



# Greenergy Series

R290DC Inverter Air Source Heat Pumps with SPRSUN Self-developed Controller



Multiple Modes for Comfortable Use



ERP A+++ Performance



Stable Running Ambient



Touch Screen Controller



Reduced Noise



WIFI Control



Built-in Water Pump



SG Ready



# One-Stop Solution To Meet Various Residential Needs

As a green heating solution for the future, SPRSUN heat pumps can provide comfortable heating in winter, cooling in summer, gentle airflow, and a more comfortable overall sensation, while also supporting a 24-hour hot water supply.



Whole House Heating



Central Hot Water



Central Cooling



Hot Water + House Heating



Hot Water + House Cooling





## R290 Refrigerant

SPRSUN has developed brand new products going with R290 refrigerant which is a highly pure propane. It has a low environmental impact and nominal global warming potential (GWP3), meaning it possesses no qualities that can destroy the ozone layer.

R290 also is the preferred hydrocarbon alternative of the Environmental Protection Agency (EPA).



# High Heating Efficiency

The unit can operate at high frequency to heat water at a faster speed. When the temperature reaches the set temperature, it will operate at a low frequency with less energy consumed to maintain temperature.



Product Service



Create a Comfortable Life with SPRSUN





  
**39** dB(A)  
 Sound Pressure (1m)



-  20dB-Rustle of Leaves
-  30dB-Whisper
-  70dB-Car

\* This data is from laboratory environmental testing.



# SPRSUN Smart Control System

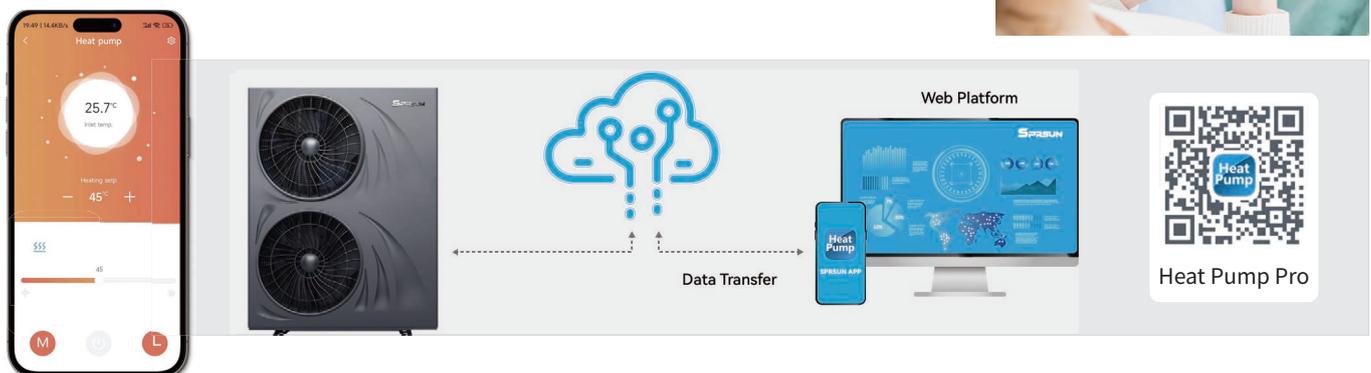
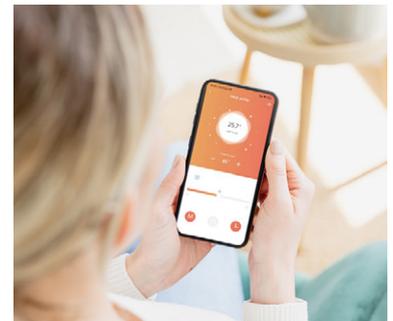
## Working Principle

SPRSUN's self-developed smart control system is equipped with highly integrated control functions, which can be operated via a remote APP. The system is easy to manipulate, stable in performance, and is truly a smart operating system that realizes man-machine separation.



## Remote Control with APP and PC Platform

The mobile phone APP and the PC background both can be opened to users. Additionally, local dealers can use the smart data platform to provide remote product inspections for users, offering convenient and prompt assistance in problem resolution.



# Smart Touch Screen



The colorful smart touch screen not only looks sleek and stylish, but also responds quickly, and supports multiple modes for easy one-touch setup, making it effortless for users to control the system.

## Multiple Operating Modes:

- Daytime
- ECO mode
- Night mode
- Test mode

## Timing Control:

- Timezone
- Setpoint
- Pre-setting
- Temperature



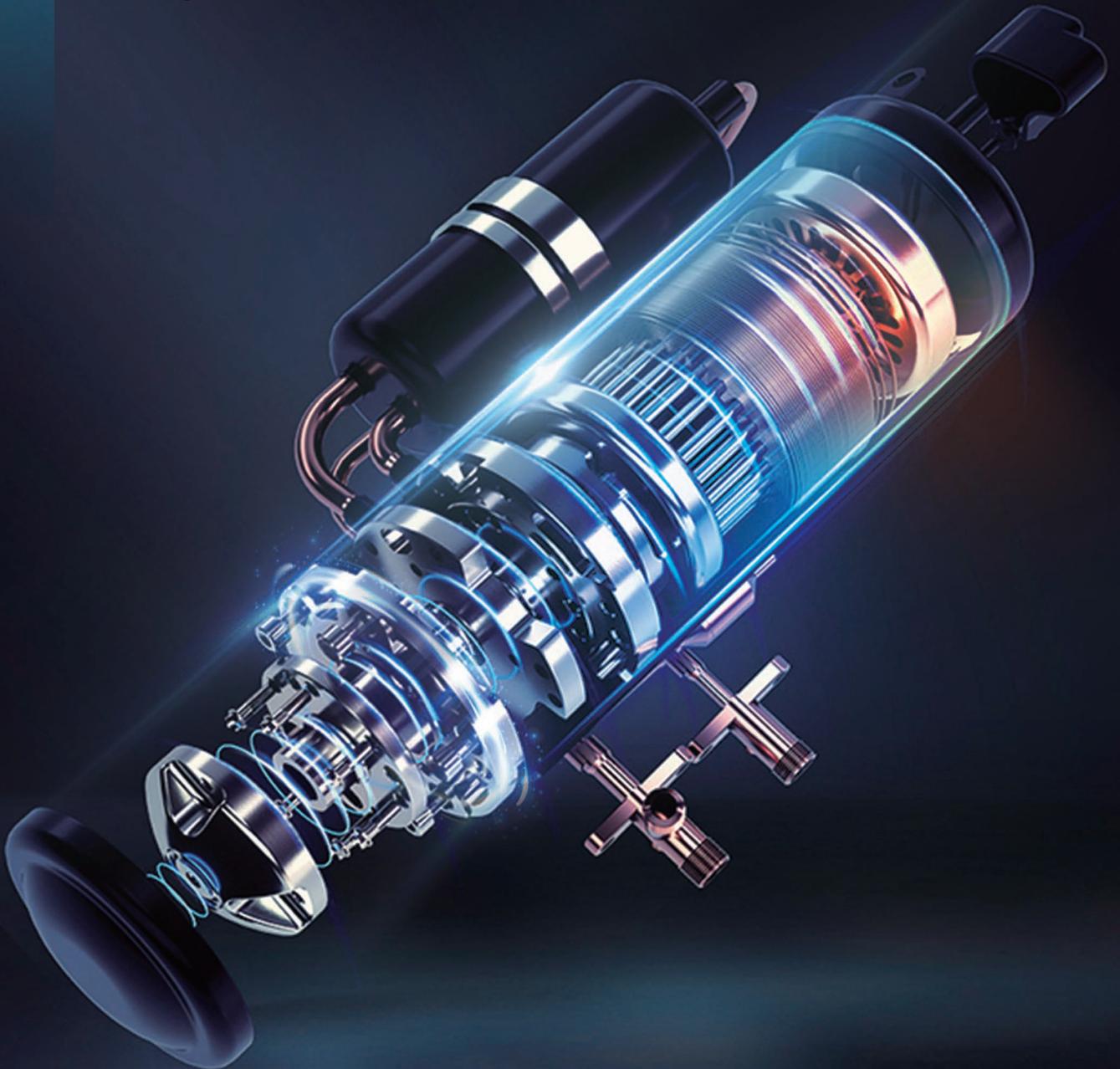
## Multiple Extended Functions:

- Language Setting
- Temperature Curve
- User Parameters
- Engineering Parameters
- Unit Information



# Heating in Low Temperature

SPRSUN's innovative DC inverter technology uses DC inverter compressors and controllers, and greatly improves heating capacity in low-temperature environments by optimising the overall system operation scheme. This allows SPRSUN heat pumps to support efficient home heating as low as  $-30^{\circ}\text{C}$ .



# Key Components

We believe that by joining hands and working together, we will be able to create greater value for our customers. We cooperate with leading companies such as Panasonic, Grundfos, Copeland, MITSUBISHI, Schneider and SANYO to ensure upgraded product quality.



**Controller**  
Touch screen Controller



**Compressor**  
HIGHLY Rotary Compressor



**Expansion valve**  
Fujikoki Electronic Expansion Valve



**Water Pump**  
SHIMGE



**Condenser**  
Plate Heat Exchanger



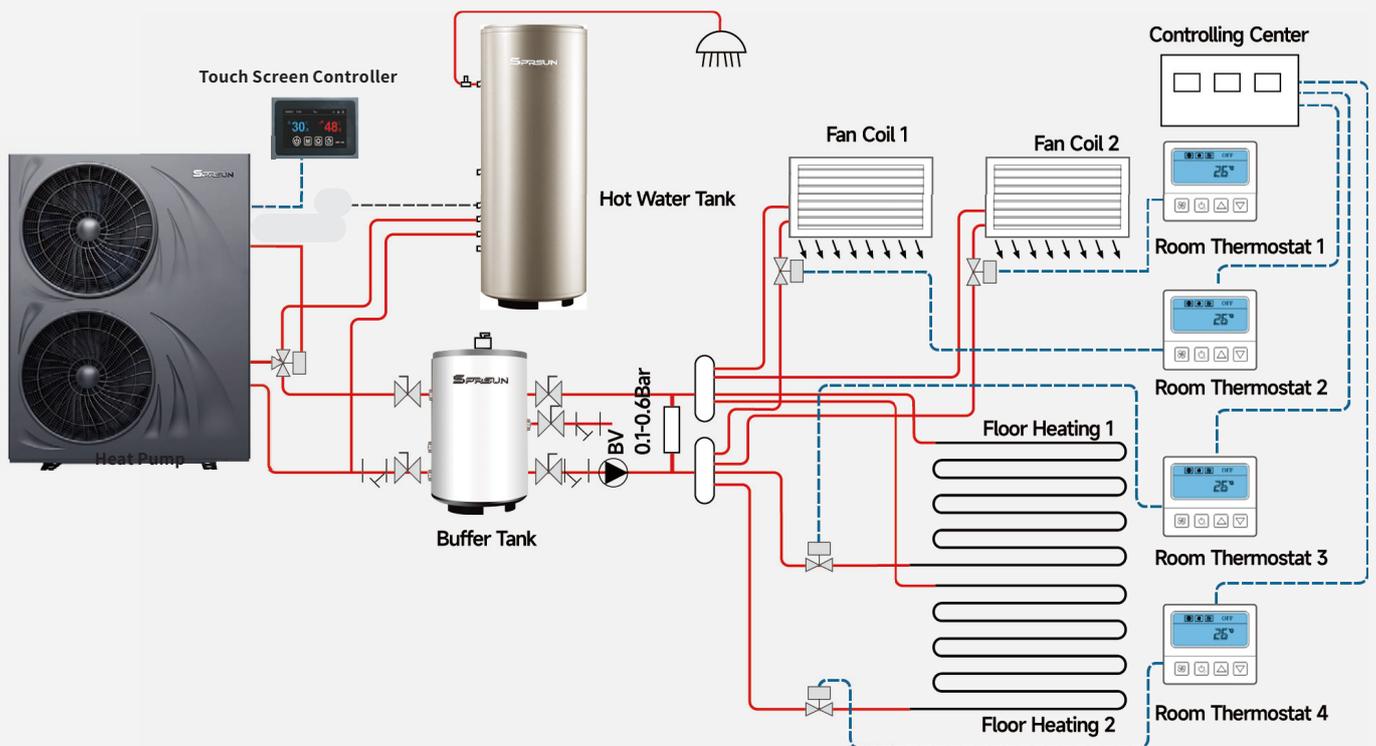
**4-way valve**  
SANHUA



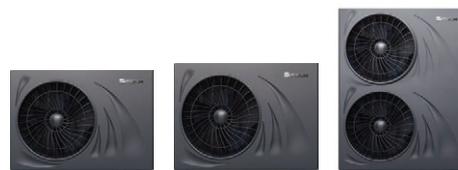
# Installation Diagram

Notice:

1. Please select the right modes according to your demand, then install it according to the installation diagram. If only hot water function is required, please select heating+hot water mode and then put the hot water sensor into the hot water tank.
2. Two-way valve and BV valve are optional for installation. Only if you need to control the temperature in different zones, please install both.
3. Fan coil can be controlled by linkage with the secondary circulation pump. Meanwhile, a passive linkage thermostat shall be installed.



# Specifications



Model		CGK020V4P-B	CGK030V4P-B	CGK040V4P-B	CGK050V4P-B	CGK-030V4P-B	CGK-040V4P-B	CGK-050V4P-B	
Power Supply	V/Hz/Ph	220-240/50/1					380-420/50/3		
Heating condition: Ambient Temp : 7°C , Outlet water temp: 35°C									
Max. Heating Capacity	kW	6.1	9.1	12	15.2	9.1	12	15.2	
C.O.P	W/W	4.4	4.2	3.9	3.9	4.2	3.9	3.9	
Heating Capacity Min./Max.	kW	2.2/6.1	3.15/9.1	4.35/12	5.6/15.2	3.15/9.1	4.35/12	5.6/15.2	
Heating Power Input Min./Max.	W	441/1386	626/2167	885/3073	1125/3900	626/2167	885/3073	1125/3900	
C.O.P Min./Max.	W/W	4.4/4.99	4.2/5.03	3.9/4.92	3.9/4.98	4.2/5.03	3.9/4.92	3.9/4.98	
Heating condition: Ambient Temp : 7°C , Outlet water temp: 45°C									
Max. Heating Capacity	kW	6.3	8.6	11.2	14.5	8.6	11.2	14.5	
C.O.P	W/W	3.6	3.52	3.28	3.23	3.52	3.28	3.23	
Heating Capacity Min./Max.	kW	2.01/6.3	2.9/8.6	4/11.2	5.4/14.5	2.9/8.6	4/11.2	5.4/14.5	
Heating power input Min./Max.	W	522/1750	757/2443	1071/3415	1427/4489	757/2443	1071/3415	1427/4489	
C.O.P Min./Max.	W/W	3.6/3.85	3.52/3.83	3.28/3.74	3.23/3.78	3.52/3.83	3.28/3.74	3.23/3.78	
Cooling condition: Ambient Temp : 35°C , Outlet water temp: 18°C									
Max. Cooling Capacity	kW	5.7	7.04	10	13.6	7.04	10	13.6	
E.E.R	W/W	3.48	3.43	3.4	3.28	3.43	3.4	3.28	
Cooling Capacity Min./Max.	kW	1.82/5.7	2.64/7.04	3.81/10	5.2/13.6	2.64/7.04	3.81/10	5.2/13.6	
Cooling Power Input Min./Max.	W	463/1638	677/2052	1003/2941	1402/4146	677/2052	1003/2941	1402/4146	
E.E.R Min./Max.	W/W	3.48/3.93	3.43/3.9	3.4/3.8	3.28/3.71	3.43/3.9	3.4/3.8	3.28/3.71	
Cooling condition: Ambient Temp : 35°C , Outlet water temp: 7°C									
Max. Cooling Capacity	kW	4.45	5.63	7.2	10.2	5.63	7.2	10.2	
E.E.R	W/W	2.87	2.66	2.62	2.6	2.66	2.62	2.6	
Cooling Capacity Min./Max.	kW	1.53/4.45	2.1/5.63	3.58/7.2	4.52/10.2	2.1/5.63	3.58/7.2	4.52/10.2	
Cooling Power Input Min./Max.	W	443/1551	612/2117	1213/2748	1520/3923	612/2117	1213/2748	1520/3923	
E.E.R Min./Max.	W/W	2.87/3.45	2.66/3.43	2.62/2.95	2.6/2.97	2.66/3.43	2.62/2.95	2.6/2.97	
Max Power Input	kW	3	4	5	6.3	4	5	6.3	
Max Current	A	14.35	19.14	23.92	30.14	8.44	10.55	13.29	
Wire diameter	mm <sup>2</sup>	4	4	6	6	2.5	2.5	4	
Fuse or circuitbreaker	A	20A	25A	32A	40A	13A	16A	20A	
Compressor Type - Quantity/System	Brand	HIGHLY							
Refrigerant / Suggested Input	Kg	R290/0.50	R290/0.75	R290/0.90	R290/1.20	R290/0.75	R290/0.90	R290/1.20	
Fan	Type	/	DC	DC	DC	DC	DC	DC	
	Quantity	/	1	1	1	2	1	1	
	Airflow	m <sup>3</sup> /h	2500	3000	3500	5000	3000	3500	
	Rated Fan Speed	RPM	900	900	900	900	900	900	
	Rated power	W	116	116	116	116*2	116	116	
Water Side Heat Exchanger	Type	/	Plate Heat Exchanger						
	Water Pressure Drop	kPa	18	20	23	25	20	23	
	Piping Connection	Inch	G1"						
Pump model	/	APM25-9-130SPWM1	APM25-9-130SPWM1	APM25-9-130SPWM1	APF25-12-130E FPWM1	APM25-9-130SPWM1	APM25-9-130SPWM1	APF25-12-130E FPWM1	
Max Water Pump Head	m	9	9	9	12	9	9	12	
Allowable Water Flow	Min./Rated./Max.	L/S	0.18/0.29/0.49	0.27/0.43/0.72	0.36/0.57/0.96	0.45/0.73/1.21	0.27/0.43/0.72	0.36/0.57/0.96	0.45/0.73/1.21
Noise Level (Sound Pressure)	dB(A)	39	41	44	43	40	43	46	
Noise Level (Power Power)	dB(A)	53	55	58	58	54	57	60	
Moisture Resistance	/	IPX4							
SCOP (35/55°C)	kWh/kWh	4.80/3.59	4.77/3.69	4.95/3.75	4.85/3.72	4.68/3.67	4.77/3.64	4.81/3.71	
ErP Level(35° C)	--	A+++							
ErP Level(55° C)	--	A++							
Cabinet Type	--	Galvanized steel painting+ABS							
Net Weight	kg	90	106	120	151	106	120	151	
Carton gross Weight	kg	102	119	133	166	119	133	166	
Splint gross Weight	kg	122	142	156	188	142	156	188	
Net Dimension(L*D*H)	mm	1053*475*755	1110*475*810	1110*475*960	1110*475*1355	1110*475*810	1110*475*960	1110*475*1355	
Carton packing Dimension(L*D*H)	mm	1115*505*910	1165*505*960	1165*505*1100	1165*505*1520	1165*505*960	1165*505*1100	1165*505*1520	
Splint packing Dimension(L*D*H)	mm	1150*530*920	1200*530*970	1200*530*1120	1200*530*1510	1220*530*970	1200*530*1120	1200*530*1510	

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# Specifications

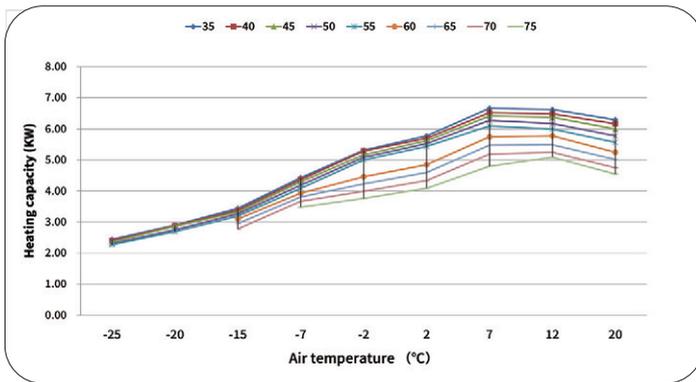
## SPRSUN CGK020V4P-B

R290 Refrigerant/Lower Noise/ErP A+++



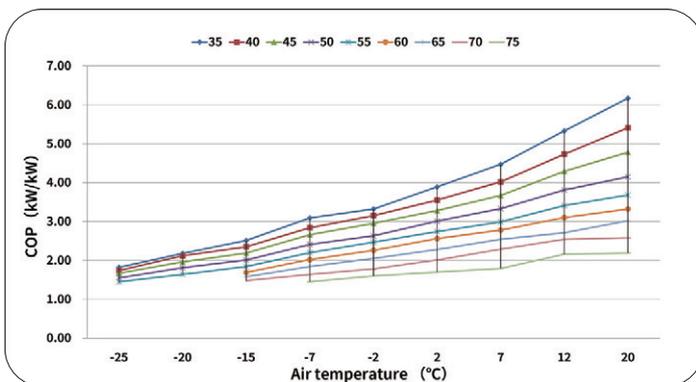
Power Supply	V/Hz/Ph	220-240/50/1
Sound Pressure (1m)	dB(A)	39
Refrigerant	/	R290
ErP Level(35° C)	/	A+++
Cabinet Type	/	Galvanized steel painting+ABS
Net Weight	kg	90
Net Dimension(L*D*H)	mm	1053×475×755

### CGK020V4P-B Heating capacity



Air temp °C	Heating capacity (kW)								
-25	2.44	2.40	2.35	2.30	2.27				
-20	2.90	2.88	2.86	2.75	2.69				
-15	3.44	3.38	3.32	3.26	3.19	3.10	2.95	2.78	
-7	4.43	4.37	4.30	4.19	4.09	3.93	3.81	3.67	3.48
-2	5.32	5.29	5.17	5.09	5.00	4.46	4.23	3.99	3.76
2	5.78	5.70	5.62	5.53	5.44	4.85	4.60	4.34	4.09
7	6.67	6.53	6.42	6.28	6.10	5.75	5.48	5.19	4.80
12	6.63	6.49	6.38	6.18	6.00	5.78	5.49	5.25	5.09
20	6.30	6.17	6.00	5.78	5.57	5.25	5.02	4.75	4.55
Hot water temp °C	30/35	35/40	40/45	45/50	50/55	55/60	60/65	65/70	70/75

### CGK020V4P-B COP



Air temp °C	COP (kW/kW)								
-25	1.82	1.74	1.67	1.55	1.45				
-20	2.18	2.12	1.96	1.81	1.64				
-15	2.51	2.35	2.19	2.01	1.84	1.69	1.58	1.48	
-7	3.09	2.84	2.66	2.41	2.20	2.02	1.84	1.64	1.45
-2	3.32	3.15	2.95	2.63	2.47	2.26	2.05	1.78	1.60
2	3.89	3.55	3.28	3.01	2.74	2.56	2.28	2.01	1.70
7	4.47	4.02	3.67	3.33	2.99	2.78	2.54	2.29	1.79
12	5.33	4.73	4.29	3.81	3.41	3.10	2.71	2.54	2.16
20	6.17	5.41	4.78	4.15	3.68	3.32	3.02	2.58	2.19
Hot water temp °C	30/35	35/40	40/45	45/50	50/55	55/60	60/65	65/70	70/75

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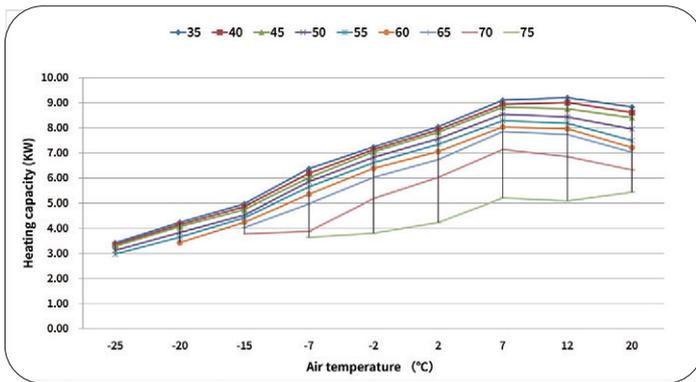


## SPRSUN CGK030V4P-B/CGK-030V4P-B

R290 Refrigerant/Lower Noise/ErP A+++

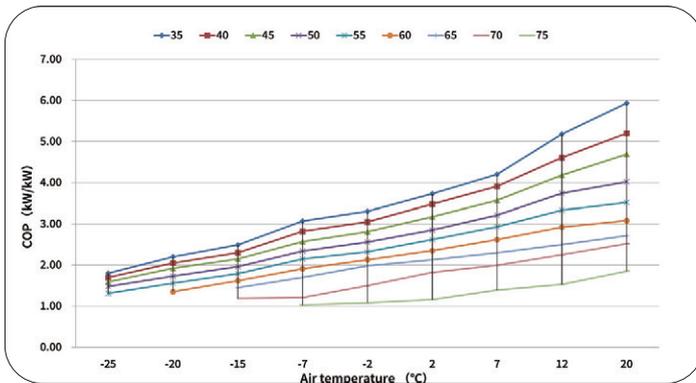
Power Supply	V/Hz/Ph	220-240/50/1, 380-420/50/3
Sound Pressure (1m)	dB(A)	41,40
Refrigerant	/	R290
ErP Level(35° C)	/	A+++
Cabinet Type	/	Galvanized steel painting+ABS
Net Weight	kg	106
Net Dimension(L*D*H)	mm	1053×475×810

### CGK030V4P-B/CGK-030V4P-B Heating capacity



Air temp °C	Heating capacity (kW)								
-25	3.42	3.35	3.29	3.12	2.97				
-20	4.24	4.15	4.07	3.83	3.65	3.43			
-15	4.97	4.86	4.75	4.53	4.42	4.24	4.03	3.78	
-7	6.37	6.18	6.01	5.85	5.64	5.35	4.97	3.88	3.64
-2	7.24	7.13	7.04	6.82	6.61	6.38	6.02	5.18	3.81
2	8.04	7.92	7.82	7.56	7.34	7.05	6.73	6.02	4.23
7	9.10	8.93	8.82	8.54	8.28	8.03	7.85	7.13	5.20
12	9.20	9.01	8.76	8.43	8.18	7.96	7.73	6.85	5.08
20	8.83	8.61	8.40	7.95	7.49	7.21	7.02	6.32	5.43
Hot water temp °C	30/35	35/40	40/45	45/50	50/55	55/60	60/65	65/70	70/75

### CGK030V4P-B/CGK-030V4P-B COP



Air temp °C	COP (kW/kW)								
-25	1.80	1.70	1.59	1.48	1.31				
-20	2.20	2.05	1.92	1.73	1.56	1.35			
-15	2.49	2.30	2.15	1.96	1.79	1.62	1.45	1.19	
-7	3.07	2.82	2.57	2.34	2.15	1.91	1.70	1.21	1.03
-2	3.30	3.05	2.81	2.56	2.32	2.13	1.98	1.50	1.08
2	3.73	3.48	3.17	2.85	2.62	2.35	2.13	1.82	1.16
7	4.20	3.91	3.57	3.21	2.93	2.62	2.30	1.99	1.39
12	5.18	4.61	4.18	3.74	3.33	2.92	2.50	2.25	1.53
20	5.93	5.20	4.69	4.02	3.52	3.08	2.72	2.52	1.85
Hot water temp °C	30/35	35/40	40/45	45/50	50/55	55/60	60/65	65/70	70/75

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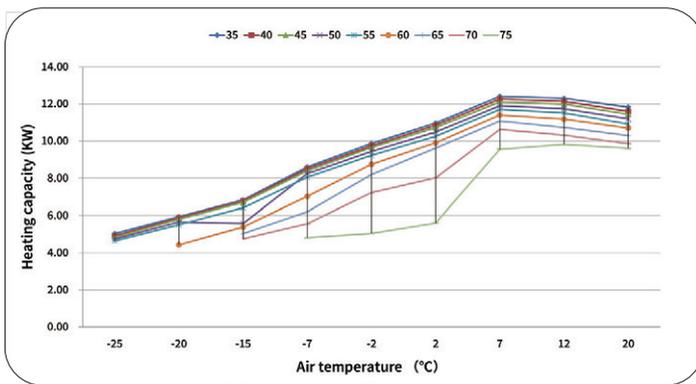


## SPRSUN CGK040V4P-B/CGK-040V4P-B

R290 Refrigerant/Lower Noise/ErP A+++

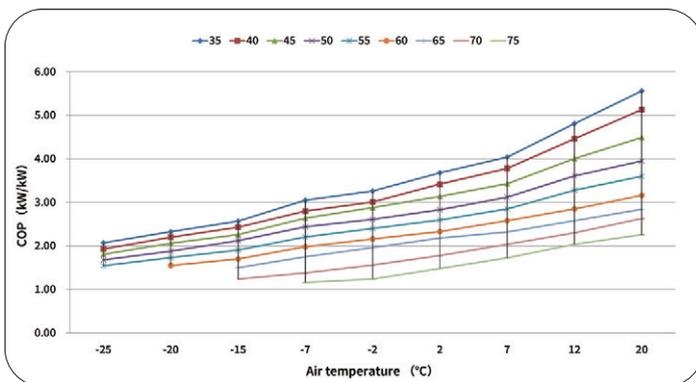
Power Supply	V/Hz/Ph	220-240/50/1, 380-420/50/3
Sound Pressure (1m)	dB(A)	44, 43
Refrigerant	/	R290
ErP Level(35° C)	/	A+++
Cabinet Type	/	Galvanized steel painting+ABS
Net Weight	kg	120
Net Dimension(L*D*H)	mm	1053×475×960

### CGK040V4P-B/CGK-040V4P-B Heating capacity



Air temp °C	Heating capacity (kW)										
-25	5.03	4.91	4.83	4.74	4.64						
-20	5.94	5.88	5.81	5.65	5.51	4.43					
-15	6.84	6.78	6.71	6.57	6.41	5.38	5.03	4.75			
-7	8.61	8.50	8.40	8.25	8.06	7.03	6.20	5.56	4.81		
-2	9.87	9.75	9.65	9.44	9.23	8.75	8.20	7.23	5.04		
2	10.97	10.85	10.73	10.49	10.26	9.91	9.62	8.02	5.60		
7	12.41	12.26	12.11	11.90	11.71	11.40	11.08	10.63	9.56		
12	12.30	12.14	11.99	11.74	11.52	11.18	10.73	10.32	9.82		
20	11.83	11.60	11.45	11.20	10.92	10.70	10.30	9.86	9.61		
Hot water temp °C	30/35	35/40	40/45	45/50	50/55	55/60	60/65	65/70	70/75		

### CGK040V4P-B/CGK-040V4P-B COP



Air temp °C	COP (kW/kW)										
-25	2.07	1.93	1.81	1.68	1.55						
-20	2.33	2.20	2.06	1.88	1.73	1.55					
-15	2.57	2.43	2.26	2.12	1.91	1.70	1.50	1.24			
-7	3.05	2.80	2.64	2.44	2.21	1.98	1.75	1.38	1.16		
-2	3.26	3.01	2.88	2.61	2.40	2.16	1.96	1.56	1.24		
2	3.68	3.42	3.14	2.83	2.60	2.33	2.18	1.78	1.48		
7	4.04	3.78	3.43	3.12	2.85	2.58	2.32	2.04	1.73		
12	4.81	4.46	4.01	3.61	3.28	2.85	2.58	2.30	2.04		
20	5.56	5.13	4.49	3.95	3.60	3.16	2.84	2.63	2.26		
Hot water temp °C	30/35	35/40	40/45	45/50	50/55	55/60	60/65	65/70	70/75		

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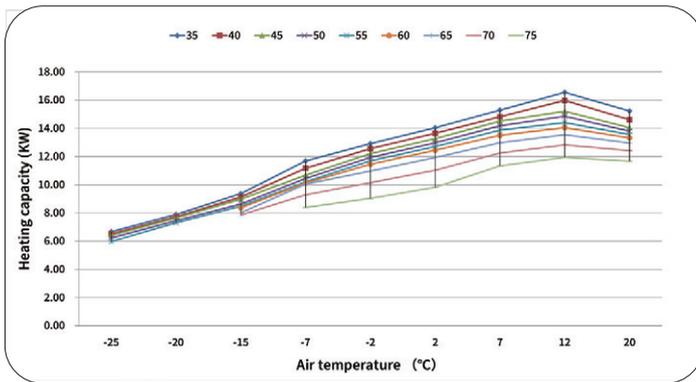


## SPRSUN CGK050V4P-B/CGK-050V4P-B

R290 Refrigerant/Lower Noise/ErP A+++

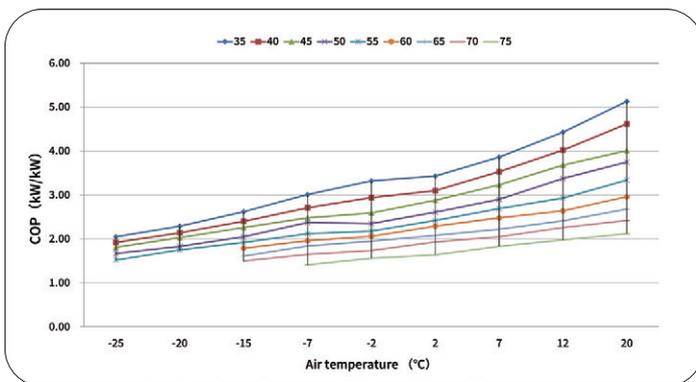
Power Supply	V/Hz/Ph	220-240/50/1, 380-420/50/3
Sound Pressure (1m)	dB(A)	43, 46
Refrigerant	/	R290
ErP Level(35° C)	/	A+++
Cabinet Type	/	Galvanized steel painting+ABS
Net Weight	kg	151
Net Dimension(L*D*H)	mm	1053×475×1355

### CGK050V4P-B/CGK-050V4P-B Heating capacity



Air temp °C	Heating capacity (kW)								
-25	6.67	6.52	6.41	6.23	5.98				
-20	7.89	7.73	7.64	7.45	7.30				
-15	9.37	9.13	8.98	8.63	8.48	8.37	8.01	7.86	
-7	11.69	11.17	10.68	10.45	10.21	10.12	10.05	9.29	8.39
-2	12.92	12.56	12.21	11.93	11.69	11.45	10.98	10.15	9.03
2	14.04	13.65	13.27	12.97	12.71	12.45	11.93	11.03	9.82
7	15.29	14.82	14.51	14.18	13.87	13.51	12.98	12.25	11.34
12	16.55	15.98	15.21	14.86	14.41	14.05	13.55	12.83	11.94
20	15.23	14.61	14.05	13.80	13.56	13.33	12.96	12.42	11.67
Hot water temp °C	30/35	35/40	40/45	45/50	50/55	55/60	60/65	65/70	70/75

### CGK050V4P-B/CGK-050V4P-B COP



Air temp °C	COP (kW/kW)								
-25	2.05	1.92	1.81	1.67	1.52				
-20	2.29	2.14	2.03	1.83	1.75				
-15	2.62	2.40	2.26	2.05	1.92	1.79	1.61	1.50	
-7	3.01	2.71	2.48	2.37	2.12	1.96	1.84	1.65	1.41
-2	3.32	2.94	2.59	2.35	2.18	2.06	1.95	1.74	1.56
2	3.43	3.10	2.88	2.61	2.42	2.29	2.08	1.93	1.64
7	3.86	3.53	3.23	2.90	2.69	2.48	2.22	2.05	1.83
12	4.43	4.02	3.68	3.38	2.93	2.64	2.41	2.26	1.98
20	5.13	4.62	4.01	3.75	3.34	2.96	2.68	2.42	2.12
Hot water temp °C	30/35	35/40	40/45	45/50	50/55	55/60	60/65	65/70	70/75

\* The information in this document is just for reference. Since the continuous improvement and control in the production process, the information contained in this document may be subject to change. Please refer to the nameplate on the machine for model specifications.



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