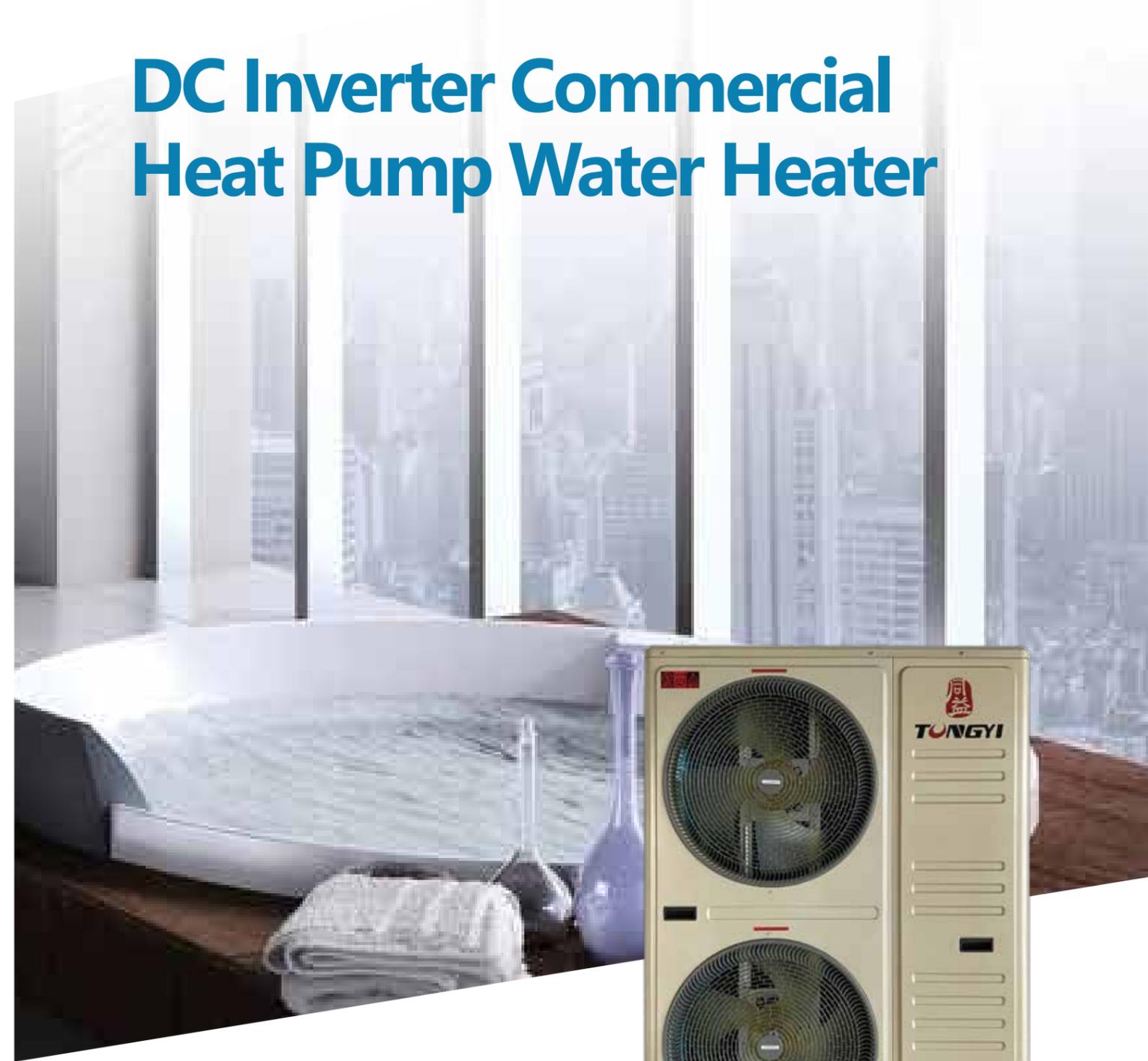


Global quality standard, Worldwide partnership



DC Inverter Commercial Heat Pump Water Heater



Facebook



Twitter



Instagram

Guangdong Tongyi Heat Pump Science and Technoloy Co., Ltd

Head office: 20/F, South Tower, No.159 Middle Qiaozhong Road, Liwan District, Guangzhou

Factory office: No.2, Chuangye South Road, Songxia Indus-park, Nanhai, Foshan

Tel.: 020-81419999

Website: www.tongyiheatpump.com

E-mail: info@tongyiheatpump.com

The contents are for reference only, may contain errors, and subject to change without prior notice. Please refer to the name plates and the manuals of the products for updated information. TY202304



WE KNOW MORE ABOUT OUR CUSTOMERS' NEEDS

20+

LEADING THE INDUSTRY FOR
MORE THAN 20 YEARS

100+

MORE THAN 100 LEADING
TECHNOLOGIES

1000000+

USERS EXCEED ONE MILLION

ROOTED IN THE INDUSTRY FOR MORE THAN 20 YEARS,
SERVING MORE THAN 1 MILLION FAMILIES

FOR MORE THAN 20 YEARS, WE HAVE BEEN SPECIALIZED
IN DEVELOPING HEAT PUMP TECHNOLOGY TO PROVIDE
MORE SUITABLE SOLUTIONS TO USERS' NEEDS



Established in 1999, Guangdong Tongyi Heat Pump Science and Technology Corp. is one of the first and most professional heat pump manufacturers in China. Tongyi is committed to being a reliable partner, establishing the highest quality standards to ensure product and safety. Tongyi products are always at the forefront of energy efficiency.

For over 20 years of development, Tongyi has gained a high reputation in quality and reliability. Tongyi has one of the most stringent control mechanisms in place for its manufacturing processes and product quality. It has successfully obtained most of the world well known certificates, including CE, EMC, RoHS, LVD, EMD, RED, ERP, IEC, ETL, SASO, CCC, ETC for its products and ISO9001, ISO14001, ISO45001 approvals for the production management.

We value your feedback. We continuously strive to meet the highest standards to satisfy our client's demands. Through rigorous monitoring and relentless after-sales service, customer feedback is collected and swiftly incorporated into our products. Tongyi is always looking to simplify processes putting customers in the center to improve our units and after-sales service.

Guangdong Tongyi Heat Pump Science and Technology Co., Ltd

1999
Established and launched products in this year.

2000
Successfully developed high efficiency heat pump air conditioner.

2001
ISO 9001 certified for the first time.

2002
Products are CE CB certified and exported to Europe.

2003
Honored the title of Trusted Quality Products Enterprise.

2004
Promote air source heat pump water heater in domestic market.

2005
Denominated the name of "Air Source Heat Pump Water Heater" in Chinese "Kong Qi Neng" Water Heater in China, and recognized by the industry.

2006
Start to provide heat pump training course twice per year for the industry.

2007
Joined in the National Standard of Heat Pump Water Heater Drafting Committee.

2008
Recognized as high-tech enterprises by the government.

2009
Inverter Heat Pump for Radiant heating and cooling supplied in Japan market.

2010
Obtained deflector-type heat dissipation device patent and triple-function heat pump patent.

2011
Successfully developed wrap-around aluminum microchannel heat exchanger and introduced the technology to production.

2012
Qualified for the rebate program of Energy-saving Products launched by the government.

2013
Launched clean production plan.

2014
Awarded Excellent quality brand enterprise.

2015
New series of DC inverter heat pump made great success in both domestic and overseas market.

2016
Participated in Beijing coal-to-electricity project, replace coal boiler with TONGYI heat pump for suburb house heating.

2017
Established Tongyi Air Source Heat Pump Research Institute.

2018
Launched new DC EVI heat pump for domestic house heating and cooling in MCE Milan.

2019
Served the hot water project of Daxing international airport (Asian top airport)

2020
Launched new DC EVI heat pump for commercial heating and cooling.

2021
Moved to new headquarters in Guangzhou.



China Certificate for Energy Conservation Product



ISO45001:2007 Occupational Health and Safety Management



ISO14000:2004 Environmental Management System Certification Certificate



ISO9001:2008 Certificate of Quality Management System



Drafting enterprise for National Standard of Heat Pump Water Heater



ETL



CE



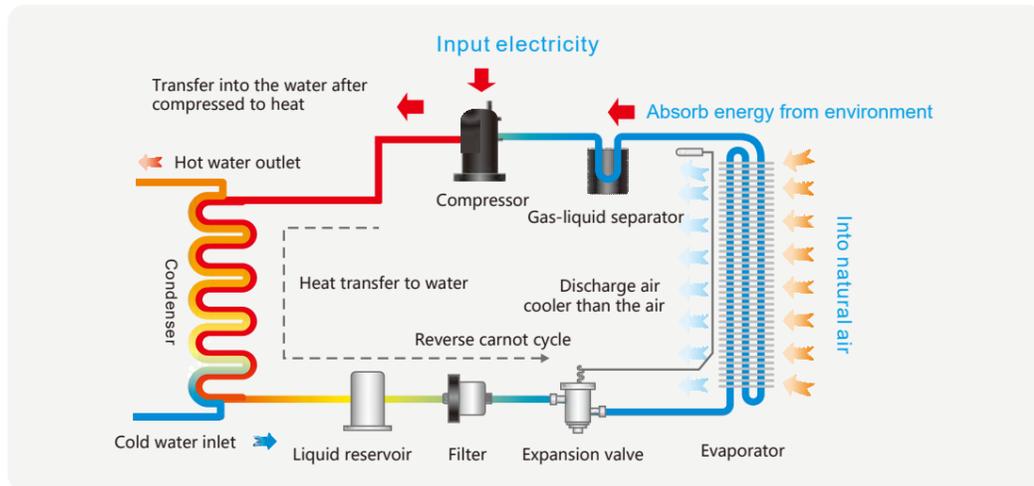
CE

- ISO45001:2007 Occupational Health and Safety Management System Certification Certificate

- ISO14000:2004 Environmental Management System Certification Certificate

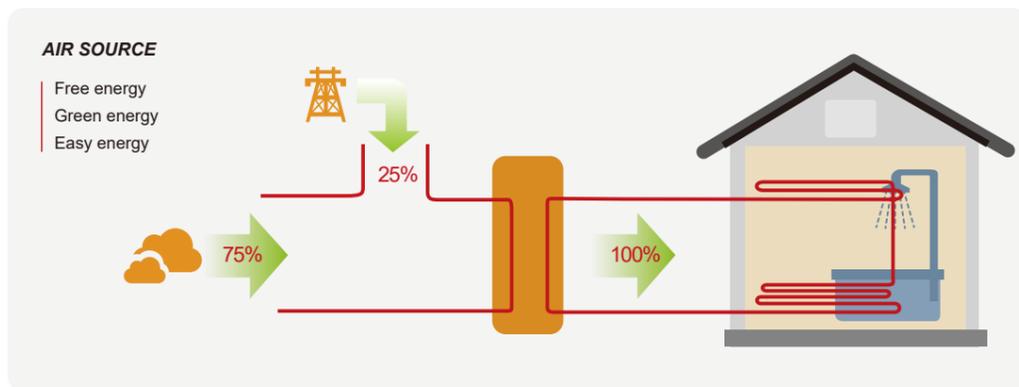
- ISO9001:2008 Certificate of Quality Management System

- Enterprise supported by The National Innovation Fund

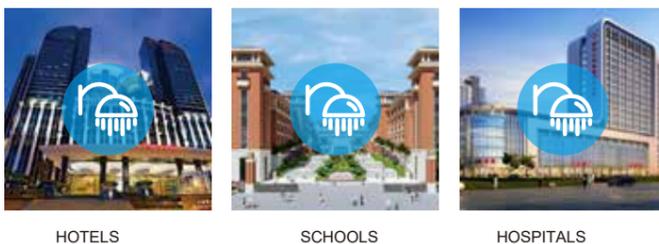


ENERGY EFFICIENT APPLICATION

TONGYI Heat Pump offers the best solution for home heating and hot water supply with TY's inverter technology. It is 4 times more energy efficient than boiler system by absorbing energy from the outdoor environment.



VARIOUS APPLICATION



ASHP VS other heating methods

Heating Methods	Tongyi ASHP	Oil/Gas hot water boiler	Electrical water heater
Type of energy consumption	Electricity	Oil/Gas	Electricity
Safety Risk	Low	High	Middle
Environmental impact	Non-pollution	Heavily polluted	Non-pollution
Estimated product lifetime	10-12 Years	5-8 Years	5-8 years
Installation site	NO limits	Special room	Special room
floor space	Small	Large	Middle
Safety performance	Safe and reliable	Flammable, explosive goods	Heating pipe aging, leakage
Noise Level	Low	High	Low
Failure Detection Way	Automatic	2-3 technician	1 electrician
Labor costs	Without specific person	2-3 people labor	1 people labor
Other cost	No	Annual examine and approve cost	Annual examine cost

Under same condition, Daily hot water demand 1000L, Heating water from 15°C to 55°C, comparison for running cost

The specific heat of water (Kcal/Kg.°C)				1
heat value(Kcal)=specific heat of water (kcal/(kg.°C)) × daily water requirement(kg) ×water temp difference(°C)				40000
Heating Methods	Tongyi heat pump	Electrical water heater	liquid gas water heater	Oil water heater
Fuel	Electricity	Electricity	Liquid gas	Gas
Combustion value	860	860	8667	8700
Unit	Kcal/h	Kcal/h	Kcal/(m3.h)	Kcal/(Kg.h)
Efficiency(%)	380	95	80	75
Demand for energy	12.2	49	5.8	5.2
Unit	Degree	Degree	m³	Kg
Fuel price (\$)	0.15	0.15	1.09	1.20
Amount fuel cost (\$)	1.82	7.32	6.28	6.25
Running cost (\$/Year)	666.8	2667.2	2294.3	2284.9

Notes: The price on the form as per market price at the time, the energy consumption of other types of heat source as per national standard of energy efficiency, specific data might be a gap. Please refer to the local condition.



Master of Core Technology

TONGYI is one of the first and most professional heat pump manufacturers in China. We are in cooperation with 3 top universities in China on various HVAC research topics.

Parts & Components Inspection

We monitor our entire supply chain for all the main parts and accessories strictly. 100% of the parts and components undergo rigorous incoming inspection at our factory.



Professional Design Procedure

From the beginning of product development, a wide range of details are taken into account: easy installation, user friendliness, cutting-edge design, high functionality, full-scale tests, and the use of more than 56 different technologies. Always aiming to provide our customers with highest standard products.

Process Control

In our production line we strictly control all processes. From the first step until the units are packed and ready to ship. Through relentless monitoring, we record all processes and developments to ensure the products are reliable and in conformity with product-specifications.



Professional R&D Team

Cooperating with several top universities in China, Tongyi attracts young talents every year and has established a government-recognized R&D Center with a team of highly-qualified engineers.

Finished-Product Inspection

We implement 100% inspection on the finished products before shipping. We implement an additional double sample inspection for all units shipped to the overseas market.



Product Features

DC inverter product configuration features

Side discharge cabinet structure

Side air duct, avoiding the limitation of top installation space, thin body, small footprint .

Large diameter high precision throttle valve

It adopts large-diameter electronic expansion valve + 500 - level high- precision and precise adjustment, which has stronger adaptability and effectively improves system performance and stability .

Evaporation side heat exchange components(Fan + heat exchanger)

The double wind wheel side exit structure design, the wind field is uniform , and the heat exchange efficiency is high ; the exclusive hydrophilic surface fins for heating, the defrosting and drainage are more favorable, and the defrosting is fast .



Refrigerant cooling inverter

Using refrigerant to dissipate heat from the inverter module, even in hot summer, the inverter module still works well

DC inverter compressor

Double rotor structure design, domestic famous brand , 25~100 % adjustable capacity range .

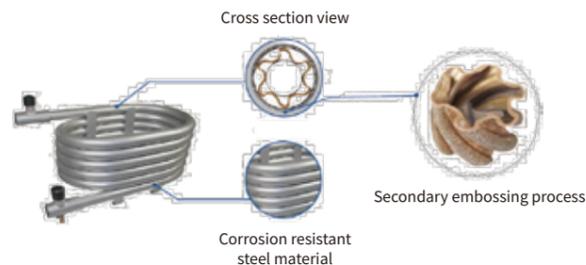
High Efficiency Water Side Heat Exchanger

Casing heat exchanger, multi-head spiral tube structure design , high heat exchange efficiency, strong frost resistance , dirt resistance, blocking resistance and other advantages .

DC inverter product configuration features

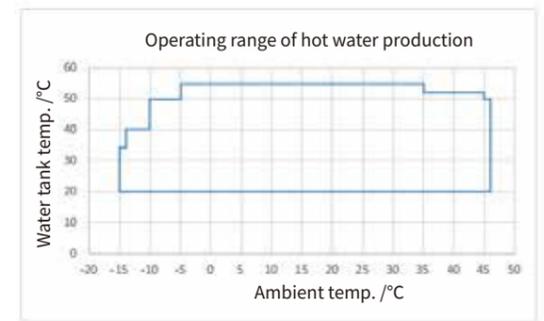
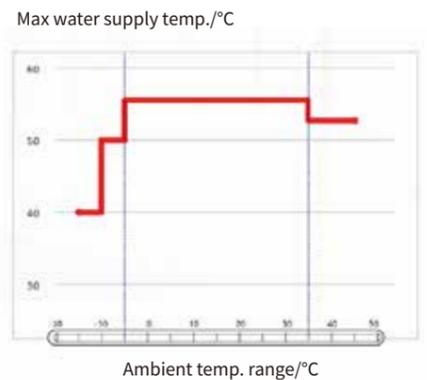
The special rotary compressor for heat pump operates in a wide range of ambient temperature -15~46°C , and can maintain strong heating capacity in harsh environments , and has the characteristics of long life, low noise, and power saving .

Adopt high-efficiency coaxial casing heat exchanger , with coaxial multi-head and secondary embossing process, improve heat exchange efficiency, and have the advantages of strong heat exchange capacity, small water resistance, not easy to scale , not easy to freeze crack ;



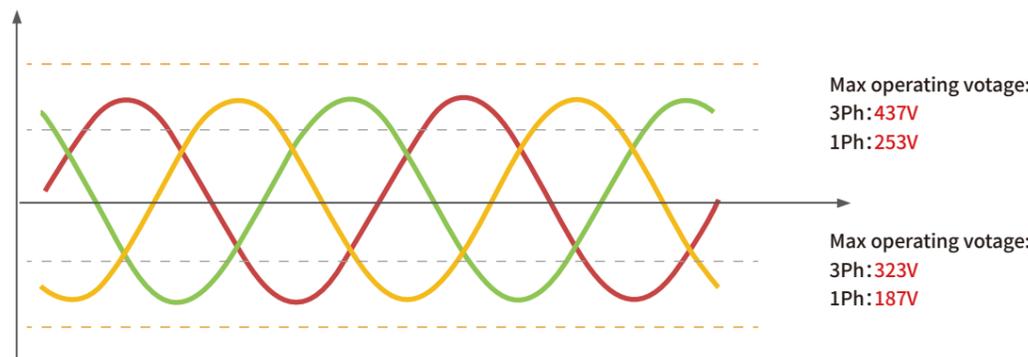
Wide operating range

It can run stably at an ambient temperature of -15 ~46 °C , and can still achieve a water supply temperature of up to 55 °C at an ambient temperature of -5 °C ; it exceeds the operating range of the conventional unit and realizes the function of making hot water throughout the year .



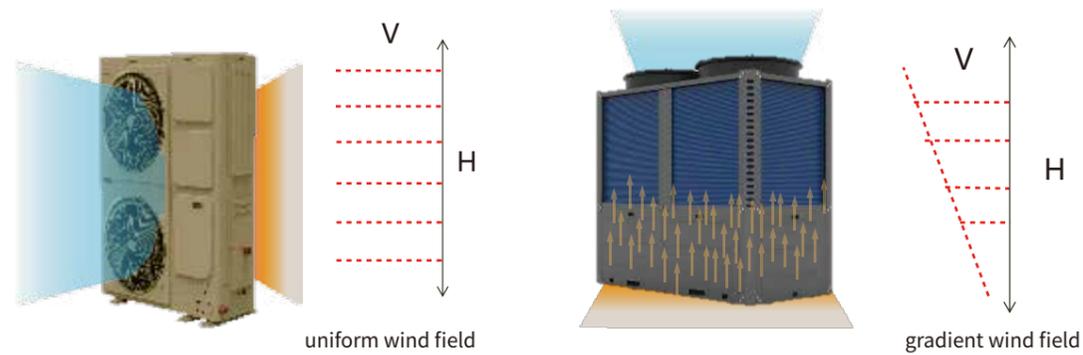
DC inverter drive, good adaptability of power supply

DC inverter module can adapt to the fluctuation of the electricity voltage, can operate normally under the voltage fluctuation intensity of ±15% of the electricity grids, and can also adapt to the 50/60HZ power supply specification



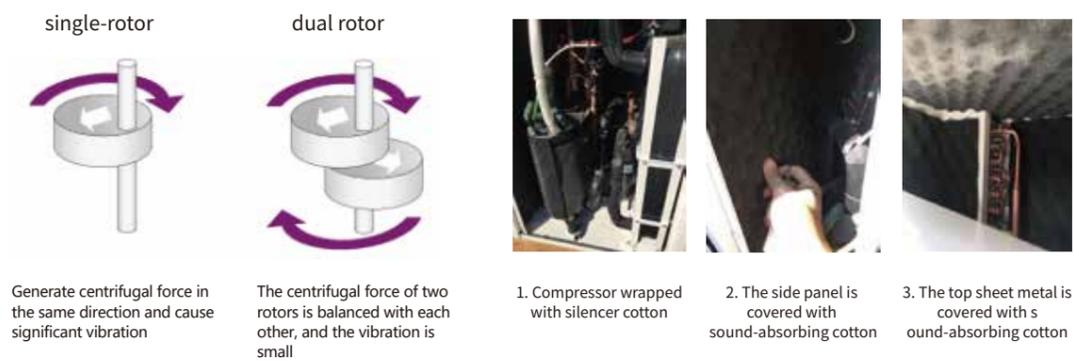
Improvement of heat exchange efficiency

Compared with the top-outlet structure, the wind field of the heat exchanger has a stepped type, and the side air outlet basically does not have this phenomenon, and the wind field is relatively Uniform and high heat exchange efficiency.



Noise reduction in normal heating operation

Compared with the water heater equipped with the original scroll compressor, the noise of the DC variable frequency rotor water heater is lower, and the noise can be reduced by 8~10db(A) compared with the original model.



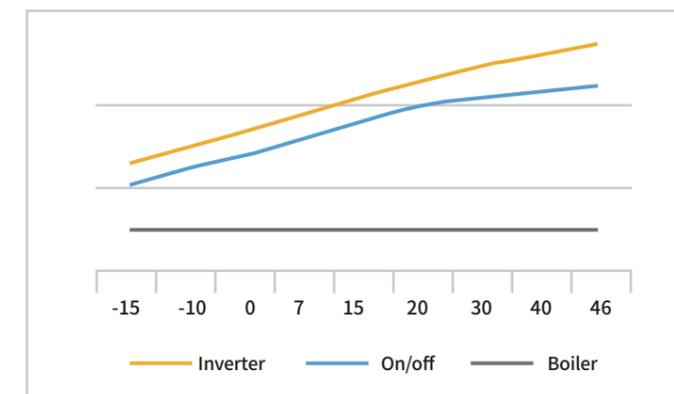
Ultra thin design, saving space

Modular design, compact single module structure, with Effectively reduce installation space and transportation costs.

	old	new	Reduced footprint
11Kw water heater			0.55 m ² → 0.43 m ² 20% reduction
21Kw water heater			0.71 m ² → 0.43 m ² 25% reduction
38Kw water heater			1.08 m ² → 0.48 m ² 50% reduction

COP Trends at Different Environmental Temperatures

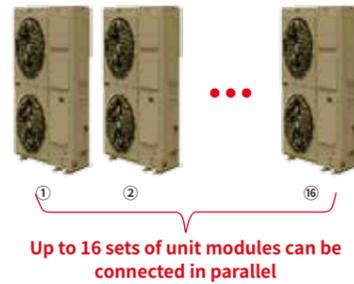
DC inverter heat pump is more efficient than on/off heat pump, can save energy and save electricity.



Product Features

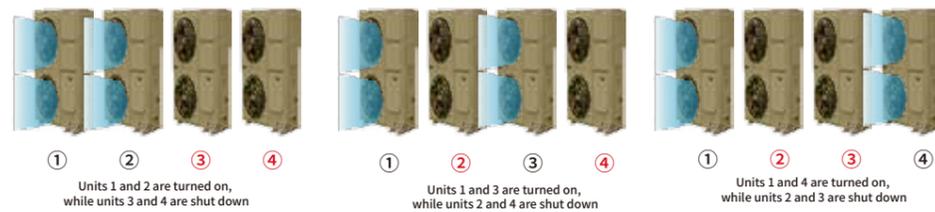
Module parallel technology

Supports up to 16 water heater modules of the same model in parallel, controlled by one wire controller



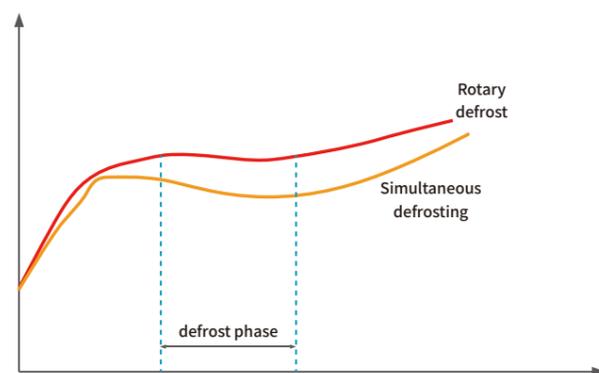
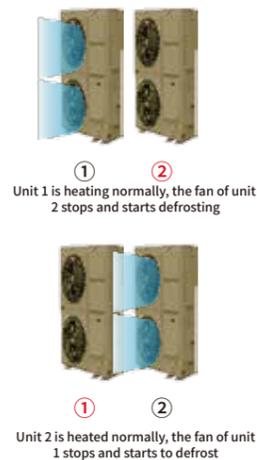
Rotation operation technology

Rotational operation - In the parallel system under the same controller , intelligently balance the running time between the units and the compressors, run in turn, avoid excessive operation, and greatly extend the service life of the unit ;



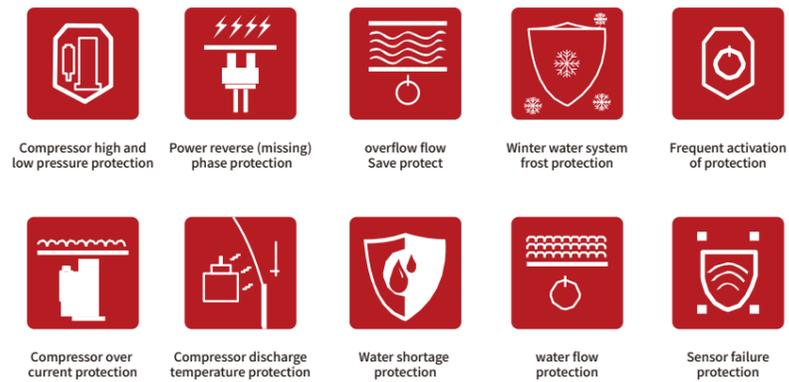
Rotational defrosting technology

Rotational defrosting - Control the number of defrosting units in the parallel system , defrosting in batches and stages, avoiding excessive fluctuation of water temperature under defrosting, and improving comfort



Multiple protection

The unit has its own high and low voltage switch, antifreeze protection device, overload protection device, power phase sequence protection device, etc., and is equipped with an operation control device, which automatically alarms in real time when an abnormality occurs to escort the system and ensure safe operation.



IOT

The unit can send data to the cloud in real time after connecting to the smart connected module. Users can log in to the cloud platform to realize remote monitoring and control, and enjoy cloud intelligent management .



It can monitor the operation mode, supply and return water temperature, start-stop status, defrost status, etc. in real time, and can automatically generate historical data.

Remotely control the start and stop of the unit, water temperature setting, and mode setting, making the equipment more efficient and energy-saving during

Fault identification and push to the after-sales management platform .

System login log , fault log management ; Including project information entry and management of address and

Product Specification

DC inverter commercial heat pump



Unit Type	unit	KX100 EPA-V	KX200 SEPA-V	KX300 SEPA-V	KX400 SEPA-V
Nominal heating capacity	kW	11	21	30	38
Nominal input power	kW	2.53	4.87	6.89	8.72
COP	W/W	4.34	4.31	4.35	4.36
Rated current	A	11.70	8.00	12.30	14.68
maximum input power	kW	3.86	7.50	12.50	13.5
Maximum input current	A	19	13	22	23
Nominal water production	m3/h	0.236	0.451	0.644	0.886
circulating water flow	m3/h	1.89	3.61	5.16	6.54
Rated water resistance	kPa	32	58	60	65
Temperature setting range	°C	Default 50, 20~55 adjustable			
environment operating range	°C	(-15~46)			
Power Specifications	/	220V~50Hz	380V 3N~50Hz	380V 3N~50Hz	380V 3N~50Hz
Refrigerant/Charge	g	R410A/970	R410A/1600	R410A/3000	R410A/3000
Number of refrigeration systems	indivual	1			
Compressor Specifications	/	Inverter Rotary Compressor			
Number of compressors	tower	1			
waterproof level	/	IPX4			
Type of protection against electric shock	/	Class I			
Inlet and outlet size	/	DN25 external teeth		DN32 external teeth	
	mm	1038*410*835		1118*425*1556	
net weight	kg	79	95	152	152
noise	dB(A)	49~58	52~60	53~62	54~63
Maximum number of parallel connections	tower	16	16	16	16
Wired controller	/	XKQ-86A	XKQ-86A	XKQ-86A	XKQ-86A

Remarks: 1. Nominal working conditions: outdoor dry/wet bulb temperature 20/15°C, initial/stop water temperature 15/55°C
2. Executive standard: GB/T 21362-2008 GB29541-2013

EVI DC inverter commercial heat pump (optional)



Model		KX300S DEPA-V	KX400S DEPA-V
Rated heating capacity	kW	30	38
Rated input power	kW	6.89	8.72
COP	W/W	4.35	4.36
Nominal heating capacity	kW	22.5	28.5
Nominal input power	kW	5.84	7.46
COP	W/W	3.85	3.82
Temperature setting range	°C	Default 50, 20~55 adjustable	Default 50, 20~55 adjustable
Environment operating range	°C	-25~46	-25~46
Power supply	/	380V/3N~50Hz	380V/3N~50Hz
Refrigerant/Charge	g	R410A/3000	R410A/3000
Inlet and outlet size	/	DN32 external teeth	DN32 external teeth
Dimensions (W*D*H)	mm	1118*425*1556	1118*425*1556
Net weight	kg	152	152
Noise	dB(A)	53~62	54~63
Maximum number of parallel connections	Unit	16	16

Remarks: 1. Rated working conditions: outdoor dry/wet bulb temperature 20/15°C, initial/stop water temperature 15/55°C
2. Nominal working conditions: outdoor dry/wet bulb temperature 7/6°C, initial/stop water temperature 9/55°C;
3. Executive standard: GB/T 21362-2008 GB29541-2013

DAXING INTERNATIONAL AIRPORT



- Category: Hot water-Transportation
- Model: TONGYI EVI Commercial Air source HP
- Description: supply of hot water for aircraft maintenance. Also supply hot water for China southern airline VIP bathroom. Providing hot water in low ambient temperature.

BEIJING OLIMPYC STADIUM



- Category: Hot water-stadium
- Selected model:TONGYI EVI Commercial air source heat pump
- Description:TONGYI Commercial heat pump water heater, supply hot water for restroom in bird nest stadium.

SAIC MOTOR FACTORY



- Category: Hot water- Factory
- Selected model:TONGYI EVI Commercial air source heat pump water heater
- Description:TONGYI Commercial EVI heat pump water heater, supply hot water for staffs



Shangri-La



Hilton



Le Meridien



Marriott



Four Season



Double Tree



Mercure



NARADA



Holiday Inn



Langham



Novotel



Conrad



Guizhou Astronomical Telescope Project



ZOOMLION



SOFITEL



Taj Mahal hotel



Unilever



Alibaba



Bulgari



Westin



Shenzhen Universiade



Hangzhou Asia Games



St Regis



Pullman



To help achieve the carbon neutrality with the heat pump technology

From 1999 up to now, the contribution of Tongyi HeatPump to the energy conservation and CO2 emissionreduction, is equal to growing **100 million** trees for the society!

750,000tons

Saved coal consumption
more than 750,000tons

3.2 million kilograms

Reduced nitrideemissions
more than3.2 million kilograms!

3 billion kilograms

Reduced carbon dioxide emissions
more than 3 billion kilograms!

12.5 million kilograms

Reduced sulfur dioxide emissions
more than 12.5 million kilograms!

