

Pool Heat Pump Solution



KLR Group

Since its establishment, KLR has continued to grow and gradually developed into four major business segments, namely heat pumps, circuit boards, wire harnesses, electric wires and cables, as well as other heat pump components.



KELINGRUI

• Heat Pump



HANTOP

• Circuit Board



HHY

• Wire Harnesses, Electric Wires and Cables



Tian Zhi Run
&
Tensin

• Other Components of Heat Pumps

Heat Pump

We offer full range of swimming pool heat pump solution. The heat pumps we provide have been maturely applied in both China and abroad, including Europe, Oceania, North America, South America and other regions.



Circuit Board

KLR owns an electric control company, and independently developed electric control solutions, laying a solid foundation for providing customers with leading heat pump solutions.

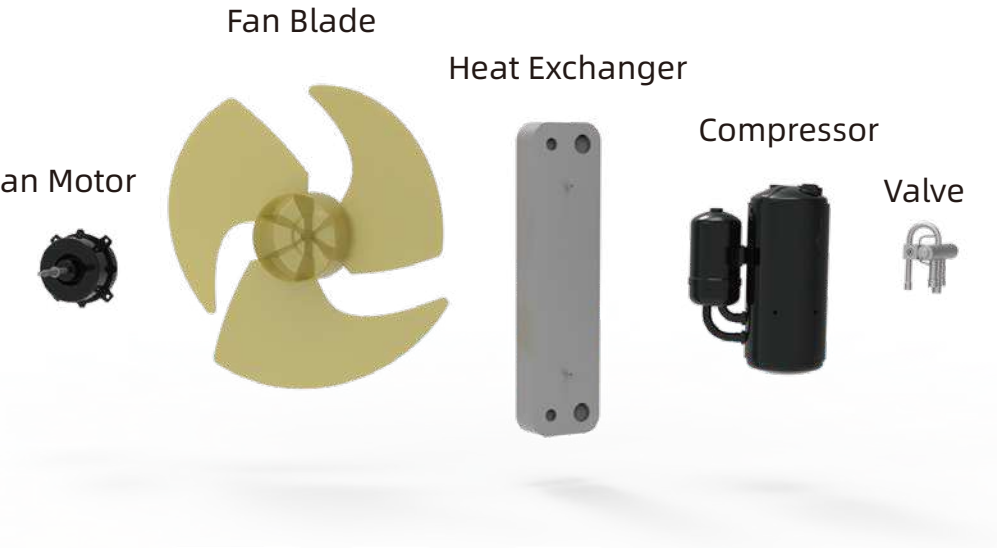
Wire Harnesses, Electric Wires and Cables

To more efficiently coordinate with the production of heat pump units, KLR has established a factory for wire harnesses, electric wires and cables. The design and production of these materials involve a complex and intricate process that spans multiple professional fields.



Quality Control

KLR owns a comprehensive and robust quality control system, regarding product quality as the lifeblood of the enterprise. From the initial design of heat pump products to research and development, and finally to mass production, we achieve all-round quality control at every stage, leaving no detail unchecked, and make every effort to provide our partners with the most reliable and trustworthy product solutions.



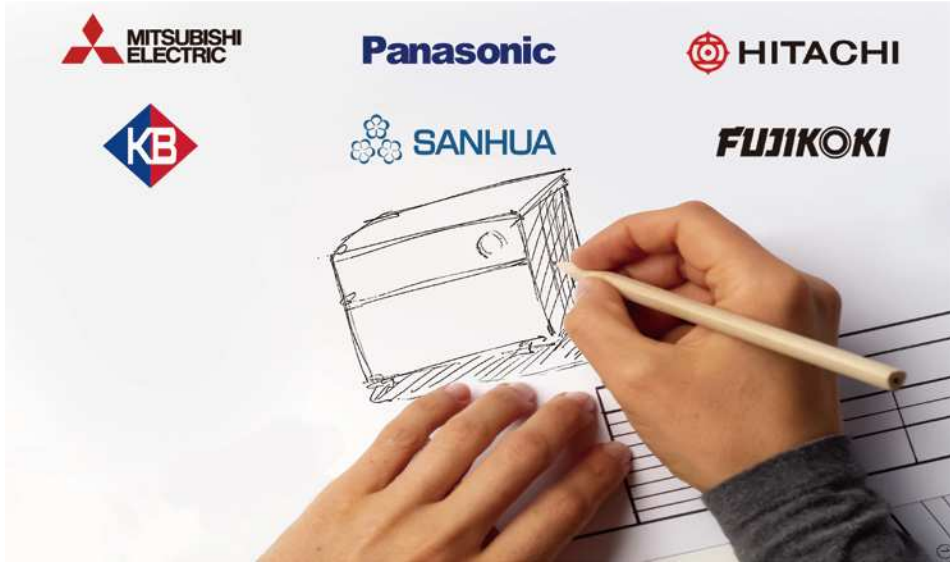
Other Components of Heat Pumps

To further ensure the production and delivery of heat pump products within the shortest possible time, KLR has established two component agent companies, which provides a more comprehensive supply chain guarantee for heat pump production.



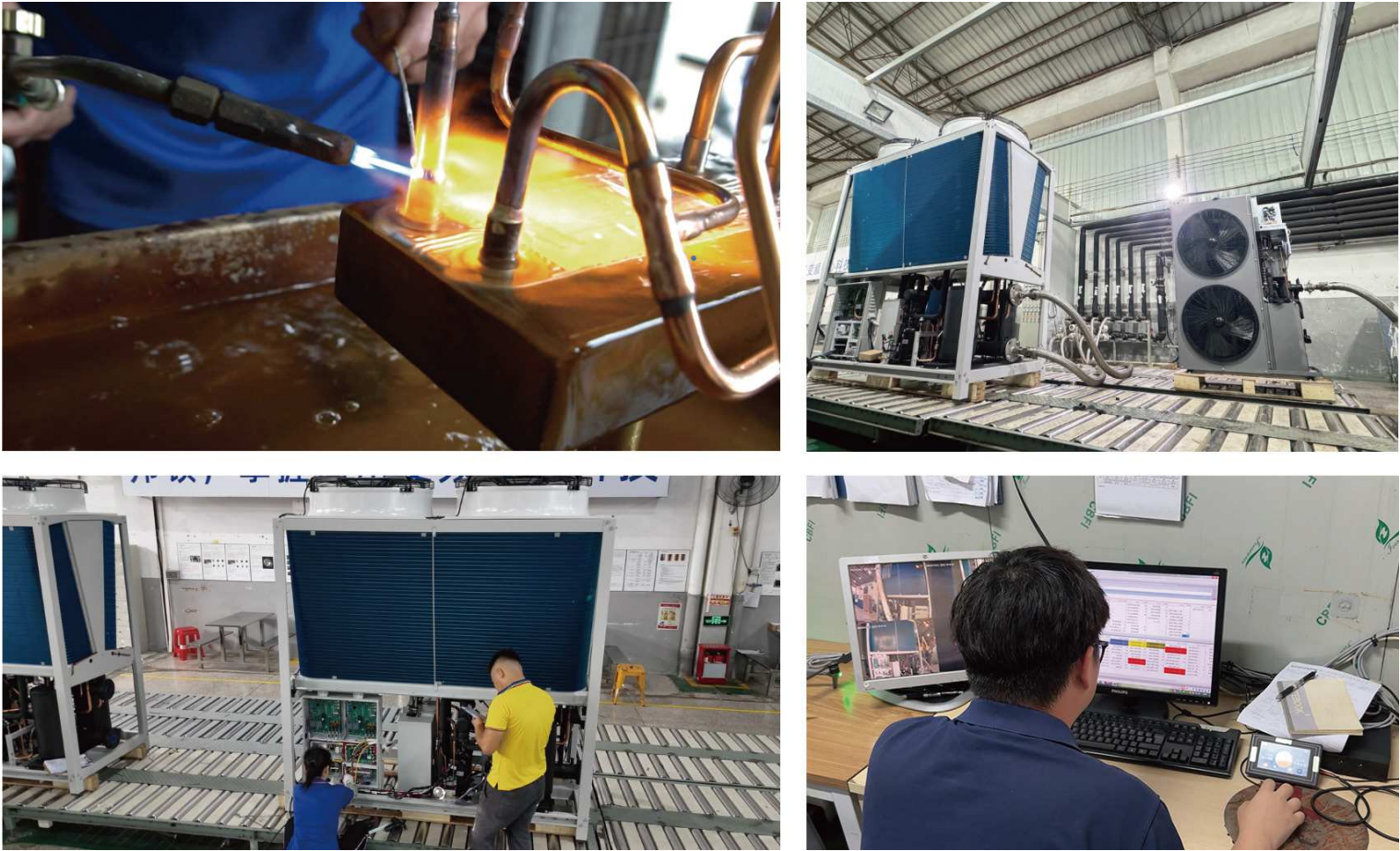
Design Stage

Design is the initial stage of heat pump products from scratch. In order to implement the design work, we have fully considered all aspects related to heat pumps when initiating the project, the most important of which are standards, components, and structure.



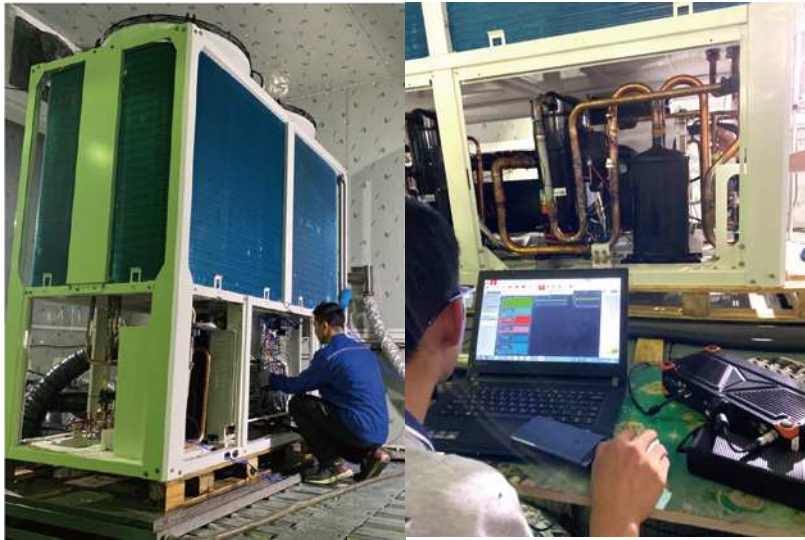
Production Stage

After finishing the design as well as research and development, the product can be officially mass-produced. During the production process, the key quality control links we focus on include critical process control, patrol inspection and spot check of finished products etc. We treat every production of the product with care, and carry out the strictest quality control for every link to ensure that we deliver the best quality products to our customers.



Research and Development Stage

After completing the design work, we enter the important research and development stage. From the perspective of product research and development, our quality control work focuses on unit testing, including performance and stability, controlling every detail.



Service Capability

We have always adhered to a customer-centric approach, providing comprehensive, efficient, and high-quality services. Our service team possesses professional knowledge and rich experience, enabling them to respond swiftly to customer needs and offer personalized solutions. Additionally, we have established a comprehensive pre-sales, mid-sales, and after-sales service system to ensure that customers always receive timely technical support and maintenance services. We are committed to creating greater value for our customers and making them truly feel KLR's professionalism and care in the field of heat pumps.



Pre-sales

• Solution Customization

We can provide our partners with exclusive heat pump product designs for the local market based on OEM, ODM and Co-design. After deeply understanding the customer's needs for heat pump products, we will customize the most suitable product solutions for them, mainly involving product series, models, application modes, etc..



• Marketing Promotion

In order to help customers quickly occupy the market, we can provide comprehensive marketing support to assist customers in completing catalogs, product videos, technical materials, etc. in the shortest possible time, and accelerate the popularity of products locally.

Mid-sales

- **Certificates Applying**

The KLR heat pump is designed based on international standards, and we are also very familiar with the certification requirements and details of various regions. Therefore, we are able to apply for and complete local certifications for our customers in the shortest possible time, empowering our products and enhancing their competitiveness.



After-sales

- **Technical Training**

In order to let our customers better understand our heat pump product solutions, we will provide online and offline technical training to our customers, covering all aspects of heat pump products, including functionality, applications, after-sales, maintenance, etc., to enhance their technical strength in heat pumps.



- **Product Upgrade**

The market is changeable. We pay close attention to market dynamics and always respond quickly to customers' latest needs. We upgrade product solutions for customers in a timely manner so that they can always be in a leading position in the local market.

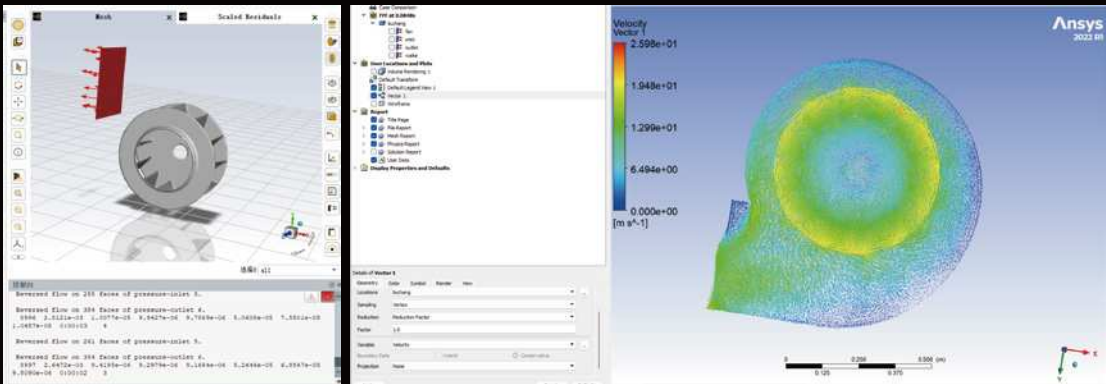


- **Warranty Support**

We provide our customers with a competitive warranty policy, offering strong after-sales support in terms of warranty period, free spare parts, after-sales solutions, and rapid problem resolution etc.

WindPlus Technology

For swimming pool heat pumps, we use our exclusive WindPlus technology. Through simulation, we deeply analyze the fan blade shape, air duct structure and the relationship between them to confirm the air volume meets the requirements, the wind pressure is appropriate, and the flow field is uniform. Ultimately, the heat pump can achieve the lowest noise level and the best wind-side heat exchange efficiency.



• CentriPlus

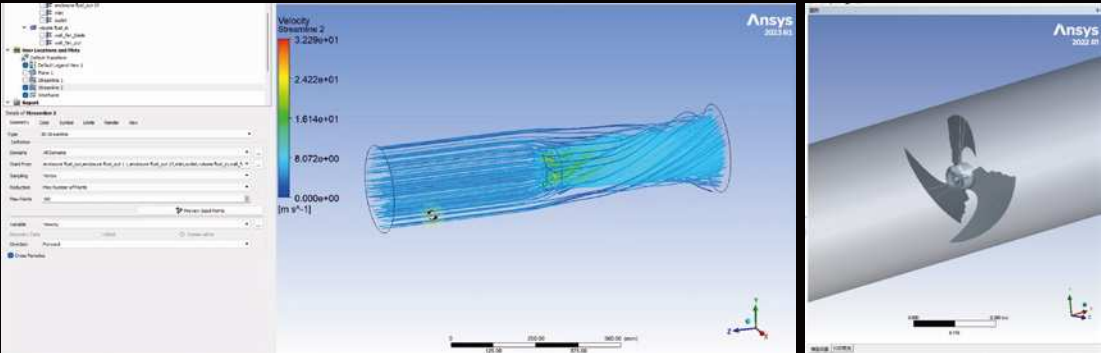
1. Shape of the Fan Blades

During the design phase, we carefully select fan blades of suitable shapes. For centrifugal fan blades, we focus on confirming their distribution angles and the guide structure of the air inlet. For axial flow fan blades, we concentrate on the structure of the sharp corners, and the angle and the number of fan blades. Therefore, the airflow is transmitted through the fan blades more stably and evenly, improving the performance and operating efficiency of the entire system and achieving the best noise reduction effect.

2. Air Duct Structure

For the centrifugal fan blades, a specially designed vortex casing is used (involving the size of the air inlet and outlet, and the curvature of the vortex casing). Regarding the axial flow fan blades, a special air guide ring is adopted (involving the angle, depth and diameter of stretching). Thus, the airflow is fully guided, to reduce airflow turning and friction loss, decrease energy loss, and maximize the air volume.

• AxialPlus

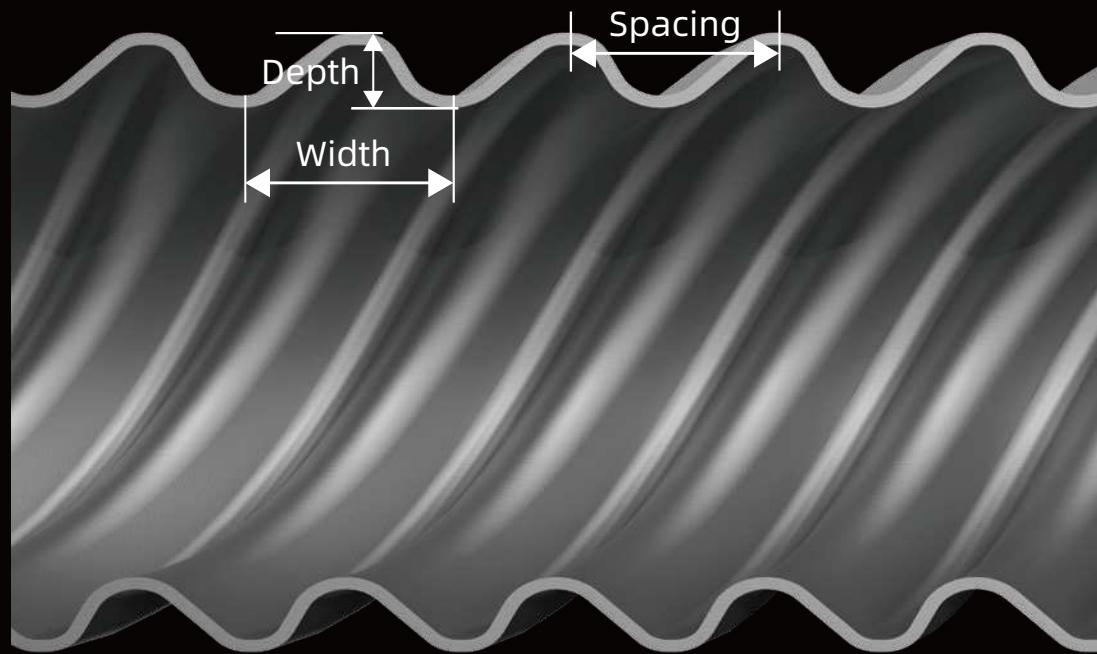


3. Position of Fan Blades

The appropriate fan blade position can maximize the advantages of the fan blades and air ducts, allowing the airflow to remain streamlined after entering the air duct, avoiding obvious rotation or turbulence, and improving the fan efficiency.

IdealFlow Technology

We have created the latest technology for titanium tube heat exchangers - IdealFlow. By precisely controlling the size of titanium tube threads, the purity of titanium, and the appropriate spacing between adjacent threaded tubes, we can achieve the maximum energy efficiency level for swimming pool heat pumps.



1. Dimensions of Thread Teeth

The width, depth and spacing of the thread teeth for titanium tube heat exchanger are precisely controlled to ensure that the refrigerant in the tube can reach a turbulent state while minimizing the resistance to the refrigerant flow.

2. Material of Titanium

In order to maximize the heat transfer capacity of titanium, we use ultra-high purity titanium to produce the titanium tube heat exchangers.

3. Spacing of Threaded Pipes

The spacing between adjacent threaded pipes and the spacing between the threaded pipes and the PVC inner wall are accurately controlled to ensure that the flowing water can fully contact the outer surface of the titanium pipe, thereby maximizing heat exchange with the internal refrigerant. In addition, the lowest water resistance can also be achieved.

Complete Pool Heat Pump Solution

Wave (Top Discharge, COP 18) -P45



Pioneer (COP 18) -P41



Pioneer-X (COP 22) -P25



Ocean (Commercial, COP 18) -P53



Guard (Back Discharge, COP 18) -P37



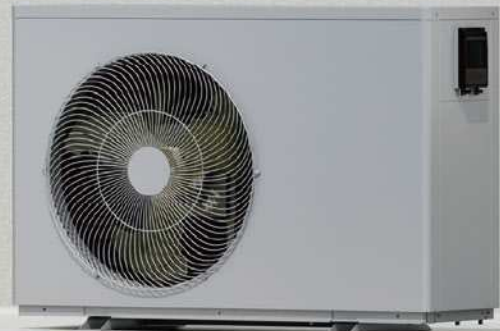
Royal-X (Side Discharge, COP 22) -P17



Noble (Side Discharge, COP 20) -P31



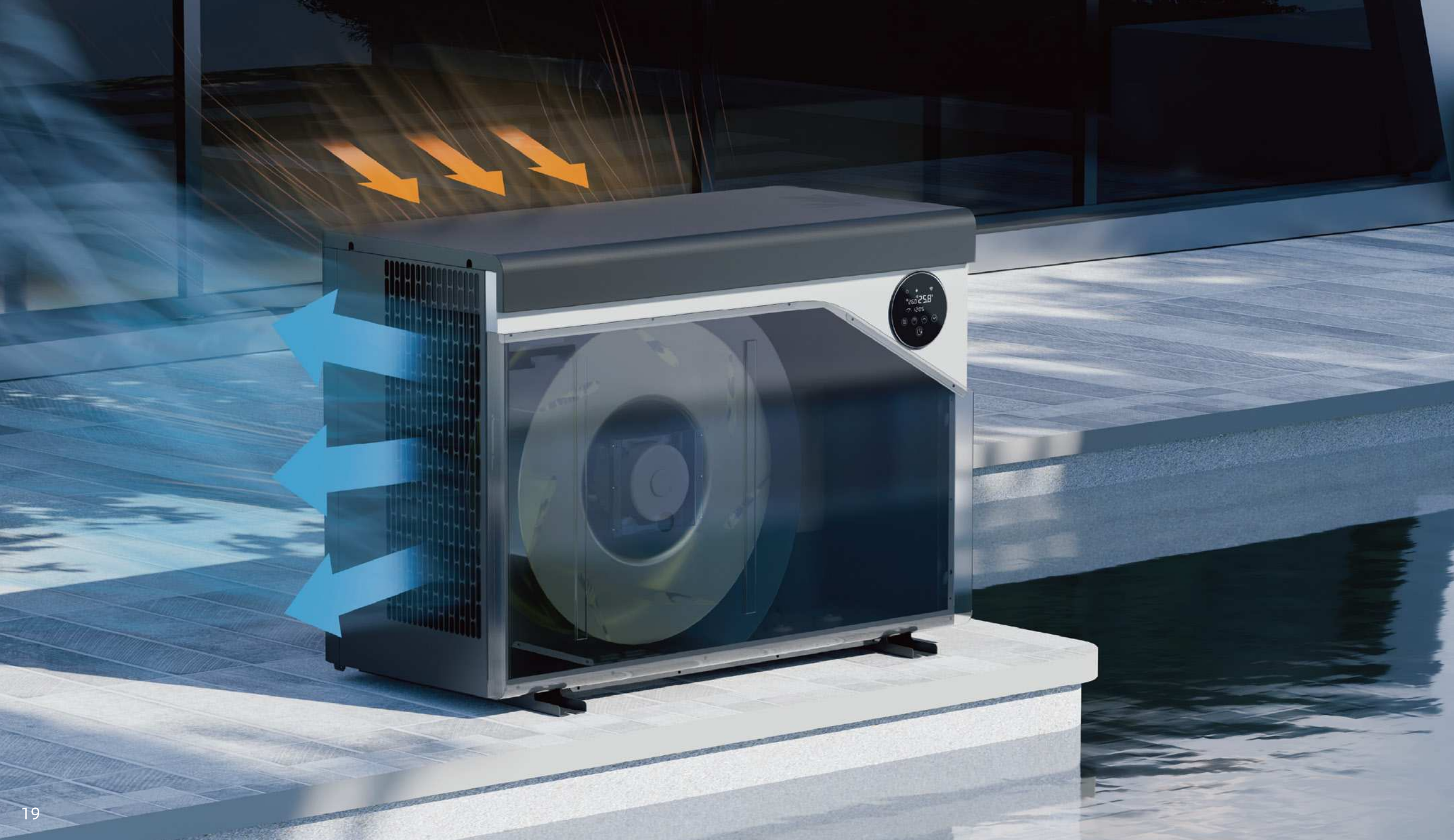
Mild (ON/OFF) -P49



Royal-X

- Extremely High Efficiency - COP up to 22





CentriPlus Patented Technology

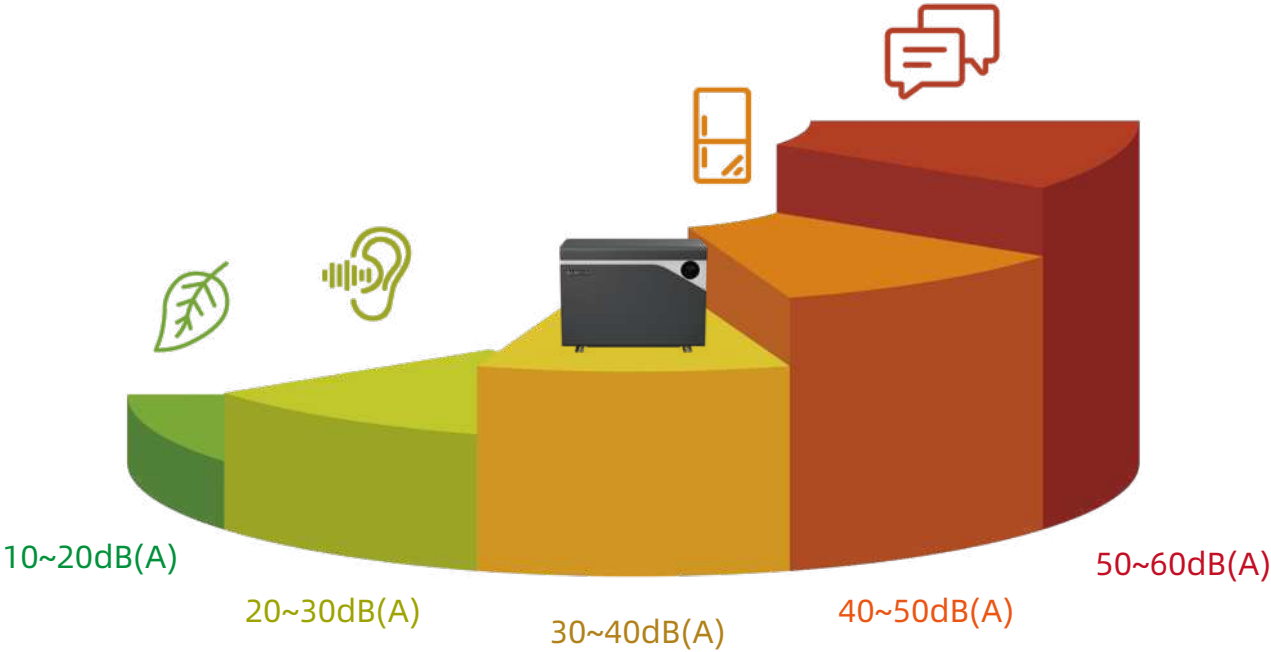
Using patented CentriPlus technology, the centrifugal fan blades and an exclusive specially designed air duct are integrated together, creating the air inlet from the rear and air outlet from the single side of the machine, reducing the possibility of users being exposed to cold air, and the sufficient air volume ensures high heat exchange efficiency.

Easy and Adaptable Installation

Because Royal-X does not blow air from the front or both sides like traditional heat pumps, it can meet the requirements of more installation scenarios, such as installing in the corner of a wall, maximizing its installation convenience and flexibility.

Peaceful Operation

Royal-X has excellent performance in terms of running noise. It uses an ultra-quiet exclusive technology to maintain low operating noise in most situations, with a minimum noise level of only 32.9dB(A) at 1 meter.



Four Seasons Running

Royal-X can be applied to a wider range of application conditions, and can operate stably under ambient temperatures ranging from -15 °C to 43 °C, allowing users to enjoy swimming all year round.



Model		PSX	80R3V	100R3V	120R3V	140R3V	160R3V	190R3V	220R3V	260R3V
Refrigerant		/	R32/R410A							
Power Supply		/	220-240V~/50Hz&60Hz							
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	7.81	9.85	12.04	13.80	16.05	19.10	22.09	26.03
	COP	W/W	22.25~7.30	21.90~7.35	22.08~7.43	22.33~7.42	22.35~7.47	22.10~7.37	22.14~7.24	22.04~7.44
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	5.67	7.55	8.75	9.85	11.72	13.88	15.05	17.90
	COP	W/W	9.13~5.50	8.81~5.51	9.17~5.61	9.15~5.41	8.77~5.66	9.03~5.62	8.78~5.64	8.91~5.61
Operating Air Temperature		°C	-15~43							
Advised Pool Volume		m³	15~30	20~35	25~40	30~50	35~60	40~65	45~75	55~90
Rated Power Input at 15°C		kW	0.15~1.03	0.21~1.37	0.23~1.56	0.26~1.82	0.31~2.07	0.37~2.47	0.41~2.67	0.45~3.19
Fan Motor		/	Centrifugal Fan + DC Motor							
Sound Level	at 1m	dB(A)	32.9~41.6	33.8~42.0	34.9~42.2	35.9~43.5	36.7~45.0	36.8~45.4	38.1~47.1	38.9~47.8
	at 10m	dB(A)	12.9~21.6	13.8~22.0	14.9~22.2	15.9~23.5	16.7~25.0	16.8~25.4	18.1~27.1	18.9~27.8

Model		PSX	290R3V	320R3V	220R3VT	260R3VT	290R3VT	320R3VT	360R3VT	400R3VT
Refrigerant		/	R32/R410A							
Power Supply		/	220-240V~/50Hz&60Hz		380-415V/3N~/50Hz&60Hz					
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	29.10	32.21	22.11	26.05	29.11	32.20	36.07	40.61
	COP	W/W	21.70~7.37	22.09~7.25	22.18~7.27	22.12~7.44	21.81~7.39	22.13~7.29	21.78~7.30	22.24~7.20
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	18.95	22.51	15.08	17.89	18.99	22.52	24.1	29.01
	COP	W/W	8.88~5.66	8.70~5.59	8.80~5.63	8.96~5.63	8.92~5.67	8.65~5.59	8.72~5.49	8.38~5.39
Operating Air Temperature		°C	-15~43							
Advised Pool Volume		m³	60~100	65~105	45~75	55~90	60~100	65~105	70~110	75~120
Rated Power Input at 15°C		kW	0.50~3.35	0.57~4.03	0.41~2.68	0.45~3.18	0.50~3.35	0.57~4.03	0.61~4.39	0.73~5.38
Fan Motor		/	Centrifugal Fan + DC Motor							
Sound Level	at 1m	dB(A)	39.4~48.1	39.7~48.6	38.1~47.1	38.9~47.8	39.4~48.1	39.7~48.6	40.4~49.1	40.7~49.7
	at 10m	dB(A)	19.4~28.1	19.7~28.6	18.1~27.1	18.9~27.8	19.4~28.1	19.7~28.6	20.4~29.1	20.7~29.7

Note: The data above may be adjusted based on continuous improvement without advanced notice. For the latest specific data, please refer to the nameplate on the unit.

Pioneer-X

- COP up to 22
- Stable Operation at -15~43°C
- Noise Level as low as 34.1 dB(A) at 1 m





Core Flow Technology

Pioneer-X uses exclusive flow control technology to achieve precise regulation of gas flow and air flow through control of core components such as compressor frequency, electronic expansion valve steps, and DC motor speed, ultimately demonstrating excellent performance.

Optimal System Matching

The optimized matching of the inverter compressor, titanium heat exchanger, and fin-tube heat exchanger ensures that Pioneer-X achieves super-high energy efficiency, sufficient power output, and stable operation under all operating conditions.

- Humanized Design
- Complete Function
- Smart Remote Control



Model		PFX	50R3V	70R3V	90R3V	110R3V	130R3V	150R3V	180R3V	210R3V
Refrigerant		/	R32/R410A							
Power Supply		/	220-240V~/50Hz&60Hz							
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	5.58	7.31	9.40	11.49	13.30	15.55	18.41	21.51
	COP	W/W	22.33~7.06	22.00~7.10	21.80~7.18	22.08~7.27	22.13~7.11	22.06~7.10	22.05~7.19	22.05~7.17
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	3.86	5.45	7.30	8.59	9.70	11.44	13.25	14.62
	COP	W/W	8.73~5.29	9.07~5.34	8.45~5.41	9.09~5.40	9.04~5.24	8.66~5.50	8.78~5.39	8.80~5.52
Operating Air Temperature		°C	-15~43							
Advised Pool Volume		m³	10~20	15~30	20~35	25~40	30~50	35~60	40~65	45~75
Rated Power Input at 15°C		kW	0.11~0.73	0.15~1.02	0.20~1.35	0.23~1.59	0.26~1.85	0.32~2.08	0.37~2.46	0.41~2.65
Fan Motor		/	DC							
Sound Level	at 1m	dB(A)	34.1~42.9	34.4~43.7	35.1~44.9	35.8~45.5	37.7~46.8	38.2~47.4	39.3~47.9	40.1~49.6
	at 10m	dB(A)	14.1~22.9	14.4~23.7	15.1~24.9	15.8~25.5	17.7~26.8	18.2~27.4	19.3~27.9	20.1~29.6

Model		PFX	250R3V	280R3V	320R3V	210R3VT	250R3VT	280R3VT	320R3VT	400R3VT
Refrigerant		/	R32/R410A							
Power Supply		/	220-240V~/50Hz&60Hz			380-415V/3N~/50Hz&60Hz				
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	25.21	28.50	31.80	21.34	25.15	28.42	31.75	40.32
	COP	W/W	21.92~7.31	22.15~7.07	22.03~7.11	22.14~7.21	21.80~7.19	22.19~7.16	22.03~7.23	22.10~7.05
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	17.62	18.82	22.08	14.70	17.69	18.75	22.11	28.74
	COP	W/W	8.60~5.24	8.55~5.63	8.40~5.31	8.78~5.46	8.53~5.38	8.59~5.68	8.32~5.34	8.22~5.11
Operating Air Temperature		°C	-15~43							
Advised Pool Volume		m³	55~90	60~100	65~105	45~75	55~90	60~100	65~105	75~120
Rated Power Input at 15°C		kW	0.43~3.36	0.51~3.34	0.57~4.16	0.41~2.69	0.43~3.29	0.51~3.30	0.57~4.14	0.73~5.62
Fan Motor		/	DC							
Sound Level	at 1m	dB(A)	40.4~50.3	40.8~50.6	41.8~50.9	40.1~49.6	40.4~50.3	40.8~50.6	41.8~50.9	42.2~51.8
	at 10m	dB(A)	20.4~30.3	20.8~30.6	21.8~30.9	20.1~29.6	20.4~30.3	20.8~30.6	21.8~30.9	22.2~31.8

Note: The data above may be adjusted based on continuous improvement without advanced notice. For the latest specific data, please refer to the nameplate on the unit.

Noble

- COP up to 20
- Noise Level as low as 34.3 dB(A) at 1 m
- Stable Operation at -15~43°C



Ultra-Quiet Performance

Engineered with a whisper-quiet design philosophy, Noble incorporates proprietary sound-dampening technology that significantly reduces operational acoustics, reaching a remarkable low of merely 34.3dB(A) at 1 meter. This advanced acoustic engineering ensures a peaceful and comfortable aquatic environment for users.



Side Discharge Technology

Noble features an innovative discharge solution that intakes air through its rear panel and expels airflow via both sides. This strategic engineering optimizes the air duct and eliminates the cold-air blowing to the users, delivering superior environmental harmony.



Adaptive Frost Management

Noble employs unique control logic to execute precision defrost cycles only when required. By real-time microclimate analysis of evaporator coil conditions, it reduces energy waste while preserving optimal heat exchange integrity.



Model		PBS	50R3V	70R3V	90R3V	110R3V	130R3V	150R3V	180R3V	210R3V
Refrigerant		/	R32/R410A							
Power Supply		/	220-240V~/50Hz&60Hz							
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	5.55	7.38	9.43	11.59	13.29	15.60	18.31	21.49
	COP	W/W	20.16~7.03	20.22~7.10	20.09~7.14	20.20~7.07	20.25~7.22	19.94~7.09	20.32~7.21	20.17~7.12
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	3.83	5.58	7.48	8.56	9.71	11.50	13.37	14.65
	COP	W/W	8.64~5.32	8.44~5.31	8.70~5.42	8.83~5.38	8.70~5.25	8.64~5.45	8.61~5.41	8.63~5.39
Operating Air Temperature		°C	-15~43							
Advised Pool Volume		m³	10~20	15~30	20~35	25~40	30~50	35~60	40~65	45~75
Rated Power Input at 15°C		kW	0.11~0.72	0.16~1.05	0.20~1.38	0.24~1.59	0.27~1.85	0.33~2.11	0.38~2.47	0.41~2.72
Fan Motor		/	DC							
Sound Level	at 1m	dB(A)	34.3~43.3	34.5~44.0	35.1~45.4	36.0~46.0	37.7~47.0	38.3~47.8	39.3~48.4	40.0~50.0
	at 10m	dB(A)	14.3~23.3	14.5~24.0	15.1~25.4	16.0~26.0	17.7~27.0	18.3~27.8	19.3~28.4	20.0~30.0

Model		PBS	250R3V	280R3V	320R3V	210R3VT	250R3VT	280R3VT	320R3VT	350R3VT	400R3VT
Refrigerant		/	R32/R410A								
Power Supply		/	220-240V~/50Hz&60Hz			380-415V/3N~/50Hz&60Hz					
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	25.50	28.51	31.69	21.45	25.47	28.52	31.71	35.09	40.25
	COP	W/W	20.26~7.18	20.07~7.06	19.80~7.11	20.21~7.10	20.30~7.17	20.03~7.06	19.86~7.11	20.05~7.07	20.18~7.02
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	17.57	18.79	22.04	14.68	17.53	18.77	22.07	23.75	28.73
	COP	W/W	8.58~5.37	8.55~5.61	8.37~5.25	8.68~5.42	8.53~5.36	8.58~5.60	8.32~5.27	8.25~5.19	8.29~5.11
Operating Air Temperature		°C	-15~43								
Advised Pool Volume		m³	55~90	60~100	65~105	45~75	55~90	60~100	65~105	70~110	75~120
Rated Power Input at 15°C		kW	0.43~3.27	0.53~3.35	0.57~4.20	0.41~2.71	0.43~3.27	0.53~3.35	0.57~4.19	0.65~4.58	0.73~5.62
Fan Motor		/	DC								
Sound Level	at 1m	dB(A)	40.4~50.6	40.8~51.2	41.9~51.8	40.0~50.0	40.4~50.6	40.8~51.2	41.9~51.8	42.3~52.1	42.6~52.4
	at 10m	dB(A)	20.4~30.6	20.8~31.2	21.9~31.8	20.0~30.0	20.4~30.6	20.8~31.2	21.9~31.8	22.3~32.1	22.6~32.4

Note: The data above may be adjusted based on continuous improvement without advanced notice. For the latest specific data, please refer to the nameplate on the unit.



Guard

- Noise Level as low as 34.5 dB(A) at 1 m
- Stable Operation at -10~43°C

COP up to 18

Guard can always maintain high efficiency operation. Under the conditions of air temperature of 27 °C and water temperature of 26 °C, its maximum COP can reach up to 18 and its minimum COP is greater than 6, both of which are higher than conventional ON/OFF pool heat pumps, thus saving users more than 100% in operating costs.



Back Discharge Solution

Guard uses a special air duct design to allow air to be drawn in from both sides of the machine and blown out from the back, avoiding the direct cold air blast from the front that traditional front discharge heat pumps deliver, improving user experience.



Model		PB	70R3V	90R3V	110R3V	130R3V	150R3V	180R3V
Refrigerant		/	R32/R410A					
Power Supply		/	220-240V~/50Hz&60Hz					
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	7.28	9.48	11.53	13.21	15.58	18.31
	COP	W/W	18.10~6.44	18.09~6.68	18.06~6.44	18.06~6.38	17.85~6.41	18.12~6.36
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	5.53	7.44	8.63	9.78	11.53	13.35
	COP	W/W	8.44~5.32	8.60~5.31	8.67~5.39	8.39~5.26	8.48~5.44	8.47~5.40
Operating Air Temperature		°C	-10~43					
Advised Pool Volume		m³	15~30	20~35	25~40	30~50	35~60	40~65
Rated Power Input at 15°C		kW	0.16~1.04	0.20~1.40	0.24~1.60	0.28~1.86	0.33~2.12	0.38~2.47
Fan Motor		/	DC					
Sound Level	at 1m	dB(A)	34.5~44.3	35.1~45.8	36.2~46.5	37.8~47.3	38.4~48.2	39.5~48.8
	at 10m	dB(A)	14.5~24.3	15.1~25.8	16.2~26.5	17.8~27.3	18.4~28.2	19.5~28.8

Model		PB	210R3V	250R3V	280R3V	210R3VT	250R3VT	280R3VT
Refrigerant		/	R32/R410A					
Power Supply		/	220-240V~/50Hz&60Hz			380-415V/3N~/50Hz&60Hz		
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	21.40	25.41	28.51	21.43	25.40	28.50
	COP	W/W	17.59~6.39	18.07~6.52	18.06~6.39	17.63~6.38	17.93~6.55	18.09~6.40
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	14.60	17.52	18.82	14.61	17.51	18.85
	COP	W/W	8.68~5.37	8.33~5.36	8.50~5.62	8.68~5.33	8.36~5.37	8.52~5.63
Operating Air Temperature		°C	-10~43					
Advised Pool Volume		m³	45~75	55~90	60~100	45~75	55~90	60~100
Rated Power Input at 15°C		kW	0.41~2.72	0.45~3.27	0.52~3.35	0.41~2.74	0.45~3.26	0.52~3.35
Fan Motor		/	DC					
Sound Level	at 1m	dB(A)	39.9~50.3	40.4~50.8	40.9~51.6	39.9~50.3	40.4~50.8	40.9~51.6
	at 10m	dB(A)	19.9~30.3	20.4~30.8	20.9~31.6	19.9~30.3	20.4~30.8	20.9~31.6

Note: The data above may be adjusted based on continuous improvement without advanced notice. For the latest specific data, please refer to the nameplate on the unit.



Pioneer

- COP up to 18
- Stable Operation at -10~43°C

Noise Cancelling Technology

Pioneer uses exclusive noise reduction technology to reduce the noise level of the machine during operation. Its noise level at a distance of 1 meter is as low as 34.5 dB(A), which is equivalent to the noise of a household refrigerator, providing users with a quiet and comfortable swimming environment.

Smart Defrosting

Equipped with an exclusive intelligent defrosting function, Pioneer can operate stably under low ambient temperature and high humidity conditions. When frosting occurs, it will automatically determine and implement rapid defrosting, providing users with continuous guarantee for maintaining the constant temperature of the pool.

Model		PF	50R3V	70R3V	90R3V	110R3V	130R3V	150R3V	180R3V	210R3V
Refrigerant		/	R32/R410A							
Power Supply		/	220-240V~/50Hz&60Hz							
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	5.52	7.20	9.45	11.46	13.15	15.52	18.30	21.30
	COP	W/W	18.57~6.42	18.00~6.61	18.09~6.56	18.06~6.40	18.06~6.32	17.70~6.31	18.08~6.33	17.52~6.36
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	3.81	5.50	7.34	8.53	9.66	11.39	13.22	14.50
	COP	W/W	8.64~5.22	8.38~5.29	8.40~5.32	8.58~5.36	8.43~5.19	8.42~5.42	8.45~5.33	8.68~5.23
Operating Air Temperature		°C	-10~43							
Advised Pool Volume		m³	10~20	15~30	20~35	25~40	30~50	35~60	40~65	45~75
Rated Power Input at 15°C		kW	0.11~0.73	0.16~1.04	0.20~1.38	0.24~1.59	0.28~1.86	0.33~2.10	0.38~2.48	0.41~2.77
Fan Motor		/	DC							
Sound Level	at 1m	dB(A)	34.5~43.7	34.8~44.7	35.6~46.3	36.3~47.2	38.0~48.3	38.4~48.8	39.8~49.4	40.5~50.8
	at 10m	dB(A)	14.5~23.7	14.8~24.7	15.6~26.3	16.3~27.2	18.0~28.3	18.4~28.8	19.8~29.4	20.5~30.8

Model		PF	250R3V	280R3V	320R3V	210R3VT	250R3VT	280R3VT	320R3VT	400R3VT
Refrigerant		/	R32/R410A							
Power Supply		/	220-240V~/50Hz&60Hz			380-415V/3N~/50Hz&60Hz				
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	25.29	28.44	31.71	21.32	25.28	28.43	31.73	40.15
	COP	W/W	17.97~6.40	18.03~6.31	18.29~6.28	17.56~6.35	18.07~6.42	17.97~6.33	18.26~6.30	17.76~6.25
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	17.41	18.79	22.02	14.51	17.43	18.80	22.04	28.70
	COP	W/W	8.34~5.21	8.42~5.59	8.19~5.24	8.66~5.20	8.32~5.23	8.46~5.61	8.16~5.26	8.12~5.11
Operating Air Temperature		°C	-10~43							
Advised Pool Volume		m³	55~90	60~100	65~105	45~75	55~90	60~100	65~105	75~120
Rated Power Input at 15°C		kW	0.44~3.34	0.52~3.36	0.58~4.20	0.41~2.79	0.44~3.33	0.52~3.35	0.58~4.19	0.74~5.62
Fan Motor		/	DC							
Sound Level	at 1m	dB(A)	40.8~51.6	41.2~52.1	42.3~52.5	40.5~50.8	40.8~51.6	41.2~52.1	42.3~52.5	43.1~53.8
	at 10m	dB(A)	20.8~31.6	21.2~32.1	22.3~32.5	20.5~30.8	20.8~31.6	21.2~32.1	22.3~32.5	23.1~33.8

Note: The data above may be adjusted based on continuous improvement without advanced notice. For the latest specific data, please refer to the nameplate on the unit.

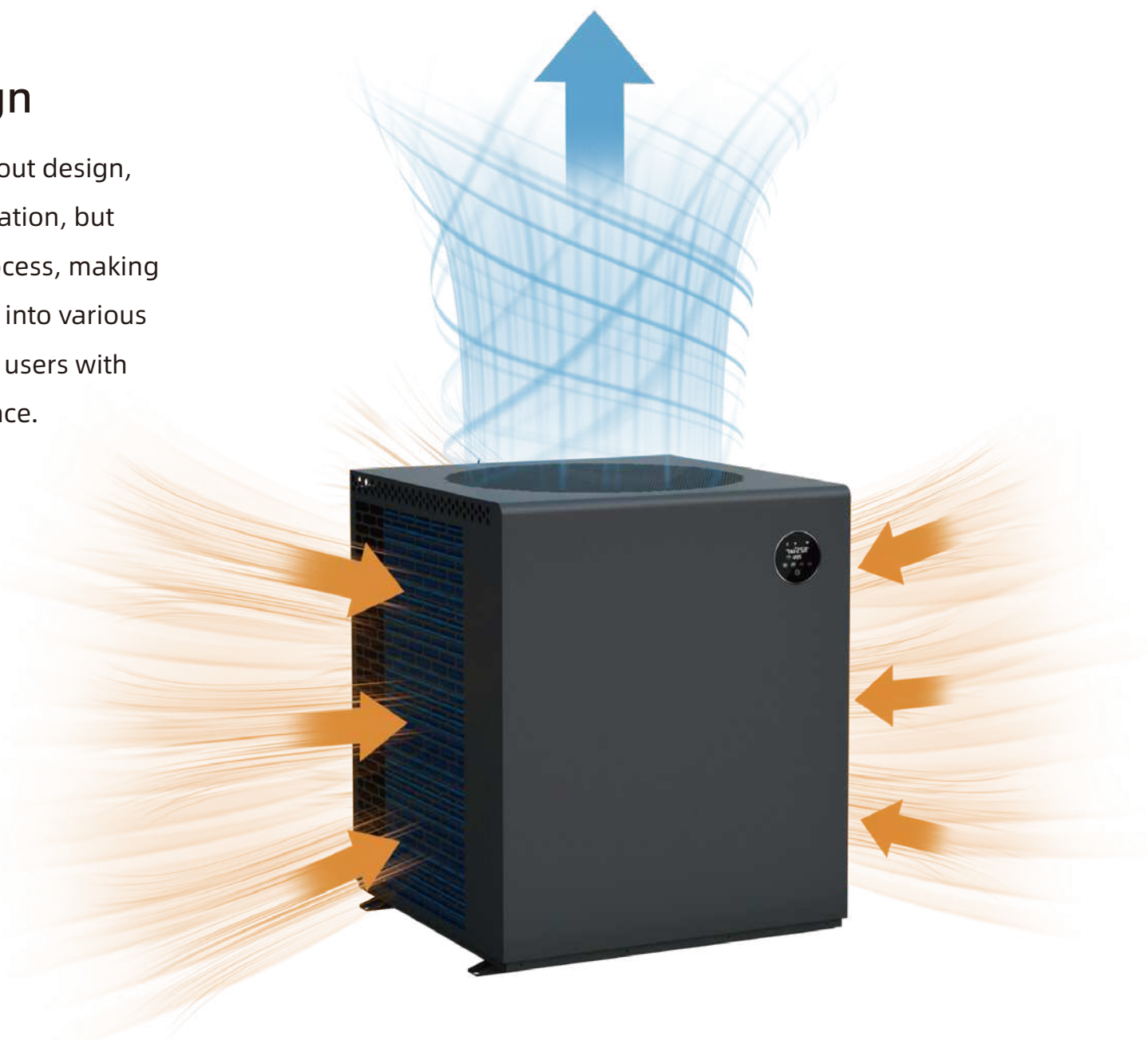
Wave

- Top Discharge
- COP up to 18
- Stable Operation at -10~43°C



Top Discharge Design

Adopting a side-suction and top-out design, Wave not only optimizes air circulation, but also simplifies the installation process, making the equipment easier to integrate into various pool environments and providing users with a convenient installation experience.



Model		PT	110R3V	130R3V	150R3V	180R3V	210R3V	260R3V	300R3V
Refrigerant		/	R32/R410A						
Power Supply		/	220-240V~/50Hz&60Hz						
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	11.10	13.21	15.12	18.05	21.10	26.13	30.32
	COP	W/W	18.00-6.31	18.06-6.35	17.86-6.20	18.12-6.16	17.70-6.37	18.56-6.30	18.30-6.23
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	8.05	9.70	11.12	13.09	14.90	18.11	21.37
	COP	W/W	8.38-5.23	8.67~5.33	8.36~5.15	8.55~5.24	8.61~5.30	8.42~5.14	8.58~5.28
Operating Air Temperature		°C	-10~43						
Advised Pool Volume		m³	25~40	30~50	35~60	40~65	45~75	55~90	60~100
Rated Power Input at 15°C		kW	0.24~1.54	0.27~1.82	0.33~2.16	0.38~2.50	0.41~2.81	0.52~3.52	0.60~4.05
Fan Motor		/	DC						
Sound Level	at 1m	dB(A)	39.4~49.1	40.8~50.4	41.5~51.3	42.1~52.3	43.8~54.1	45.8~55.3	47.3~57.3
	at 10m	dB(A)	19.4~29.1	20.8~30.4	21.5~31.3	22.1~32.3	23.8~34.1	25.8~35.3	27.3~37.3

Model		PT	210R3VT	260R3VT	300R3VT	350R3VT	400R3VT
Refrigerant		/	R32/R410A				
Power Supply		/	380-415V/3N~/50Hz&60Hz				
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	21.14	26.21	30.28	35.24	40.22
	COP	W/W	18.15-6.39	18.59-6.32	18.25-6.27	18.11-6.32	18.02-6.70
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	14.92	18.10	21.38	24.39	27.89
	COP	W/W	8.63~5.31	8.46~5.17	8.57~5.31	8.54~5.25	8.38~5.34
Operating Air Temperature		°C	-10~43				
Advised Pool Volume		m³	45~75	55~90	60~100	70~110	75~120
Rated Power Input at 15°C		kW	0.41~2.81	0.52~3.50	0.60~4.03	0.69~4.65	0.74~5.22
Fan Motor		/	DC				
Sound Level	at 1m	dB(A)	43.8~54.1	45.8~55.3	47.3~57.3	49.1~59.6	51.4~61.0
	at 10m	dB(A)	23.8~34.1	25.8~35.3	27.3~37.3	29.1~39.6	31.4~41.0

Note: The data above may be adjusted based on continuous improvement without advanced notice. For the latest specific data, please refer to the nameplate on the unit.

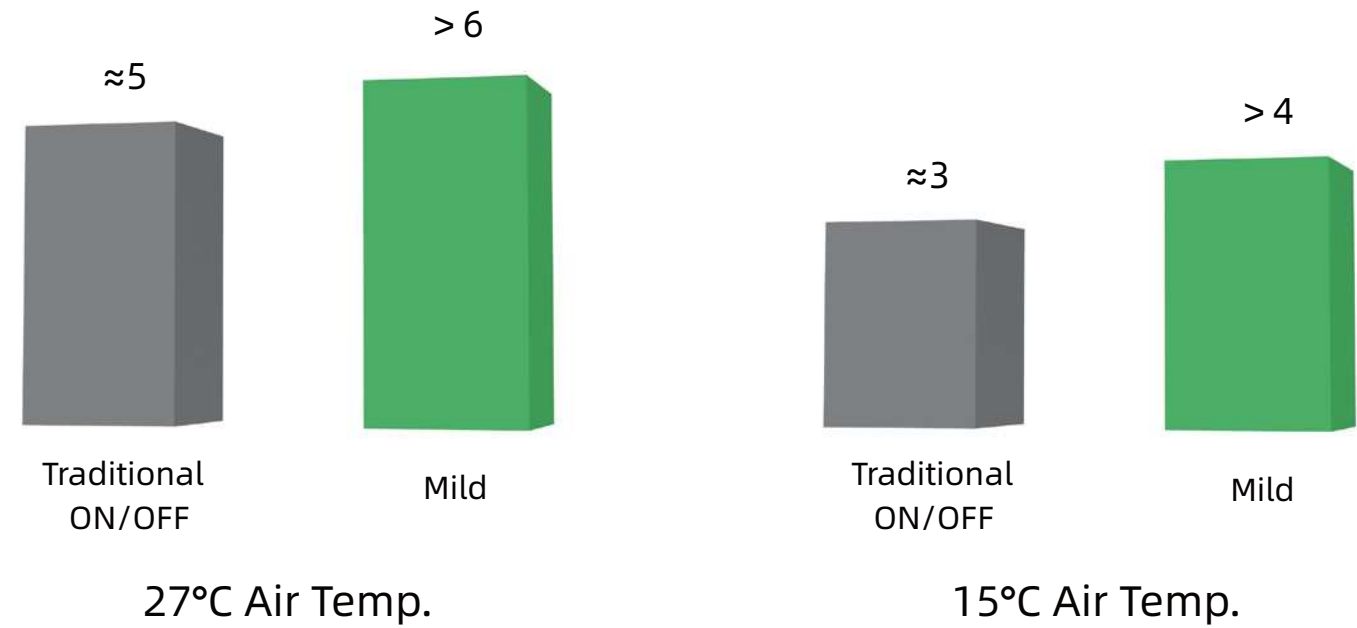
Mild

- Multi-protection Solution
- Stable & Smooth Operation
- Noise Reduction Technology



Showing Better Performance

Compared to traditional ON/OFF pool heat pumps, Mild exhibits higher COP under various operating conditions, such as at ambient temperatures of 27 °C and 15 °C, with a COP 20~30% higher than traditional ON/OFF units, greatly reducing user costs.



Model		PF	60R3	90R3	120R3
Refrigerant		/	R32/R410A		
Power Supply		/	220-240V~/50Hz&60Hz		
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	6.23	9.44	12.43
	Power Input	kW	0.99	1.49	1.95
	COP	W/W	6.29	6.34	6.37
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	4.55	7.03	8.70
	Power Input	kW	0.95	1.46	1.78
	COP	W/W	4.79	4.82	4.89
Operating Air Temperature		°C	-7~43		
Advised Pool Volume		m³	10~25	20~35	25~40
Sound Level	at 1m	dB(A)	47.2	49.4	51.5
	at 10m	dB(A)	27.2	29.4	31.5

Model		PF	140R3	160R3	180R3
Refrigerant		/	R32/R410A		
Power Supply		/	220-240V~/50Hz&60Hz		
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	14.20	16.32	18.25
	Power Input	kW	2.27	2.63	2.99
	COP	W/W	6.26	6.21	6.10
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	10.55	11.24	13.23
	Power Input	kW	2.21	2.38	2.77
	COP	W/W	4.77	4.72	4.78
Operating Air Temperature		°C	-7~43		
Advised Pool Volume		m³	30~50	35~60	40~65
Sound Level	at 1m	dB(A)	53.1	54.0	55.2
	at 10m	dB(A)	33.1	34.0	35.2

Note: The data above may be adjusted based on continuous improvement without advanced notice. For the latest specific data, please refer to the nameplate on the unit.



Ocean

- COP up to 18
- Stable Operation at -20~43℃

Multi-function Protection

Ocean adopts multiple protection functions to ensure that in any operating condition, if an abnormality occurs, the machine can automatically identify and quickly initiate corresponding protective measures to maximize its service life.

Full Inverter Solution

Ocean uses full inverter technology, which can reach the target water temperature faster than traditional inverter and ON/OFF pool heat pumps, and then can maintain a small water temperature fluctuation, reducing waiting time for customers and providing a comfortable swimming experience for users.

Model		PT	600R3VT	1200R3VT	2500R3VT
Refrigerant		/	R32/R410A		
Power Supply		/	380-415V/3N~/50Hz		
Air: 27°C Water: 26°C Humidity: 80%	Heating Capacity	kW	60.8	120.5	250.2
	COP	W/W	18.15~6.44	18.07~6.54	18.09~6.39
Air: 15°C Water: 26°C Humidity: 70%	Heating Capacity	kW	41.3	80.7	182.9
	COP	W/W	8.68~5.10	8.87~5.07	8.41~5.35
Operating Air Temperature		°C	-20~43		
Advised Pool Volume		m³	130~260	250~510	350~760
Rated Power Input at 15°C		kW	1.15~8.10	2.21~15.92	5.02~34.19
Sound Level	at 1m	dB(A)	52~62	54~65	60~71
	at 10m	dB(A)	32~42	34~45	40~51
Water Connection		mm	63	110	110

Note: The data above may be adjusted based on continuous improvement without advanced notice. For the latest specific data, please refer to the nameplate on the unit.