



COLD CLIMATE

R32 DC 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



KEYMARK
Certification



SG
Ready





R32 refrigerant

R32 refrigerant is an environmentally friendly refrigerant with low global warming potential and ozone depletion potential. Using R32 refrigerant in heat pump systems can improve operational performance and efficiency, reduce energy consumption and carbon emissions, and become a key element of sustainable development. Combined with the intelligent control system developed by sprsun and excellent product design, the advantages of R32 refrigerant are fully utilized to contribute to sustainable development.



High Heating Efficiency



Product Service

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.



Intelligent Defrosting

SPRSUN independently developed its own PID intelligent defrosting control mode. When the defrosting conditions are met, the defrosting mode will be automatically entered to prevent the unit from defrosting confusion and energy consumption, which will improve the reliability and economy of the whole unit.



Stable Running
Ambient -30° C





 **48dB**

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.



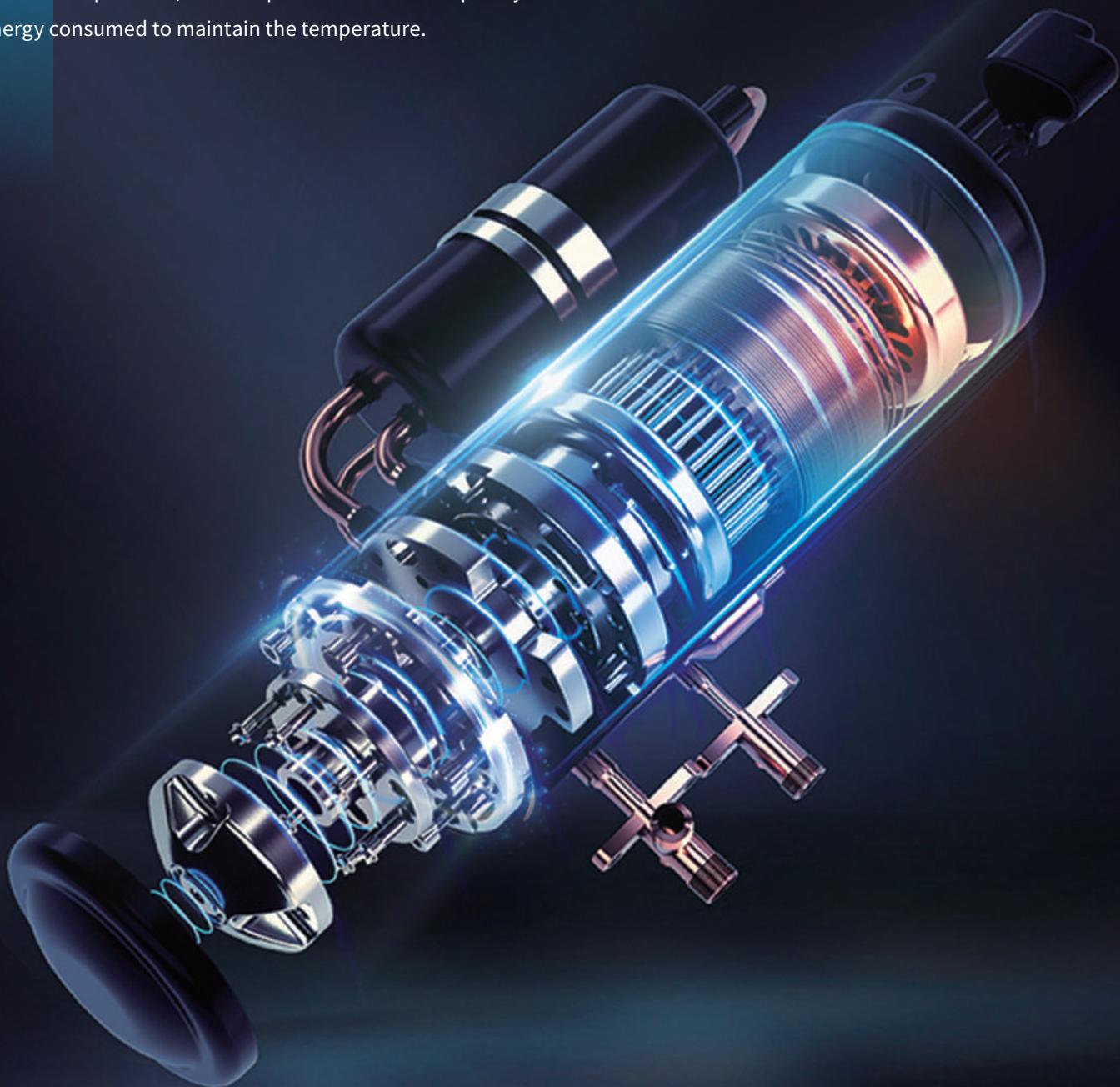
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Heating in Low Temperature

Regulate heating and cooling using DC inverter compressors and DC inverter controllers; SPRSUN DC inverter heat pumps can operate at high frequency to heat water faster. When the temperature reaches the set temperature, it will operate at a low frequency with less energy consumed to maintain the temperature.



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



Expansion valve

Fujikoki Electronic Expansion valve Danfoee/Fujikoki



Compressor

Panasonic Rotary Compressor



Condenser

Plate Heat Exchanger



4-way valve

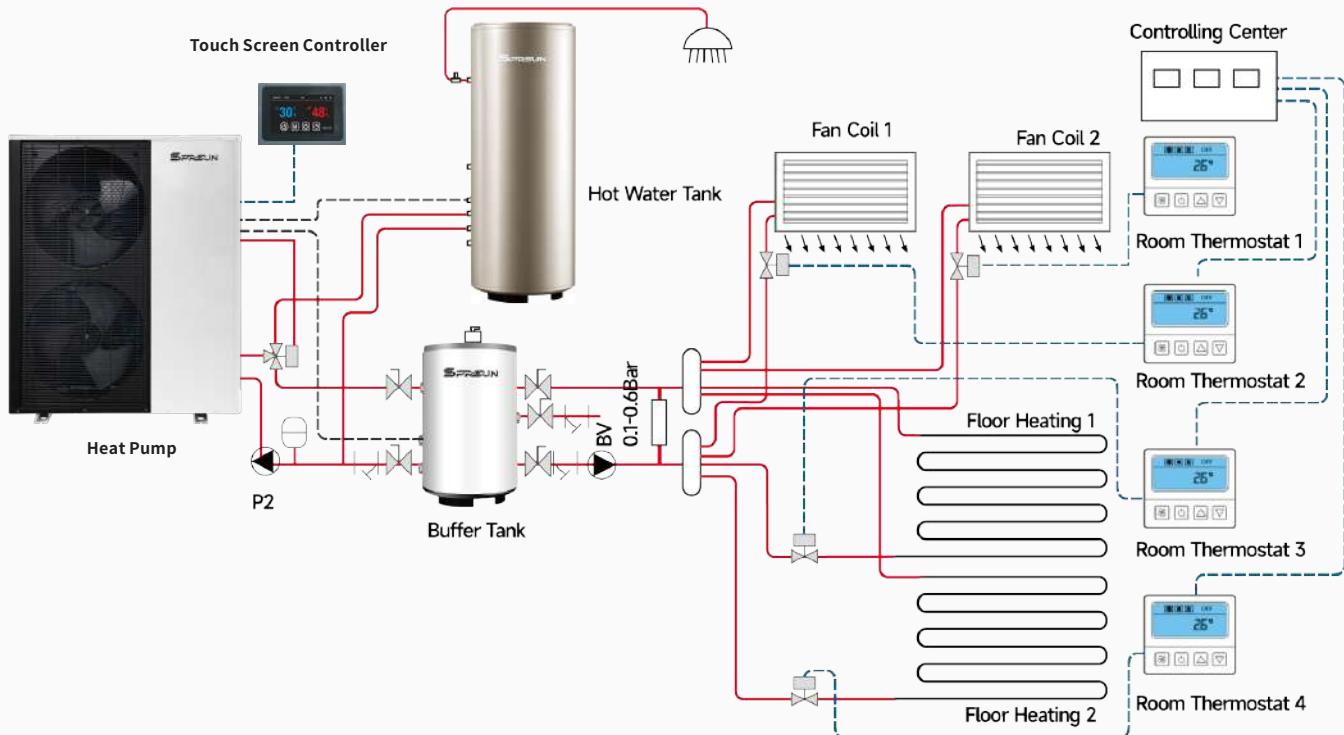
SANHUA



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 (220V)



Model		CGK015V3L-B	CGK025V3L-B	CGK030V3L-B	CGK040V3L-B	CGK050V3L-B	CGK060V3L-B
Power Supply / Refrigerant	V/Hz/Ph			220-240/50/1 - R32			
Heating condition: water inlet/outlet temperature: 30°C /35°C , Ambient temperature: DB 7°C /WB 6°C ;							
Max. Heating Capacity	kW	6	9.4	11.6	15.8	19.8	21.8
C.O.P	W/W	4.45	4.56	4.41	4.61	4.71	4.61
Heating Capacity Min./Max.	kW	2.76/6	4.32/9.4	5.34/11.6	7.27/15.8	9.11/19.8	10.03/21.8
Heating Power Input Min./Max.	W	564/1348	759/2061	968/2630	1261/3427	1547/4204	1740/4729
C.O.P Min./Max.	W/W	4.45/4.9	4.56/5.7	4.41/5.51	4.61/5.76	4.71/5.89	4.61/5.76
Heating condition: water inlet/outlet temperature: 40°C /45°C , Ambient temperature: DB 7°C /WB 6°C ;							
Max. Heating Capacity	kW	5.8	9	11.1	15.2	19	20.9
C.O.P	W/W	3.56	3.65	3.53	3.69	3.77	3.69
Heating Capacity Min./Max.	kW	2.65/5.76	4.15/9.02	5.12/11.14	6.98/15.17	8.74/19.01	9.63/20.93
Heating power input Min./Max.	W	677/1618	958/2474	1223/3156	1593/4113	1954/5045	2198/5675
C.O.P Min./Max.	W/W	3.56/3.92	3.65/4.33	3.53/4.19	3.69/4.38	3.77/4.47	3.69/4.38
Cooling condition: water inlet/outlet temperature: 23°C /18°C , Ambient temperature: DB35°C /WB24°C ;							
Max. Cooling Capacity	kW	5.5	8.6	10.6	14.4	18.1	19.9
E.E.R	W/W	3.45	3.54	3.42	3.58	3.65	3.58
Cooling Capacity Min./Max.	kW	2.52/5.47	3.94/8.57	4.87/10.58	6.63/14.41	8.31/18.06	9.15/19.88
Cooling Power Input Min./Max.	W	656/1852	929/2423	1185/3091	1544/4028	1894/4941	2131/5558
E.E.R Min./Max.	W/W	2.95/3.84	3.54/4.25	3.42/4.11	3.58/4.29	3.65/4.39	3.58/4.29
Cooling condition: water inlet/outlet temperature: 12°C /7°C , Ambient temperature: DB35°C /WB24°C ;							
Max. Cooling Capacity	kW	4.3	6	7.5	10.2	12.7	14
E.E.R	W/W	2.59	2.48	2.4	2.5	2.56	2.5
Cooling Capacity Min./Max.	kW	1.99/4.32	2.78/6.05	3.43/7.46	4.67/10.16	5.86/12.74	6.45/14.02
Cooling Power Input Min./Max.	W	575/1720	744/2441	950/3115	1238/4058	1518/4978	1708/5599
E.E.R Min./Max.	W/W	2.51/3.45	2.48/3.74	2.4/3.61	2.5/3.78	2.56/3.86	2.5/3.78
Max Power Input	kW	2.02	3.09	3.95	5.14	6.31	7.09
Max Current	A	9.68	14.79	18.88	24.6	30.17	33.94
Wire diameter	mm ²	2.5	4	4	6	6	6
Fuse or circuitbreakerer	A	13A	20A	25A	32A	40A	40A
Compressor	Type - Quantity/System				Twin Rotary - 1		
	Quantity		1	1	1	2	2
Fan	Airflow	m3/h	1500	2500	3000	3500	5000
	Rated power	W	30	80	100	120	200
	Type				Plate Heat Exchanger		
Water Side Heat Exchanger	Water Pressure Drop	kPa	15	18	20	21	23
	Piping Connection	Inch	G3/4"		G1"		
Allowable Water Flow	Min./Rated./Max.	L/S	0.18/0.29/0.48	0.28/0.45/0.75	0.35/0.55/0.92	0.47/0.75/1.26	0.59/0.95/1.58
Sound Pressure (1m)	dB(A)		48	48	51	53	54
Sound power Level	dB(A)		62	63	66	67	69
CO2 Equivalent	Ton	0.675	1.0125	1.1475	1.35	1.89	1.89
ErP Level(35° C)	/				A+++		
Cabinet Type	/				Galvanized steel painting		
Refrigerant / Proper Input	Kg	R32/1000g	R32/1500g	R32/1700g	R32/2000g	R32/2800g	R32/2800g
SCOP		4.46	4.55	4.47	4.65	4.60	4.72
Net Dimension(L×D×H)	mm	990*375*655	1110*475*810	1110*475*810	1110*475*960	1110*475*1355	1110*475*1355
Packing Dimension(L×D×H)	mm	1100*460*725	1165*490*960	1165*490*960	1165*490*1100	1165*490*1520	1165*490*1520
Packing Dimension(L×D×H)	mm	1070*405*800	1200*540*970	1200*540*970	1200*540*1120	1200*540*1510	1200*540*1510
Net Weight	kg	59	78	88	105	124	124
Gross Weight (Cardboard case)	kg	70	101	105	120	150	150
Gross Weight (Plywood case)	kg	80	106	116	126	161	161

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Specifications (380V)



Model		CGK-025V3L-B	CGK-030V3L-B	CGK-040V3L-B	CGK-050V3L-B	CGK-060V3L-B	CGK-080V3L-B
Power Supply / Refrigerant	V/Hz/Ph			380-420/50/3 - R32			
Heating condition: water inlet/outlet temperature: 30°C /35°C , Ambient temperature: DB 7°C /WB 6°C ;							
Max. Heating Capacity	kW	9.4	11.6	15.8	19.8	21.8	28
C.O.P	W/W	4.56	4.42	4.62	4.72	4.62	4.62
Heating Capacity Min./Max.	kW	4.32/9.4	5.34/11.6	7.27/15.8	9.11/19.8	10.03/21.8	12.88/28
Heating Power Input Min./Max.	W	759/2061	966/2624	1259/3420	1544/4195	1736/4719	2230/6061
C.O.P Min./Max.	W/W	4.56/5.7	4.42/5.53	4.62/5.78	4.72/5.9	4.62/5.78	4.62/5.78
Heating condition: water inlet/outlet temperature: 40°C /45°C , Ambient temperature: DB 7°C /WB 6°C ;							
Max. Heating Capacity	kW	9	11.1	15.2	19	20.9	26.9
C.O.P	W/W	3.65	3.54	3.7	3.78	3.7	3.7
Heating Capacity Min./Max.	kW	4.15/9.02	5.12/11.14	6.98/15.17	8.74/19.01	9.63/20.93	12.36/26.88
Heating power input Min./Max.	W	958/2474	1220/3149	1590/4104	1950/5034	2193/5662	2817/7273
C.O.P Min./Max.	W/W	3.65/4.33	3.54/4.2	3.7/4.39	3.78/4.48	3.7/4.39	3.7/4.39
Cooling condition: water inlet/outlet temperature: 23°C /18°C , Ambient temperature: DB35°C /WB24°C ;							
Max. Cooling Capacity	kW	8.6	10.6	14.4	18.1	19.9	25.5
E.E.R	W/W	3.54	3.43	3.59	3.66	3.59	3.59
Cooling Capacity Min./Max.	kW	3.94/8.57	4.87/10.58	6.63/14.41	8.31/18.06	9.15/19.88	11.75/25.54
Cooling Power Input Min./Max.	W	929/2423	1183/3084	1541/4019	1890/4930	2126/5546	2731/7123
E.E.R Min./Max.	W/W	3.54/4.25	3.43/4.12	3.59/4.3	3.66/4.39	3.59/4.3	3.59/4.3
Cooling condition: water inlet/outlet temperature: 12°C /7°C , Ambient temperature: DB35°C /WB24°C ;							
Max. Cooling Capacity	kW	6	7.5	10.2	12.7	14	18
E.E.R	W/W	2.48	2.4	2.51	2.56	2.51	2.51
Cooling Capacity Min./Max.	kW	2.78/6.05	3.43/7.46	4.67/10.16	5.86/12.74	6.45/14.02	8.28/18.01
Cooling Power Input Min./Max.	W	744/2441	948/3108	1235/4049	1515/4967	1704/5587	2189/7176
E.E.R Min./Max.	W/W	2.48/3.74	2.4/3.62	2.51/3.79	2.56/3.87	2.51/3.79	2.51/3.79
Max Power Input	kW	3.09	3.94	5.13	6.29	7.08	9.09
Max Current	A	6.53	8.31	10.83	13.28	14.94	19.18
Wire diameter	mm ²	2.5	2.5	2.5	4	4	4
Fuse or circuitbreakerer	A	13A	13A	16A	20A	20A	25A
Compressor	Type - Quantity/System			Twin Rotary - 1			
	Quantity		1	1	2	2	2
Fan	Airflow	m3/h	2500	3000	3500	5000	5500
	Rated power	W	80	100	120	200	210
Water Side Heat Exchanger	Type			Plate Heat Exchanger			
	Water Pressure Drop	kPa	18	20	21	23	25
	Piping Connection	Inch		G1"			
Allowable Water Flow	Min./Rated./Max.	L/S	0.28/0.45/0.75	0.35/0.55/0.92	0.47/0.75/1.26	0.59/0.95/1.58	0.65/1.04/1.74
Sound Pressure (1m)	dB(A)		48	50	53	53	58
Sound power Level	dB(A)		62	65	68	68	73
CO2 Equivalent	Ton	1.0125	1.1475	1.35	1.89	1.89	2.3625
ErP Level(35° C)	/			A+++			
Cabinet Type	/			Galvanized steel painting			
Refrigerant / Proper Input	Kg	R32/1500g	R32/1700g	R32/2000g	R32/2800g	R32/2800g	R32/3500g
SCOP		4.46	4.50	4.47	4.61	4.50	/
Net Dimension(L×D×H)	mm	1110*475*810	1110*475*810	1110*475*960	1110*475*1355	1110*475*1355	1110*475*1455
Packing Dimension(L×D×H)	mm	1165*490*960	1165*490*960	1165*490*1100	1165*490*1520	1165*490*1520	1165*490*1590
Packing Dimension(L×D×H)	mm	1200*540*970	1220*540*970	1200*540*1120	1200*540*1510	1200*540*1510	1200*540*1610
Net Weight	kg	78	88	105	124	124	150
Gross Weight (Cardboard case)	kg	101	105	120	150	150	183
Gross Weight (Plywood case)	kg	106	116	126	161	161	188

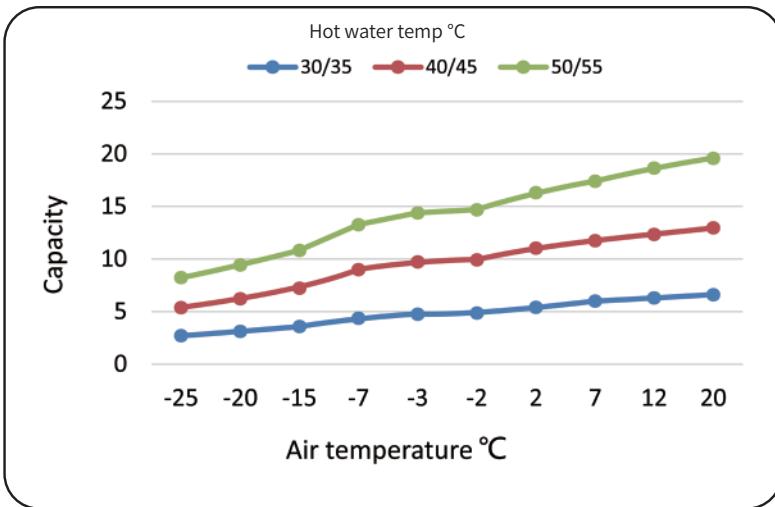
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CGK015V3L-B

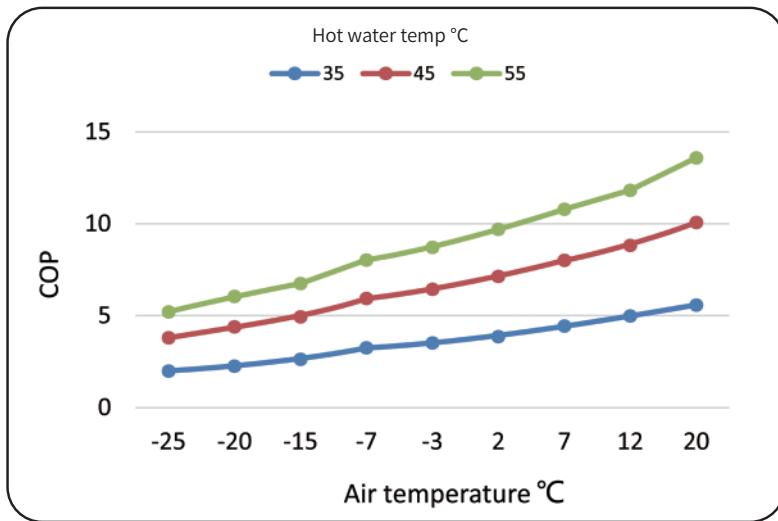
Heating Capacity at Different Conditions

CGK015V3L-B Heating capacity



Air temp °C	Heating capacity (kW)		
-25	2.71	2.67	2.84
-20	3.12	3.11	3.21
-15	3.59	3.66	3.59
-7	4.37	4.63	4.27
-3	4.76	4.98	4.66
-2	4.86	5.08	4.75
2	5.40	5.64	5.28
7	6.00	5.76	5.64
12	6.30	6.05	6.31
20	6.62	6.35	6.62
Hot water temp °C	30/35	35/40	40/45

CGK015V3L-B COP



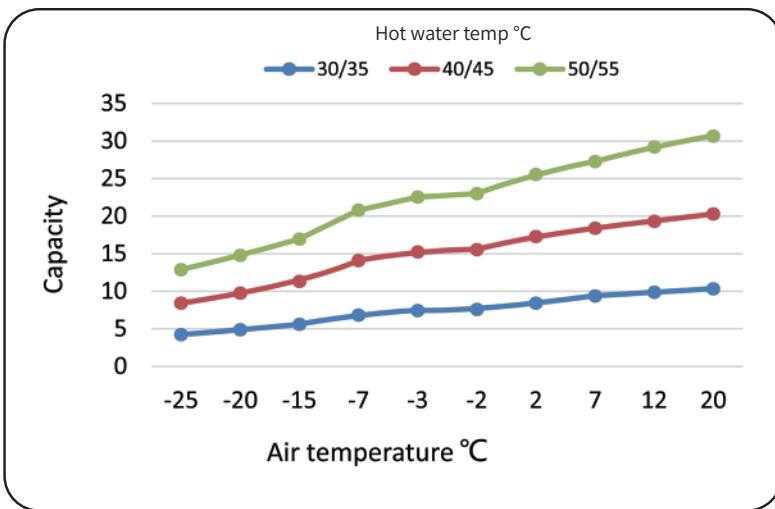
Air temp °C	COP (kW/kW)		
-25	1.99	1.81	1.41
-20	2.27	2.12	1.66
-15	2.63	2.31	1.80
-7	3.25	2.69	2.09
-3	3.52	2.91	2.27
2	3.87	3.28	2.55
7	4.45	3.56	2.78
12	4.98	3.84	3.00
20	5.58	4.50	3.51
Hot water temp °C	30/35	35/40	40/45



CGK025V3L-B/CGK-025V3L-B

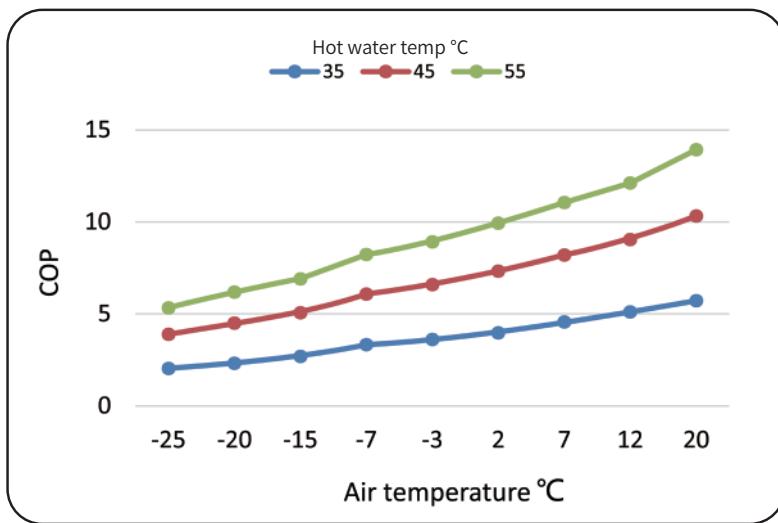
Heating Capacity at Different Conditions

CGK025V3L-B/CGK-025V3L-B Heating capacity



Air temp °C	Heating capacity (kW)		
-25	4.25	4.19	4.46
-20	4.89	4.87	5.02
-15	5.62	5.73	5.63
-7	6.85	7.25	6.69
-3	7.46	7.80	7.29
-2	7.61	7.96	7.44
2	8.46	8.84	8.27
7	9.40	9.02	8.84
12	9.87	9.48	9.89
20	10.36	9.95	10.37
Hot water temp °C	30/35	35/40	40/45

CGK025V3L-B/CGK-025V3L-B COP



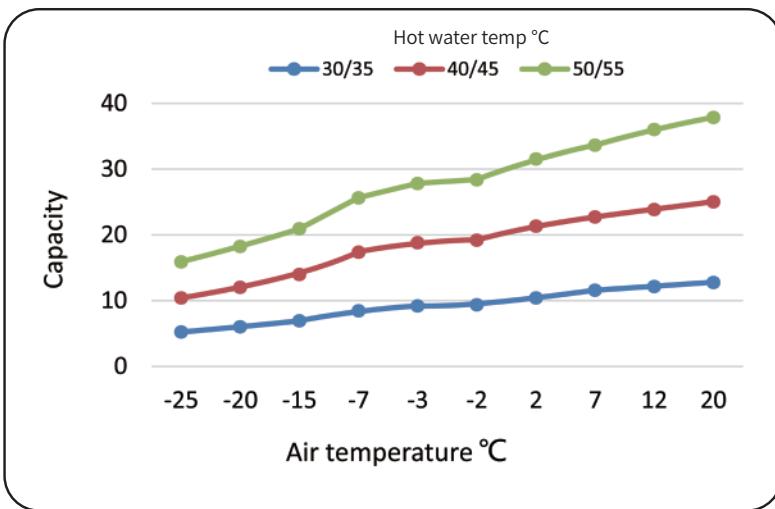
Air temp °C	COP (kW/kW)		
-25	2.04	1.85	1.44
-20	2.32	2.18	1.70
-15	2.70	2.37	1.85
-7	3.33	2.75	2.15
-3	3.61	2.99	2.33
2	3.97	3.36	2.62
7	4.56	3.65	2.85
12	5.11	3.94	3.07
20	5.72	4.61	3.60
Hot water temp °C	30/35	35/40	40/45



CGK030V3L-B/CGK-030V3L-B

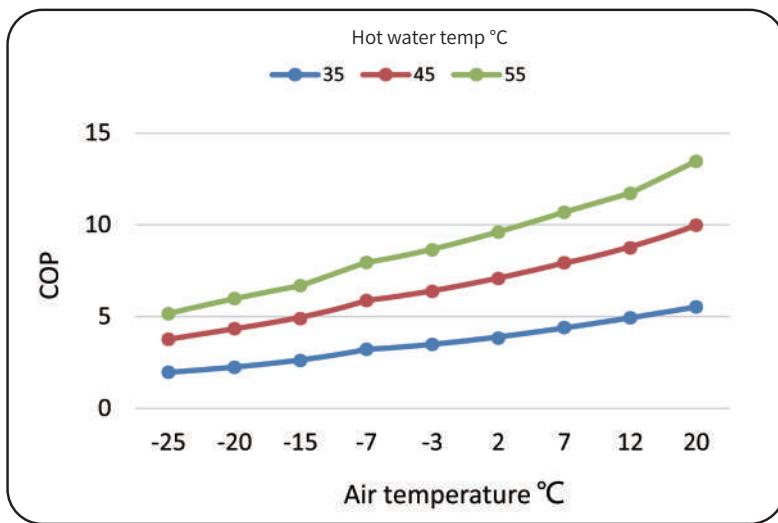
Heating Capacity at Different Conditions

CGK030V3L-B/CGK-030V3L-B Heating capacity



Air temp °C	Heating capacity (kW)		
-25	5.25	5.17	5.50
-20	6.03	6.01	6.20
-15	6.93	7.07	6.94
-7	8.46	8.95	8.25
-3	9.21	9.63	9.00
-2	9.40	9.82	9.18
2	10.44	10.91	10.20
7	11.60	11.14	10.91
12	12.18	11.69	12.20
20	12.79	12.28	12.80
Hot water temp °C	30/35	35/40	40/45

CGK030V3L-B/CGK-030V3L-B COP



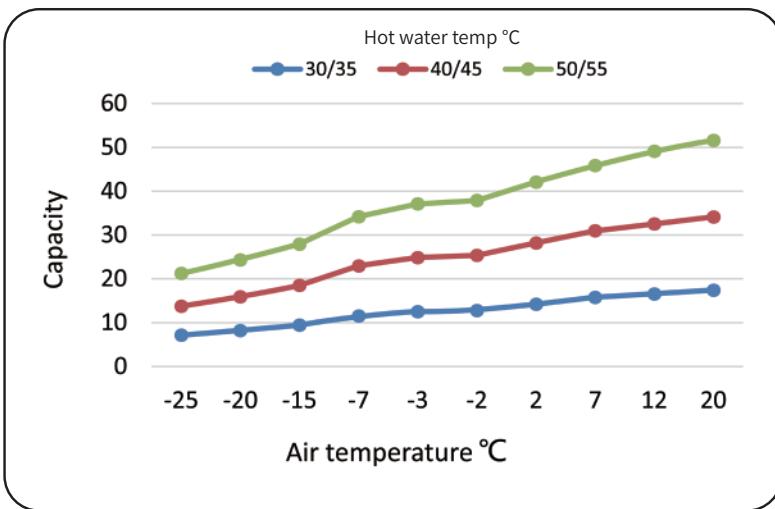
Air temp °C	COP (kW/kW)		
-25	1.98	1.79	1.40
-20	2.25	2.11	1.64
-15	2.61	2.29	1.79
-7	3.22	2.66	2.08
-3	3.49	2.89	2.25
2	3.84	3.25	2.53
7	4.41	3.53	2.75
12	4.94	3.81	2.97
20	5.53	4.46	3.48
Hot water temp °C	30/35	35/40	40/45



CGK040V3L-B/CGK-040V3L-B

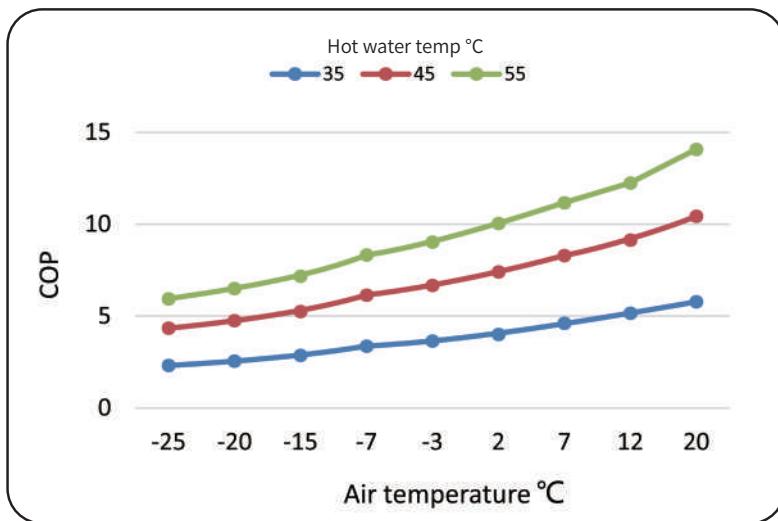
Heating Capacity at Different Conditions

CGK040V3L-B/CGK-040V3L-B Heating capacity



Air temp °C	Heating capacity (kW)		
-25	7.15	6.61	7.49
-20	8.22	7.68	8.44
-15	9.44	9.04	9.46
-7	11.52	11.44	11.24
-3	12.54	12.31	12.26
-2	12.80	12.56	12.51
2	14.22	13.95	13.90
7	15.80	15.17	14.86
12	16.59	15.93	16.62
20	17.42	16.72	17.43
Hot water temp °C	30/35	35/40	40/45

CGK040V3L-B/CGK-040V3L-B COP



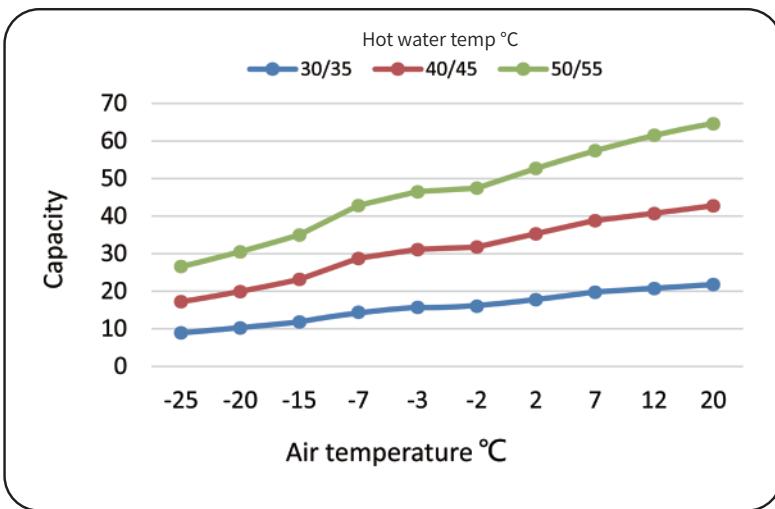
Air temp °C	COP (kW/kW)		
-25	2.32	2.03	1.60
-20	2.55	2.20	1.76
-15	2.86	2.39	1.91
-7	3.37	2.78	2.17
-3	3.65	3.02	2.36
2	4.01	3.39	2.65
7	4.61	3.69	2.88
12	5.16	3.98	3.11
20	5.78	4.66	3.63
Hot water temp °C	30/35	35/40	40/45



CGK050V3L-B/CGK-050V3L-B

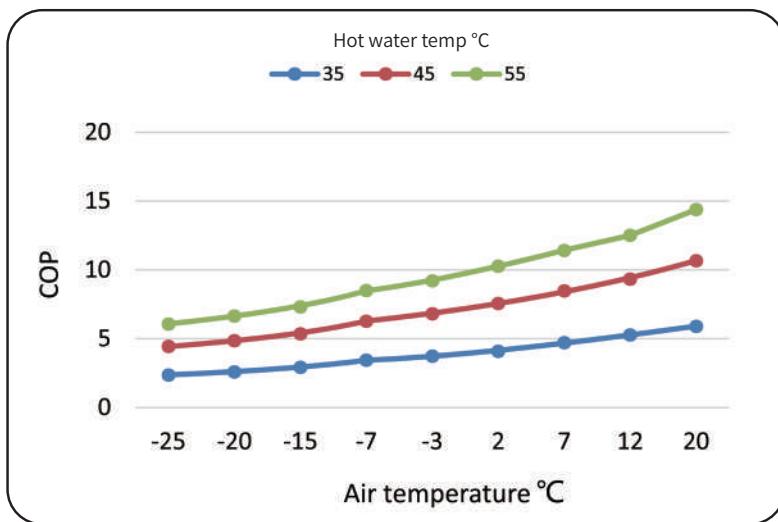
Heating Capacity at Different Conditions

CGK050V3L-B/CGK-050V3L-B Heating capacity



Air temp °C	Heating capacity (kW)		
-25	8.96	8.28	9.39
-20	10.30	9.63	10.58
-15	11.84	11.33	11.85
-7	14.43	14.34	14.09
-3	15.72	15.42	15.36
-2	16.04	15.74	15.68
2	17.82	17.49	17.42
7	19.80	19.01	18.63
12	20.79	19.96	20.83
20	21.83	20.96	21.85
Hot water temp °C	30/35	35/40	40/45

CGK050V3L-B/CGK-050V3L-B COP



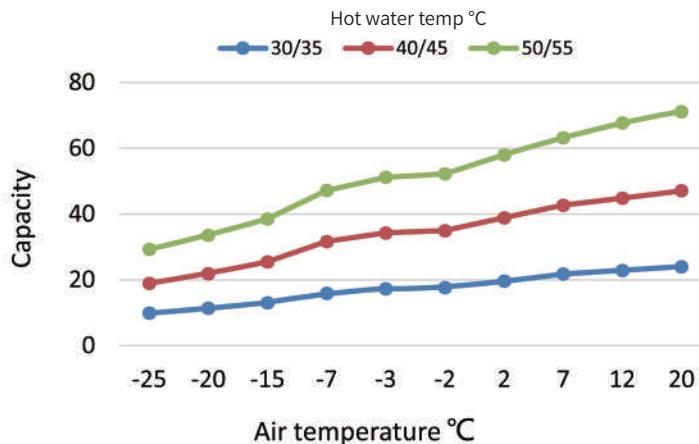
Air temp °C	COP (kW/kW)		
-25	2.37	2.07	1.63
-20	2.60	2.25	1.80
-15	2.93	2.44	1.95
-7	3.44	2.84	2.22
-3	3.73	3.09	2.41
2	4.10	3.47	2.70
7	4.71	3.77	2.94
12	5.28	4.07	3.17
20	5.91	4.76	3.71
Hot water temp °C	30/35	35/40	40/45



CGK060V3L-B/CGK-060V3L-B

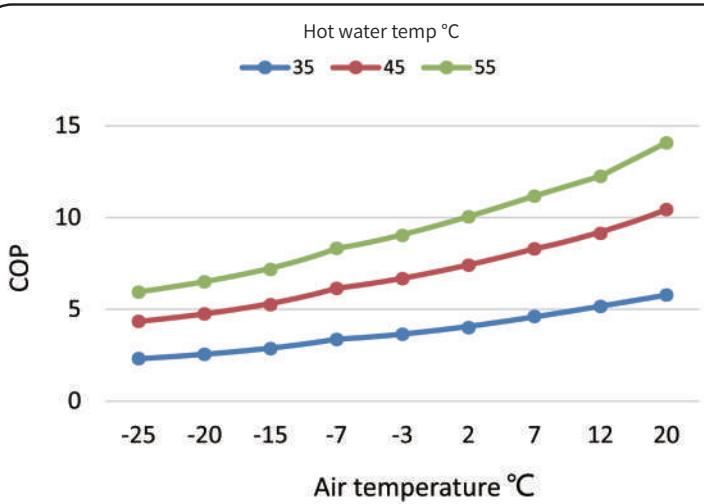
Heating Capacity at Different Conditions

CGK060V3L-B/CGK-060V3L-B Heating capacity



Air temp °C	Heating capacity (kW)		
-25	9.86	9.12	10.33
-20	11.34	10.60	11.65
-15	13.03	12.47	13.05
-7	15.89	15.79	15.51
-3	17.30	16.98	16.91
-2	17.66	17.33	17.26
2	19.62	19.25	19.18
7	21.80	20.93	20.51
12	22.89	21.97	22.93
20	24.03	23.07	24.05
Hot water temp °C	30/35	35/40	40/45

CGK060V3L-B/CGK-060V3L-B COP



Air temp °C	COP (kW/kW)		
-25	2.32	2.03	1.60
-20	2.55	2.20	1.76
-15	2.86	2.39	1.91
-7	3.37	2.78	2.17
-3	3.65	3.02	2.36
2	4.01	3.39	2.65
7	4.61	3.69	2.88
12	5.16	3.98	3.11
20	5.78	4.66	3.63
Hot water temp °C	30/35	35/40	40/45

