7
*Consumption	11.63kW·h	2.09m3	48.96kW·h	5.6kg	17.22kW·h
Running Cost(USD)	0.9	5.9	4.3	6.5	1.5
Advantage and Disadvantage	<ul style="list-style-type: none"> • Environmental friendly • High Efficiency • Safety 	<ul style="list-style-type: none"> • Risk of gas leakage • Toxic gas emission 	<ul style="list-style-type: none"> • Risk of Electrical shock 	<ul style="list-style-type: none"> • Air pollution • Toxic gas emission 	<ul style="list-style-type: none"> • Environmental friendly • Safety • Weather depends

1.*Comparison based on that 40,000kcal are required to heat 1 ton of water from 15°C to 55°C.

2. Products tested under controlled conditions at laboratories.

Products lineup





190L
(3~4 people)



300L
(5~6 people)



Models	RSJ-15/190RDN3-F	RSJ-23/300RDN3-F1
Storage size (L)	180L	280L
COP	3.35	4.39
Heating Capacity	1.45kw	3kw
Electric back-up output	3.15kw	3.15kw
Energy class	A 	A 
Water tank material	Enamel	Enamel
Refrigerant	R134a	R134a

Power supply

220-240V/50Hz

Unit working
ambient temperature

-7°C~43°C
(190L-F/300L-F1)

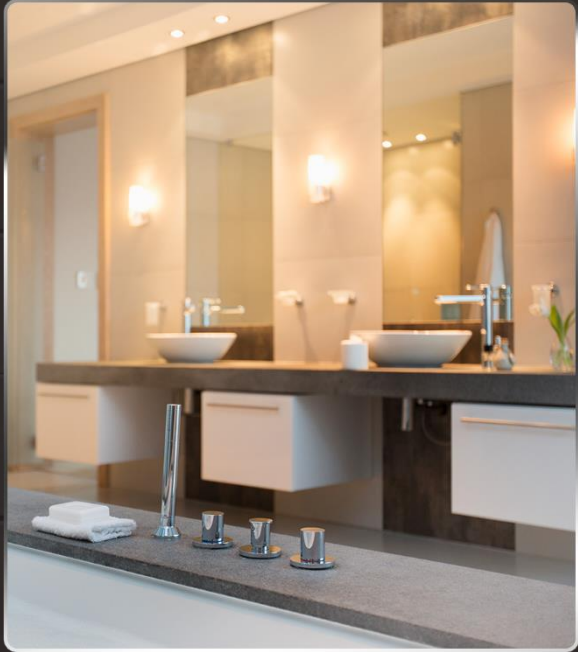
Electric Heater
working temperature

-20°C~43°C

Water outlet
temperature range

Default 60°C, 38°C~70°C
(190L-F)
Default 60°C, 38°C~70°C
(300L-F1)

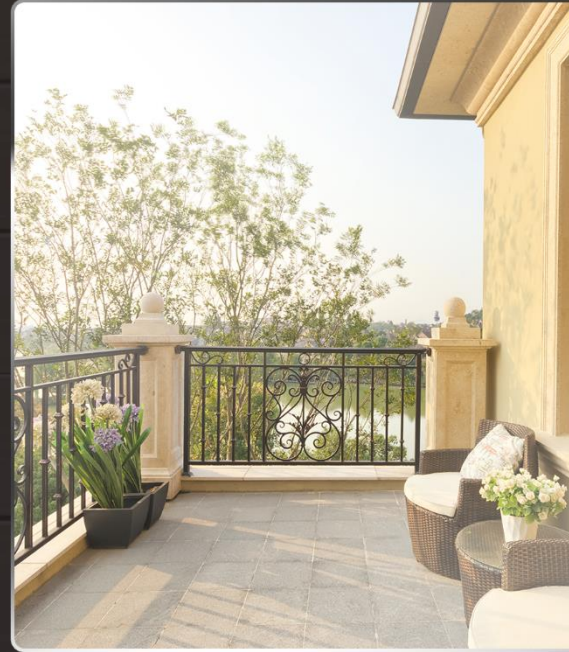
Easy Installation



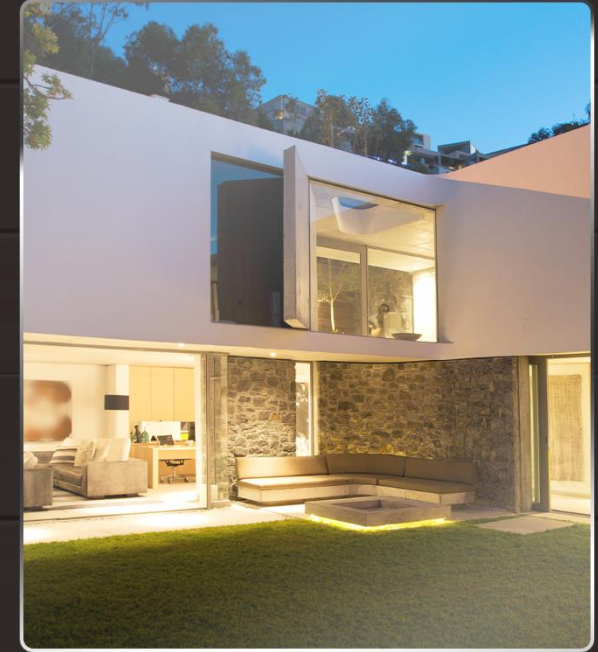
Closet/washroom



Garage



Balcony



Backyard

Easy Installation

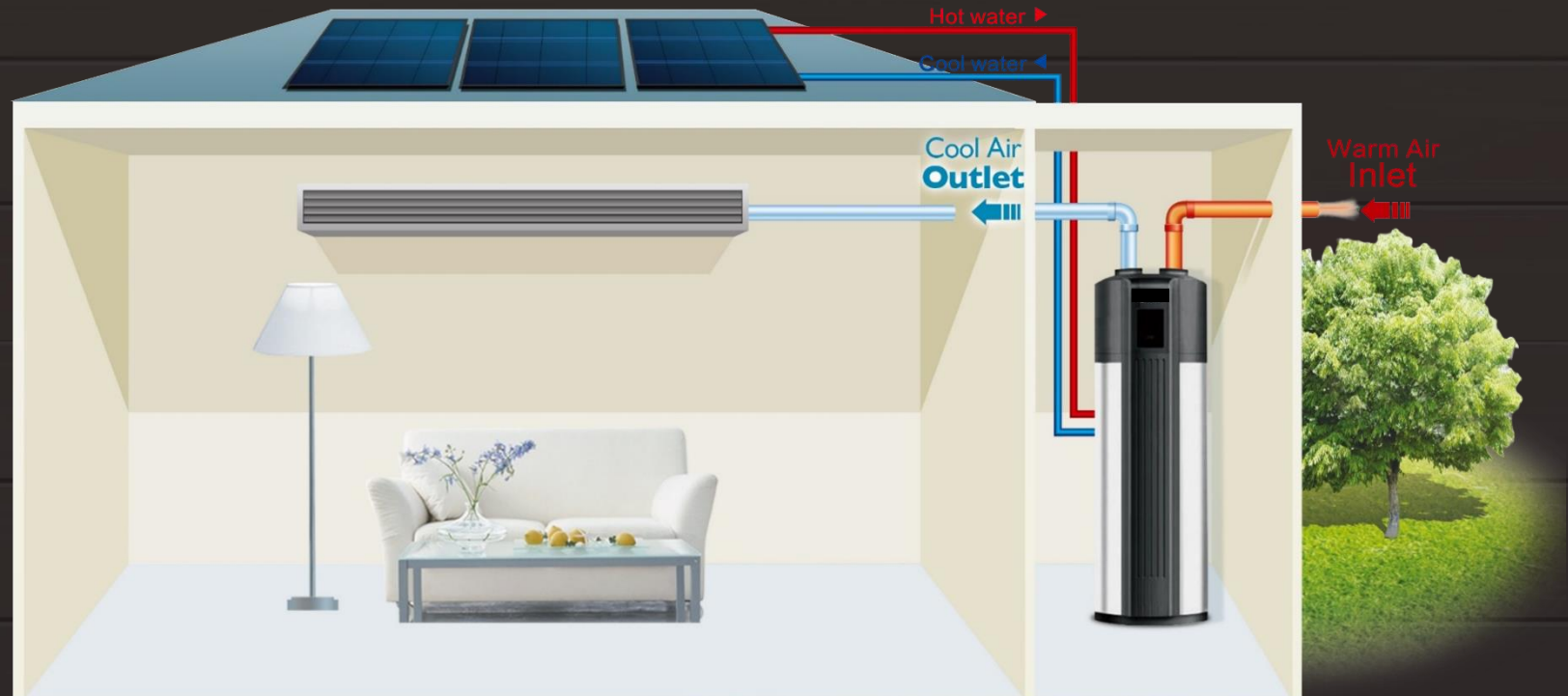
Special air inlet/outlet design, fits well for the installation in the inside the room(for EU models).

For RSJ-15/190RDN3-F

- Ducts diameter 160mm
- 15Pa air outlet pressure
- Max duct length 5 meters

For RSJ-35/300RDN3-F1

- Ducts diameter 190mm
- 30Pa air outlet pressure
- duct length 10 meters



Unique Technology

Blue-Diamond Enamel Tank with +15 years lifespan



High impact strength
More than 800 thousands of impact tests



Strong corrosion resistance
500-hour acid resistance test (standard with 2 Mg+anodes)



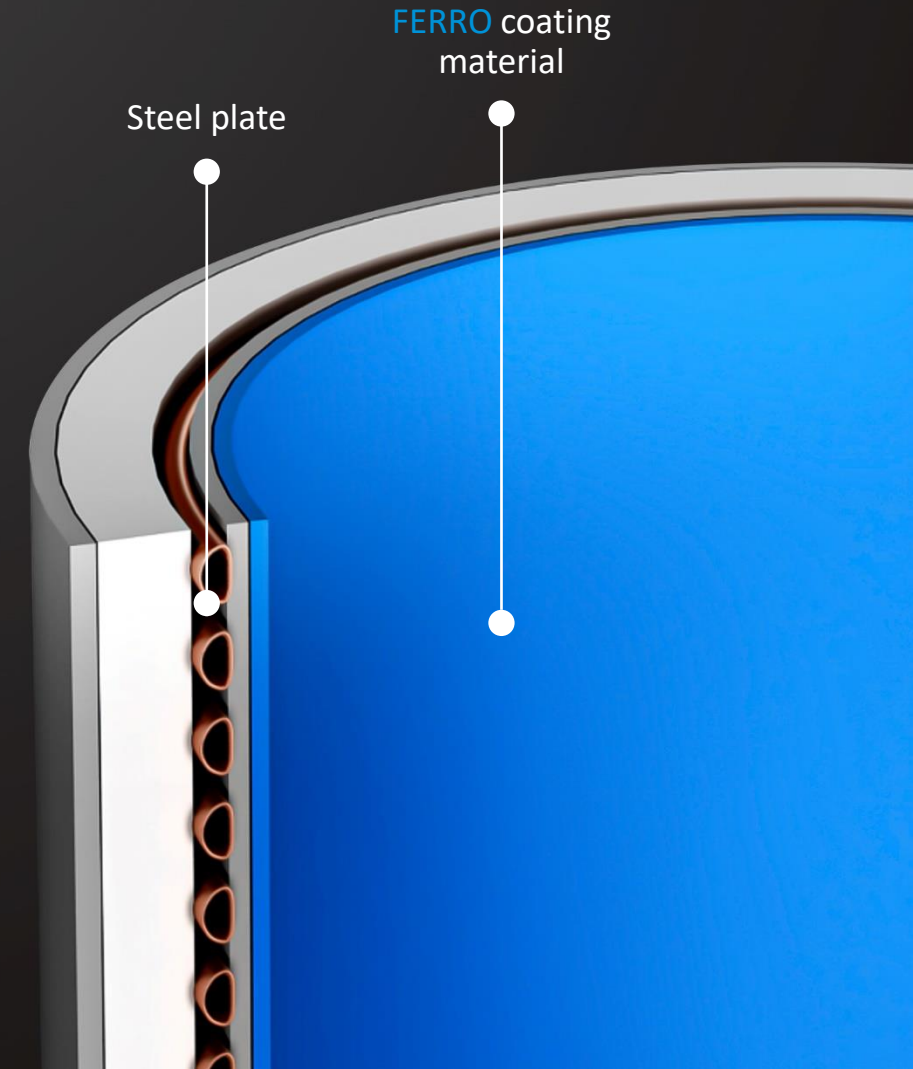
High adsorption capacity
Tank coating materials from international famous brand FERRO, adhere to the tank tightly



High pressure bearing strength
Dedicated steel helps ensure the strength under pressure



Top manufacturing technology
International cutting-edge enamel manufacturing process
German famous EISENMAN professional production line



COMBO Enamel Water Tank

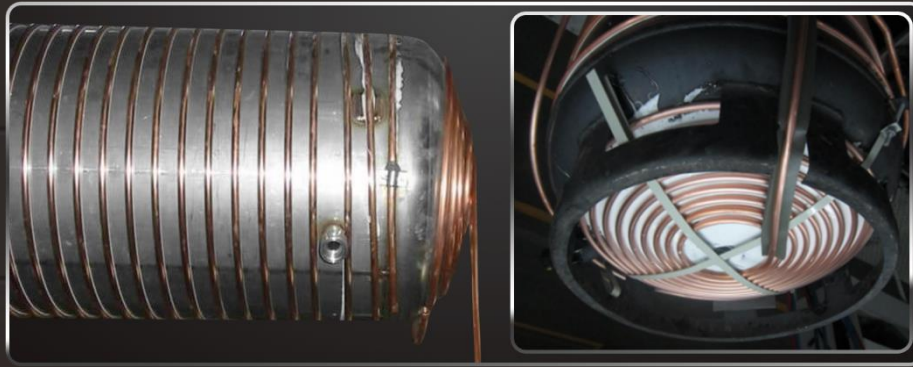
The comparison between blue-diamond enamel and conventional stainless steel

No	Items	Tropical blue-diamond enamel	Stainless steel
1	Depth	2.0mm	0.8-1.2mm
2	Design pressure	0.8MPa	0.70MPa
3	Max pressure	2.06MPa	1.2MPa
4	High-low temperature durable	0.8 million	0.25 million
5	Life span	+15 years	+15 years
6	Anti-acid	480 hours	200 hours
7	Anti-incrustant	Hardly be corroded	Easily be corroded
8	Max High temp	75°C	60°C

Unique Technology

Patented Bottom Coil Heating Technology

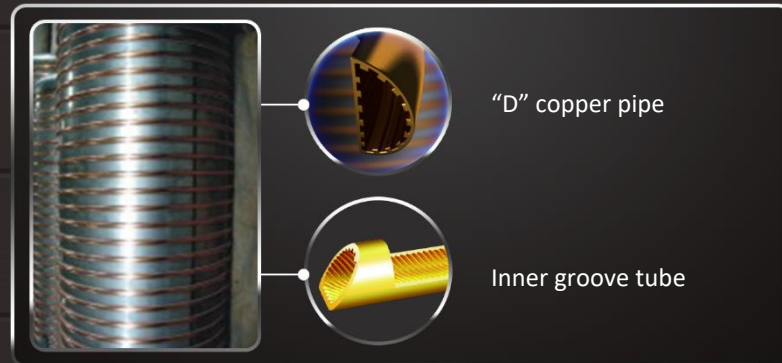
Patent number: 200920050386.1



Thermal conductive silicone

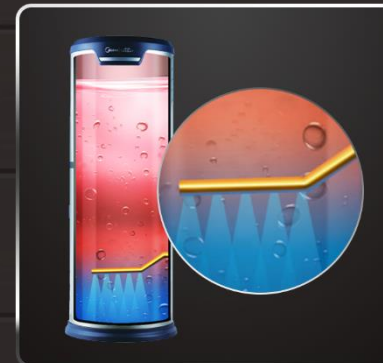


High efficient D-type copper pipe

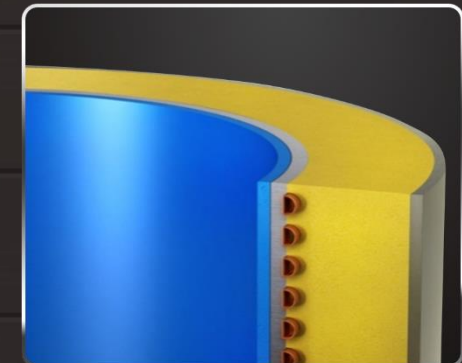


Patented laminar water injection technology

Patent number: 200820097997.7




55mm thick insulation layer



Flexible Operation & More Comfort

Easy to Use--Friendly display and control panel

Model	RSJ-15/190RDN3-E RSJ-35/300RDN3-F1
Display Panel	
Functions	<ol style="list-style-type: none">1. Error display and alarm2. Child Lock3. Auto restart4. Query and clear faults5. On/Off control , Timer, E-heater, Holiday mode, Disinfection mode



WIFI(optional)



Flexible Operation & More Comfort

Vacation Mode

With vacation mode, you can set the Combo heat pump water heater's operation during the vacation. At the end of the setting vacation time, the unit will enter into disinfection mode automatically, and resumes previous settings before vacation mode.



Water keep at 15°C, in low energy consumption;
Vacation days can be set from 1 to 99 days(default as 14 days).

Flexible Operation & More Comfort

Disinfection function

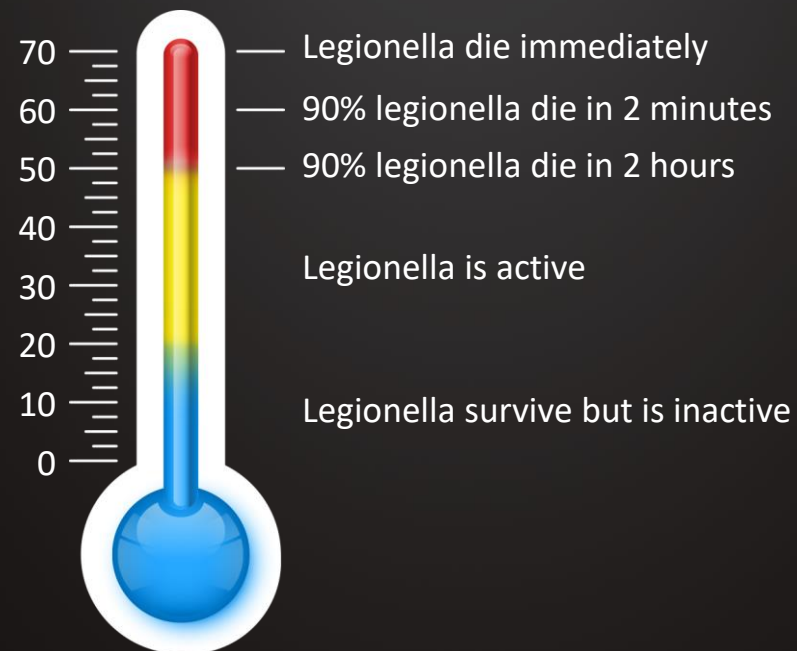
The disinfect function is used to kill legionella by 60-70 °C water to ensure the health and safety. This function can be activated by the user interface.

After entering the disinfection mode, the time to start disinfection mode can be set. If the customer does not set the disinfection start time, the disinfection mode will be start at the default 23:00 once a week.

Disinfection mode setting temp	65°C
Running frequency	7days
Start time	23:00

Legionella can easily cause infectious pneumonia and other diseases, threatening human health.

Research data shows that when the water temperature is in the range of 25~45 °C for a long time, in case of pipeline corrosion, water flow stagnation, etc., it is easy to breed a large number of Legionella bacteria.



Flexible Operation & More Comfort

Other features



Auto-defrost

The unit enters into defrost mode automatically and remove frost from the condenser



Timer settings

Set timer on/off up to 24 hours



Power-off Memory

When a power failure happens, the unit operates with previous setting after power resumes.



Self-diagnosis



Engineering Mode



Smart Grid



Thank You