

GreenCore

CLIMATE SOLUTIONS

CO₂ R744 Heat Pump Water Heater



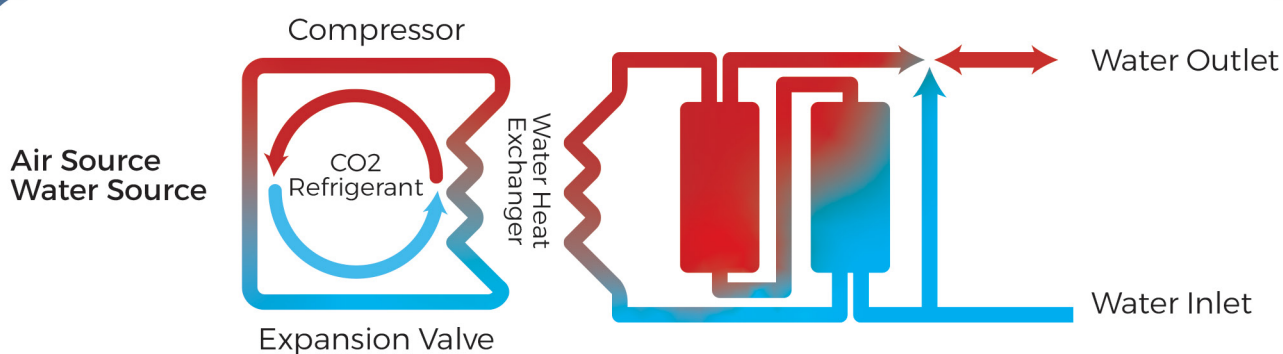
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The compressor absorbs low-temperature and low-pressure gaseous carbon dioxide refrigerant from the evaporator, and then compresses it into a high-temperature & high-pressure supercritical fluid. This fluid enters the gas cooler to exchange heat with water, where it is cooled into a high-pressure fluid and releases a large amount of heat. The water absorbs the released heat and the temperature continues to rise. After the high-pressure fluid is throttled and reduced in pressure by the expansion valve, it absorbs the heat in the surrounding air & evaporates into a low-pressure gas through the action of the fan in the evaporator, and is then sucked into the compressor for compression. This cycle is repeated to produce hot water.

Operating System



- Excellent high-temperature heating performance: the highest water output can reach more than 90°C.
- Excellent low-temperature performance: high-temperature hot water can still be produced at an ambient temperature of -30°C.
- First-level energy efficiency: high efficiency, standard COP not less than 4.6.
- Wide application range: can work normally in an ambient temperature of -30°C~43°C, suitable for producing domestic or industrial hot water in most parts of my country.

HOT WATER UNITS/ CO2 (R744) Heat Pump Water Heater

Technical Parameters

Model		SJKRS-28 11/C	SJKRS-36 11/C	SJKRS-55 11/C	SJKRS-73 11/C	SJKRS-106 11/C	SJKRS-160 11/C
Specifications		7.SHP	10HP	15HP	20HP	30HP	45HP
Power supply		380V/ 3P/ 50Hz					
Heating mode		Direct heating/ Circulation					
Standard Working Conditions	Heating Capacity	28.1	37.7	56.1	74.1	108.6	158.7
	Input Power	6.1	8.2	12.2	16.1	23.6	34.5
	COP	4.6	4.6	4.6	4.6	4.6	4.6
	Hot Water Flow	0.60	0.81	1.21	1.62	2.33	3.41
High TEMP. Working Conditions	Heating Capacity	23.9	28.5	51.5	59.5	89	131.5
	Input Power	7.5	8.9	16.1	18.6	27.8	41.1
	COP	3.2	3.2	3.2	3.2	3.2	3.2
	Hot Water Flow	0.27	0.33	0.59	0.68	1.02	1.51
Low TEMP. Ambient	Heating Capacity	15.7	19.1	31.8	38.9	59.3	90
	Input power	5.8	7.1	11.8	14.4	21.9	33.3
	COP	2.7	2.7	2.7	2.7	2.7	2.7
	Hot Water Flow	0.28	0.34	0.56	0.68	1.04	1.52
Component	Water Pipe Connection	DN20		DN25		DN32	DN40
	Water Heat Exchanger	Plate / Shell and tube heat exchanger					
	Air Heat Exchanger	Copper tube aluminum fin					
	Compressor Type	Semi-closed reciprocating					
	Operation Panel	Color touch screen					
Max. water outlet TEMP.		90℃					
Refrigerant		R744 (CO2)					
Design Pressure		15MPa(HP)/8MPa(LP)					
Dimensions (Length * Width * Height)		1450x950x1450	1690x950x1800	1850x1150x1900	2050x1150x1950	2670x1410x2150	2150x2072x2250
Noise		≤ 56	≤ 59	≤ 62	≤ 67	≤ 70	≤ 70
Weight		550	660	780	860	1500	2500
High temp. working Conditions	Water Supply TEMP.	5 ~ 40					
	Water Supply Pressure	0.05 ~ 0.4					
	Water Outlet TEMP.	55 ~ 90					
	Max. Flow Rate	1.2	1.5	2.4	3.2	4.9	6.5
	Ambient TEMP.	-30 ~ 43					

Remarks:

- Standard working condition: ambient temperature DB 20°C/WB 15°C, initial water temperature on the user side 15°C, and final water temperature 55°C;
- High-temperature water outlet working condition: ambient temperature DB 20°C/WB 15°C, initial water temperature on the user side 15°C, and final water temperature 90°C;
- Low-temperature working condition: ambient temperature DB -12°C/WB -14°C, initial water temperature on the user side 9°C, and final water temperature 55°C;

ULTRA-LOW AMBIENT TEMPERATURE VARIABLE FREQ

CASCADE HIGH TEMPERATURE HEAT PUMP UNIT

Model			SJK-20G/IIBF-100	SJK-40G/IIBF-100	SJK-80G/IIBF-100
Rated heating conditions	Heating capacity	kW	38.3	78.9	123.2
	Water flow	m ³ /h	3.3	6.8	8.9
	Input power	kW	16.5	34.0	52.6
	COP	W / W	2.32	2.32	2.34
Rated high TEMP outlet water condition	Heating capacity	kW	33.1	68.3	112.8
	Water flow	m ³ /h	2.8	5.9	9.7
	Input power	kW	19.7	40.3	67.3
	COP	W / W	1.68	1.69	1.68
Nominal high TEMP water outlet condition	Heating capacity	kW	30.1	62.1	99.9
	Water flow	m ³ /h	2.6	5.3	8.6
	Input power	kW	21.1	43.4	70.8
	COP	W / W	1.42	1.43	1.41
Power			380V/3N~50Hz		
Max. input power		kW	24	48	80
Max. input current		A	49	99	166
Ambient temp		°C	~35 ~ 43		
Max. water outlet temp		°C	98		
Refrigerant			R410A+R1234ze(E)		
Compressor			High-efficiency flexible scroll compressor (RA10A DC variable frequency 1234ze(E) fixed frequency)		
Air source heat exchanger			High-efficiency Internally threaded copper tube fin heat exchanger		
Water heat exchanger			Double pipes heat exchanger		
Water system	Water Pipe Connection		DN40 (internal thread)	DN50 (Flange)	DN65 (Flange)
	Water Pressure Drop	kPa	≤50		
Dimensions (length * width * height)		mm	1700*1160*2050	2300*1262*2135	2270*2275*2250
Noise		dB(A)	≤62	≤68	≤75
Weight		kg	850	1400	2100

- Rated heating conditions: dry bulb temperature 7°C, wet bulb temperature 6°C, water inlet temperature 60°C, water outlet temperature 70°C.
- Rated high temperature outlet conditions: dry bulb temperature 7°C, wet bulb temperature 6°C, water inlet temperature 85°C, water outlet temperature 95°C.
- Nominal high temperature outlet conditions: dry bulb temperature -12°C, wet bulb temperature -13.5°C, water inlet temperature 85°C, water outlet temperature 95°C.