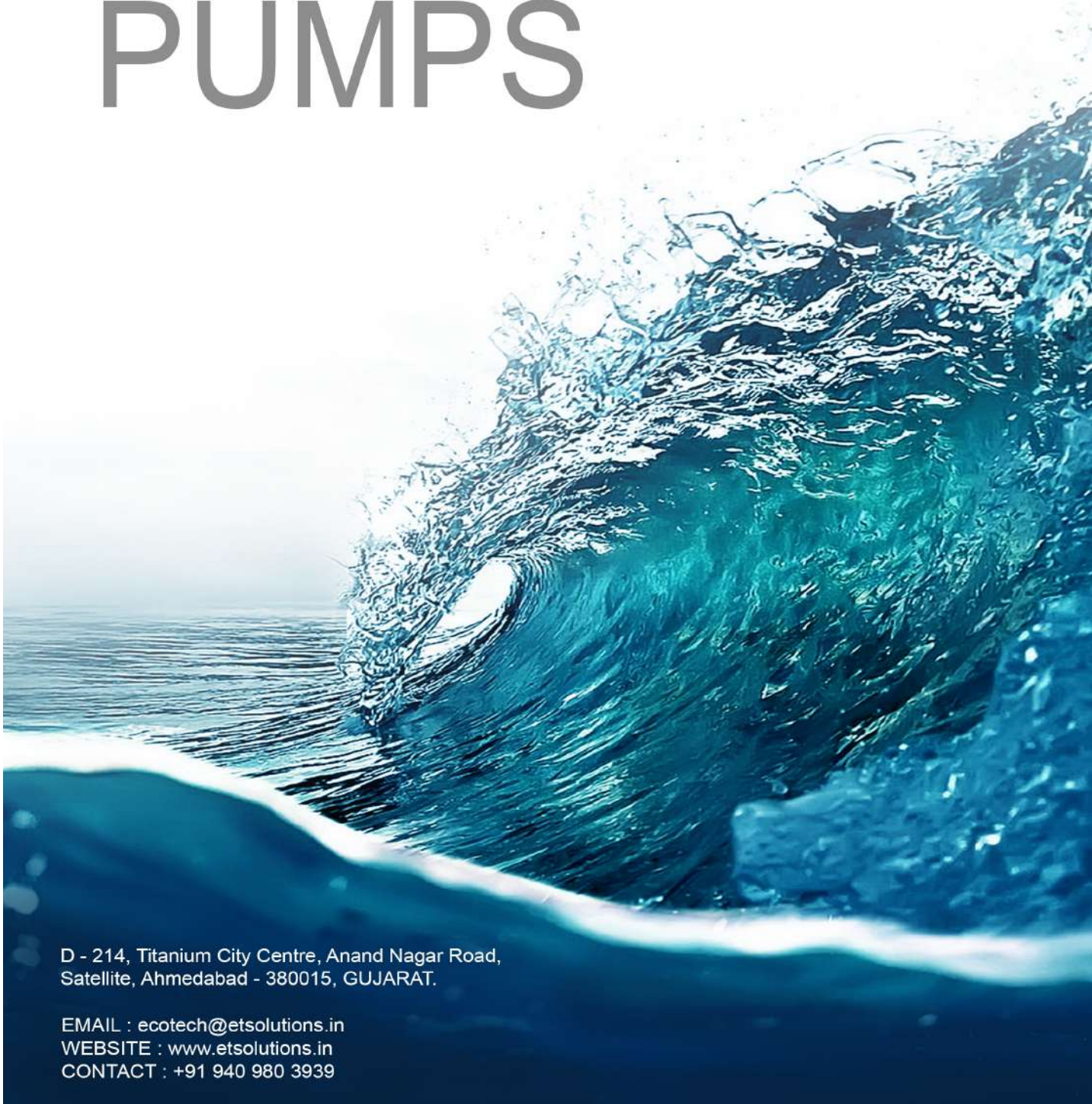




HEAT PUMPS



D - 214, Titanium City Centre, Anand Nagar Road,
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Vision

To provide best quality products and service to all of our customers. Delivering quality workmanship and value for money through our professionally qualified team of engineers.

Values

We believe in treating our customers with respect and faith. We integrate honesty, integrity and business ethics into all aspects of our business functioning.

Mission

To build long term business relationships and provide exceptional customer services. Deliver high quality products with uniformity at reasonable prices.



About Us

With the increasing demand for energy-efficient products, our company has decided to venture into the heat pump business. Heat pumps have been gaining popularity as an alternative heating and cooling option due to their high efficiency, reliability, and environmental friendliness.

EcoTech Solutions is a leading manufacturer of energy-efficient heat pumps for residential and commercial use. We built a reputation for producing high-quality, reliable, and cost-effective heat pumps. Our products are designed to meet the needs of customers who are looking for environmentally friendly and energy-efficient heating solutions. The company's heat pumps are designed to work in a variety of climates and can be used for heating, cooling, and hot water production.

EcoTech's manufacturing facilities are equipped with state-of-the-art technology and staffed by highly skilled engineers and technicians who are committed to producing the best possible products.

We aim to provide our customers with the best quality heat pumps that can reduce their energy bills while maintaining optimal comfort in their homes and offices. Our team of experts has extensive knowledge and experience in the HVAC industry, and we are committed to providing excellent customer service to ensure that our clients' needs are met. We believe that our entry into the heat pump business will not only benefit our clients but also contribute to a sustainable future by promoting the use of renewable energy sources.

Overall, EcoTech Heat Pump is a company that is committed to providing innovative and sustainable heating solutions to customers around the world.

Heat Pump Water Heater

Heat pump water heaters are becoming increasingly popular due to their energy efficiency and cost-saving features. A heat pump water heater works by transferring heat from the surrounding air into the water rather than creating heat directly. This technology offers several benefits that make it an excellent choice for those looking to upgrade their water heating system.

1. Energy Efficiency

One of the most significant advantages of using a heat pump water heater is its energy efficiency. These systems consume very little electricity compared to traditional electric water heaters. According to the Department of Energy, a heat pump water heater can save up to 50% compared to a standard electric water heater, resulting in significant cost savings on energy bills over time.

2. Environmentally Friendly

Heat pump water heaters are an environmentally friendly option as they significantly reduce greenhouse gas emissions. Since they use less energy to heat water, they lower the carbon footprint of a household. Additionally, some models of heat pump water heaters use eco-friendly refrigerants that are not harmful to the environment.

3. Durability

Heat pump water heaters are known for their durability and longevity. Unlike traditional water heaters that can corrode and fail over time, heat pump water heaters are built to last. They have fewer moving parts and require less maintenance, making them a reliable option for homeowners.

4. Versatility

Heat pump water heaters are flexible and can be installed indoors or outdoors. They can even be used in cold climates, making them an ideal option for homeowners who live in areas where winters are harsh. There are different types of heat pump water heaters available, each with their unique features and benefits, making them versatile and adaptable to various household needs.

5. Government Rebates

Many local governments offer rebates and incentives for installing heat pump water heaters. These incentives are typically offered to promote energy efficiency and reduce energy consumption. These rebates can significantly reduce the upfront cost of purchasing a heat pump water heater, making it an even more affordable option for homeowners.

In conclusion, heat pump water heaters offer many advantages over traditional water heaters, including energy efficiency, environmental friendliness, durability, versatility, and cost-saving government rebates. If you're considering upgrading your water heating system, a heat pump water heater is an excellent choice. It will provide you with the hot water you need while saving you money on energy bills and reducing your carbon footprint.



What exactly is a heat pump? How does it work?

The basic principle is as simple as it is brilliant: take the free energy that exists in the air and ground, and convert it into heating for a house.

But things are rarely this straight-forward. As the popularity of heat pumps has grown, so has the number of options. Today homeowners who have decided to do something about their heating costs can find it difficult to get an overview of the world of heat pumps.

At EcoTech's R&D centre in Ahmedabad we work continuously to take the heat pump technology to the next level, even though we have produced many of the market's very best heating systems for years. This also means that we possess invaluable knowledge about every aspect of the heat pump, and that's what this booklet is about. Of course we want to present our solutions, but most of all we want to offer you a convenient forum to get the knowledge you need, so you can make the right decisions based on your specific needs.



HEAT PUMPS a smarter use of energy

A heat pump from EcoTech creates a comfortable indoor climate in your home. While it's supplying your home with heating, hot water and cooling, you can reduce your energy consumption by up to 75%. When it's time to select a new source of energy for your home, a heat pump from EcoTech means you're also contributing your share to help the environment.

Economical

Solar power generates large amounts of free energy that is stored in the air, ground and ground water. A heat pump will help you unlock this free energy. By extracting this heat efficiently you can reduce your energy consumption considerably. The savings are often

large enough to pay for the investment in just a few years.

Comfortable

A heat pump requires virtually no maintenance or refilling of fuel, and it's very easy to operate. You can adjust your indoor temperature with just a touch of a button. The heat pump does not take up much space, normally only about as much as a fridge.

Eco-friendly

By choosing a heat pump you help to reduce the impact on the environment. The technology is well-tested and the

EU classifies heat pumps as a renewable source of energy. The amount of solar energy the heat pump extracts is much greater than the amount of energy it consumes.

BASICS OF HEAT PUMPS

A heat pump extracts stored solar energy and converts this into heating and hot water for your home.

There are four types of heat pumps:

1 Air/air

It collects energy from the outdoor air and converts this into warm air. Does not always work at lower temperatures and cannot produce hot water. Should be seen as a complement to other forms of heating.

2 Air/water

It converts the energy in the outdoor air into heating for a water-based heating system (radiator or floor heating). Some models function at outdoor temperatures as low as minus 20°C. Can also produce hot water. This type provides a complete and flexible heating solution.

3 Brine/water

It collects energy from the ground or ground water by circulating brine fluid in a loop in the ground. The heat is then transferred to a water-based heating system (radiator or floor heating). Can also produce hot water. This type provides a complete and flexible heating solution and is more efficient than air/water at low outdoor temperatures.

4 Exhaust air

It recycles energy from the home's ventilation and returns it to the heating system. Can help deliver savings, but cannot be the main supplier of heating and hot water.

Heat pumps use approximately one part electrical energy to extract three parts solar energy stored in the air or the ground.



High - quality heat pump systems can be equipped with an electric heating element for extra safety. The heating element provides extra high temperatures to the hot water, to prevent the formation of legionella bacteria.

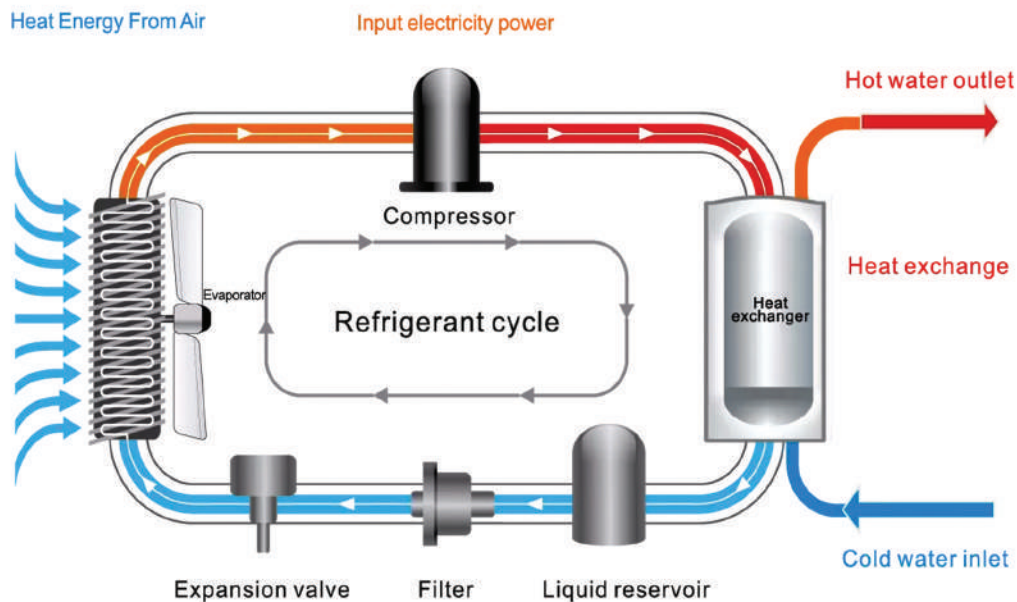
SERVICE LIFE AND OPERATION

The service life of a heat pump varies for different types and brands, but in general an air/water or brine/water heat pump from a good manufacturer can last between 20 and 30 years. A major

advantage of a heat pump is that it requires minimal maintenance and attention. If it's installed correctly you can almost forget that you have one. It should work every day, all year round, keeping your home warm and comfortable.

RENEWABLE ENERGY

The EU has classified heat pumps as a renewable source of energy since the amount of solar energy it extracts is much greater than the amount of energy it consumes.



How a Heat Pump Works

A brine circulates in a collector loop and absorbs heat energy from the bedrock, ground, air or water.

In a heat exchanger (evaporator) the tepid brine in the collector loop meets the refrigerant circulating in the refrigerant loop. The refrigerant absorbs energy, heats up and turn into gas.

A compressor increases the pressure of the refrigerant, and by doing so the temperature climbs to a required heating level.

In a second heat exchanger (condenser) the refrigerant releases its heat to the heating system in the house. As this occurs the refrigerant is cooled down.

The refrigerant continues to circulate. In an expansion valve its pressure falls. This reduces the temperature and the refrigerant returns to liquid form. The process recommences when the refrigerant again meets the brine.



Heat pump – a profitable investment for everyone

Investing in a heat pump pays off, whether you're building a new house or renovating an existing one. You reduce your energy consumption while also increasing the value of your house. Plus, you help cut carbon dioxide emissions, a benefit for future generations.

May pay for itself twice

With a good heat pump, up to 75% of your energy consumption for heating and hot water is for free. This saving means that the heat pump will pay for itself in time. Moreover you increase the value of your house when you install a heat pump which may mean that it pays for itself twice: firstly you recover the investment cost and secondly there is a good chance the sales price of the house will be higher the day you sell it.

The future volatile market situation of the earth's limited oil and gas resources is another strong reason for choosing a renewable energy solution.

New construction

When building a new house there are lots of decisions to make, and choosing the correct heating solution is one of the most important ones. With the right heat pump you can cover a range of applications, for instance heating, cooling and pool heating, in a single system. As a result you avoid investing in, and maintaining, separate solutions. Moreover, many countries have energy efficiency requirements for new construction, making it extra important to choose a future-secure energy source.

Replacement and renovation

The savings a heat pump can provide will depend on the house, existing heating system and geographical location. To find out how high the savings can be in your specific case, contact an authorized installer, who can help you with a calculation showing your savings based on your situation and requirements.

The heat pump can also be adapted to an existing heating system you may already have and be combined with different types of supplementary energy sources, such as solar, gas, wood or pellets.

Subsidies

Both within and outside the EU, considerable efforts are underway to reduce environmental impacts and increase the proportion of renewable energy used. In line with this, more and more countries make subsidies available to those who choose a renewable energy source. As the EU has classified the heat pump as a renewable energy source, these subsidies may be available to you. To find out which subsidies are available in your area, contact an authorized heat pump installer.



WIFI
CONTROLLER



MORE
SAFETY



ADORABLE DIGITAL
FEATURES



MORE LIFE



MORE SAVING



ECOFRIENDLY



ROHS CERTIFIED

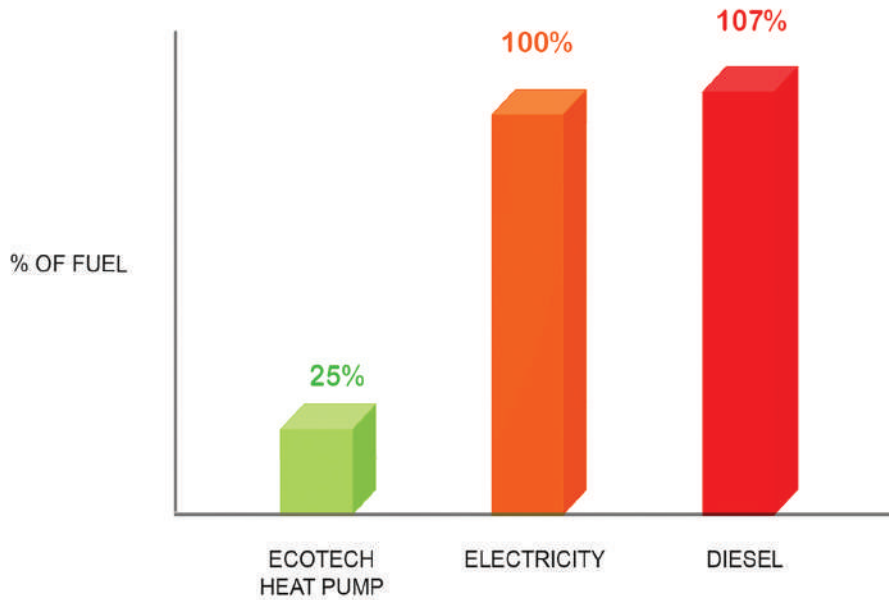


COOLING



HEATING

Heating Expenses



Heat Pump Compared to Solar Water Heater

SUNSHINE		NIGHT		RAINY DAY		FOGGY DAY					
											
Heat Pump	Solar Water Heater	Heat Pump	Solar Water Heater	Heat Pump	Solar Water Heater	Heat Pump	Solar Water Heater	Heat Pump	Solar Water Heater	Heat Pump	Solar Water Heater

A vertical photograph of a young child underwater, wearing blue swimming goggles and smiling. The image is tinted with a teal/cyan color. The text "Why EcoTech Heat Pumps ?" is overlaid in white at the top left of the image.

Why EcoTech Heat Pumps ?

We made the products that gives you whole range of safety, more life and energy efficiency along with more savings.

1) WIFI CONTROLLER

- Monitor your whole Heat Pump System using Wifi into Smartphones.

2) SAFETY

- Compressor Safety: Over Load Relay / Low pressure & High switch - It is made for Compressor Safety in Heat Pump Water Heaters.
- Single Phase Preventer - It will prevent heat pump to start In case of phase loss or over load.
- Flow Switch Safety Valve - It will tend to stop Heat Pump, if discharge & inlet water is not flowing into line.

3) MORE LIFE

- Superior Quality of Water Storage Tank due to inner side of Ceramic Coating.

4) MORE SAVING

- Energy Saving up to 75% compared to geyser.

5) FEATURES

- CE,IEC, ROHS approval.
- Built-in water circulation pump.
- Double-wall heat exchanger to prevent refrigerant leakage
- Four-way valve for automatic defrosting.
- Close refrigerant circuit and easy for installation.
- Compact and convenient digital controller.
- On/Off timer for better efficiency.
- Our all products are tested with sophisticated equipments like automatic fluorine injection machine, automatic leak detection etc.

6) ECOFRIENDLY

- Our products do not consume any fossil fuel so no exhaust fumes.
- All of our products use eco-friendly refrigerant.

Three decisive issues when choosing a heat pump

Installing a heat pump is a long term investment. You can rely on it to provide a comfortable indoor climate with the largest possible cost savings. Year after year, day by day, minute by minute.

When you choose a heat pump it's important to understand the basics. The following pages will guide you through the three areas you need knowledge about to make the right decision

- 1 Annual efficiency
- 2 Hot water production
- 3 Flexibility





Some heat pump manufacturers cite a COP (Coefficient of Performance) based on for instance an average spring day in April. This doesn't give a correct picture of the heat pump's total efficiency. It's more accurate to measure the efficiency over a whole year.

Here is a good way to see the difference between COP and annual efficiency: COP is similar to a car's fuel consumption at a particular speed and rpm, e.g. 72 km/h and 3,000 rpm, while annual efficiency resembles the average fuel consumption at different speeds and rpm's during a full year.

1 Annual Efficiency

COP - efficiency in specific conditions

As a buyer it's important that you find out how efficient a heat pump is. Most manufacturers present this information in terms of COP (Coefficient of Performance). In specific test conditions, an assessment is made of the heat pump's ability to supply heat, relative to the amount of electricity required to extract it. If a heat pump has a COP of 4, this means that in the specified test conditions it produces four times more energy than it consumes. Consequently the extracted energy makes up three quarters.

Be careful when comparing values

It's important to be conscious when comparing a heat pumps efficiency. Measuring the COP in specified test conditions, without calculating the

energy consumption for all the components in the system (e.g. circulation pumps), can produce what seems to be very good values. But a measurement should not be done just to support a manufacturer's marketing. It should give homeowners like you a more correct picture of how efficient the heat pump is, over time.

Annual efficiency - the real measure

A far more accurate measure of a heat pump's performance is its annual efficiency (seasonal performance factor). This incorporates the whole year, including the warmest and the coldest periods, as well as the production of hot water. Other factors that affect the overall result include house size, geographical location and number of residents.

The annual efficiency is unique to every heating system's specific conditions. Therefore, it is not possible to specify a seasonal performance factor value as part of a standard technical data. This value must be calculated by an authorized EcoTech installer on a case by case basis and based on your specific home's location and conditions.

2 Hot Water Production a key component

Roughly 20% or more of the energy consumed by a heat pump is used to produce hot water. The availability of the hot water must be sufficient to meet the needs of the whole household, therefore it's important to choose a heat pump that can meet the demand.

As our water consumption is increasing and our homes are better insulated, the hot water production represents a growing share of a home's energy needs. Therefore it becomes more and more important that the hot water is produced with the highest possible annual efficiency. At the same time the hot water tank must be replenished quickly to maintain the hot water comfort. It's also vital that the heat pump has a system that minimizes the risk of legionella bacteria breeding in the water.

A good heat pump should produce sufficient hot water while maintaining a high annual efficiency. (That is, costs are kept as low as possible.)

It's important not to focus excessively on how hot the hot water gets. The key is how quickly the hot water is produced in order to meet the needs of the entire household.





3 Flexibility

When investing in a new heating system it is important to examine the requirements of the entire house, before making a final decision. With a heat pump you can customize a solution that meets all your demands and requirements, including heating, cooling, pool heating, and additional heating sources.

Once you have decided to install a heat pump, it's important to select a supplier who can provide you with all the climate solutions you and your home would require. Ask yourself what you want your heat pump to supply, besides heating and hot water. For instance do you also want cooling? Perhaps you have a swimming pool that needs heating or a wine cellar that you want to cool. With a heat pump it's possible to combine

these types of solutions with the basic heat pump functions. This means you don't have to invest in separate systems such as air conditioning or a cooling unit. Moreover, it's fully possible to combine a heat pump with other heating sources like solar panels, wood or pellet-burning furnaces. In order to have all this flexibility, make sure you choose a supplier that can offer these more comprehensive solutions.



EcoTech - a safe investment

Installing a heat pump is a long term investment that must provide a convenient and comfortable indoor climate with the maximum cost savings year by year, day by day, and minute by minute. An EcoTech heat pump provides just that, with a minimum of attention required.

When you choose one of our products, you get more than a heat pump. More than 5 years ago we produced the very first heat pump with a built-in warm water heater, and ever since we have taken upon ourselves to be more than just a supplier of heat pumps. As an EcoTech heat pump owner you can expect the highest possible performance at the maximum savings, expert support when the unexpected happens, the safety of always having a home that is warm and comfortable, and enough hot water for the whole family.

On the following pages you can read more about what makes our heat pumps repeatedly receive top test results and how you proceed to choose the heat pump that is right for your needs.

Technology for highest annual efficiency

To ensure you get maximum performance and functionality, EcoTech has developed a number of technologies, all contributing to increased annual efficiency, comfort, reliability and cost savings.

Controller for optimal operation

The controller coordinates all the various parts of the heating system to provide the best possible indoor climate and hot water production at the lowest possible cost. The controller also integrates any other functions that may have been added to the system, such as cooling or pool heating.

EcoTech's controller manages the supply of heat at the source rather than in the heating system itself. This solution, called floating condensation, can result in up to 15 % energy savings compared to traditional technologies.

Demand-controlled defrosting for air source heat pumps

Outdoor air units require defrosting at low temperatures to ensure an unrestricted air flow through the fin coil. EcoTech has developed a technology for defrosting that operates only when and as long as required, in contrast to standard solutions used by other brands which defrost even when it is not needed. Demand-controlled defrosting minimizes the energy consumption.



Optimum technology for highest annual efficiency

Optimum technology keeps the heat pump working in ideal conditions at all times. This means maximum efficiency and minimum energy consumption, second by second.

EcoTech's Optimum technology uses automatic variable speed controlled circulation pumps to optimize conditions for the heat pump by controlling delta T in heating system and brine collector. The temperature difference between supply line water and return line water is kept constant between 7-10 °C. For the collector a difference of 3 °C between inlet and outlet is optimal. The Optimum technology reduces energy consumption and thus improves annual efficiency.

Effective scroll compressor

At the heart of the EcoTech heat pump is a specially developed scroll compressor. Its unique feature is its high efficiency, even when producing heating and hot water above 40°C. Another advantage is that it contains fewer moving parts than a conventional compressor. This means lower noise levels and a longer product life.

Let the Heat Pump heat your Pool

The EcoTech heat pumps can easily be supplemented to heat also your pool all year round. This way you can substantially lower the heating costs for the pool.

Indoor pool

For indoor pools the heat pump is dimensioned to heat the pool all year round. The heat pump then coordinates the heating of the pool with the home's current heating and/or cooling needs and ensures that the cost is kept at a minimum.

Outdoor pool

Many outdoor pools are used only during the summer and since the need for heating the house is low during this period there's plenty of capacity to heat the pool. By leveraging this unused capacity, the pool can be heated at a significantly lower cost than traditional pool heating systems.

Leverage the excess energy to heat your pool

When a house is cooled using an active cooling module, heating is produced as a bi-product. This excess energy is usually dumped back into the ground, but if you have a pool you can instead use this energy to heat the water.





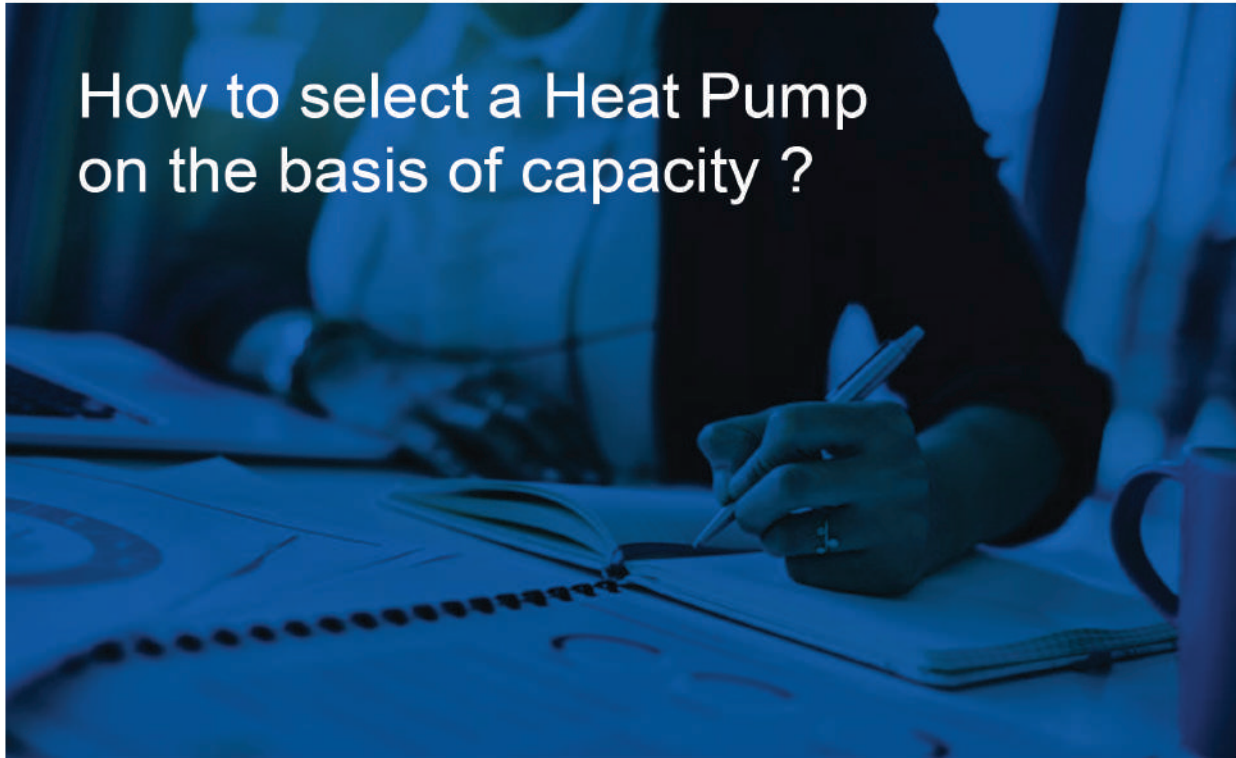
Ready for solar collectors and other alternative energy sources

You can easily supplement your system with solar collectors or some other alternative energy sources, the heat pump is already prepared for this.

Every EcoTech heat pump is already prepared to be combined with alternative energy sources, such as solar collectors or water-jacket wood- or pellet furnaces. If you want to wait with making this addition it's not a problem, since everything is ready to be activated when you decide it's time to proceed. Of course, the heat pump can also be combined with existing gas or oil furnace.

EcoTech's unique control system ensures an optimal interplay between the heat pump and the alternative energy source to minimize the energy consumption for the entire system. EcoTech can offer a large number of predefined solutions for a wide variety of applications.





How to select a Heat Pump on the basis of capacity ?

Application	Model No.	Tank Capacity (Ltr.)											
		200	300	500	750	1000	1500	2000	2500	3000	4000	5000	& Above
Domestic Max. Water Temp 60°C	EcoT-HP-41P	✓	✓	✓									
	EcoT-HP-86P		✓	✓	✓	✓	✓						
	EcoT-HP-120P			✓	✓	✓	✓	✓					
Commercial Max. Water Temp 60°C	EcoT-HP- 210				✓	✓	✓	✓	✓	✓			
	EcoT-HP-430						✓	✓	✓	✓	✓	✓	✓
	EcoT-HP-600							✓	✓	✓	✓	✓	✓
	EcoT-HP-900									✓	✓	✓	✓
	EcoT-HP-1150											✓	✓
	EcoT-HP-1900											✓	✓
Industrial Max. Water Temp 80°C	ET-HT-160			✓	✓	✓	✓	✓					
	ET-HT-320					✓	✓	✓	✓	✓			
	ET-HT-500						✓	✓	✓	✓	✓		
	ET-HT-560						✓	✓	✓	✓	✓		
	ET-HT-720							✓	✓	✓	✓	✓	
	ET-HT-1120								✓	✓	✓	✓	✓
	ET-HT-1500								✓	✓	✓	✓	✓

DOMESTIC HEAT PUMP





HEAT PUMP - 1 PH			
Model No.	EcoT-HP- 41P	EcoT-HP-86P	EcoT-HP-120P
Power Supply	220V/50Hz	220V/50Hz	220V/50Hz
Heating Capacity at Air 20°C/15°C, Water Temperature from 25°C to 55°C			
Heating Capacity (kW)	4.1	8.6	12
Power Input (kW)	0.99	2.09	2.88
COP	4.14	4.12	4.16
Max Power Input (kW)	1.35	2.7	4.68
Max Current(A)	6.2	12.5	24.0
Rated Hot Water(L/h)	110	270	350
Expansion Valve	Electronic	Electronic	Electronic
Air Flow Direction	Horizontal	Horizontal	Horizontal
Water Pump inside	Yes	Yes	Yes
Water Pressure Drop (kPa)	35	40	45
Net Dimensions(L*W*H) (mm)	936×385×550	1011×420×615	986×376×800
Working temperature range (°C)	-7~43		
Noise (dB)	47	52	54
Net Weight (kg)	55	65	96
Water connection(mm)	female 20	female 20	female 20

Notes : Technical information may change without any prior information.

COMMERCIAL HEAT PUMP





COMERCIAL HEAT PUMP					
Model No.	EcoT-HP-210	EcoT-HP-300	EcoT-HP-430	EcoT-HP-680	EcoT-HP-900
Power Supply	380V/3/50Hz				
Heating capacity at Air 20°C/15°C, Water Temperature from 25°C to 50°C					
Heating Capacity (kW)	21	30	43	68	90
Power Input (kW)	4.9	6.9	10.1	15.9	21.2
COP	4.27	4.31	4.26	4.29	4.25
Max Current (A)	12.3	14.8	23.5	35.9	48.3
Rated Hot Water (L/h)	600	860	1200	1800	2500
Refrigrant	R410A				
Compressor	Copland Scroll				
Water flow volume (L/h)	4500	6000	9,000	14,000	18,000
Dimensions (L*W*H*) (mm)	752x691x1055	765x691x1055	1410x748x1050	1590x850x1500	2150x1078x2258
Working Temp. Range (°C)	-15~43				
Noise (dB)	60	60	65	68	70
Net Weight (kg)	160	180	259	560	650
Notes : Technical information may change without any prior information.					

ALL IN ONE HEAT PUMP



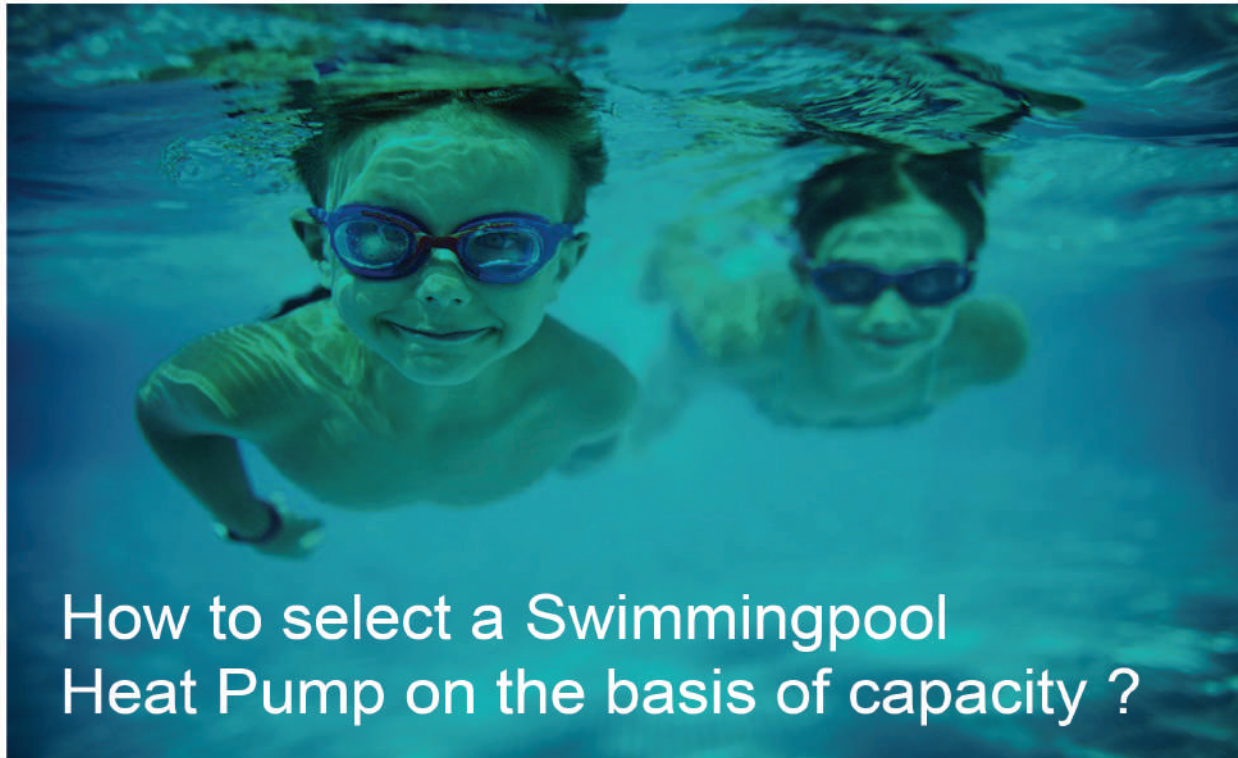


- Air Source Heat Pump
- Maximum Energy Saving
- High Performance
- World Class Circulation Pump and Compressor
- Low Sound Level

ALL IN ONE HEAT PUMP		
Rated Volume	350L	420L
Color	Grey	Grey
COP	4.07 W/W	4.07 W/W
Power Type	220-240V~50Hz	220-240V~50Hz
Heating Capacity(W)	5300 W	5300 W
Produced Water	118 L/h	118 L/h
Max.Wate Temp.	75°C	75°C
Max.Working Power	5000 W	5000 W
Max.Working Current	23 A	23 A
Rated Working Power	1300 W	1300 W
Electric Heater Power	2500 W	2500 W
Water pressure	0.8 MPa	0.8 MPa
Noise	45 dB(A)	45 dB(A)
Weight	192 Kg	207 Kg
Refrigerant	R134a/1150 g	R134a/1150 g
Compressor Brand	Panasonic	Panasonic
Throttle Component	Electronic Expansion Valve	
Suction/ Discharge Pressure	0.7/2.6 MPa	0.7/2.6 MPa
Low/High Side Working Pressor	0.7/2.6 MPa	0.7/2.6 MPa
Max.Pressure Heat Exchanger	2.6 MPa	2.6 MPa
Product Size (L*W*H*) (mm)	675×937×1720	675×1006×1720
Packing Size (L*W*H*) (mm)	875×1208×1860	875×1208×1860

Notes : Technical information may change without any prior information.





Model No.	Pool Capacity (Cubic Meter)						
	40 - 80	80 - 150	100 - 200	200 - 400	250 - 500	350 - 600	500 - 800
EcoT-S-028TI	✓						
EcoT-S-058TI		✓	✓				
EcoT-S-090TI			✓	✓			
EcoT-S-120TI				✓	✓		
EcoT-S-145TI					✓	✓	
EcoT-S-175TI						✓	
EcoT-S-220TI						✓	✓

SWIMMING POOL HEAT PUMP





- Air Source Heat Pump
- Maximum Energy Saving
- High Performance
- World Class Circulation Pump and Compressor
- Low Sound Level

SWIMMINGPOOL HEAT PUMP									
Model	EcoT-S-028TI	EcoT-S-035TI	EcoT-S-058TI	EcoT-S-090TI	EcoT-S-120TI	EcoT-S-145TI	EcoT-S-175TI	EcoT-S-220TI	
Power Supply	415V - 380V/3/50Hz								
Heating Capacity at Air 27°C/24°C, Water 27°C									
Heating Capacity (kW)	28	35	58	90	120	145	175	220	
Power input (kW)	4.8	5.7	10.1	16.2	21.4	25.7	31.4	41.1	
COP	5.81	5.78	5.75	5.56	5.62	5.65	5.58	5.35	
Heating Capacity at Air 15°C/12°C, Water 26°C									
Heating Capacity (kW)	22	30	48	75	95	120	145	185	
Power input (kW)	4.7	6.4	9.8	15.6	20.2	25.5	31.0	40.5	
COP	4.76	4.70	4.88	4.81	4.71	4.70	4.67	4.57	
Cooling Capacity at Air 35°C/24°C, Water 29°C in, 27°C out									
Cooling Capacity (kW)	20	25.3	42	68	85	108	130	165	
Power input (kW)	6.5	8.2	13.6	22.3	27.4	36.2	45.0	57.3	
EER	3.1	3.1	3.09	3.05	3.1	2.98	2.89	2.88	
Max Power Input (kW)	7.7	9.4	14.7	26.0	31.0	44.5	53.9	67.2	
Max Current(A)	13.8	17.4	26.4	46.8	55.9	80.2	97.1	121.1	
Refrigerant	R410A								
Compressor Type	Scroll	Rotary	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	
Heat Exchanger	Titanium								
Expansion Valve	Electronic								
Air Flow Direction	Vertical	Horizontal	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	
Water Flow Volume (m ³ /h)	10	15	22	30	40	62	70	90	
Net Dimensions (mm)	Length	805	1003	1410	1590	2150	2150	2150	2148
	Width	663	374	748	850	1078	1078	1078	2148
	Height	1050	1318	1050	1500	2258	2258	2258	2138
Working temperature range (°C)	-7~43	-15~43	-7~43	-7~43	-7~43	-7~43	-7~43	-7~43	
Noise (dB)	≤60	≤54	≤65	≤68	≤70	≤71	≤72	≤80	
Net Weight (kg)	120	135	250	550	650	760	900	2100	
Water connection (mm)	50	50	65	65	75	75	100	125	

Notes : Technical information may change without any prior information.

HIGH TEMPERATURE HEAT PUMP





HIGH TEMPERATURE HEAT PUMP								
Model No.	ET-HT-160	ET-HT-320	ET-HT-500	ET-HT-560	ET-HT-720	ET-HT-1120	ET-HT-1500	
Power Supply	380V - 415V/3PH/50Hz							
Heating Capacity (kW)	16	32	50	56	72	112	150	
Power Input (kW)	5	10.1	15.6	18.5	24	37	50	
COP	3.19	3.18	3.21	3	3	3	3	
Max Power Input (kW)	6.9	13.2	20.1	28	35	56	70	
Max Current (A)	12.3	23.5	35.9	50	65	100	120	
Rated Hot Water (L/h)	350	700	1150	802	1032	1605	2150	
Refrigerant	R134A & R407C							
Max Water Temperature	75							
Compressor	Copeland Scroll							
Expansion Valve	Electronic							
Air Flow Direction	Vertical							
Water flow volume (L/h)	4,500	9,000	13,000	14,000	15,500	28,000	30,000	
Waterproof rating	IPX4							
Dimensions (mm)	Length	715	715	715	1405	1405	2000	2005
	Width	715	715	715	800	800	985	1125
	Height	830	1050	1050	1050	1050	1905	2248
Working temperature ran (°C)	-15~43							
Noise (dB)	≤53	≤55	≤56	≤58	≤65	≤70	≤86	
Net Weight (kg)	90/100	125/150	133/158	270/300	300/330	570/620	1150/1350	
Notes : Technical information may change without any prior information.								

CO₂ HEAT PUMP





- CO₂ Source Heat Pump
- Maximum Energy Saving
- High Performance
- World Class Circulation Pump and Compressor
- Low Sound Level

CO ₂ HEAT PUMP					
Model			EcoT-78	EcoT-240	EcoT-400
Standard temperature condition	Heating Capacity	kW	7.8	24.0	40.0
	Hot water capacity	L/H	149	458.0	764.0
	Heating power input	kW	1.7	5.3	9.0
	COP	W/W	4.6	4.5	4.4
Low temperature condition	Heating Capacity	kW	7.0	20.0	35.0
	Hot water capacity	L/H	118	337.0	590.0
	Heating power input	kW	1.7	5.0	9.4
	COP	W/W	4.1	4.0	3.7
Ultra-Low temperature condition	Heating Capacity	kW	6.5	14.0	28.0
	Hot water capacity	L/H	109	236.0	472.0
	Heating power input	kW	1.7	4.8	10.1
	COP	W/W	3.8	2.9	2.8
Power supply		V/Ph/Hz	220/1/50		380/3/50
Heating type			Direct		
Rated output water temperature		°C	45		
Maximum output water temperature		°C	90		
Work ambient temperature		°C	(-)25~43		
Compressor	Type		Panasonic		Torin(Italy)
Circulation water pump	Brand		Wilo(Inverter)		
Defrosting type			Bypass		
Water side heat exchanger	Type		Tube-Tube type		
Air side heat exchanger	Type		Internally grooved copper pipe in aluminium fin		
Refrigerant	Type		R744		
Controller	Brand		CAREL(Italy)		
Dimensions	Length	mm	910	1280	1537
	Width	mm	430	800	1000
	Height	mm	920	1500	1884
Unit noise level		dB(A)	38	42	49
Net weight		kg	130	380	525

Notes : Technical information may change without any prior information.

SCREW COMPRESSOR HEAT PUMP





- Air Source Heat Pump
- Maximum Energy Saving
- High Performance
- World Class Circulation Pump and Compressor
- Low Sound Level

1. Unit function:

The water source heat pump system can be used for cooling and heating. One machine has multiple functions: one system can replace the original two sets of boilers and air-conditioning devices or systems.

2. Advantages of the unit:

No boiler room system is required for heating, no cooling tower is required for refrigeration and no pollution and no emissions are realized during use. : While saving a lot of energy, it also reduces the initial investment of equipment. It can save energy by 30%-80% compared with a central air conditioner during operation

3. Unit capacity:

Cooling range: 70kw -5000kw; heating capacity range: 80kw-6000kw. The unit has a high energy efficiency ratio, and the energy of 1KW can be used for heating and cooling in an area of 70-100 square meters.

4, Non-standard customization:

The unit can provide refrigerant such as R1234ze and R134a.380V-50Hz-3N and other power supply formats can be selected.

WATER TO WATER HEAT PUMP





WATER TO WATER HEAT PUMP						
Configuration	Galvanized steel with epoxy painting					
Compressor	Copeland Scroll Compressor					
Refrigerant	Dupont R134a					
Power supply	220-230V/1PH/50Hz	380-415V/3PH/50Hz	380-415V/3PH/50Hz	380-415V/3PH/50Hz	380-415V/3PH/50Hz	380-415V/3PH/50Hz
Condensator	High efficient heat exchanger					
Evaporator	316L Plate heat exchangers or tube in tube HE depends on water source quality					
Expansion valve & 4-way valve	SANHUA					
AC contactor	Schneider					
Control system	Single system					
Heating capacity (kW)	9.5	16	18.2	32	36.5	75
Input power(kW)	2.4	3.9	4.5	8	9	18.2
Rated current(A)	12.2	8.2	8.7	16.5	18	34.2
COP	4	4.1	4	4	4.1	4.1
Cooling capacity (kW)	7.8	12.5	14.5	24	28.8	60.2
Input power(kW)	2.55	4.1	4.87	8	9.8	20.2
Rated current(A)	12.8	8.8	9.5	17.5	20.5	38.6
EER	3.1	3	3	3	2.9	3
Max running current (A)	20.3	12	14	25.6	27	53
Max input power (kW)	3.8	6.6	8.2	13	14.5	30
Water temp setting range (°C)	10 TO 75°C	10 TO 75°C	10 TO 75°C	10 TO 75°C	10 TO 75°C	10 TO 75°C
Water production rate (L/H)	204	344	391	688	785	1612
Hot water pipe size (mm)	DN25	DN25	DN25	DN40	DN40	DN65
Heat source pipe size (mm)	DN25	DN32	DN32	DN40	DN40	DN65
Protection grade	IPX4					
Anti-electric shock Rate	I	I	I	I	I	I
Noise(dB(A))	≤54	≤54	≤54	≤60	≤60	≤64
N.W(kg)	135	135	135	276	276	572
G.W(kg)	148	148	148	300	300	602
Heating test condition: source side inlet/outlet temperature 20°C/15°C, to heat water from initial temperature 30°C to 75°C. Cooling test condition: source side inlet/outlet temperature 30°C/35°C, water side inlet/outlet temperature 17°C/12°C.						
Notes : Technical information may change without any prior information.						



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EcoTech Solutions pays great attention to absorb and integrate the advanced technologies of heat pump in the world and keeps close communication and cooperation with the overseas Research & Development organizations.





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