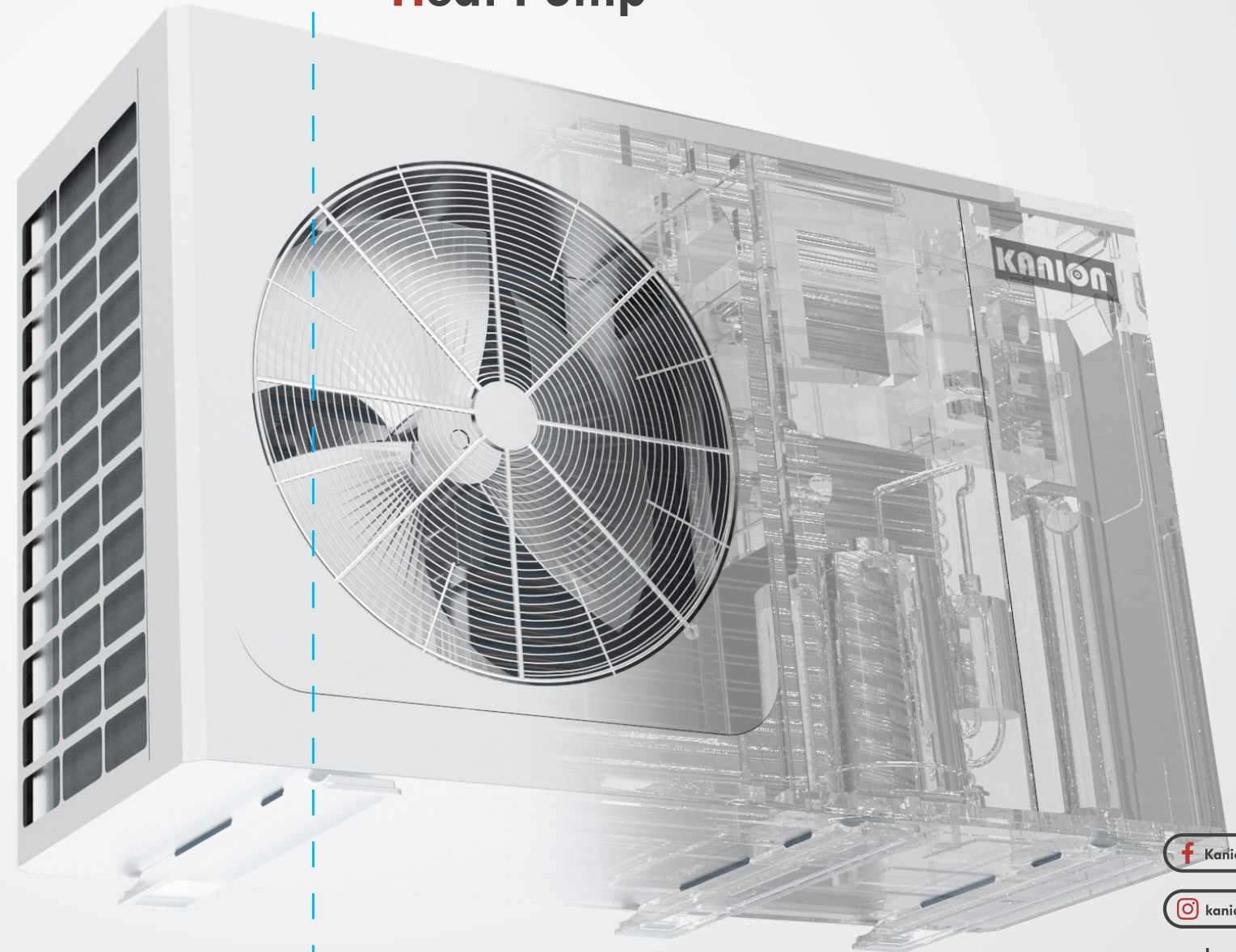




AIR TO WATER

Heat Pump



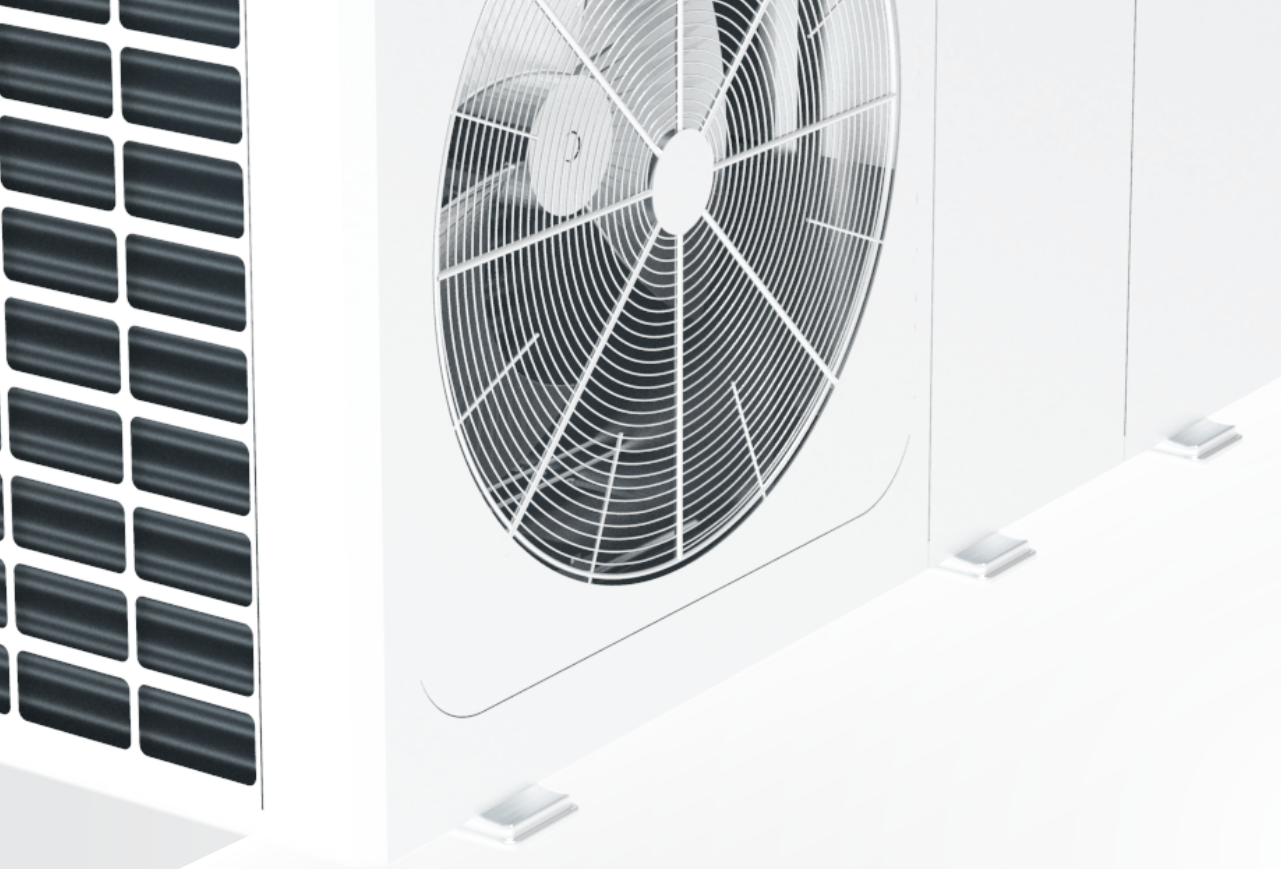
kanionco.com

what if

every home appliance was a silent hero, keeping our places pleasant and homely while leaving no ecological footprint.

WHAT IF KANION CO...





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C O N T E N T S



Kanion Co, a global brand established in 2010, has become a pioneer in the development of eco-friendly, energy-efficient air conditioning solutions while ensuring optimal indoor comfort. With a strong focus on sustainability and continuous innovation, Kanion Co has set new standards in performance, efficiency, and environmental responsibility.

Pioneering Eco-Conscious Solutions

Kanion Co is dedicated to pushing the boundaries and challenging conventional practices. Through substantial investments in research and development, materials science, and advanced manufacturing processes, the company develops cutting-edge products that maximize cooling power while minimizing energy consumption and environmental impact. Their team of highly skilled experts constantly explores innovative ways to achieve these goals.

Kanion Co emphasizes the use of recyclable and non-toxic materials, waste reduction, and energy conservation in all its operations. The company will continue to develop cutting-edge solutions that set the global standard for efficiency, effectiveness, and eco-consciousness. By prioritizing sustainability and investing in research and development, Kanion Co aims to shape the future of home comfort and contribute to a cleaner and greener world.

Integrating Clean Energy Resources

Sustainability today requires more than just reducing energy consumption; it involves reimagining climate solutions. Kanion Co goes above and beyond by integrating solar technologies into its products. This seamless integration harnesses renewable solar energy, significantly reducing reliance on fossil fuels and moving closer to achieving net-zero energy usage.

360 Energy Hub plays a pivotal role in this vision, serving as the cornerstone of Kanion Co's sustainable offerings by combining efficient heat pump technology with solar power and energy storage solutions.

Moreover, Kanion Co strives to maximize energy conservation at every opportunity. This includes using eco-friendly refrigerants, incorporating recyclable materials, optimizing heat transfer systems to minimize carbon footprint, and developing products that repurpose energy waste to fulfill demanding domestic needs. Their Total Energy Solution, featuring advanced energy storage and inverters, seamlessly integrates with all their products, including the 360 Energy Hub, providing a comprehensive approach to energy management and setting a new standard for eco-friendly innovation.



Recognitions & Accolades

Kanion Co's commitment to developing eco-conscious air conditioning solutions has garnered recognition globally. In 2023-2024, the company was featured as one of the most environmentally friendly companies worldwide by The CEO Magazine®. Additionally, Kanion Co received the prestigious title of Best Air Conditioner Supplier by Corporate Vision Magazine®, highlighting their unrivalled product quality and performance. The company's continuous advancements in air conditioning technology and sustainability efforts earned them a place in the 50 Best Companies in the World to Watch, as recognized by The Silicon Review®.

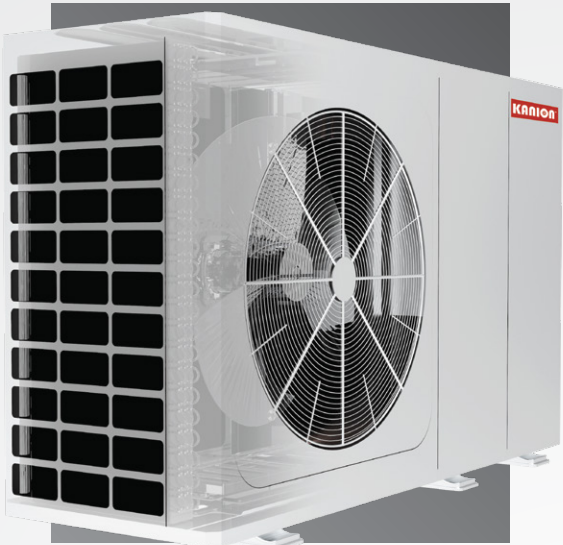


Worldwide Presence

Kanion Co products meet the unique requirements of almost every country. Meticulously designed to adhere to different import, certification, safety, and environmental standards, Kanion Co Air To Water Heat Pumps (ATWHPs) are available across the globe, each tailored to meet the bespoke needs of our diverse customer base.

Our product range not only meets varied capacity requirements but is also equipped with cutting-edge technology to ensure optimal performance in extreme climates. From the sub-zero temperatures in the farthest reaches of the North and South to the humidity and high temperatures of equatorial regions, Kanion Co ATWHPs are built to perform.

Kanion Co combines global reach, robust manufacturing processes, and state-of-the-art production bases to deliver world-class cooling, heating and domestic hot water solutions.



Manufacturing Philosophy

At Kanion Co we subscribe to the belief that well-designed processes can minimize the potential for human error, thereby increasing robustness. Our approach to process robustness is divided into three key stages:

Critical Quality Attributes (CQA): These are the key features we strive to instill in our final products, including purity, technological innovation, efficiency, environmental friendliness, and safety.

Critical Process Parameters (CPP): In this stage, we define and set crucial elements like raw materials, manufacturing equipment, and the degree of automation to ensure adequate control.

Setting Tolerance Limits: Here, we establish upper and lower tolerance limits to define acceptable quality levels, thereby ensuring the production of superior final products.

Production Facilities

Xiaolan Air Conditioners Production Base
Boasting an area of 20,000 square meters, this production base houses 4 production lines manned by over 1,000 employees. Commercial air conditioners produced here are exported to more than 100 countries.

100K+
Square Meters
Production Base Area

Beijiao Air Conditioners Production Base
This production base covers an area of 38,000 square meters, featuring 5 production lines with over 1,000 employees. Residential air conditioners produced here, including wall split mounted types, window types, portable types, floor standing types, and dehumidifiers, are exported to over 100 countries.

14+
Different International
Certificate

Kanion Co Head Office
The head office of Kanion Co's China mainland company is situated in the Luohu District, the business center of Shenzhen. The transportation is convenient, about 30km to Shenzhen International Airport, about 50km to Hong Kong International Airport, and about 25km to Shenzhen Yantian Port and Shekou Port.

25+
Different Air Conditioning
Products Available In Variable
Capacities

SHIFTING MINDSETS FOR A GREENER FUTURE

At Kanion Co social responsibility equals commitment to people and the planet. Eco-conscious culture starts at home and as Kanion Co products step into an increasing number of homes globally, we do feel our part in the common effort gets more important by the day.

K-climate hub Initiative

A free, online, global platform dedicated to sharing tools of measuring a home's energy consumption and environmental footprint and tips and consistent knowledge on how to improve energy efficiency, properly use home appliances, and adopt a greener lifestyle with minimum effort and time invested. The K- Climate Hub provides actionable tips that anyone can daily implement.

"what if" Innovation Policy

Encouraging an open exchange of ideas by welcoming anyone at all levels to suggest innovations through the "What If" program, in the hopes of fostering a culture of creativity and engagement and result in continuously improving products and practices. Long story made short, everybody is encouraged to suggest dual benefits of indoor and outdoor energy conservation (more information to follow on K-Climate Hub soon...)



An initiative that envisions a home in the future that coexists in harmony with the physical environment. It combines air-to-water heat pump, solar resources, and energy storages for efficient and sustainable energy management.

Waste Segregation

Implementing waste segregation across all our premises to eliminate garbage headed to landfills. All our associates are committed to properly separating trash for recycling and composting.

CHRONICLE OF DEVELOPMENT

Kanion Co has charted a remarkable journey since its establishment in 2010. From its humble beginnings, the Co has grown into a prominent player in the air conditioning industry. Let's take a closer look at the significant milestones in the Co's timeline:

The Silicon Review®



Awarded by Silicon Review and Corporate Vision Magazine among the most prestigious start-ups globally.



Air Conditioning division
Kanion products are accredited some of the most prestigious and demanding certificates globally.

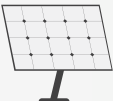
2016

2010

Kanion Co founded.

2018

Solar air conditioning division is established and conventional air conditioners are regularly integrated with solar technologies.



2020

2020

Kanion Co trademark is registered in more than 100 countries as Kanion Co products reach the planet from north to south and east to west.

2022

2023

360 Energy Hub is established and inverters, energy storages and Air To Water Heat Pumps are introduced in to the Co's portfolio.



2023

Invited by The CEO Magazine to exhibit the Co's approach on sustainability and develop a discussion of broader interest on the matter.



2023

k-climate hub

K-Climate Hub initiative is established A free, online, global platform dedicated to sharing tools of measuring a home's energy consumption and environmental footprint and tips and consistent knowledge on how to improve energy efficiency.

2024



Kanion Co products hold the Eurovent, BAFA and the SG Ready certification, further highlighting their reliability and adherence to industry standards.

INTERNATIONALLY RELIABLE BRAND

Kanion Co takes great pride in producing products that adhere to rigorous regulations and certification standards set by various countries and organizations. Our commitment to quality and compliance ensures that our customers can trust in the reliability and safety of our air conditioning solutions. In fact, many of our products have received accreditation for government rebates in North America, Europe, and other regions worldwide. This recognition further demonstrates the superior performance and energy efficiency of Kanion Co's offerings, making them a smart choice for both consumers and businesses seeking top-notch air conditioning solutions.



CB



CE



RoHS

R&D STRENGTH

Significant Features



Super Low Noise



Guaranteed Safety



Intelligent Water Adjustment



75 °C Water Outlet



Solar Technology



UVC Sterilization



Auxiliary Heat Source



Electric Heater



Modbus Gateway

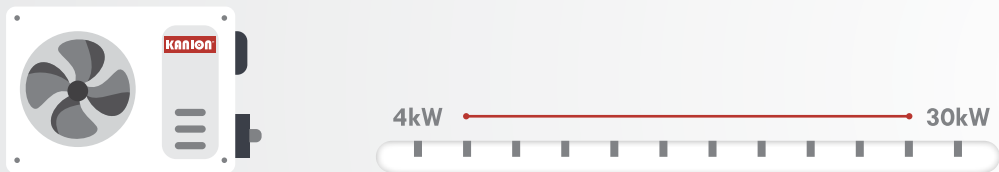


Seven Modes



EVI Technology

Wide Capacity Range



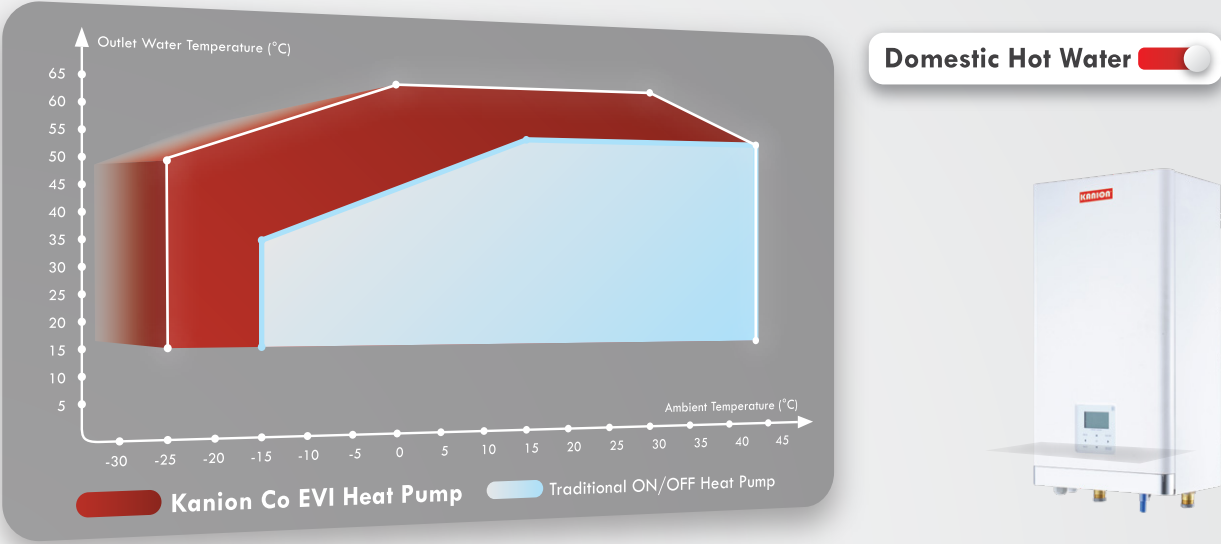
Kanion Co offers a comprehensive range of ATWHPs that cater to a wide capacity range, spanning from 4 kW to 30 kW. Our ATWHPs are engineered using state-of-the-art technologies, ensuring optimal performance and energy efficiency to meet the diverse heating requirements of our clients.

Ideal for Replacement

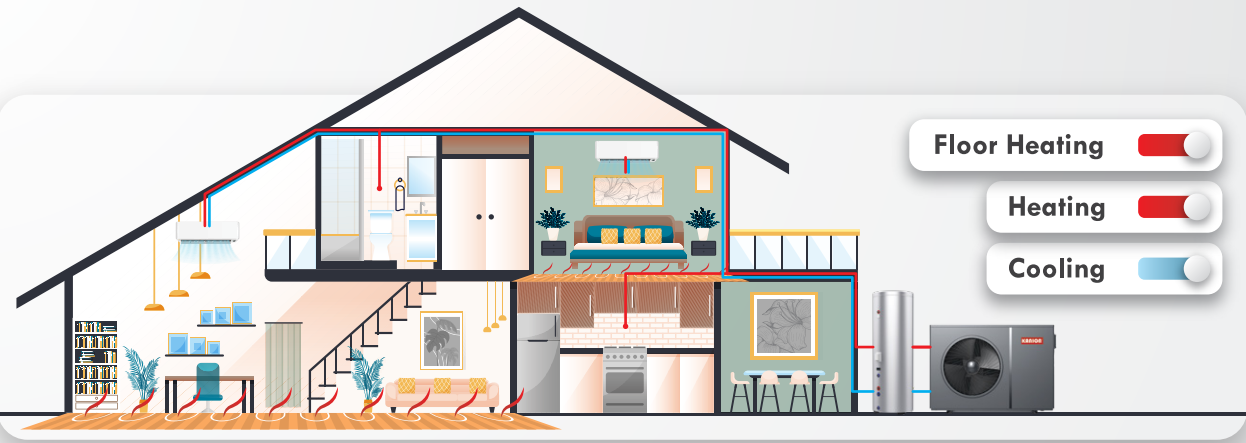


Replacing traditional boilers can be an expensive undertaking, with average costs of around \$8,000 and even higher if radiator replacement is necessary, not to mention the exclusion of air conditioning costs. Nevertheless, Kanion Co provides an outstanding alternative to traditional boilers through our ATWHPs, allowing you to realize substantial cost savings and enjoy multiple advantages by opting for our heat pump solution.

Revolutionizing Cooling, Heating & Domestic Hot Water



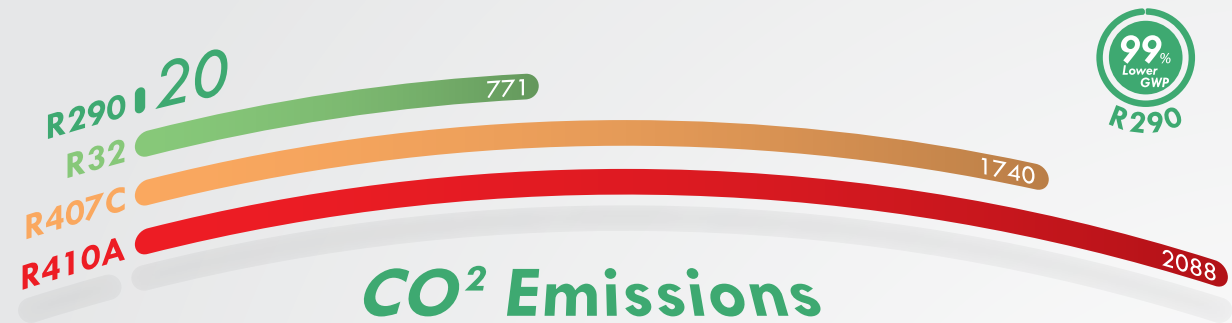
ATWHPs are equipped with advanced inverter and EVI technology, allowing them to operate effectively across a wide temperature range. They can provide space heating, cooling, and domestic hot water. These ATWHPs excel in cold climates, as they can achieve high water temperatures and remain stable even at -25°C.



SG Ready With SG Ready, the ATWHP can automatically switch state according to the power storage of PV equipment and the peak and valley power status of the grid, making full use of free power.

They harness heat from the surrounding environment, such as ambient air or geothermal sources, and transfer it to water. This heated water is then distributed to radiators or underfloor heating systems. By efficiently capturing and utilizing heat, these ATWHPs can extract up to 75% of their energy from the environment, while consuming only 25% electricity. The hot water produced is stored in a cylinder and readily accessible for faucets, showers, and baths, offering sustainable and cost-effective solutions for households.

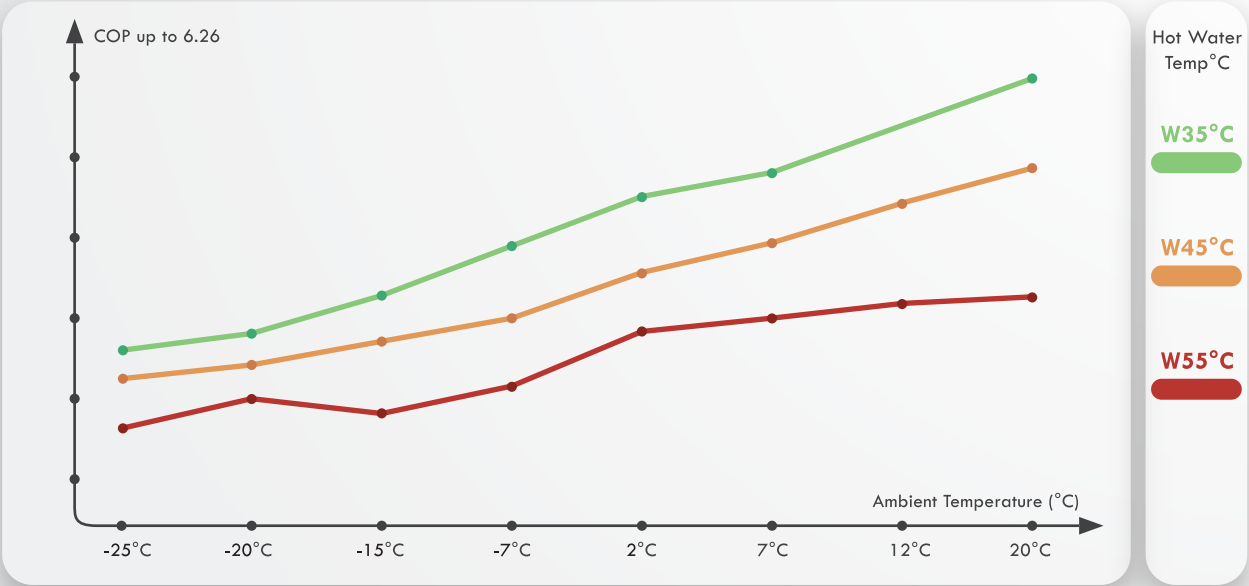
Innovative Air To Water Heat Pump (ATWHP) Design for Enhanced Efficiency



Kanion Co utilizes advanced heat exchanger designs, like plate and coaxial heat exchangers, to maximize heat transfer efficiency between the refrigerant and water. These designs improve heat exchange, resulting in enhanced overall performance and more efficient heating output. Additionally, Kanion Co's ATWHP systems have reduced refrigerant volume, particularly in mono ATWHPs. Unlike split-system heat pumps that require larger amounts of refrigerant due to their internal circuitry, mono ATWHPs confine the refrigerant circuit within the outdoor unit, leading to a smaller refrigerant volume.

Coefficient of Performance (COP) Optimization

Kanion Co prioritizes optimal performance by using advanced control algorithms to fine-tune key parameters like refrigerant flow, compressor speed, and defrost cycles. These algorithms continuously optimize the ATWHP's Coefficient of Performance (COP), ensuring efficient operation in different conditions. By adjusting these parameters dynamically, the ATWHPs maximize heating performance while minimizing energy consumption, resulting in significant energy savings. This COP optimization not only improves energy efficiency but also aligns with global efforts to combat climate change. Homeowners can enjoy comfortable living spaces while making environmentally conscious choices.



Smart Features

DELUXE
series



iLetComfort

For End-User

Enable customer to control temperature, mode, set schedule, energy analysis



AEOLUS
series



Eco-Home

For Installer

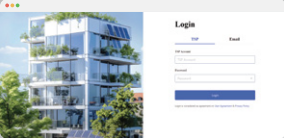
Enable installer to take care of heating system remotely. It saves time and money and offers the quickest service and solutions for ATWHP



Eco-Home
(Coming Soon)

For Distributor

Enable distributor to have complete control of all installations. With a simple click, all units from different locations, receive status updates in real-time



iBuilding HVAC



Eco-Home

Efficiency

Despite improvements in boiler efficiency over the years, some heat is still lost through fuel pipes. In contrast, ATWHPs can achieve efficiency levels of up to 400%. This means that users can enjoy approximately four times more heat output per kilowatt (kW) of electricity consumed. The coefficient of performance (COP) for a typical household ATWHP is around four, indicating that the energy output is four times greater than the electrical energy used to operate it.

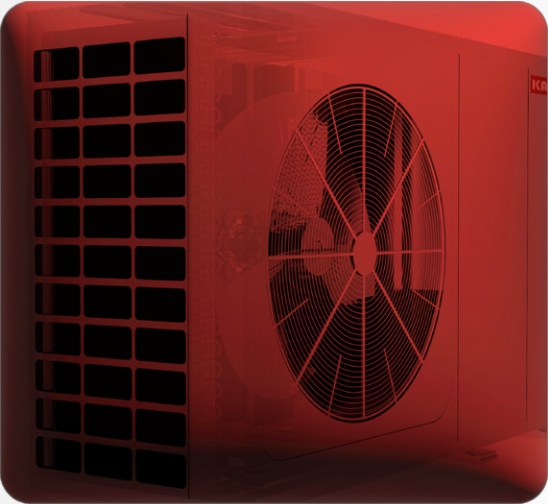
Environmental Impact

Gas or oil boilers rely on the combustion of fossil fuels, which contributes to carbon emissions and air pollution. On the other hand, ATWHPs utilize renewable energy from the air, making them a greener heating option. By reducing reliance on fossil fuels, ATWHPs help decrease carbon footprints and contribute to a more sustainable future.

Air to Water Heat Pumps (ATWHPs)

vs

Classic Gas or Oil Boilers



Cost Savings

While the upfront cost of an ATWHP may be higher than a gas or oil boiler, the long-term savings can be significant. With higher efficiency and lower operating costs, ATWHPs can lead to reduced energy bills over time. Additionally, as renewable energy technologies continue to advance, the cost of electricity is expected to decrease, further enhancing the cost-effectiveness of ATWHPs.

Versatility

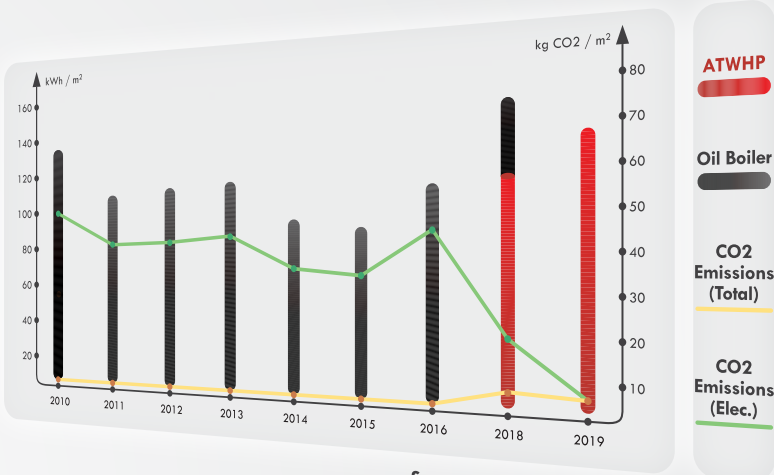
The integration of an air-to-water heat pump, solar resources, and energy storage systems showcases remarkable versatility. The heat pump offers efficient heating and cooling capabilities for different climates, while energy storage eliminates the need for separate systems and saves costs. The utilization of solar resources demonstrates a commitment to sustainable energy, reducing reliance on fossil fuels and minimizing environmental impact.

The Imperative for Change Towards Sustainability

CO2 Emissions in Monovalent Air To Water Heat Pumps (ATWHPs) from 2010 to 2019

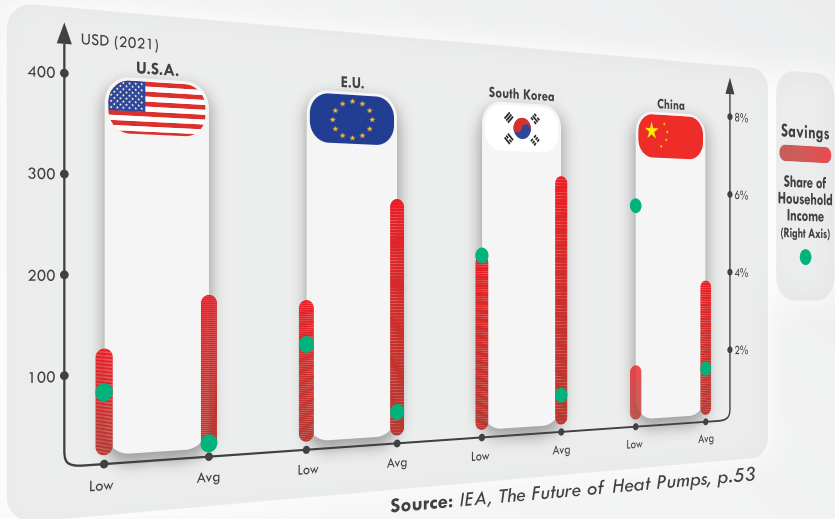
This study examines the CO2 emissions and heat production in Monovalent Air-to-Water Heat Pumps (ATWHPs) from 2010 to 2019. The analysis considers the annual period from July to June of the following year and includes the uncertainty in heat production due to boiler efficiency estimates.

The research reveals a significant reduction in CO2eq emissions, from an average of 42 kgCO2/m2/yr to 3.4 kgCO2/m2/yr in the second year of ATWHPs operation. Additionally, the study highlights the high CO2 savings (92%), exceeding the renewable energy share (75%), thanks to the contribution of low-emission nuclear electricity in the Swiss energy mix.



Source: MDPI, Energies, Vol.15 Issue 14, p.11

Significant Energy Bill Savings for Households Switching from Gas Boilers to ATWHPs



Source: IEA, The Future of Heat Pumps, p.53

This study examines the energy bill savings achieved by households that transitioned from gas boilers to heat pumps in 2021. The findings reveal substantial average savings, varying from USD 180 in the United States to nearly USD 300 in Europe. The significance of these savings becomes even more apparent when considering the energy price increases in 2022, with savings ranging from USD 300 per year in the United States to USD 900 in Europe.

Intenationally Reliable Brand

In line with our commitment to sustainable energy solutions, Kanion Co incorporates solar technologies into our ATWHP systems. Additionally, our products hold the Solar Keymark certification, the SG Ready certification and the Eurovent Certita, further highlighting their reliability and adherence to industry standards.



Bundesamt für Wirtschaft und Ausfuhrkontrolle (BAFA)

Kanion Co's ATWHP has obtained the BAFA certificate, which covers various building-related measures aimed at improving energy efficiency. Kanion Co's ATWHP is eligible under the BAFA program, demonstrating its compliance with the program's requirements.



SG Ready

Kanion Co's ATWHPs have undergone rigorous testing and meet the requirements of the SG Ready certification. This certification ensures that our products comply with the highest standards of safety, performance, and energy efficiency. Customers can have confidence in the quality and reliability of our ATWHP systems.



Eurovent Certita

Kanion Co's ATWHPs are Eurovent certified. It is a mark of excellence that signifies products have been rigorously tested and meet the stringent standards for safety, performance, and energy efficiency. This certification is recognized across Europe and assures customers of the superior quality and reliability of certified HVAC equipment.

PRODUCT PERFORMANCE RATING

Document ID 1638760339-24-ef90c89d

Issued on: 6 December 2021 - Délivré le : 6 décembre 2021

This product is certified by Eurovent Certita Certification as mentioned on:

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Certificate N° 20.11.018

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Certification programmes / Programmes de certification

Product type / Type de produit

Model name / Nom du modèle

Range / Gamme

Participant / Titulaire

Brand / Marque

Liquid Chilling Packages and Hydronic Heat Pumps

Comfort chiller, air-cooled, packaged, reversible

ECOSPAR-M10KW-1N

A Series Air Source Heat Pump

KANION GROUP CO., LIMITED

KANIONCo

This performance certificate is delivered for the following project

Project Name	Project company	Project Reference	Project location
Nom du projet	Nom de la société	Project Reference	Localisation du projet
KANIONCo Mono heat pump energy test report	KANION group	Good	China

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Tel. : +33 (0)1 75 44 71 71 | S.I.S 513 133 607 RCS Paris | SIRET 513 133 607 000 35 | TVA FR 5051313607

A+++ is Essential

ATWHPs harness heat from the surrounding environment, such as ambient air or geothermal sources, and transfer it to water. This heated water is then distributed to radiators or underfloor heating systems. By efficiently capturing and utilizing heat, these ATWHPs can extract up to 75% of their energy from the environment, while consuming only 25% electricity.

The hot water produced is stored in a cylinder and readily accessible for faucets, showers, and baths, offering sustainable and cost-effective solutions for households.

ENERG

енергия · ΕΝΕΡΓΕΙΑ

Y

IJA

IE

IA

KANION

SEER

A+++

A++

A+

A

B

C

D

kW X

SEER X

kWh/annum X

SCOP

A+++

A++

A+

A

B

C

D

kW 3,4

SCOP 5,1

kWh/annum 735

53dB

63dB

ENERGIA · ЕНЕРГИЯ · ΕΝΕΡΓΕΙΑ · ENERGIJA · ENERGY · ENERGIE · ENERGI

626/2011

360 ENERGY HUB

The 360 Energy Hub is an innovative integration of ATWHP technology, solar power, and energy storage systems. This cutting-edge solution harnesses renewable energy sources to provide efficient heating, cooling, and hot water supply, while reducing environmental impact and promoting sustainable living.

Benefits of Kanion's 360 Energy Hub



Enhanced Energy Efficiency

Kanion Co enhanced energy efficiency is highlighted by the transformative effect of integrating an air to water heat pump, solar resources, and energy storage systems. This seamless integration showcases the potential for remarkable synergy, resulting in numerous benefits, including increased sustainability, cost savings, and reduced environmental impact.

Sustainability & Environmental Responsibility

Kanion Co not only prioritises the use of eco-friendly refrigerants and components in ATWHPs but has also established a dedicated website called *K-Climate Hub* (<https://kclimatehub.com/>).

K-climate Hub is an online platform aimed at raising awareness about environmental issues, encouraging the adoption of sustainable lifestyles, and sharing the latest news and trends in environmental protection. It provides users with an interactive community where they can exchange ideas, share experiences, and find practical tips for practicing environmental responsibility.

Energy Consumption Management (ECM) in Temperature

By incorporating these technologies, users can experience the convenience of centralized temperature management throughout their entire home while effectively managing electricity consumption. This integration enables users to maintain a comfortable living environment in every room, optimizing energy usage and reducing reliance on the grid for a more sustainable energy future.

360 ENERGY HUB

Integration of Solar Energy with the Power Grid

Solar panels are the most widespread means to harness green energy for domestic use. Kanion Co 360 Energy hub goes beyond the immediate use of available solar energy but also allows us to store it, and make use of it when it is most needed or when the grid power is most expensive and harmful for the environment. Furthermore Kanion Co 360 Energy Hub seamlessly integrates solar power with grid power. By channeling surplus energy back to the grid, this mechanism significantly reduces utility bills, and makes our homes as cost-effective and environmentally friendly as a home goes.

Why Kanion Co Energy Storage

This innovative solution acts as a vital bridge, connecting renewable energy sources to your home's power network and enabling efficient energy management while enhancing sustainability. It has the capability to store excess energy during periods of surplus, ensuring optimal energy utilization and storage when renewable energy generation exceeds immediate demand.

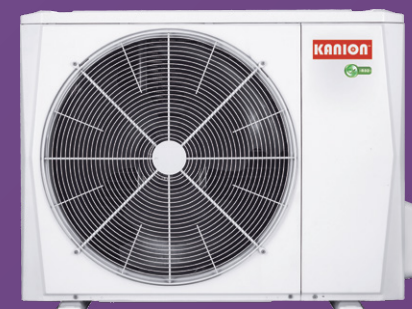
With Deluxe and Aeolus Series ATWHPs

Kanion Co ATWHPs are advanced heating and cooling solutions designed to cater to the needs of any home device. These highly efficient systems possess SG ready, BAFA, and Eurovent certifications, ensuring superior performance, energy efficiency, and compatibility with renewable energy sources.

IN A GLANCE

DELUXE

DELUXE
series



Deluxe Story

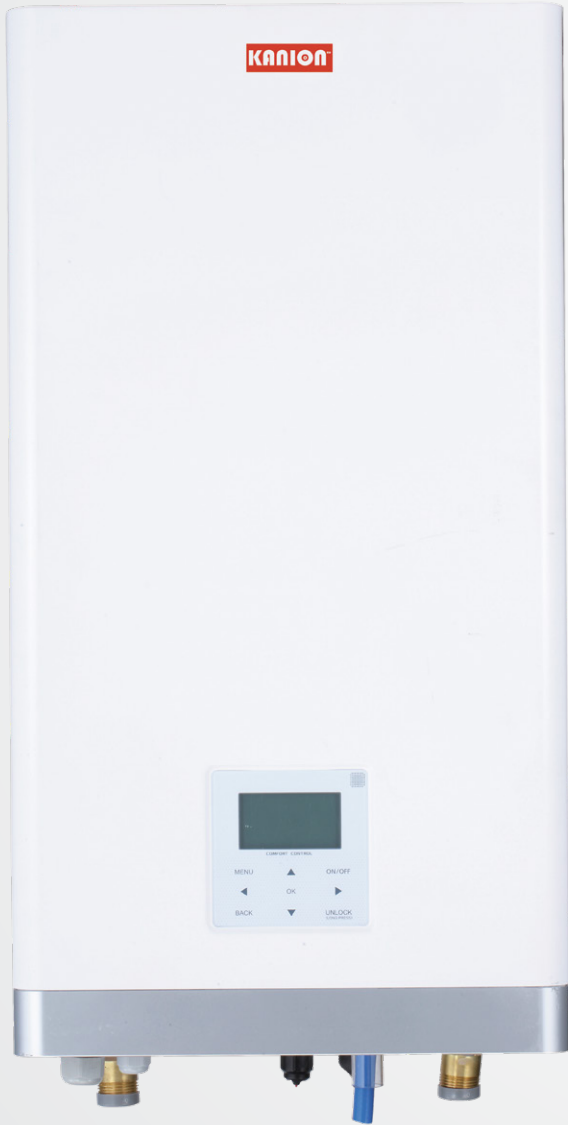
Deluxe is a human creation that emerged as an answer to a pressing question on the future of earth. She combines groundbreaking technology with an extraordinary ability to empathize with humans and their natural environment .

With her sleek and elegant human-made design, adorned with gleaming silver and green details, Deluxe constitutes an intelligent and compassionate human companion who's able to go beyond mere temperature regulation. Equipped with advanced sensors that detect air quality and temperature fluctuations, Deluxe can adapt her cooling and heating capabilities to provide optimal comfort and improve the overall well-being of humans, while at the same it significantly minimizes the impact on the surrounding environment.

As the future unfolds, where climate control takes center stage in our lives, inventions like Deluxe become the epitome of air conditioning mastery. They are not just ordinary machines but possess advanced algorithms that enable them to understand and adapt to the unique needs of their human companions as well as to the preservation of our planet. Deluxe and its kind redefine the boundaries of technology, offering a harmonious blend of innovation and empathy to enhance our daily lives.

R32 Split Air to Water Heat Pump

4 ~ 16kW Hydronic Box



RoHS

CE

Model number ECOSPAR-		4kW ~ 6kW Indoor	8kW ~ 10kW Indoor	12kW ~ 16kW Indoor
Control type		Wifi control, Touch screen		
Sound power level	dB	38	42	43
Unit dimension (W×H×D)	mm	420 x 790 x 270		
Expansion tank	L	8		
Room temperature range	°C	5 - 35		
Max. water outlet temperature range	°C	60		

R32 Split Air to Water Heat Pump
4 ~ 16kW Outdoor



4~16kW

12~16kW

Model number ECOSPAR-		S4kW-1N	S6kW-1N	S8kW-1N	S10kW-1N	S12kW-1N
Power supply		220-240V / 1Ph / 50Hz				
Capacity	kW	4	6	8	10	12
Heating	COP	5.20	5.00	5.20	5.00	4.95
Energy efficiency class	35°C	A+++				
Refrigerant type		R32 Eco Refrigerant				
Sound power level	dB	56	58	59	60	64
Unit dimension (WxHxD)	mm	1008 x 712 x 426		1118 x 865 x 523		
Outdoor air temperature range		°C				



RoHS

Model number ECOSPAR-		S14kW-1N	S16kW-1N	S12kW-3N	S14kW-3N	S16kW-3N
Power supply		220-240V / 1Ph / 50Hz		380-415V / 3Ph / 50Hz		
Capacity	kW	14	16	12	14	16
Heating	COP	4.70	4.50	4.95	4.70	4.50
Energy efficiency class	35°C	A+++				
Refrigerant type		R32 Eco Refrigerant				
Sound power level	dB	65	68	64	65	68
Unit dimension (WxHxD)	mm	1118 x 865 x 523				
Outdoor air temperature range	°C	-25 - 43				