

**R410A**

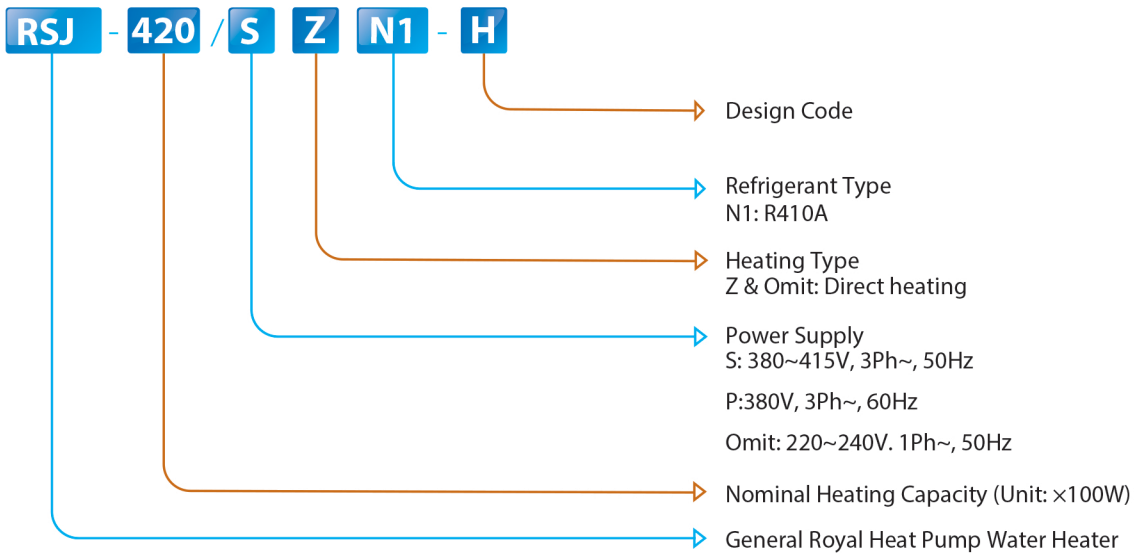
# Commercial Application



## Product lineup

Capacity (kW)	10	20	30	38	42	80	82
Appearance Series							
Direct heating 50Hz	●	●			●	●	
Direct heating 60Hz				●			●
Cycle heating 50Hz			●				

# Nomenclature

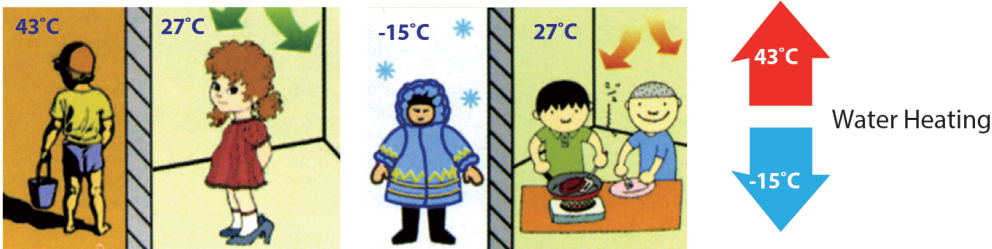


## Features

### Wide application range

- 7 basic models with heating capacity ranging from 10kW to 82kW.
- Free modular combination.
- Wide operation ambient temperature range.

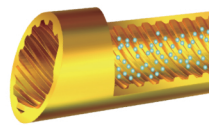
For the direct heating products, the running ambient temperature down to -15°C.



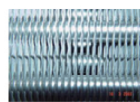
### High heating energy efficiency

The unit adopts heat pump principle, which absorbs heat from ambient air and releases it to the water to produce hot water.

- High performance fin-coil type heat exchanger is adopted at air side.



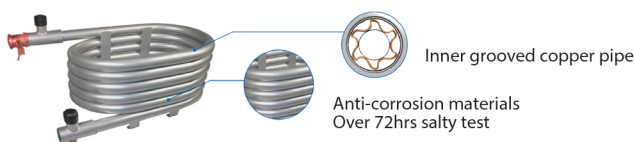
Inner grooved copper tube



Hydrophilic aluminum foil



- High efficiency tube-in-tube heat exchanger
- Inner grooved copper pipe, increase area of heat exchanger, improve efficient.
- Anti-corrosion shell increases the useful life of heat exchanger.



## Advanced technology

- Unique defrosting flow path.

Air side reserved special defrosting flow path, when the system is defrosting, the four-way valve is reversing, the system will

- absorb energy from special defrosting flow path, the defrosting progress will have no impact on water temperature.
- Proprietary gas balance and fluid balance design to ensure the unit operates reliably.
- Electric water flow valve supplies hot water at a stable temperature and expands the life of compressor.
- Optimized fan blade edge by CFD programs with analyzing air pressure distribution.
- Adopt fin-coil exchanger with V or G shape to optimize air flow system of unit.

## Wired controller

- Touch key operation.
- LCD displays operation parameters.
- Multiple timers.
- Real-time clock function.
- Power-off memory function.

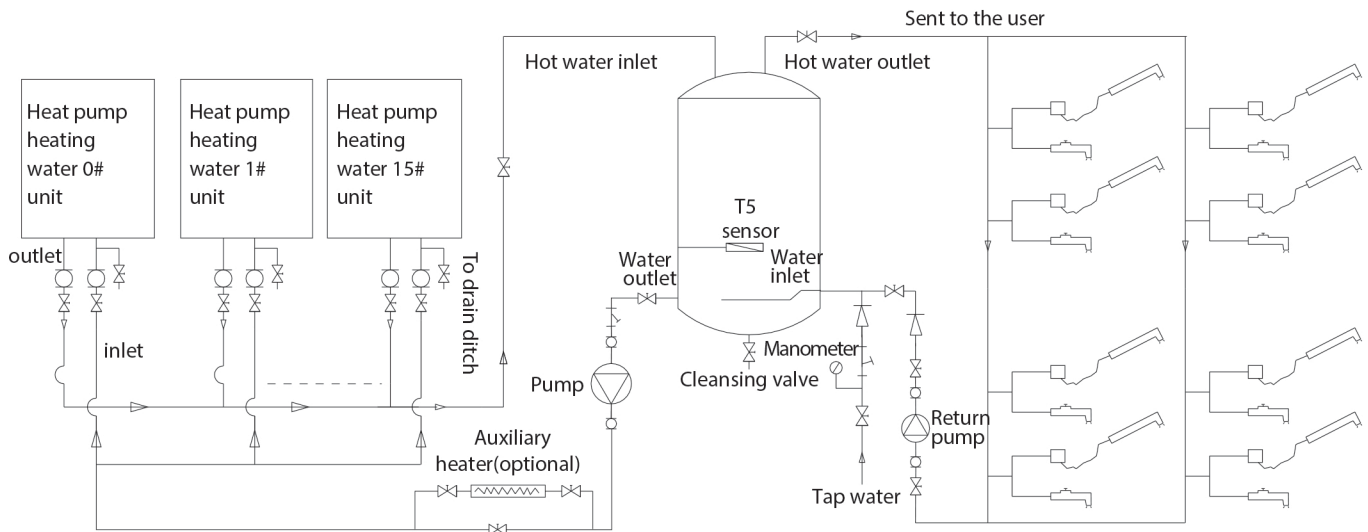


Note: It can be applied to most of the General Royal HPWH models by properly setting.

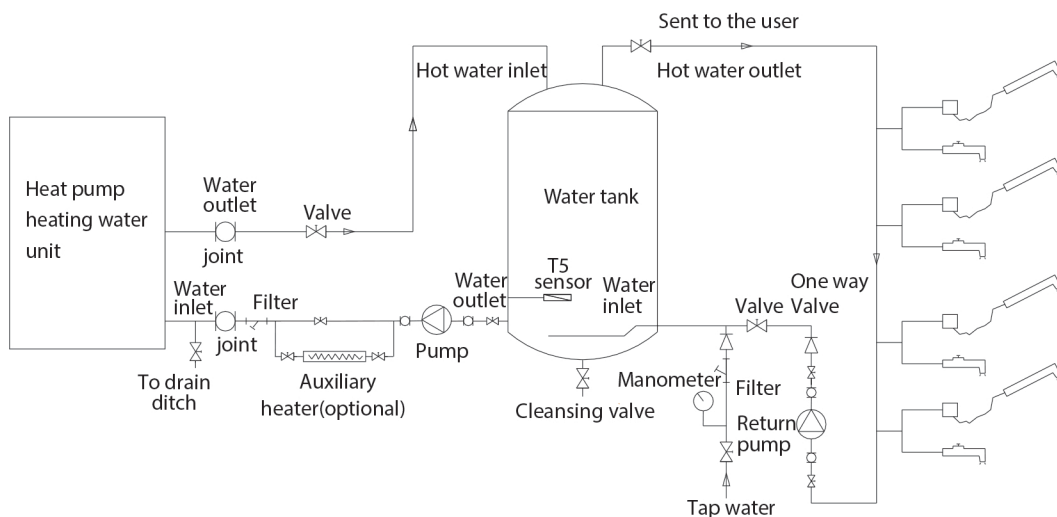
KJR-51/BMKE-A

## Simple refrigerating system diagram

### Parallel connected heat pump system



### Single connected heat pump system



# Specifications

## Direct heating 50Hz

Model			RSJ-100/N1-540V-D	RSJ-200/SN1-540V-D
Power supply		V/Ph/Hz	220-240/1/50	380-415/3 / 50
Running ambient temp		°C	-15~43	-15~43
Outwater Temp		°C	Default 56°C, 48°C~60°C	
Water Heating	Capacity	kW	11.2	20.4
	Input	kW	2.98	5.23
	COP		3.76	3.90
	Max. input current	A	17.8	13.0
Unit dimension (W×H×D)		mm	750×1,100×750	750×1,100×750
Packing dimension (W×H×D)		mm	770×1,065×770	770×1,065×770
Net/Gross weight		kg	121/135	148/163
Outdoor noise level		dB(A)	59	63
Max. combination quantity		Pieces	16	16
Compressor	Type		Scroll	Scroll
	Quantity	Pieces	1	1
Fan motor	Type		AC motor	AC motor
	Quantity	Pieces	1	1
Air side heat exchanger	Type		Fin-coil	Fin-coil
Warer side heat exchanger	Type		Tube-in-tube	Tube-in-tube
Refrigerant	Refrigerant Type/Quantity	kg	R410A/1.5	R410A/2.8
	Throttle type		Electric expansion valve	
water pipe	water inlet pipe	mm	DN25	DN25
	water outlet pipe	mm	DN25	DN25
Controller			KJR-51/BMKE-A	KJR-51/BMKE-A
Hot Water Yield		m <sup>3</sup> /h	0.25	0.45

Model			RSJ-420/SZN1-H	RSJ-800/SZN1-H
Power supply		V/Ph/Hz	380-415/3 / 50	380-415/3 / 50
Running ambient temp		°C	-15~46	-15~46
Outwater Temp		°C	Default 56°C, 48°C~60°C	
Water Heating	Capacity	kW	39.0	80.0
	Input	kW	9.65	20.00
	COP		4.04	4.00
	Max. input current	A	24.0	34.0
Unit dimension (W×H×D)		mm	1,015×1,775×1,026	1,995×1,770×1,025
Packing dimension (W×H×D)		mm	1,070×1,900×1,030	2,080×1,895×1,120
Net/Gross weight		kg	323/343	599/627
Outdoor noise level		dB(A)	66	68
Max. combination quantity		Pieces	4	2
Compressor	Type		Scroll	Scroll
	Quantity	Pieces	1	2
Fan motor	Type		AC motor	AC motor
	Quantity	Pieces	1	2
Air side heat exchanger	Type		Fin-coil	Fin-coil
Warer side heat exchanger	Type		Tube-in-tube	Tube-in-tube
Refrigerant	Refrigerant Type/Quantity	kg	R410A/4.5	R410A/2×4.4
	Throttle type		Electric expansion valve	
water pipe	water inlet pipe	mm	DN32	DN50
	water outlet pipe	mm	DN32	DN50
Controller			KJR-51/BMKE-A	KJR-51/BMKE-A
Hot Water Yield		m <sup>3</sup> /h	0.85	1.72

### Remark:

1. The test conditions: outdoor temperature 20/15°C(DB/WB), inlet water temperature 15°C, outlet water temperature 55°C.
2. The specifications may be changed for product improvement, please refer to the nameplate.

## Direct heating 60Hz

Model			RSJ-380/PN1-820	RSJ-820/PZN1-H
Power supply		V/Ph/Hz	380/3 / 60	
Running ambient temp		°C	-15~43	-15~46
Outwater Temp		°C	Default 56°C, 40°C~60°C	
Water Heating	Capacity	kW	42.0	82.5
	Input	kW	10.70	21.10
	COP		3.93	3.91
	Max. input current	A	26.0	47.8
Unit dimension (W×H×D)		mm	997×1,771×894	1,995×1,770×1,025
Packing dimension (W×H×D)		mm	1,100×1,965×920	2,080×1,895×1,120
Net/Gross weight		kg	283 / 310	592/613
Outdoor noise level		dB(A)	65	68
Max. combination quantity		Pieces	4	2
Compressor	Type		Scroll	Scroll
	Quantity	Pieces	1	2
Fan motor	Type		AC motor	AC motor
	Quantity	Pieces	1	2
Air side heat exchanger	Type		Fin-coil	Fin-coil
Water side heat exchanger	Type		Tube-in-tube	Tube-in-tube
Refrigerant	Refrigerant Type/Quantity	kg	R410A/5.0	R410A/2×4.4
	Throttle type		Electric expansion valve	
water pipe	water inlet pipe	mm	DN25	DN50
	water outlet pipe	mm	DN25	DN50
Controller			KJR-51/BMKE-A	KJR-51/BMKE-A
Hot Water Yield		m <sup>3</sup> /h	0.89	1.77

Remark:

1. The test conditions: outdoor temperature 20/15°C(DB/WB), inlet water temperature 15°C, outlet water temperature 55°C.
2. The specifications may be changed for product improvement, please refer to the nameplate.

## Cycle heating 50Hz

Model			RSJ-300/MSN1-G	
Power supply		V/Ph/Hz	380-415/3 / 50	
Running ambient temp		°C	-10~46	
Outwater Temp		°C	Default 50°C, 20°C~55°C	
Water Heating	Capacity	kW	27.0	
	Input	kW	6.40	
	COP		4.22	
	Max. input current	A	16.5	
Unit dimension (W×H×D)		mm	970×1,565×990	
Packing dimension (W×H×D)		mm	995×1,700×1,010	
Net/Gross weight		kg	249/256	
Outdoor noise level		dB(A)	58	
Max. combination quantity		Pieces	6	
Compressor	Type		Scroll	
	Quantity	Pieces	1	
Fan motor	Type		AC motor	
	Quantity	Pieces	1	
Air side heat exchanger	Type		Fin-coil	
Water side heat exchanger	Type		Tube-in-tube	
Refrigerant	Refrigerant Type/Quantity	kg	R410A/3.3	
	Throttle type		Electric expansion valve	
water pipe	water inlet pipe	mm	DN32	
	water outlet pipe	mm	DN32	
Controller			KJR-51/BMKE-A	
Hot Water Yield		m <sup>3</sup> /h	0.58	

Remark:

1. The test conditions: outdoor temperature 20/15°C(DB/WB), initial water temperature 15°C, terminal water temperature 55°C.
2. The specifications may be changed for product improvement, please refer to the nameplate.