

R290

Series Pool Heat Pump

99% Lower CO2 Emissions

solvue

R290 Core Advantages

- 1.Ultimate Environmental Protection: GWP is only ~1, about 1/675 of R32, better adapted to carbon neutrality, with no long-term phase out risk.
- 2.Higher Heat Exchange Efficiency: Large latent heat of vaporization and low system pressure ratio, with actual energy efficiency 3% ~ 5% higher than R32, faster cooling/heating speed.
- 3.Better Operating Conditions: Discharge temperature is 10~20° C lower than R32, reducing compressor loss and extending equipment service life.
- 4.Lower Usage Cost: Charge amount is only about 50% of R32; as a natural propane, it has lower refrigerant purchase and refilling costs.
- 5.Stable Low-Temperature Performance: Stable pressure ratio at -25° C and below, no obvious attenuation of heating COP, suitable for cold areas.

Note: in 2023 SOLVUE's first R290 heat pump was launched, and refrigerant leakage sensors were used for the first time.
To date, 100% of SOLVUE's products have adopted R290 refrigerant.

R290 Ultra Pool Heat Pump



SCOP >8 COP Up to 24



CozyQuiet+ Technology



Remote Diagnosis



Heating at -20°C



Modbus



5-inch Touchscreen Display



0.1°C Precision Control



Mitsubishi Compressor



IOT Platform



Refrigerant Leak Sensor



R290 Compressor Reliability Assured

High-efficiency R290 Twin-Rotary Compressor
Our R290 swimming pool heat pump is equipped with a high - performance twin-rotary compressor, designed for superiorefficiency, stability, and quiet operation.

Key Benefits

1. Higher Efficiency
2. Ultra-Quiet Operation
3. Enhanced Reliability.
4. Stable Operation in All Seasons

R290 Leak Sensor

- High Sensitivity
- Excellent Durability: 15 years design lifespan
- Maintenance free: no calibration needed
- Fast response

Attributes	Specifications
Alarm Range	> 0.4% (R290 LFL 2.1%)
Communication Interface	RS-485
Operating Conditions	-30°C-60°C, 0-95%RH
Response time	5 Seconds Fast Responding
Design Lifespan	15 years



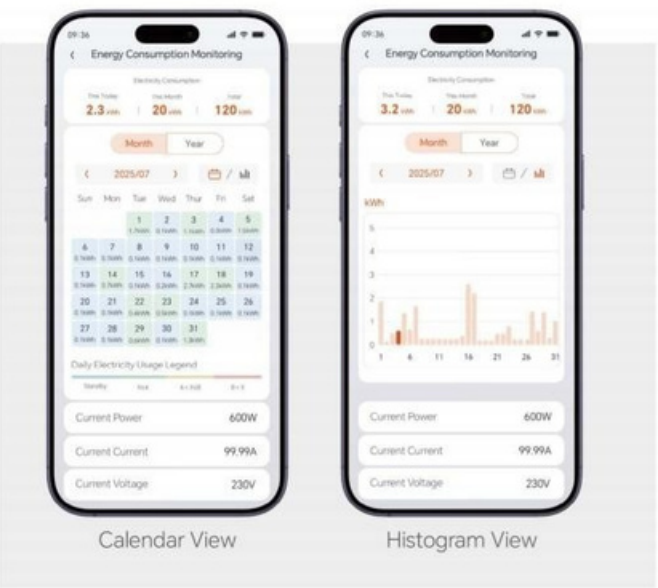
CozyQuiet® Technology

SOLVUE's innovative CozyQuiet technology
Our heat pump is engineered for whisper-quiet operation, creating a peaceful and comfortable indoor environment.

1. Acoustically Optimized fan
2. Three layers of acoustic cotton Sound insulation Metal shell
3. Double layer vibration absorbing foot rubbers
4. 2-Stage Quiet Operation Program

Intuitive Touch Screen Interface

Our pool heat pump controller features weather sealing, a simple UI, and RS-485 long-distance communication for reliable and effortless control. It withstands outdoor conditions, offers easy operation, and ensures stable performance even across large pool systems.



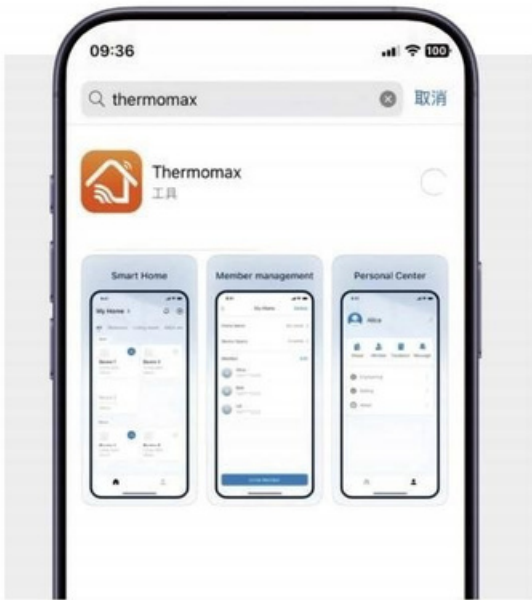
Electricity Monitoring (Optional)

- Two ways of electricity consumption tracking - know where every Watt goes.
- Easily view power consumption and capacity output for up to 10 years.
- Intuitive Daily Overview - Calendar view with color-coded usage
- Easy Navigation - Simple month/year toggle
- Real-Time Monitoring - Instant access to current power, current, and voltage values.

ThermoMax APP & Platform

User guide

Our heat pump system works seamlessly with our self-developed smart App, designed to give users a smarter, easier, and more connected heating experience.



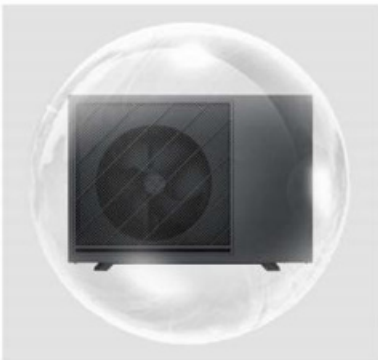
R290 Ultra Specifications

Model		SV-80N7/ BP-X	SV-110N7/ BP-X	SV-140N7/ BP-X	SV-180N7/ BP-X	SV-220N7/ BP-X	SV-280N7/ BP-X	SV-320N7/ BP-X
Advised Pool Volume	m³	20-30	30-40	40-60	50-80	70-100	80-120	100-140
Operating air temperature	℃	-20~43						
Heating Water Temperature Setting Range	℃	15~40						
Cooling Water Temperature Setting Range	℃	28~7						
Refrigerant volume		R290						
Air15℃/Water26℃ Humidity 70%	Capacity kW	1.3~4.9KW	1.4~8.1	1.5~10.6	2.1~13.8	3.0~16.2	3.1~21.2	3.2~22.8
	COP	7.6~5.1	8.2~5.5	7.8~5.2	8.0~5.1	7.8~5.0	8.5~5.4	8.1~5.2
Air26℃/Water26℃ Humidity 80%	Capacity kW	3.6~8.3	4.1~11.2	4.2~14.3	5.3~18.4	6.3~22.2	7.0~28.5	7.1~32.0
	COP	22.6~7.1	24.0~7.3	22.5~7.1	24.1~7.2	22.7~7.0	23.4~7.1	22.5~7.0
SCOP		8.1	8.5	8.1	8.8	8.3	8.2	8.1
Air35℃/Water28℃ Humidity 40%	Capacity kW	4.5	5	6.5	10.3	11.5	13	15
	EER	3.2	3.5	3.2	3.1	3.3	3.4	3.4
Power supply	V / Ph / Hz	220-240~/ 1ph / 50				220-240~/ 1ph / 50 380-415~/3ph / 50		
Unit dimensions	LxWxH (mm)	985*380*700	985*380*700	985*380*700	1187*415*810	1187*415*810	1420*450*1025	1420*450*1025
Noise at 1 m	dB(A)	36.3~45.1	36.1~46.2	37.2~46.3	39.3~47.7	40.7~48.2	40.8~49.4	42.6~52.5
Water flow	m³/h	3.4	4.7	6	7.7	9.5	12	13.7
Water Pressure Drop	KPa	5	8	8	10	12	16	16
water pipe in-out	mm	50						
Compressor brand		MITSUBISHI						

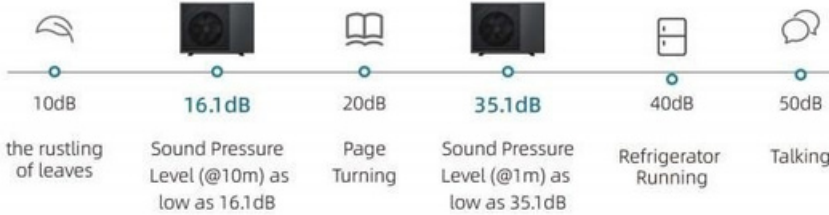
R290 Pro Pool Heat Pump



More Silence



Ultimate Noise Reduction



SCOP>7, COP up to 16

Heating at -20°C

Modbus

5-inch Touchscreen Display

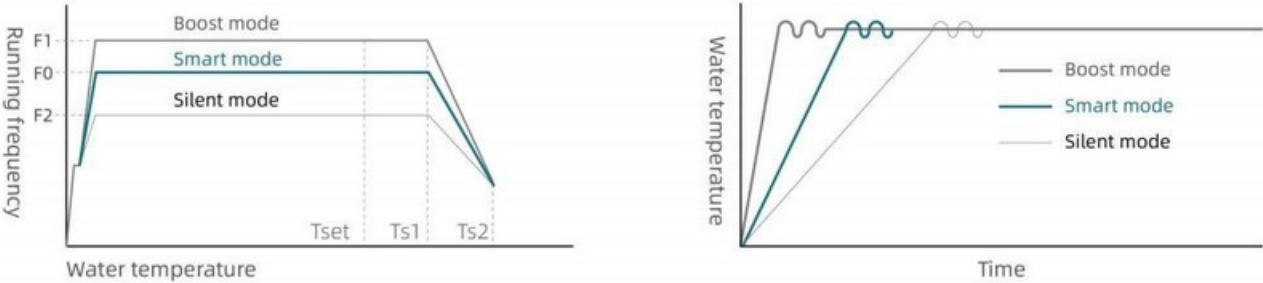
0.1°C Precision Control

Remote Diagnosis

IOT Platform

Refrigerant Leak Sensor

More intelligent



More Stable

- Full DC inverter for precise temp control and steady operation

A graph showing 'Setting temperature' vs 'Time'. It illustrates the temperature rising and then stabilizing, with labels for 'ON/OFF unit' and 'Full wave inverter unit'.

- Soft start protects home power system, with gradual current rise

A graph showing 'Start current' vs 'Time'. It shows a gradual rise in current when the unit is turned 'On', followed by a steady state, and then a drop when turned 'Off'. Labels include 'HP start', 'On', 'Off', and 'Full wave inverter unit'.

R290 Pro Specification

Model		SV-80N7 /BP-B	SV-100N7 /BP-B	SV-140N7 /BP-B	SV-180N7 /BP-B	SV-220N7 /BP-B	SV-260N7 /BP-B	SV-300N7 /BP-B
Advised Pool Volume	m³	20-30	30-40	40-60	50-80	70-90	80-100	100-120
Operating air temperature	°C	-20~43						
Heating Water Temperature Setting Range	°C	15~40						
Cooling Water Temperature Setting Range	°C	28~7						
Refrigerant volume		R290						
Air26°C/Water26°C Humidity 80%	Capacity kW	2.5~7.8	4.1~10.1	4.2~14.3	5.3~18.4	6.3~22.2	8.0~26.5	10.0~30.0
	COP	16.5~6.5	16.2~6.4	17.0~6.6	16.8~6.4	15.9~6.6	17.5~6.8	17.2~6.7
Air15°C/Water26°C Humidity 70%	Capacity kW	1.3~5.2	1.4~8.1	1.5~10.6	2.1~13.8	3.0~16.2	4.0~19.2	5.0~21.0
	COP	7.3~5.0	7.2~4.9	7.5~5.3	7.3~5.1	7.1~4.7	7.5~5.2	7.3~4.8
SCOP		7.4	7.5	7.8	7.6	7.2	7.4	7.3
Air35°C/Water28°C Humidity 40%	Capacity kW	4	5	6	8	10	11.5	13
	EER	3.1	3.1	3.2	3.1	3	3.1	3
Power supply	V / Ph / Hz	220-240~/ 1ph / 50						220-240~/ 1ph / 50 380-415~/ 3ph / 50
Noise at 1 m	dB(A)	35.1~46.8	36.1~47.2	37.2~47.3	39.3~48.7	40.7~50.2	40.8~52.4	42.6~54.5
Noise at 10 m	dB(A)	16.1-25.4	17.2-26.1	18.3-27.6	20.7-28.2	21.7-29.1	22.8-30.5	23.5-31.5
Water flow	m³/h	4	5	6	8	10	12	13
Water Pressure Drop	KPa	6	8	8	10	12	16	16
water pipe in-out	mm	50mm						
compressor brand		GMCC						
Unit dimensions	LxWxH(mm)	913*370*712		1040*436*854			1223*436*854	