

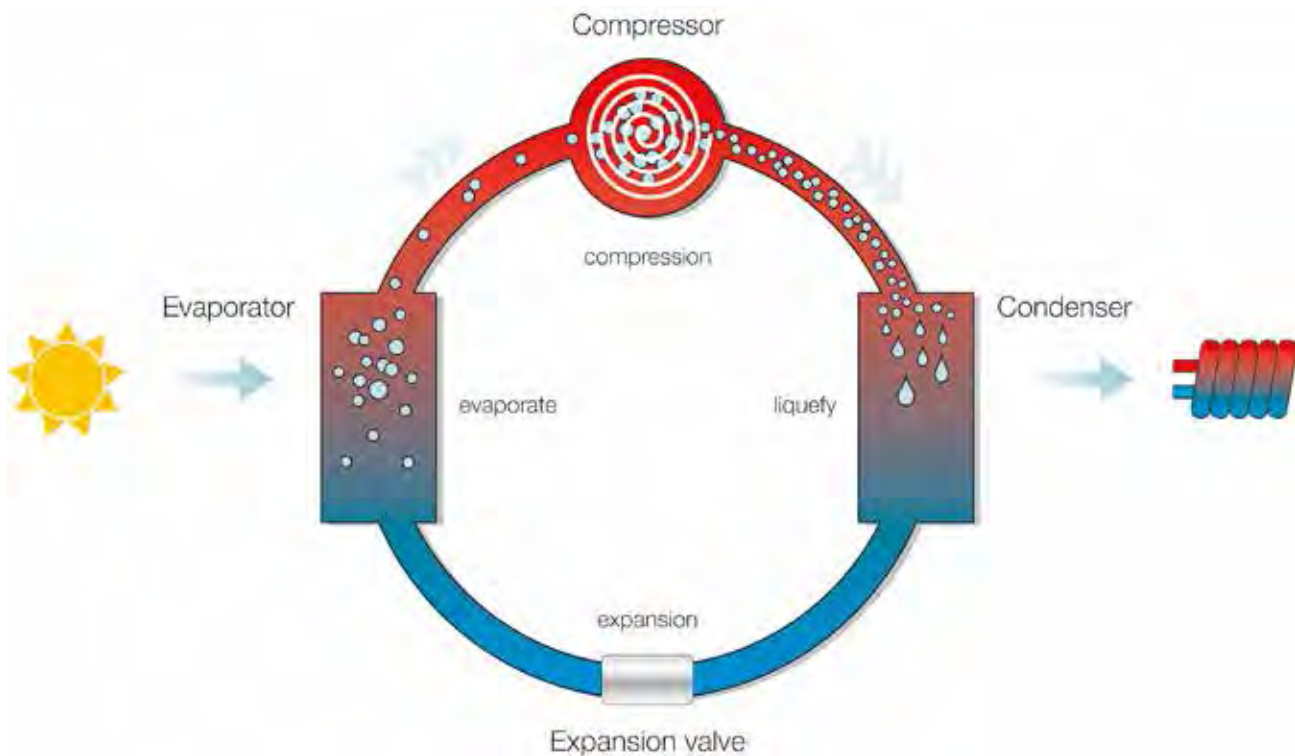


AIR TO WATER HEAT PUMP COOLING & HEATING VERSOPUMP RH-SERIES





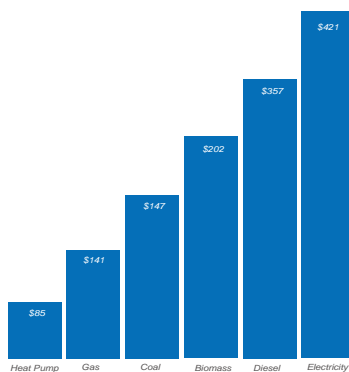
HEAT PUMP WORKING PRINCIPLE



Heat pump water heater extracts energy from the air or other heat source and uses it to heat water. It uses 1 time power to drive the compressor and brings 4.3 times heat to the water, this is what we called coefficient of performance (COP). With COP up to 4.3.

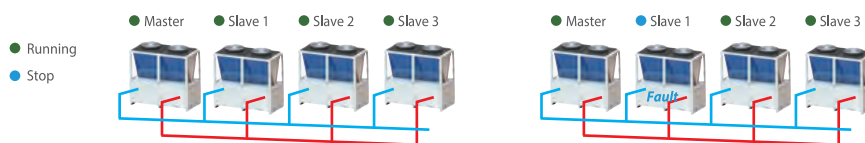
ENERGY RESOURCE COMPARISON

The data on the following drawing are calculated on the basis of 20hrs/day in 120 days.

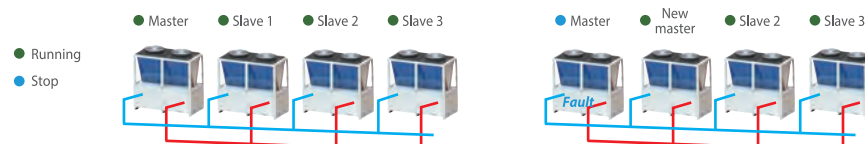


Operating Cost Comparison						
Items	Heat Pump	Gas	Diesel	Electricity	Coal	Biomass
Calorific Value	860kcal/kW	8600kcal/L	10200kcal/L	860kcal/kW	5000kcal/Kg	4000
Unit Price	\$0.1/kWh	\$0.3/m ³	\$0.9/L	\$0.10/kWh	\$0.075/Kg	0.20
Heating Load	200kW					
η	468%	85%	85%	95%	35%	85%
Consumption Per Hour	43kW/h	24m ³ /h	20L/h	211kW/h	98Kg/h	51
Operating Cost Per Day	\$85	\$141	\$357	\$421	\$147	\$202
Operating Cost Per Year	\$10256	\$16941	\$42851	\$50526	\$17691	\$24282
Energy-Saving	/	19.05%	68.00%	72.86%	22.48%	43.52%

When one of the slave units is failed or in protecting status, other slave units will still keep running.



Any unit can operate as the master when a group of units are combined.



The fan motor's protective level meets IP55, metal fan is designed with excellent anti-corrosion performance.



Professional compressor for heat pump water heater: Adopt Copeland or Panasonic top quality scroll compressor specially for heat pump water heater, with much wider operation range for different ambient temperature. Special design for high suction & exhaust temperature, and system high condensing temperature & pressure, Higher efficiency, Lower noise, Higher reliability, Longer service life.



Wifi function for option(Control by Apps on mobile phone).



Controller: Adopt famous master chip, ensure stable running. With lot of protection functions: High & low pressure protection, anti-freezing protection, high temperature protection, overload protection, lack phase and reverse phase protection, and so on. Modular control for at most 16 heat pumps, can be combined freely according to the required capacity.



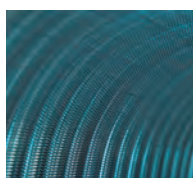
Stainless steel 304 material for side cover of finned tube heat exchanger, for all fastener and other important parts, not easy to rust and corrosion, more durable.



High efficiency shell & tube heat exchanger: Adopt high efficiency internal thread copper coil, which heating area is 3.6 times than ordinary smooth coil, larger diameter water loop design to make water flow smoothly, energy efficiency is superior.



High precision electronic expansion valve: use electronic expansion valve for controlling, reach 500 steps adjustment, adjust super heat degrees accurately, achieve high efficiency operation system.



The blue hydrophilic aluminum foil fin heat exchanger adopts cross-type multi-flow path design to make the heat exchange more uniform; the internal thread copper tube design has higher heat transfer efficiency; at the same time, the hydrophilic fins are not easy to form water droplets, Spreading into a uniform water film completely on the surface of fins, eliminates the generation of water bridges, which greatly improves the heat exchange capacity and heat exchange efficiency between the aluminum foil and the flowing air.

R410A

Low ODP refrigerant: R410a.



RH SERIES- DOMESTIC/ROOM HEATING & COOLING HEAT PUMP											
Model / Part No		RH9-H	RH13-H	RH9-H	RH14-H	RH18-H	RH30-H	RH40-H	RH70-H	RH140-H	
Rated Heating Capacity	kW	8.7	13.5	8.8	14.0	18.3	29.7	39.8	70.0	140.0	
Rated Power	kW	2.70	4.23	2.71	4.30	5.58	9.50	12.40	20.00	40.00	
Rated Current	A	12.85	19.72	5.16	8.32	10.49	18.10	23.50	37.98	75.97	
Performance Coefficient	COP	3.22	3.19	3.25	3.26	3.28	3.13	3.21	3.50	3.50	
Rated Cooling Capacity	kW	7.8	12.4	7.9	12.6	16.9	28.7	36.6	65.0	130.0	
Input Power	kW	2.48	3.95	2.54	4.08	5.59	9.50	11.80	20.00	39.40	
Input Current	A	12.12	18.94	4.83	7.72	10.66	17.90	22.93	39.46	74.83	
EER	/	3.15	3.14	3.11	3.09	3.02	3.02	3.10	3.26	3.30	
Max. Power	kW	3.24	4.97	3.24	5.20	6.91	11.60	14.80	26.70	51.20	
Max. Current	A	15.50	23.78	6.15	10.00	13.20	21.70	28.40	52.00	104.00	
Power Supply		1N 220V/50Hz			3N 380V/50Hz or 3N 380V 60Hz						
Compress or	Type		Hermetic scroll type								
	Quantity	Set	1	1	1	1	1	2	2	2	
	Start mode		Directly Start (Soft start for option)								
Application Side Heat Exchanger	Type		Brazed Plate Heat Exchnager / Shell & Tube Heat Exchanger								
	Water Flow	m³/h	1.38	2.15	1.38	2.24	3.09	5.16	6.54	12.00	22.40
	Pressure Drop	KPa	40	40	40	40	40	40	60	70	
	Connection Size	DN	DN20	DN25	DN20	DN25		DN32		DN50	DN65
	Connection type		BSP Threaded							ANSI / DN Flnage	
Fan	Type		Efficient axial type								
	Wind blowing type		Horizontal				Vertical				
Refrigerant	Throttle type		Electronic Expansion Valve								
	Type		R410A								
	Quantity	KG	2.1	3.1	2.1	3.3	4.3	6.5	4.2×2	5×2	9×2
Noise		DB(A)	≤50	≤62	≤50	≤63	≤63	≤65	≤68	≤70	≤70
Unit dimensions		m	0.8*0.5*1.4	0.8*0.5*1.4	0.8*0.5*1.4	0.8*0.5*1.4	0.8*0.7*1.4	1*1*1.9	1*1*1.9	2*1*1.8	2.2*1.2*2.1
Weight		KG	115	135	115	170	190	335	395	530	900
Remarks:											
1. Cooling Mode Standard Condition: Dry bulb temperature 35℃, water input 12℃, water output 7℃.											
2. Heating Mode Standard Condition: Dry bulb temperature 7℃, wet bulb 6℃; water input 40℃, water output 45℃.											
3. The above parameter are for single module,could be grouped according to requirements.											
4. The above parameters are based on Refrigearnt R410A,for parameters based on other refrigerant please contact us.											

Water Heating & Cooling Solutions

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Heat Pump

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