

QVANTUM QA+QH Series

Air source heat pump

Quantum QA+QH is a top performing, inverter-controlled and energy efficient air-to-water heat pump with natural refrigerant that produces heating and cooling.

The QH hydronic unit features an integrated accumulator tank, functioning as a thermal battery, allowing heat storage at up to 90°C. The heat pump is flexready – by charging during periods of low electricity prices or renewable energy surplus, it optimises energy consumption and helps balance the power grid while ensuring consistent comfort. With API communication capabilities, the QH is prepared for flexibility markets, enabling automated energy trading based on real-time electricity prices and grid demand.

Domestic hot water is produced instantly via a heat exchanger. This means that you avoid the risk of legionella and you do not need different corrosion protection depending on the water quality. The Quantum QA air-to-water heat pump is available with outputs of 9 kW and 15 kW. A user-friendly interface makes the heat pump easy to use, for both installers and users.



Product's efficiency class room heating, 35 °C.



Product's efficiency class room heating, 55 °C.



Product's efficiency class and load profile for hot water.

THERMAL BATTERY

A patented solution where the integrated accumulator tank can be used as a thermal battery which means that the heat pump is adapted for the flexibility market.

BUILT FOR THE FUTURE

As Quantum's software develops, the heat pump will automatically be upgraded with new features.

BALANCING SERVICES

By responding to fluctuations in energy availability, flexready heat pumps ease grid strain, lower energy costs, and enhance system stability.



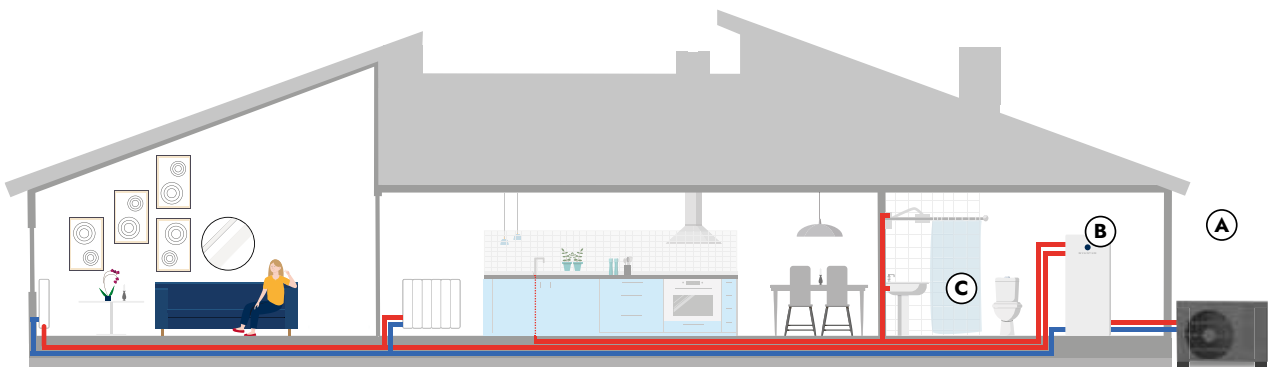
HOW DOES AN AIR SOURCE HEAT PUMP WORK?

PRINCIPLE

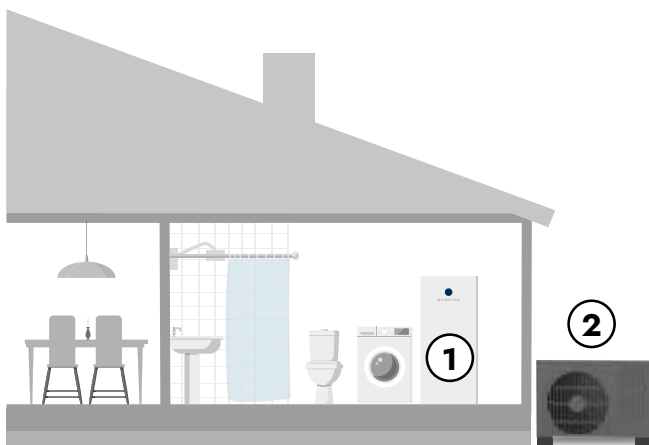
Heat pump technology is based on a very simple and well-known principle, in fact, it is the same principle used in a normal refrigerator. By extracting thermal energy from the outside air, even at lower temperatures, a Qvantum air-to-water heat pump can provide your home with heating and hot water. The process can also be reversed to provide cooling during the summer months.

A Qvantum air/water heating system consists of a heat pump unit combined with a hydronic unit. They work together to create a complete climate system that is easy to install, operate and maintain.

- A Free energy from outdoor air is captured by heat pump unit.
- B The heat is circulated from the heat pump unit to the hydronic unit, where the need for heating, cooling or domestic hot water is met.
- C The distribution of heating and cooling is managed by the hydronic unit to meet the comfort requirements of the home.



REMEMBER! The heat pump unit should be installed at a sufficient height above the ground to avoid the impact of both snow and leaves.



- 1 Hydronic unit
- 2 Heat pump unit

Qvantum QA+QH KEY FEATURES

- R290 natural refrigerant
- All-in-one unit with all functions pre-plumbed.
- Support for active cooling as standard.
- Excellent serviceability through click-fittings.
- Domestic hot water is produced without risk of legionella via a heat exchanger, and you do not need to choose corrosion protection by water quality.
- Simple installation through low weight and compact design.
- Expansion vessel and their safety equipment included.
- 2 anti-vibration mounting feet included

100% DIGITAL – SMART COMFORT

For installers and energy consultants, efficiency and reliability are key when working with heating systems. Qvantum’s software-driven platform simplifies installation, integration, and operation — making heat pumps easier to manage and more adaptable to the evolving energy landscape.

REMOTE CONTROL

Qvantum’s smart control system enables remote monitoring and adjustments, ensuring optimal comfort, efficiency, and energy savings — anytime, anywhere. Installers can adjust settings, track performance and diagnose issues remotely, reducing on-site visits and improving service efficiency.



flexready®

Qvantum’s flexready heat pumps support balancing services by allowing heat storage at up to 90°C. Acting as thermal batteries, they store excess energy when electricity prices are low and reduce consumption during peak hours — without affecting comfort.

By responding to fluctuations in energy availability, flexready heat pumps ease grid strain, lower energy costs and enhance system stability. This ensures a more efficient and future-proof energy system while allowing users to benefit from smarter energy management.

HEAT PUMP TO GRID (HP2G®)

Fossil-free cities need more than renewable electricity — they require smarter, more integrated energy solutions. Qvantum’s HP2G®-optimised heat pumps can be used as standalone solutions for single-family homes or connected in larger thermal networks to create flexible, efficient energy systems. By transforming heat pumps into active grid assets, reduces emissions, stabilises the grid and increases energy independence.

THERMAL GRID – EFFICIENT HEATING & COOLING FOR CITIES

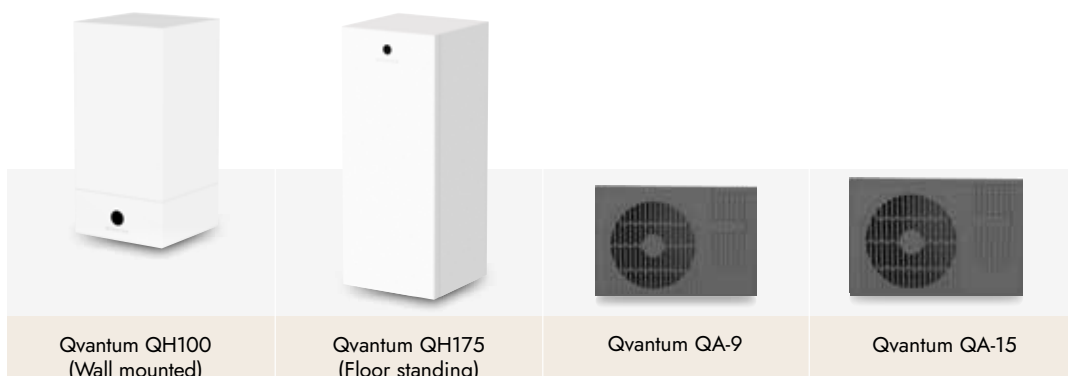
Qvantum’s heat pumps are grid optimized and enables efficient heating and cooling by a shared low-temperature network. Instead of relying on gas boilers or traditional district heating, the shared network captures and redistributes excess heat from data centres, supermarkets and industrial processes etc, ensuring minimal energy losses.

By integrating both centralized and decentralized heat pumps, buildings can efficiently extract and use available thermal energy, reducing reliance on fossil fuels. The low-temperature network integrates with renewable electricity sources, optimising energy use across urban environments.

This future-ready heating and cooling solution helps cities reduce emissions, lower energy costs and transition toward a more sustainable and resilient energy system.

INSTALLATION FLEXIBILITY

The Qvantum QA outdoor units comes in heating capacities of 9 kW and 15 kW and can be combined with Qvantum’s modular floor standing and wall mounted hydronic unit to enable flexible installation layouts to fit available space and desired capacity.





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Product's efficiency class room heating, 55 °C.



Product's efficiency class and load profile for hot water.

TECHNICAL DATA		QA-9 + QH-175		QA-15 + QH-175	
Heating efficiency and capacity					
The product's efficiency class room heating, average climate 35 / 55 °C		A+++/A++			
The system's efficiency class room heating, average climate 35 / 55 °C		A+++/A++	A+++/A++	A+++/A+++	
SCOP _{EN14825} average climate, 35 °C / 55 °C		5,05/3,61	4,92/3,67	4,94/3,72	
Nominal heating output _(P_{design,h}) , average climate 35 / 55 °C	kW	4,92/4,71	9,29/9,24	9,46/9,02	
Heating capacity/COP at 7/35°C (min nom max)	kW	3,6/5,7 6,0/4,8 8,9/4,2	5,3/5,1 10,3/4,9 15,4/4,5		
Operational range source side	°C	-25~43			
Operational range sink side*	°C	25 - 80			
Electrical data					
Rated voltage outdoor unit	V	230V 1N ~ 50Hz	400V 3N ~ 50Hz	230V 1N ~ 50Hz	
Rated voltage hydronic unit		400V 3N ~ 50Hz/230V 1N ~ 50Hz			
Max power immersion heater	kW	5,0 kW (1+2+2)			
Sound (outdoor unit)					
Sound power level _{EN12102 (LWA)}	dB(A)	57	53,4	57	
Sound pressure level at 2/4/6/8/10 meter**	dB(A)	46/40/36/34/32	42,4/36,4/32,9/30,4/28,4	46/40/36/34/32	
Hot water efficiency and capacity					
Amount of hot water (40°C) _{EN16147 (V_{max})} ***	l	235			
Max amount of domestic hot water (40 °C)****	l	350			
Efficiency class hot water heating / declared tap profile		A/XL			
Refrigerant circuit					
Type of refrigerant (GWP)		R290 (3)			
CO ₂ equivalent	kg	1,5	2,55	2,55	
Refrigerant quantity	kg	0,5	0,85	0,85	
Weight and dimensions					
Measurements outdoor unit (W x D x H)	mm	1 165 x 400 x 795	1 287 x 465 x 928		
Measurements hydronic unit (W x D x H)	mm	600 x 620 x 1 480			
Weight outdoor unit	kg	110	150		
Weight hydronic unit	kg	110			

* 25-75 without electrical addition ** The sound pressure levels are calculated using the guidance factor Q=4. *** Depending on system settings and domestic water flow rate. **** When the 'Extra hot water' operating mode is active.

HEAT PUMPS FOR SUSTAINABLE CITIES

WE CHANGE THE WAY THE CITIES OF EUROPE ARE HEATED
 Quantum, founded in Sweden in 1993, develops high-quality heat pumps for individual buildings and innovative heat pump-based solutions for densely populated areas to enable everybody to benefit from emission free heating and cooling. The company has deep knowledge in both heat pump technology and energy systems engineering and works in close collaboration with engineering consultants, installers, project developers and utilities.

QVANTUM

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