

Global quality standard, Worldwide partnership



EVI DC Inverter Heat Pump Heating/Cooling Domestic Hot Water



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Guangdong Tongyi Heat Pump Science and Technology Corp.

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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. TY202305



Contents

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 SPECIALIZE IN DEVELOPING
HEAT PUMP TECHNOLOGY TO PROVIDE OPTIMAL
SOLUTIONS TO FULFIL OUR USER'S NEEDS.

Guangdong Tongyi Heat Pump Science and Technology Corp.

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Tongyi's new Guangzhou Headquarters Since 2021



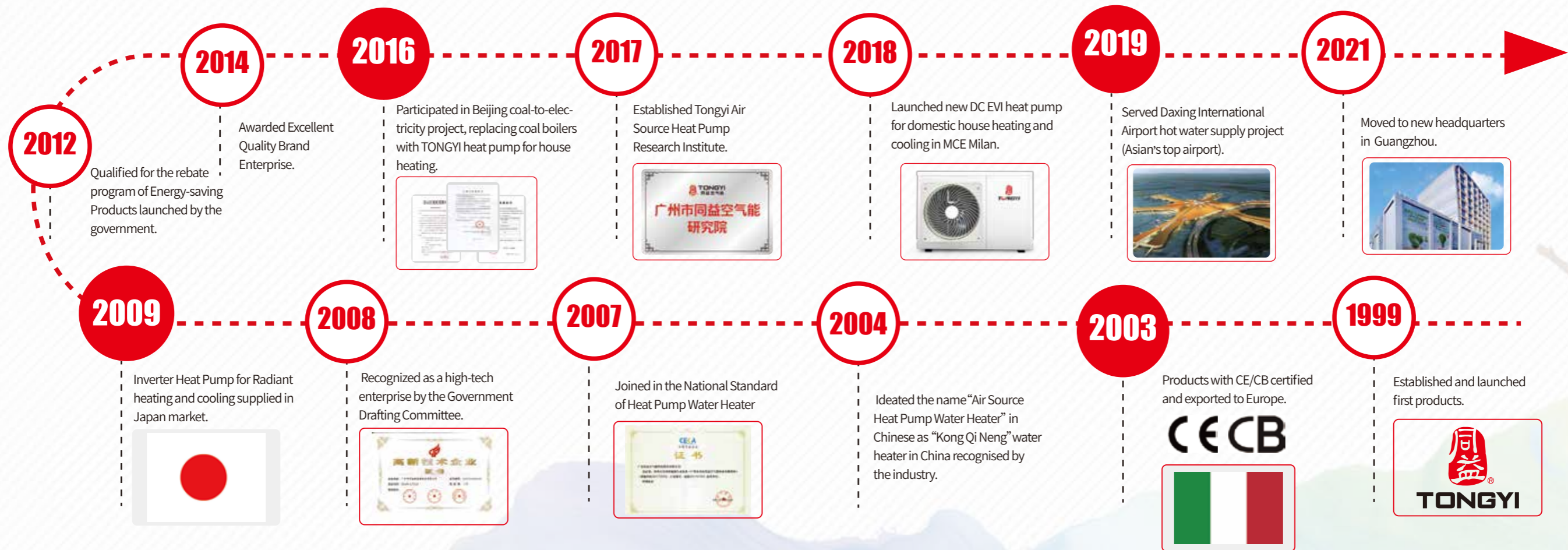
About TONGYI

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 optimization 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, LVD, EMC, RED, RoHS, ERP, IEC, CCC, UKCA and SG Ready. Our products are also on the BAFA list in Germany and the ISDE list in the Netherlands. Additionally, we hold ISO9001, ISO14001, and ISO45001 approvals for our 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.

Milestones



Market Overview

 Regional Spare Parts Center

Country
China
Germany
Poland



Professional R&D Team



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.

Quality Control

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.



Qualification & Certificates



TÜV CERTIFICATE of Conformity Low Voltage Directive
 TÜV CERTIFICATE of Conformity Electromagnetic Compatibility
 TÜV CERTIFICATE of Conformity Radio Equipment
 TÜV CERTIFICATE Restriction of Hazardous Substances Test Report



SG Ready Label for SMARTGRID-COMPATIBLE Heat Pumps
 ISO45001:2018 Occupational Health and Safety Management
 ISO14000:2004 Environmental Management System Certification Certificate
 ISO9001:2015 Certificate of Quality Management System

Above List or Certification are for Specific Models

BAFA

German customers can now adhere to government subsidies when acquiring a Tongyi Heat Pump. As an experienced heat pump manufacturer, Tongyi provides high-quality and efficient units, BAFA listed, under the air-to-water heat pump list.



Bundesamt für Wirtschaft und Ausfuhrkontrolle

ISDE

Customers in the Netherlands also can adhere to government subsidies when acquiring a Tongyi Heat Pump. As an experienced heat pump manufacturer, Tongyi provides ISDE listed, eco-friendly units.



Rijksdienst voor Ondernemend Nederland

Smart Grid Ready

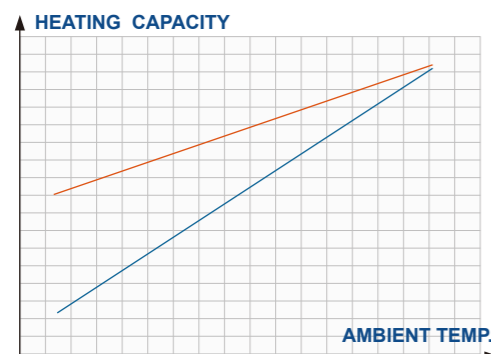
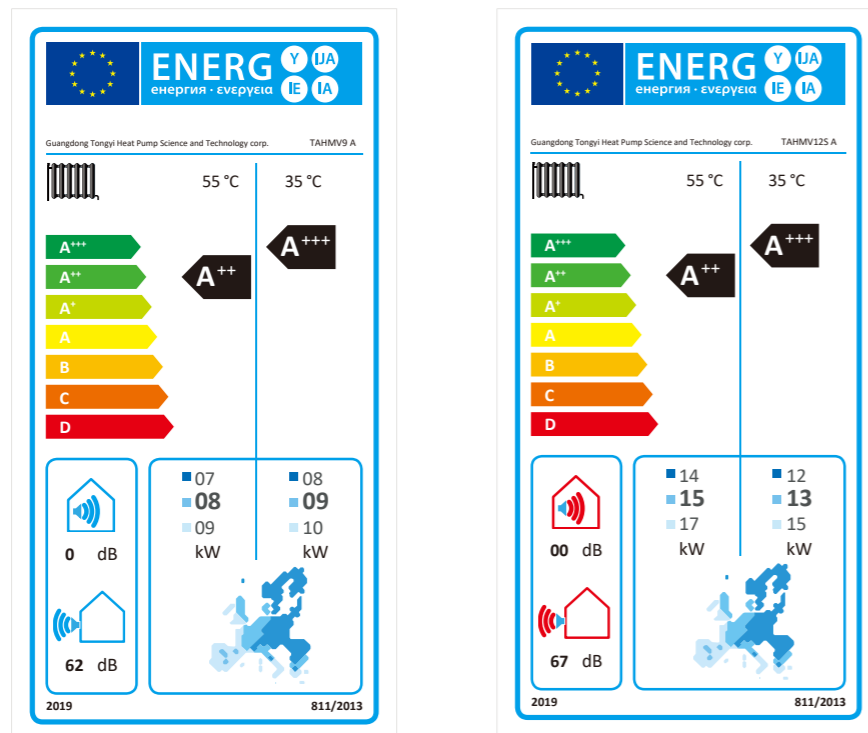
Smart Grid Ready (SG Ready) certifies that the heat pump unit can work smartly according to a defined interface for load management to serve the grid. TONGYI HEAT PUMP is ready and designed for this purpose.



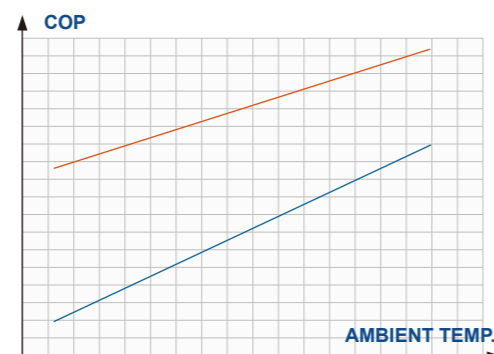
Above Functions are for Specific Models
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A+++ Energy Label

TONGYI HEAT PUMP has always adhered to the goal of energy saving. The highest energy efficiency level of TONGYI HEAT PUMP can reach the EU Energy Efficiency A+++ Level, which ensures that users can get a better experience at a lower cost.



— TONGYI EVI heat pump
— Traditional Inverter Hp



— TONGYI EVI heat pump
— Traditional Inverter Hp

IoT Technology

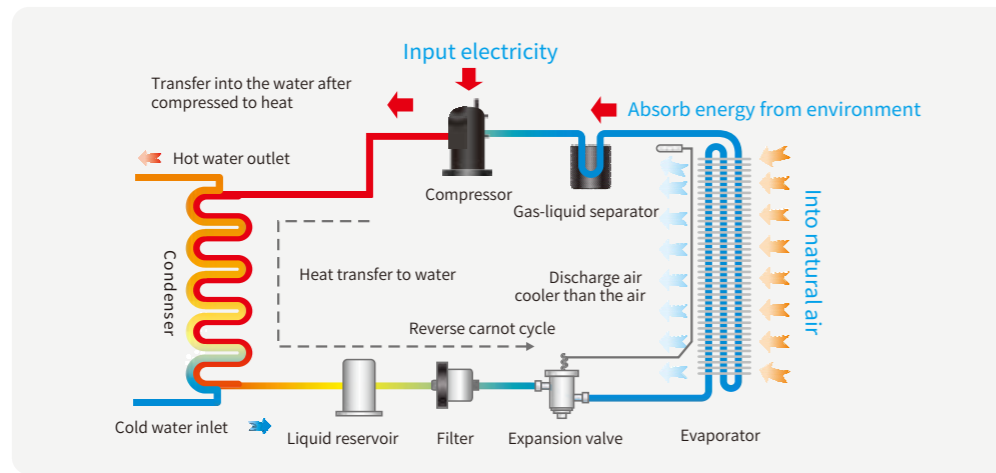
With IoT Technology the heat pump status remotely can be monitored. When a failure occurs, it is possible to check and control remotely the unit's information, providing with immediate support to our customers.

With OTA (update over air) Technology, if there is any error happening on the software, we can provide a remote service by updating the software online. When the software has a new version that upgrades its functions, as long as you grant us with access, we can update the software remotely.



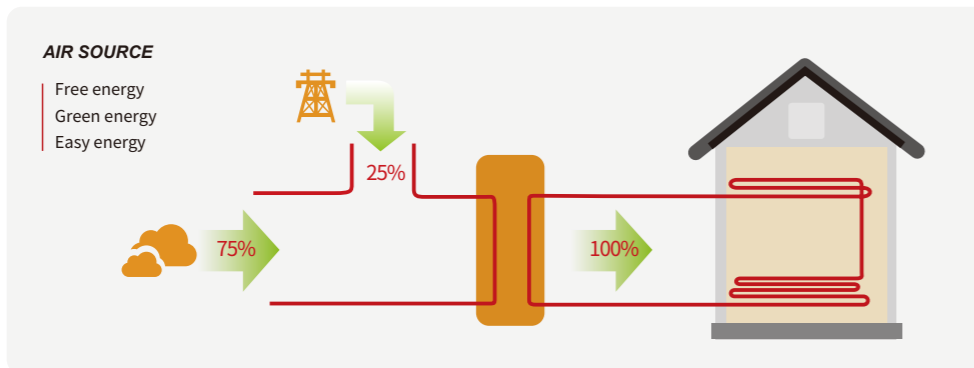
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Working Principle

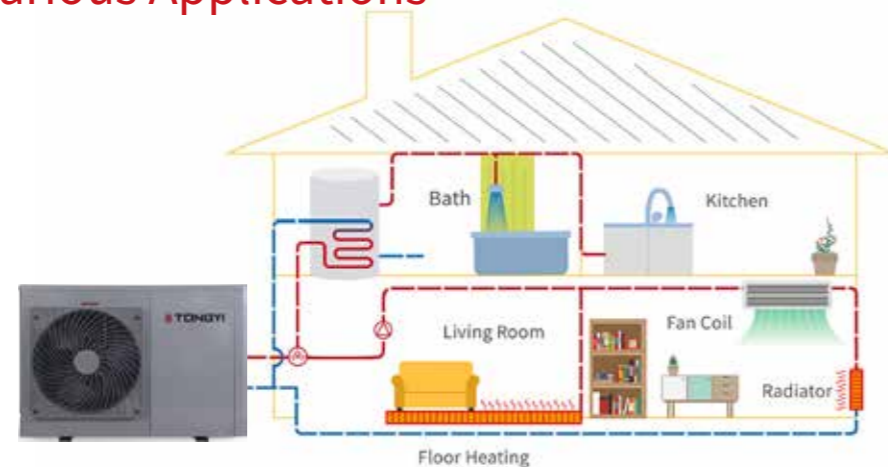


Energy Efficient Application

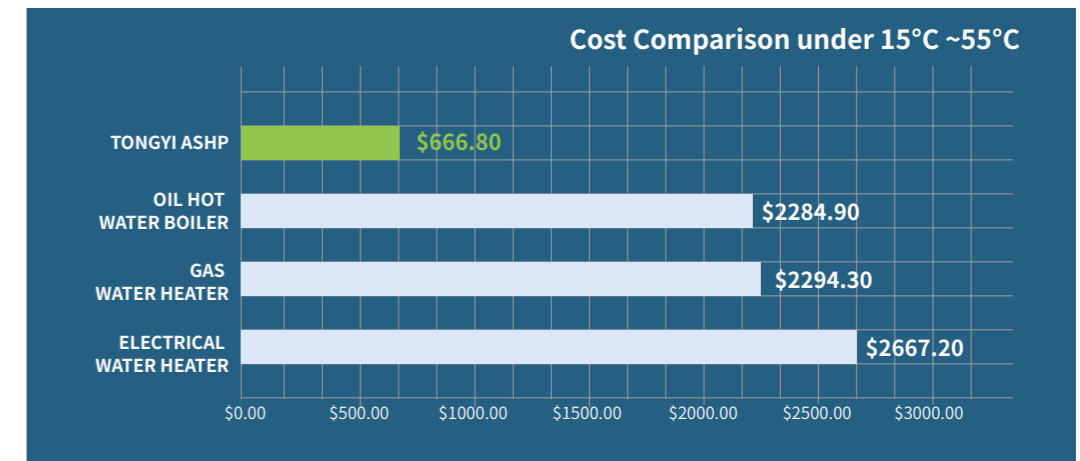
TONGYI HEAT PUMP offers the best solution for home heating and hot water supply with Tongyi's inverter technology. It is 4 times more energy-efficient than a boiler system by absorbing energy from the outdoor environment.



Various Applications



Energy Saving Comparison



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

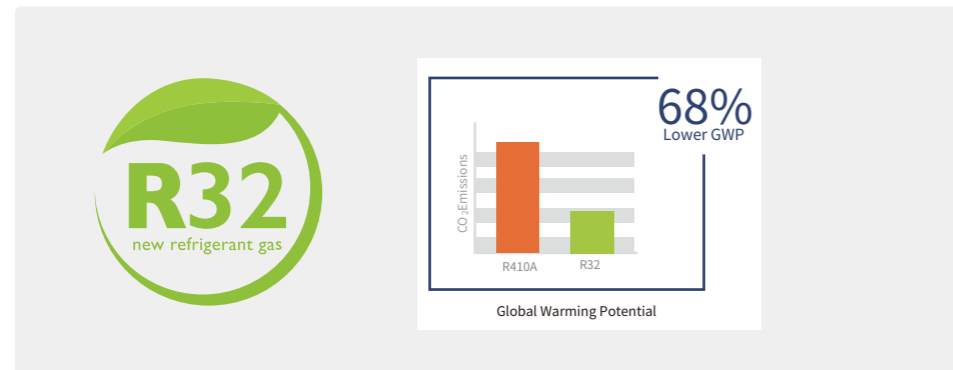
Under same condition, Daily hot water demand 1000L, Heating water from 15°C to 55°C, comparison for running cost

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	Kw/h	Kw/h	m ³	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.

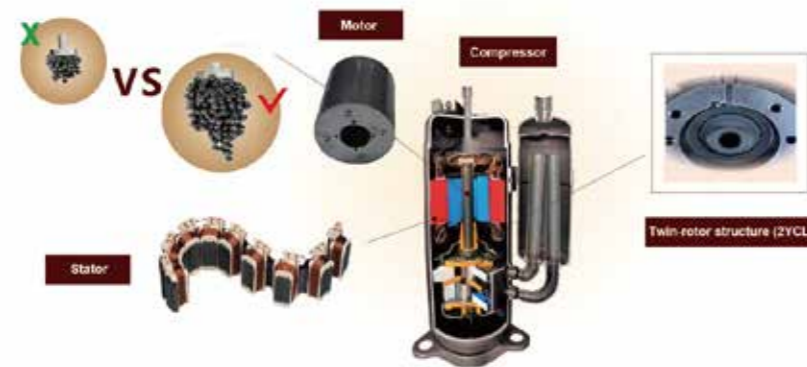
Product Technology

R32 Refrigerant



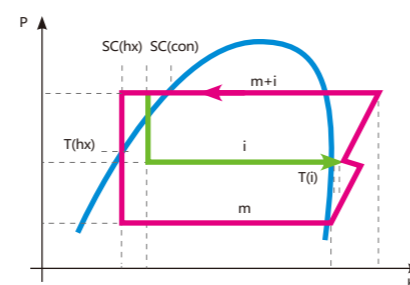
Twin Rotary

Twin rotary DC inverter compressor consumes 30% less power than traditional scroll compressors whilst also giving a wider operating frequency range, enabling precise control and reducing running noise levels.



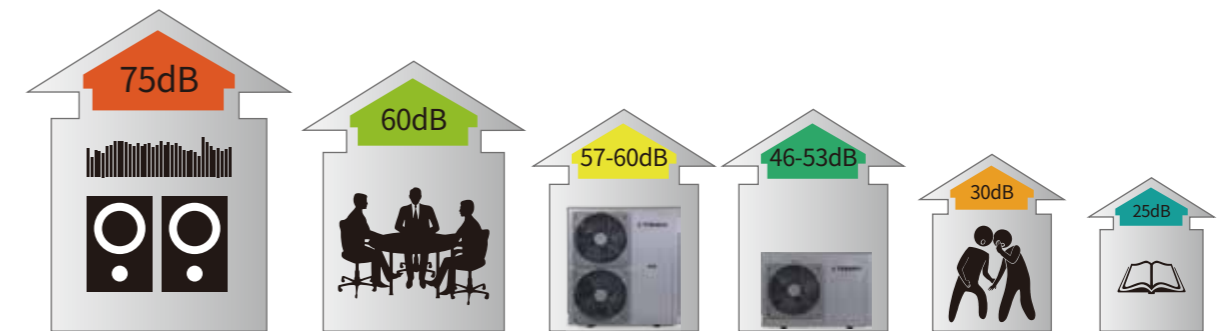
DC Inverter EVI Technology

DC Inverter EVI Technology can effectively reduce power consumption and improve the heating capacity of heat pump units to ensure stable performance even at ambient temperatures as low as -25°C.



Noise Control

1 meter away from the unit



Seven Processes for Silence Design

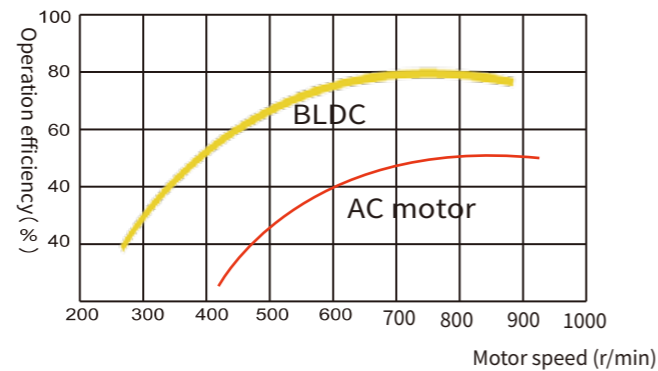


BLDC Motor Fan, Effectively Reduce The Wind Noise

The rotor is made of permanent magnets and the stator of high density pure copper coils are concentrated and wound together to keep low noise and efficient operation. Stepless adjustment can be carried out according to the changes of system operation. The system operates efficiently under different loads, with the system efficiency up to 85%.

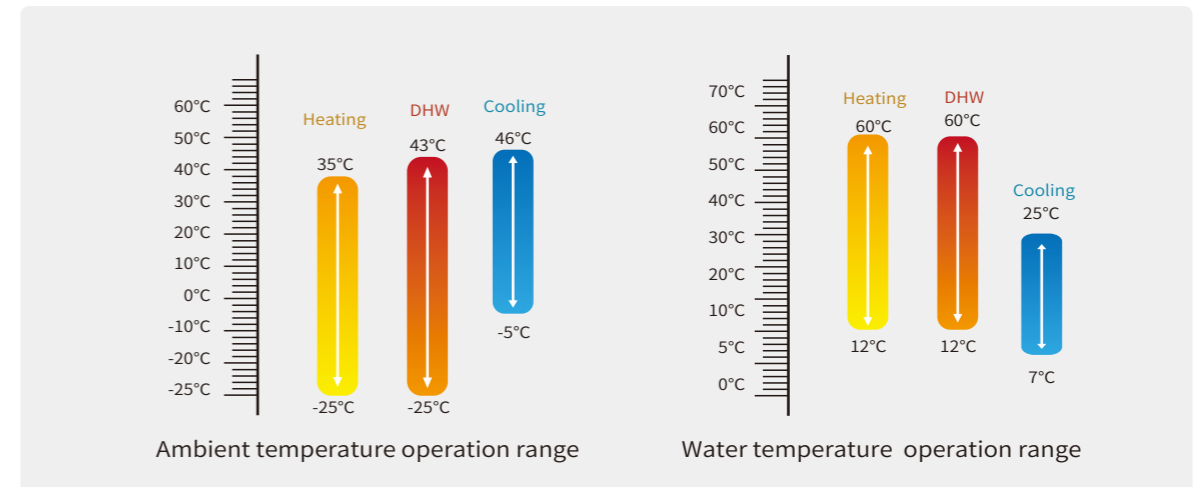


Brushless DC motor



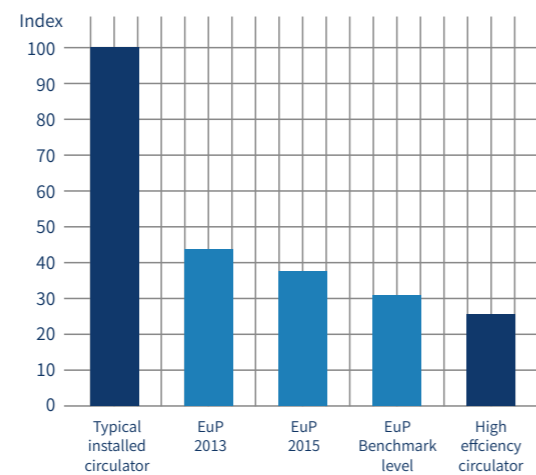
Wide Ambient Temperature And Water Temperature Operation Ranges

Our heat pump products have a wide temperature operating range, wide adaptability, and a large water temperature operating range.



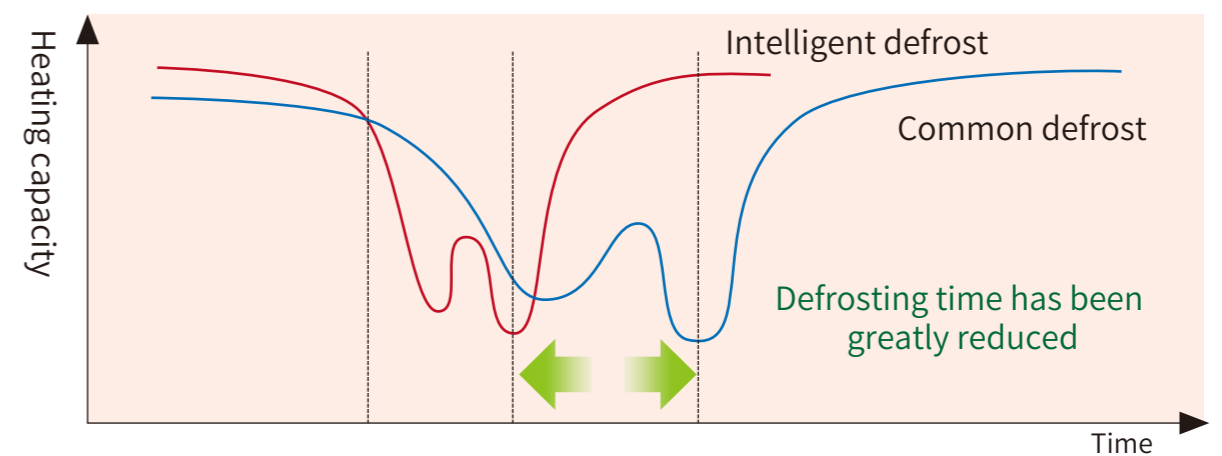
High Efficiency Pump

High efficiency provide an 85% ~ 90% reduction of electrical consumption. Depending on what you pay per kilowatt hour, that electrical savings may translate into \$13 ~ \$15 per month during the heating season.



Smart Defrost, Winter Heating Worry-free

The system can accurately judge the timing and time of defrosting according to the defrosting data such as unit running time, compressor suction and exhaust pressure and outdoor environmental temperature, and shorten the defrosting time to 3~5 minutes, so as to achieve defrosting and frost-free heating and ensure the optimal heating capacity of the unit.



Smart Control



Smart Colored Touchscreen Display

4-inch colored touch screen display is with user-friendly design for easy and convenient operation.



Intelligent Temperature Adjustment and Multi-mode Switching

Experience ultimate comfort with Multi-Mode Switching. Our intelligent temperature adjustment logic allows for seamless switching between different modes, all tailored to your needs.



Visual Management

Wi-Fi wireless communication allows you to control the unit by mobile phone anytime and anywhere.



Smart Main Controller

Introducing our latest innovation, equipped with the cutting-edge Transistor Regulator technology for interference-free and stable performance. With the added RS485 communication interface, long-distance and smart control are now possible. Experience hassle-free and reliable control with our advanced technology.

Multiple languages



Polski



Deutsch



Nederlands



Français



slovenčina



Italiano



English



čeština



svenska



Español

Above UI is for Reference

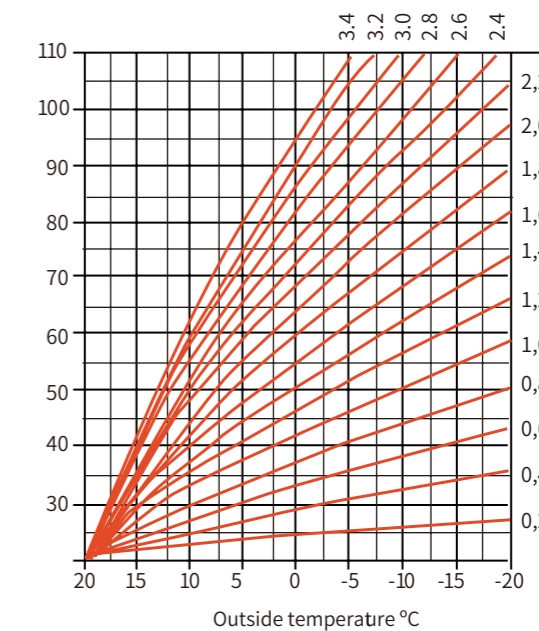
WIFI Control



- On/Off
- Operation Mode Selection
- Current temperature
- Set temperature
- On/Off Reservation
- WiFi connect

Climate Curve

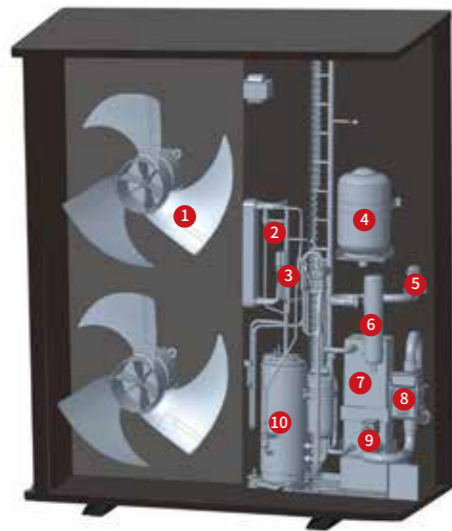
Thanks to the precise weather control function, the heat pump can make up to 32 temperature controls for different weather conditions according to the current situation, bringing users a more comfortable, smarter experience and more energy-saving.



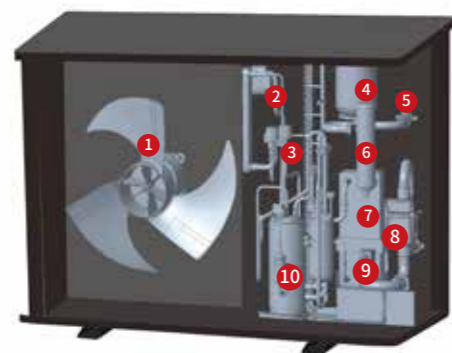
Above Functions are for Specific Models
Above UI is for Reference

Easy Installation & Maintenance

TONGYI HEAT PUMP's Monobloc Unit is fully packaged, which integrates water side components in one package. No refrigeration piping connection is necessary, which makes the installation easier and quicker.

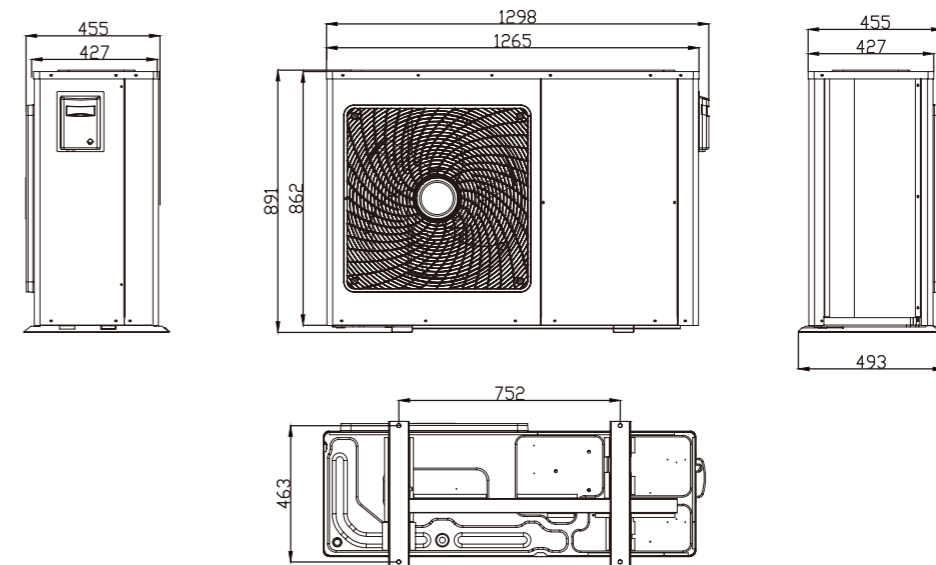


- 1 Fan
- 2 2-way-valve
- 3 Electrical expansion valve
- 4 Expansion vessel
- 5 Exhaust valve (optional)
- 6 Electrical heater (optional)
- 7 Plate heat exchanger
- 8 DC water pump
- 9 Water flow switch
- 10 DC inverter EVI compressor

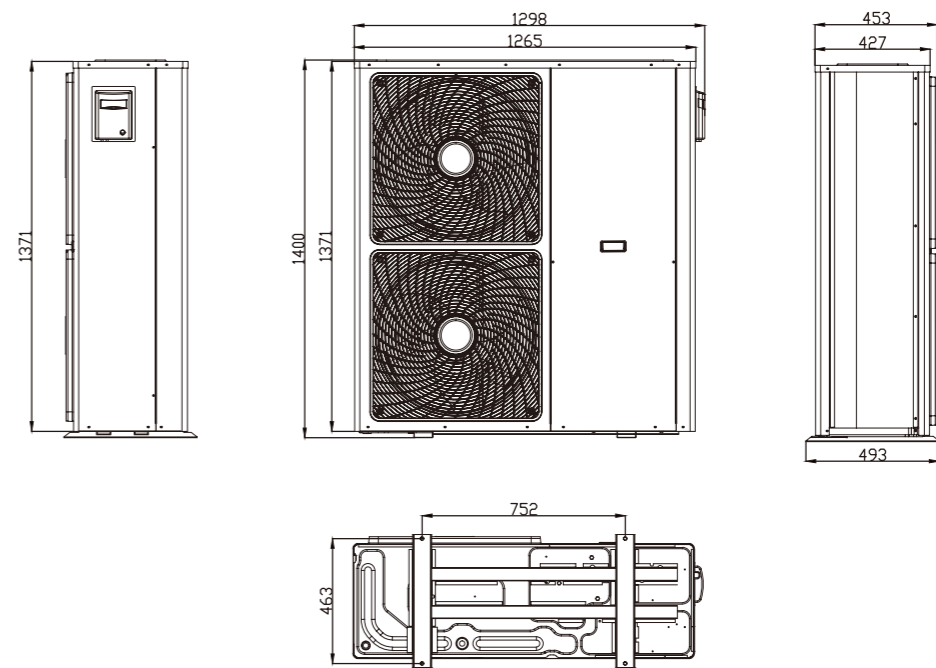


- 1 Fan
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- 6 Electrical heater (optional)
- 7 Plate heat exchanger
- 8 DC water pump
- 9 Water flow switch
- 10 DC inverter EVI compressor

Product Appearance Size



V5/V7/V9/V10/V12/V12S/V14S/V16S



V18S/V22S

Product Specification



Model		V5	V7	V9
ErP Level(35°C)	/	A+++	A+++	A+++
ErP Level(55°C)	/	A++	A++	A++
Technical Data				
A7W35				
Rated Capacity	KW	5.10	7.10	9.13
Capacity Range	KW	3.00-6.40	3.00-9.00	4.00-12.66
Input Power Range	KW	0.60-1.54	0.60-2.15	0.90-3.15
A35W7				
Rated Capacity	KW	3.50	5.00	6.39
Capacity Range	KW	2.00-5.00	2.00-7.00	3.20-7.74
Input Power Range	KW	0.70-2.15	0.70-3.05	1.05-3.50
A20W15-55				
Rated Capacity	KW	7.00	8.50	10.24
Capacity Range	KW	2.60-8.00	2.60-9.00	4.20-10.13
Input Power Range	KW	0.52-1.85	0.52-2.15	0.87-2.38
Power Supply				
Power Supply, Volts/Ph/Hz	50 Hz	220/1/50	220/1/50	220/1/50
Max. Input Power	kW	2.20	3.00	4.00
Max. Input Current	A	10.00	13.50	18.00
NOISE LEVEL				
Sound Pressure(1m)	dB(A)	46	46	48
Sound Pressure(10m)	dB(A)	27	29	31
Sound Power Level	dB(A)	58	60	62
OPERATION RANGE				
Ambient temperature	°C	-25-43	-25-43	-25-43
COMPRESSOR				
Type	/	DC inverter	DC inverter	DC inverter
REFIGERANT				
Type/GWP	/	R32/675	R32/675	R32/675
Charge/CO2 Equivalent	kg/TON	2.2/1.485	2.2/1.485	2.2/1.485
PUMP				
Type	/	Inverter	Inverter	Inverter
Circulation Pump Water Head	m	8	8	8
HYDRONIC				
Rated Water Flow Rate	m3/hr	0.85	1.2	1.5
Piping Connections				
Piping Connections Inlet		DN25	DN25	DN25
Piping Connections Outlet		DN25	DN25	DN25
PACKING				
Dimensions (Lx Wx H)	mm	1298x455x891	1298x455x891	1298x455x891
Packing Dimensions (Lx Wx H)	mm	1380x570x1030	1380x570x1030	1380x570x1030
Net Wt.	kg	100	100	100
Approx. Shipping Wt.	kg	115	115	115



Model		V12S	V14S	V16S	V18S	V22S
ErP Level(35°C)	/	A+++	A+++	A+++	A+++	A+++
ErP Level(55°C)	/	A++	A++	A++	A++	A++
Technical Data						
A7W35						
Rated Capacity	KW	12.50	14.00	16.00	18.10	22.00
Capacity Range	KW	8.00-13.28	8.00-15.49	8.00-17.70	8.65-19.54	8.65-23.88
Input Power Range	KW	1.75-3.16	1.75-3.69	1.75-4.22	1.80-4.87	1.80-5.95
A35W7						
Rated Capacity	KW	9.74	10.50	12.00	12.37	15.50
Capacity Range	KW	5.38-10.73	5.38-12.56	5.38-14.31	5.70-15.58	5.70-15.80
Input Power Range	KW	2.03-4.51	2.03-5.26	2.03-6.01	1.80-7.00	1.80-7.30
A20W15-55						
Rated Capacity	KW	11.27	13.15	15.03	22.79	25.50
Capacity Range	KW	9.20-11.27	9.20-13.15	9.20-15.03	9.58-22.61	9.58-27.64
Input Power Range	KW	1.92-2.67	1.92-3.12	1.92-3.56	1.97-5.52	1.97-6.75
Power Supply						
Power Supply, Volts/Ph/Hz	50 Hz	380/3/50	380/3/50	380/3/50	380/3/50	380/3/50
Max. Input Power	kW	5.50	6.00	6.50	8.00	9.00
Max. Input Current	A	8.00	8.80	9.50	12.00	13.50
NOISE LEVEL						
Sound Pressure(1m)	dB(A)	50.2	51	53	57	60
Sound Pressure(10m)	dB(A)	33.6	35	38	40	43
Sound Power	dB(A)	66	67	68	70	71
OPERATION RANGE						
Ambient temperature	°C	-25-43	-25-43	-25-43	-25-43	-25-43
COMPRESSOR						
Type	/	DC inverter	DC inverter	DC inverter	DC inverter	DC inverter
REFIGERANT						
Type/GWP	/	R32/675	R32/675	R32/675	R32/675	R32/675
Charge/CO2 Equivalent	kg/TON	2.2/1.485	2.2/1.485	2.2/1.485	2.8/1.89	2.8/1.89
PUMP						
Type	/	Inverter	Inverter	Inverter	Inverter	Inverter
Circulation Pump Water Head	m	8	8	8	8	8
HYDRONIC						
Rated Water Flow Rate	m3/hr	2	2.4	2.75	3	3.8
Piping Connections						
Piping Connections Inlet		DN25	DN25	DN25	DN25	DN25
Piping Connections Outlet		DN25	DN25	DN25	DN25	DN25
PACKING						
Dimensions (Lx Wx H)	mm	1298x455x891			1298x455x1400	
Packing Dimensions (Lx Wx H)	mm	1380x570x1030			1380x570x1560	
Net Wt.	kg	115	115	115	125	125
Approx. Shipping Wt.	kg	130	130	130	145	145

Project Portfolios



Daxing International Airport Project



Guizhou Astronomical Telescope Project



Sheraton Shenzhen Greater China



Shanghai Pudong International Hotel



Bird's Nest Stadium Project in Beijing



Shanghai Automotive Group Project



Mazda



HONDA



ZOOMLION



Alibaba



Radiant heat&cool (Kumamoto)



Canada

Join the green revolution with Tongyi Heat Pump Technology Your partner in achieving carbon neutrality!

For over two decades, we've been at the forefront of the fight against climate change by conserving energy and reducing CO2 emissions. Our efforts are equivalent to planting **100 million** trees since 1999, and we're just getting started.

coal **750,000tons**
Reduced 750,000 tons of coal consumption

CO₂ **3 billion kilograms**
Prevented the release of 3 billion kilograms of carbon dioxide emissions

NO_x **3.2 million kilograms**
Reduced nitrogen oxides emissions by 3.2 million kilograms

SO₂ **12.5 million kilograms**
Saved 12.5 million kilograms of sulphur dioxide emissions from being released into the atmosphere.

With our technology, you can make a significant impact on the environment while saving costs. Join us in our mission to achieve carbon neutrality and create a greener, more sustainable future. Choose Tongyi Heat Pump Technology and experience the benefits of eco-friendly living.

