

## SWIMMING POOL AND HOT WATER HEAT PUMP

- ▶ HOT TUB
- ▶ INGROUND & ABOVE GROUND POOL/NFLATABLE
- ▶ POOL/FIBERGLASS
- ▶ VINYL LINER
- ▶ CONCRETE POOL

## About Us .

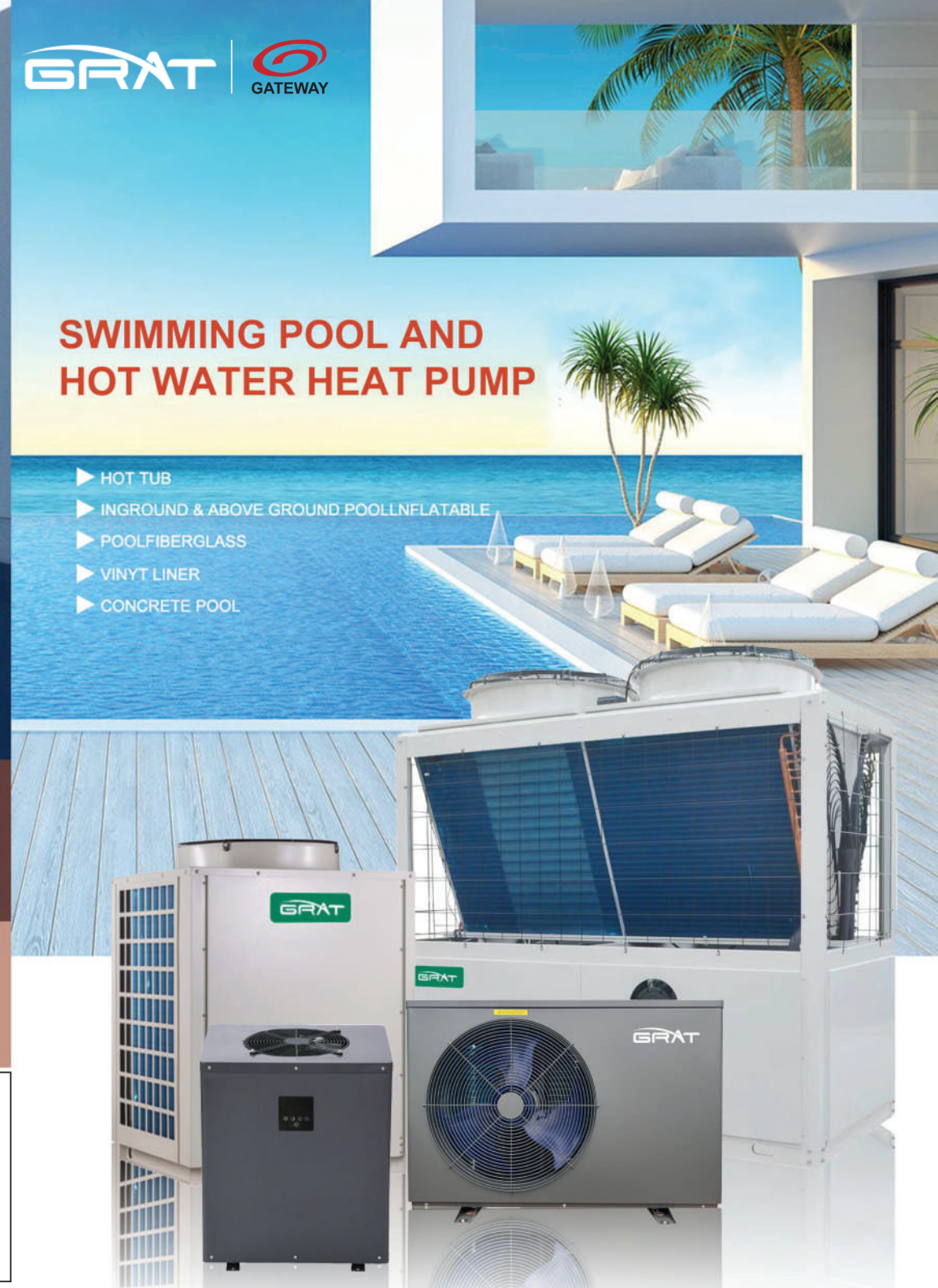
SICHUAN GREAT TECHNOLOGY CO., LTD, is located in Chengdu City, Sichuan of China, and has its owning fabrication base in Foshan City, Guangdong of China. As one pioneer in the Air Source Heat Pump industry, the company has the workshop of more than 30,000 square meters, and professional R&D department which achieved more than 30 patented technologies. As one reliable & professional manufacturer, the company has exported and installed the product over 30 countries worldwide, and enjoy good reputation in both product design, quality, performance & service.

Distributor:



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# Why Choose Our Heat Pumps ?

01.

## Safety

Adopt air source heat pump technology, NO have hidden troubles created by electric heating and combustible gas for heating, separate water and electricity. Safety is the greatest wealth of our life.

02.

## Energy Saving

The air source heat pump will heat through absorbing the free energy from surrounding air, without any waste & pollution emission, high efficiency and energy saving up to 80% compared with the traditional electric heating mode.

03.

## Eco-friendly

Heat comes from air for free of charge, no exhausted gas production, which will reduce CO2 emission and save the liquid gas and electricity source. Protecting the ecological sustainable development.

04.

## Intelligent Control

The air source heat pump can realize automatic control without special maintenance, which save the extra cost of manual maintenance.

05.

## Convenient Installation

The installation of the heat pump is simple and convenient. As long as the air is fully flowing, the heat pump could be located at the site such as external wall, the roof or indoor.

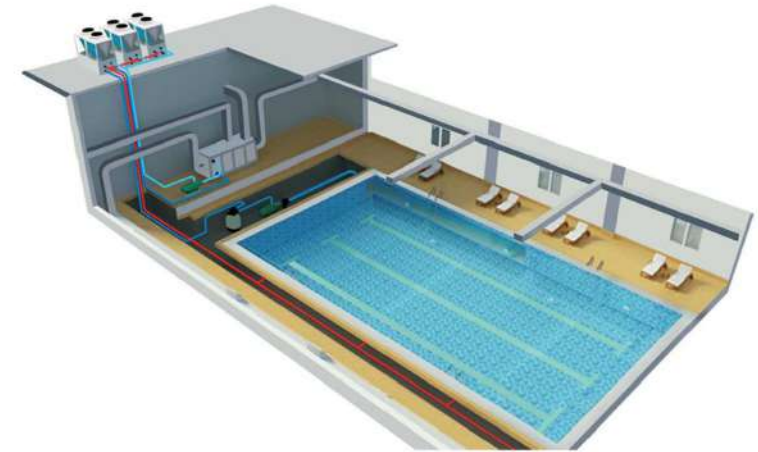
06.

## Comfortable In Usage

24 hour unlimited suitable & comfortable water temperature will be available for your swimming pool, SPA & hot tub, and supply a high quality life.

# Swimming Pool Heating Systems

Our heat pumps are designed for large swimming pools and swimming pool projects, and can meet the temperature control needs of high-demand places such as Olympic-standard swimming pools and resort hotel swimming pools. With advanced technology and excellent performance, our heat pumps perform well in commercial swimming pools of all sizes, ensuring that the swimming pool can maintain the optimal temperature in any season and provide users with a comfortable swimming environment. At the same time, our products are highly efficient and energy-saving, which helps to significantly reduce operating costs and promote green and sustainable development.



## For High Temperature Environments

Optionally Equipped with GRAT Commercial Pool Heat Pump's Dual Special Cooling Protection Technology, Ensuring Smooth Operation in Hot Conditions, Especially Ideal for Summer Use in the High Temperatures of the Middle East.



## Product Features

- ✓ DC INVERTER Technology bring more efficiency performance, suitable for various kinds of conditions
- ✓ 0 pollution, friendly to environment. Equipped with environmental refrigerant R410a / R407c / R22, 0 emission of CO2
- ✓ Energy saving up to 80%, based the technology of air source, low cost in operation
- ✓ Durable and long service life, equipped with PVC & Titanium tube heat exchanger
- ✓ Safety & comfort, 24 hours working, and no any potential danger risk during operation & working
- ✓ Intelligent automatic control without special maintenance, user friendly operation logic
- ✓ Equipped with several intelligent protection function, such as ground protection, leakage protection, high temp. protection etc.
- ✓ Quiet operation, super low noise level
- ✓ Simple & unique design, convenient to move, installation and operation
- ✓ Ideal for above-ground structure pool & mini size pool & SPA, and normal residential pool
- ✓ Built-in WIFI control modular for Smart APP Control, more friendly to the user

## DC Inverter Technology

Adopts international brand and high-efficiency DC inverter compressor and brushless DC motor, which combined with full DC controlling, assures the motor speed and refrigerant flow can be adjusted in real time according to the changes of the environment.

## Sustainable & Eco-friendly Low GWP Refrigerants

Refrigerant	Name	Status	ODP	GWP	More Information
R32	Difluoromethane	Widely used	0	675	Climate-friendly substitute for R-134a and R-410a. Excellent heat transfer and pressure drop performance, both in condensation and vaporisation.
R134a	1,1,1,2-Tetrafluoroethane	Widely used	0	1430	Most used for hydronic heat pumps in Europe and USA
R407c		Widely used	0	1770	A mixture of R-32, R-125, and R-134a
R410a		Widely used	0	2088	Most used in split heat pumps / AC
R290	Propane	Increasing use	0	6.3	Low cost, widely available and efficient.



# APP

### Intelligent Control

You can pre-heat or cool a pool no matter where you are. The controller and the APP are multi-functional and easy to use.

### Low Noise

- Optimizing the noise reduction treatment of compressor starting noise
- Special sound insulation technology

## 24kw - 290kw Commercial DC Inverter Pool Heat Pump

- Utilizes inverter technology for greater energy efficiency
- CB certified for reliable quality
- Cost-effective operation and effortless installation

 High Performance with Inverter Technology

 Qualified with International Standard

 Low Maintenance Widely Application





FOCUS ON MANUFACTURING

## FOCUS ON SMART SWIMMING POOL SYSTEMS

WE STRICTLY CONTROL QUALITY AND PASS MULTIPLE INTERNATIONAL CERTIFICATIONS TO CREATE A COMFORTABLE SWIMMING POOL



## Green Low Carbon Economy

High-efficiency, energy-saving, low-carbon and environmentally friendly, intelligent, user-friendly product research and development orientation, practicing corporate social responsibility.

## Our Service

**Before Sale:**  
Provide consulting and butler services to clients, helping them choose suitable and advantageous high-quality products.

**Sale:**  
Provide customers with a series of marketing support to help them and partners better sell products and expand the market.

**After Sale:**  
Provide customers with a series of technical support to help them better install, maintain, and use products, as well as video teaching.

## AUTHORITATIVE CERTIFICATION

Sound and complete production and product quality system, with CB, CE, TUV, Energy Star and other product certifications



**30+**  
Country / Region



## Project Cases

Our heat pump brandstrives to become a brand loved by customers worldwide. After several years of development, our heat pump products have been sold to more than 30 countries and regions worldwide.

### Project Case 1

*U.S. Embassy in Pakistan, Islamabad. The swimming pool volume in the residence is 600 cubic meters. The ambient temperature is 20-40 degrees in summer and 5-20 degrees in winter. Finally, I chose to purchase 4 GPKFX-120UCII units for use and 2 additional units for backup.*



### Project Case 2

*Dubai Project - The World Islands*

*We provide swimming pool heat pumps for the swimming pools of 12 five-star hotels on the islands*



### Project Case 3

*The upscale fitness center in Riyadh, Saudi Arabia, plans to upgrade its existing traditional swimming pool electric heating system to a heat pump heating system for enhanced energy efficiency, meeting the management's return on investment requirements.*



### Project Case 4

*The project includes an indoor pool area dedicated to providing entertainment and fitness facilities for visitors. By providing efficient heat pump systems, GRAT Energy ensures precise control of pool water temperature and maintenance of air quality, creating a comfortable and pleasant*



### Project Case 5

*Indoor constant temperature swimming pool project*



## What We Can Do For Your Project

We specialize in providing a wide range of consulting services specifically tailored to meet your needs for swimming pool heat pump systems. Our experienced team offers comprehensive assistance in design, supplying pool heat pump equipment, and providing technical guidance throughout the construction process. We pride ourselves on delivering a complete solution, including pool design, post-construction support, efficient equipment installation, performance configuration, project bidding, and pre-design services. With our expertise, you can rest assured that your swimming pool heat pump system will be optimized for maximum efficiency and comfort.



Free Consultation



Project Design



Equipment Supply



Construction & Technical

## Fully automatic production line

Our state-of-the-art factory is equipped with robust production capabilities, enabling efficient and high-quality manufacturing to meet the demands of a diverse range of projects. We pride ourselves on delivering products that adhere to the highest standards.

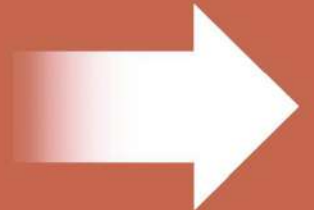


## Goods Sent Out

Complete order and project delivery system and process management, as well as strong execution capabilities, ensure timely delivery as scheduled.



**PRODUCT  
PARAMETERS**





## MINI SWIMMING POOL & SPA HEAT PUMPS

DC inverter compressor & fan Built in flow switch and safety devices WiFi intelligent control cooling and heating Fasy to use controller.

## PRODUCT PARAMETERS

Model		GTHP007VST	GTHP010VST	GTHP015VST	GTHP025VST	GTHP034VST	GTHP050VST
Heating Capacity(A27/W26)	KW	2.45 - 7.00	3.50 - 10.00	5.00 - 15.00	9.00 - 25.00	13.00 - 34.00	17.00 - 50.00
	BTU/h	8,300 - 23,900	11,900 - 34,100	17,000 - 51,200	30,700 - 85,300	44,300 - 116,000	58,000 - 170,600
Input Power (A27/W26)	kW	0.28 - 1.40	0.39 - 2.0	0.5 - 2.63	0.94 - 4.39	1.36 - 6.07	1.8 - 9.1
COP (A27/W26)	W/W	5.0 - 9.0	5.0 - 9.0	5.7 - 9.6	5.7 - 9.5	5.6 - 9.5	5.5 - 9.4
Heating Capacity (A24/W26)	KW	2.45 - 7.00	3.50 - 10.00	4.5 - 14.0	8.0 - 22.0	12.0 - 32.0	15.0 - 45.0
	BTU/h	8,300 - 23,900	11,900 - 34,100	15,350 - 47,700	27,300 - 75,000	41,000 - 109,100	51,200 - 153,500
Input Power (A24/W26)	kW	0.28 - 1.56	0.39 - 2.22	0.5 - 2.69	0.89 - 4.23	1.3 - 6.2	1.7 - 9.0
COP (A24/W26)	W/W	4.5 - 9.0	4.5 - 9.0	5.2 - 9.1	5.2 - 9.0	5.1 - 9.0	5.0 - 8.9
Heating Capacity (A15/W26)	KW	2.28 - 6.5	3.35 - 9.5	4.0 - 12.0	7.5 - 19.0	10.0 - 28.0	12.0 - 39.0
	BTU/h	7,700 - 22,100	11,400 - 32,400	13,600 - 41,000	25,600 - 64,800	34,000 - 95,500	41,000 - 133,000
Input Power (A15/W26)	kW	0.33 - 1.71	0.48 - 2.5	0.5 - 2.67	0.96 - 4.22	1.27 - 6.22	1.6 - 8.9
COP (A15/W26)	W/W	3.8 - 7.0	3.8 - 7.0	4.5 - 7.9	4.5 - 7.8	4.5 - 7.8	4.4 - 7.7
Cooling Capacity(A35/W10)	kW	1.65 - 4.6	2.28 - 6.5	2.5 - 7.0	4.0 - 12.0	6.0 - 17.0	8.0 - 23.0
Input Power (A35/W10)	kW	0.66 - 1.42	0.91 - 2.03	0.82 - 3.04	1.33 - 5.45	2.0 - 7.7	2.6 - 10.4
EER (A35/W10)	W/W	2.5 - 3.2	2.5 - 3.2	2.3 - 3.0	2.2 - 3.0	2.2 - 3.0	2.2 - 3.0
Product Type	/	DC INVERTER, Heating & Cooling Dual Function					
Refrigerant	/	R32 or R410a					
Fan Location	/	Top Discharge, Vertical Type					
Maximum Input Power	KW	2.86	3.74	3.80	6.00	8.00	11.00
Maximum Input Current	A	13.00	17.00	18.00	11.40	15.19	20.89
Power Supply	V/Hz	220V/1Ph/50-60Hz			380V/3Ph/50-60Hz		
Advised Water Flow	m <sup>3</sup> /h	3.01	4.03	5.00	9.00	13.00	18.00
Protection Level	/	IPx4					
Control Panel	/	Equipped, with self protection logic & related protection system					
WiFi Function	/	Available based on specific request					
Noise Level	dB(A)	≅56	≅58	≅55	≅58	≅58	≅65
Pressure Drop	KPa	40.00	40.00	40.00	40.00	40.00	40.00
	PSI	5.80	5.80	5.80	5.80	5.80	5.80
Ambient Temp. Range	°C	-10~53	-10~53	-10~53	-10~53	-10~53	-10~53
	°F	14~113	14~113	14~113	14~113	14~113	14~113
Water Connection	/	DN40	DN40	DN40	DN40	DN40	DN63
Overall dimensions	mm	530*540*690	530*540*690	710*710*830	750*750*1050	750*750*1050	1480*760*1050
Unit weight	KG	52.00	62.00	80.00	120.00	130.00	240.00

### Remarks

Above technical specifications may be modified based on continuous improvement without prior notice, please refer to the final data on the USER MANUAL / NAMEPLATE.



## RESIDENTIAL & COMMERCIAL POOL HEAT PUMPS

With EVI (Enhanced Vapor Injection) compressor technology and high-efficiency eco-friendly refrigerant, GRAT EVI cold climate heat pumps can generally work at as low as -25°C and supply heating in cold areas.

## PRODUCT PARAMETERS

Model		GTHP160VCSA32	GTHP210VCSA32
Advised Pool Volume	m <sup>3</sup>	40-70	50-95
	U.S. Gallon	10,566-18,492	13,208 -25,096
<b>Performance Data at Ambient Temp. 27°C (80.6°F), Water Inlet 26°C (78.8°F) /Outlet 28°C (82.4°F), Relative Humidity 80%</b>			
Heating Capacity	KW	3.56-15.48	4.68-21.15
	BTU	12,147-52,819	15,968-72,166
Power Consumption	KW	0.22-2.5	0.29-3.38
	C.O.P.	16.18-6.2	16.13-6.25
<b>Performance Data at Ambient Temp. 15°C (59°F), Water Inlet 26°C (78.8°F) /Outlet 28°C (82.4°F), Relative Humidity 70%</b>			
Heating Capacity	KW	2.75-11.32	3.61-14.34
	BTU	9,383-38,624	12,317-48,928
Power Consumption	KW	0.33-2.13	0.42-2.78
	C.O.P.	8.33-5.31	8.59-5.15
<b>Performance Data at Ambient Temp. 35°C (95°F), Water Inlet 28°C (82.4°F) /Outlet 26°C (78.8°F)</b>			
Cooling Capacity	KW	3.41-8.10	4.4-10.13
	KW	0.43-1.65	0.57-2.08
Power Consumption	KW	0.43-1.65	0.57-2.08
	E.E.R.	7.91-4.85	7.75-4.86
<b>General Data</b>			
Product Type	/	DC INVERTER, Heating & Cooling Dual Function	
Voltage	/	220-240V/1Ph/50-60Hz	
Compressor	/	Mitsubishi or similar brand, INVERTER type	
Compressor Type	/	Rotary	
Refrigerant	/	R32 or R410a	
Fan Type	/	INVERTER type	
Fan Location	/	Side Discharge, Horizontal	
Cover Material	/	Galvanized metal	
Water Side Heat Exchanger	/	PVC Titanium tube heat exchanger	
Protection Level	/	IPx4	
Control Panel	/	Equipped	
WiFi Function	/	Available based on specific request	
Max. Input Power	KW	3.2	4.29
Max. Current	A	14.5	17.6
Applicable Temp. Range of Ambient	°C	-10~53	
Applicable Water Inlet Temp. Range	Heating Mode	10 - 40°C ( 50 - 104°F)	
	Cooling Mode	7 - 30 °C (44.6 - 86°F)	
	Auto Mode	9 - 40 °C (48.2 - 104°F)	
Advised Water Flow	m <sup>3</sup> /h	6.5	9.1
	U.S. GPM	28.62	40.06
Water Pressure Drop	KPa	18	35
	PSI	2.61	5.08
Connection Size	/	50mm (1-1/2")	
Noise Level (1m)	dB(A)	38.5-49	41-51
<b>Package Data</b>			
Product Dimension	mm	986*420*650	1098*447*958
	inch	38.82*16.54*25.59	43.23*17.6*37.72
Product Packing Size	mm	1026*460*690	1138*487*998
	inch	40.39*18.11*27.17	44.8*19.17*39.29
Net Weight	KG	52	75
	lbs	114.64	165.35
Gross Weight	KG	64	87
	lbs	141.1	191.8

Remarks:

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Waterproof control panel



Water inlet and outlet



Simple side fuselage



Large wind wing





## INVERTER COMMERCIAL SWIMMING POOL HEAT PUMP

Experience a transformative leap in pool comfort with our comprehensive Air-Source Heat Pump System. Designed to ensure unwavering temperature control and cooling for pools, water parks, and thermal spas year-round. Elevate your visitors' comfort and delight while significantly slashing operational costs for your enterprise.

## PRODUCT PARAMETERS

Model		GTHP075VST	GTHP150VST	GTHP245VST	GTHP290VST
Heating Capacity(A27/W26)	kW	24.00 - 75.00	45.00 - 150.00	75.00 - 245.00	90.00 - 290.00
	BTU/h	81,900 - 255,900	153,500 - 511,800	255,900 - 835,900	307,000 - 989,400
Input Power (A27/W26)	kW	2.55 - 13.88	4.8-27.7	8.1 - 46.2	9.78 - 55.7
COP (A27/W26)	WW	5.4 - 9.4	5.4 - 9.4	5.3 - 9.3	5.2 - 9.2
Heating Capacity (A24/W26)	kW	21.00 - 65.00	39.00 - 126.00	63.00 - 210.00	76.00 - 250.00
	BTU/h	71,600 - 221,800	133,000 - 430,000	215,000 - 716,500	259,000 - 853,000
Input Power (A24/W26)	kW	2.39 - 13.0	4.4 - 25.2	7.2 - 43.75	8.8 - 52.08
COP (A24/W26)	WW	5.0 - 8.8	5.0 - 8.8	4.8 - 8.7	4.8 - 8.6
Heating Capacity (A15/W26)	kW	17.5 - 56.0	31.0 - 102.0	53.00 - 165.00	60.00 - 195.00
	BTU/h	59,700 - 191,000	105,700 - 348,000	180,800 - 563,000	204,700 - 665,300
Input Power (A15/W26)	kW	2.3 - 12.7	4.0 - 23.1	6.88 - 39.2	8.0 - 46.4
COP (A15/W26)	WW	4.4 - 7.8	4.4 0 7.8	4.2 - 7.7	4.2 - 7.5
Cooling Capacity(A35/W10)	kW	9.0 - 30.0	18.0 - 60.0	30.0 - 100.0	35.0 - 120.0
Input Power (A35/W10)	kW	3.2 - 14.3	6.4 - 28.6	11.1 - 47.5	12.9 - 57.1
EER (A35/W10)	WW	2.1 - 2.8	2.1 - 2.8	2.1 - 2.7	2.1 - 2.7
Product Type	/	DC INVERTER, Heating & Cooling Dual Function			
Refrigerant	/	R32 or R410a			
Fan Location	/	Top Discharge, Vertical Type			
Maximum Input Power	KW	16.00	32.00	55.00	65.00
Maximum Input Current	A	30.39	60.78	104.46	123.45
Power Supply	V/Hz	380V/3Ph/50-60Hz			
Advised Water Flow	m³/h	27.00	54.00	90.00	108.00
Protection Level	/	IPx4			
Control Panel	/	Equipped, with self protection logic & related protection system			
WiFi Function	/	Available based on specific request			
Noise Level	dB(A)	≤65	≤75	≤86	≤86
Pressure Drop	KPa	40.00	40.00	40.00	40.00
	PSI	5.80	5.80	5.80	5.80
Ambient Temp. Range	°C	-10~53	-10~53	-10~53	-10~53
	°F	14~113	14~113	14~113	14~113
Water Connection	/	DN63	DN63	DN63	DN63
Overall dimensions	mm	1500*900*1530	2250*1100*2000	1400*1200*2300	2400*1200*2300
Unit weight	KG	350.00	550.00	800.00	850.00

Remarks  
Above technical specifications may be modified based on continuous improvement without prior notice, please refer to the final data on the USER MANUAL / NAMEPLATE.



## Features

- **Cascade Variable Frequency Compression Technology**

This innovative technology ensures a stable heat source on the high-pressure side, enhancing overall operational stability to meet the demand for high-temperature hot water. By providing consistent heat to the high-pressure side, it optimizes the system's performance.

- **Ultra-Low Temperature Operation at -7°C**

Operating at an ultra-low temperature of -7°C eliminates the need for electric auxiliary heating. This system maintains stability with a consistent heating capacity of approximately 56 kilowatts even at low temperatures, without any significant performance degradation.

- **Smart Defrost Technology**

Featuring fully automatic intelligent control, this technology actively adjusts frequency under abnormal conditions, ensuring rapid defrosting while minimizing frequent starts and stops for improved efficiency.

- **V-Shaped Structure and High-Quality Components**

This system is equipped with a high-quality variable frequency compressor, V-shaped heat exchange fins, and a high-efficiency plate heat exchanger. These components collectively deliver exceptional performance and facilitate efficient heat exchange.





## COMMERCIAL HOT WATER HEAT PUMP SYSTEMS

This commercial heat pump water heater is the best solution for hot water supply of commercial project, and can work with advantages of high safety, stability, much convenience, energy saving, and environment friendly, which assures 24 hours comfortable hot water supplying. It is widely used in hot water project of school, hotel, hospital, super market and other large building, which needs large water volume supply.

## PRODUCT PARAMETERS

MODEL		GTHP-010HCII	GTHP-018HCII	GTHP-023HCII	GTHP-036HCII	GTHP-045HCII	GTHP-070HCII	GTHP-090HCII
Heating mode		Circulating	Circulating	Circulating	Circulating	Circulating	Circulating	Circulating
Ambient temp. range	℃	-10~53	-10~53	-10~53	-10~53	-10~53	-10~53	-10~53
Rated heating capacity	KW	10	18	23	36	45	70	90
COP	W/W	4.17	4.3	4	4.2	4.2	4.1	4.1
Rated power input	KW	2.4	4.2	5.75	8.57	10.7	17	21.9
Max. running current	A	17	14	16	24.8	30	45	58
Power supply	/	220V 1N-50Hz	380v 3N-50Hz	380v 3N-50Hz	380v 3N-50Hz	380v 3N-50Hz	380v 3N-50Hz	380v 3N-50Hz
IP code	/	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4
Safety function	/	High and low pressure protection, Overload protection, Temperature protection Power phase sequence protection, etc.						
Refrigerant type/weight	-/kg	R32	R32	R32	R32	R32	R32	R32
Compressor QTY	PCS	1	1	1	2	2	2	2
Compressor type	/	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Max. temp. outlet water	℃	60	60	60	60	60	60	60
Water side heat exchanger type	/	Casing/high efficiency tank		High efficiency tank	Casing	Casing	High efficiency tank	High efficiency tank
Air side heat exchanger type	/	Finned heat exchanger						
Circulating waterpipe nozzle	inch	G3/4" Internal thread	G1" Internal thread	G1.2" Internal thread	G1.5" Internal thread	G1.5" Internal thread	DN100	DN100
Outlet nozzle	inch	G3/4" Internal thread	G1" Internal thread	G1.2" Internal thread	G1.5" Internal thread	G1.5" Internal thread	DN100	DN100
Circulating water flow	inch	1.72	3.1	3.95	6.2	7.74	12.04	15.48
Fan motor QTY	PCS	1	1	1	2	2	2	2
Noise	dB(A)	56	56	57	59	65	69	72
Machine dimension (W×D×H)	mm	750×690×870	750×690×1070	830×793×1084	1500×690×1070	1500×690×1270	2100×1100×2000	2100×1100×2000
Packing dimension (W×D×H)	mm	840×780×1020	840×780×1220	920×885×1240	1590×780×1220	1590×780×1420	2190×1190×2150	2190×1190×2150
Net weight	kg	110	130	150	290	350	700	800
Gross weight	kg	130	150	170	330	390	750	860
20GP	PCS	42	21	12	10	10	4	4
40GP	PCS	84	42	26	22	22	10	10
40HQ	PCS	84	84	52	44	44	10	10

Remarks:  
 1. Test conditions: (DB/WB) 20°C/15°C, inlet water temperature 15°C, outlet water temperature 55°C.  
 2. Due to product improvement, above data are subject to change without prior notice, please take the rating plate as standard.  
 3. The heat pump system is suitable for city water that meets the national standard. If use groundwater, well water, etc., it must be treated to reach the national standard tap water quality before use. If the water quality is poor, install a filter and water processor.