

## QVANTUM QG

### Ground source heat pump

Quantum QG is a high-efficiency ground source heat pump that delivers high performance in heating, cooling, and domestic hot water.

The heat pump 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 QG 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.

Using R290, a natural refrigerant with an ultra-low GWP of 3, QG combines sustainability with advanced engineering. A low refrigerant charge of just 152 grams allows for flexible installation, making it a practical choice for various applications. Designed for reliability and ease of service, the QG12 model features a modular system with two 6 kW compressor units, ensuring operational flexibility - even if one module is offline. Easily replaceable compressor modules simplify maintenance and extend the unit's lifespan.

With integrated expansion vessels, built-in safety features, and support for both active and passive cooling, QG is a complete, future-ready heating solution. Available in 6 kW and 12 kW versions, it offers premium technology and efficiency - at a price that makes sense.



Product's efficiency class room heating, 35/55 °C.



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



Natural refrigerant R290

#### 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.

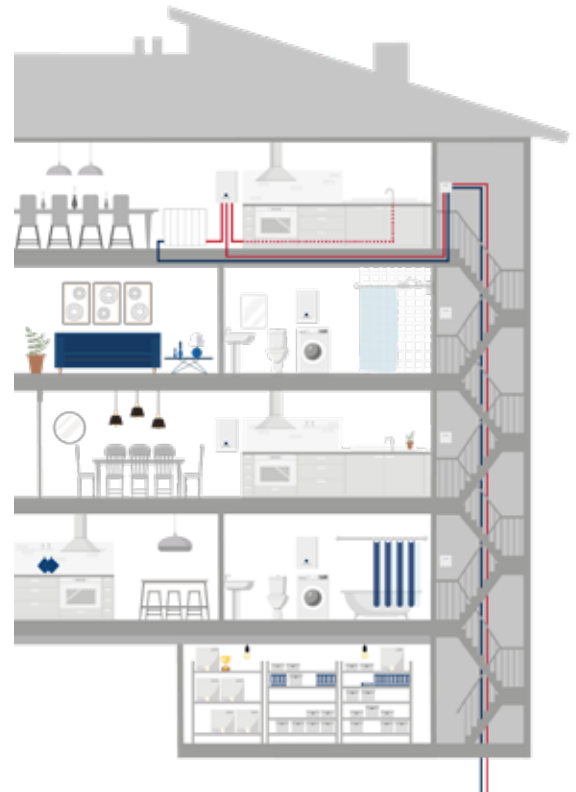


# HOW DOES IT WORK?

## PRINCIPLE

The QG heat pump absorbs low grade heat from a central heat source piped around the building and then raises the water temperature for heating or hot water production via the apartment heat exchanger.

The compact footprint makes it suitable for both new build and existing apartments.

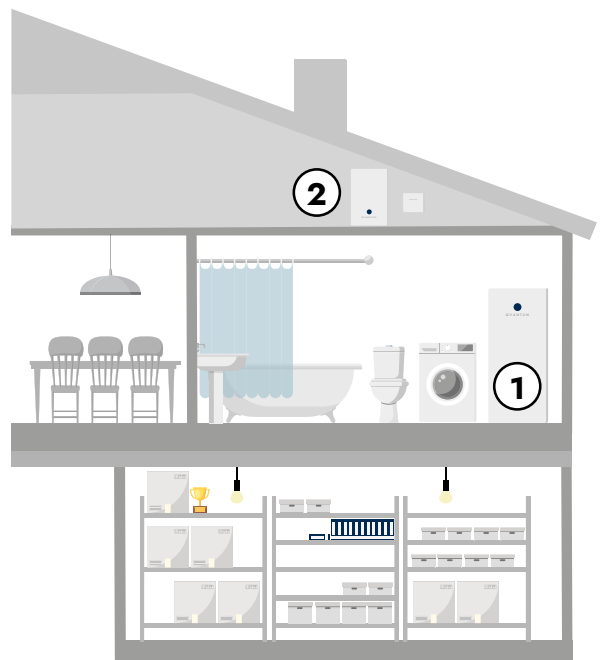


## Quantum QG

### KEY FEATURES

- Available in 6 kW and 12 kW output and inverter control to meet the comfort demands of the home.
- Low refrigerant quantity enables installation anywhere.
- Natural refrigerant R290 allows >70 °C supply flow temperature.
- Support for active cooling as standard or passive cooling as an option.
- Excellent serviceability through click-fittings and replaceable compressor modules.
- Instantaneous domestic hot water for comfort as well as efficient legionella prevention.
- Future proof connectivity.
- Dedicated app for installers and advanced users.
- Integrated buffer tank that enables true energy peak price shaving for both hot water and heating.
- Suitable for single - and three phase connections.
- Simple installation through low weight and compact dimensions.
- Modular design which enables multiple installation options.

## INSTALLATION POSSIBILITIES



Installation can be made in several different ways due to the modular concept.

- 1 Complete All-in-one installation.
- 2 Modular installation as separate units.

# 100% DIGITAL – SMART COMFORT

For installers and energy consultants, efficiency and reliability are key when working with heating systems. Quantum’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

Quantum’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 from anywhere, reducing on-site visits and improving service efficiency.



## flexready®

Quantum’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®)

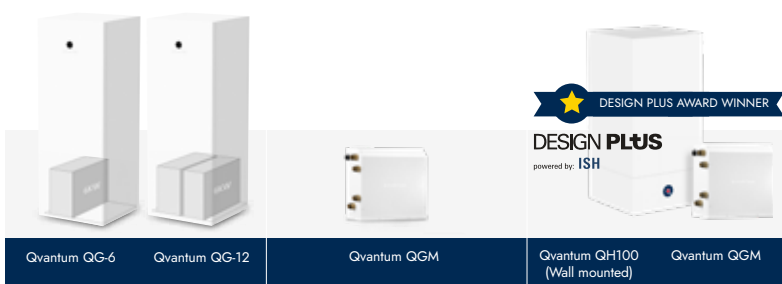
Fossil-free cities need more than renewable electricity — they require smarter, more integrated energy solutions. Quantum’s HP2G®-optimised heat pumps can be used as standalone solutions for single-family homes or connected in larger thermal networks to create flexible, efficient energy systems. By transforming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

## THERMAL GRID – EFFICIENT HEATING & COOLING FOR CITIES

Quantum’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 Quantum ground source heat pump compressor module comes with 6 kW heating capacity. The system offers a range from 6kW to 12 kW in one single All-in-one unit, containing both the heat pump module(s) and the hydronic unit.

The Quantum QG-series modular design enables easy installation also in confined spaces. The heat pump module(s) are fitted after the installation of the larger hydronic unit. They are equally easy to remove and replace when service is needed. If the energy consumption increases in the building, a second heat pump module can easily be added, and the capacity of your system scaled up.

PRELEMINARY TECHNICAL DATA		QG-6	QG-12
<b>Heating efficiency and capacity</b>			
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+++	
SCOP <small>EN14825</small> average climate, 35°C/55°C		4,4/3,8	4,4/3,8
Nominal heating output <small>(P<sub>designh</sub>)</small>	kW	6	12
Operational range source side, GSHP/Cold grid*		-10–40 / 10–40	
Operational range sink side		25–75	
<b>Electrical data</b>			
Rated voltage	V	400V 3N ~ 50Hz	
Max power immersion heater	kW	5.0 kW ( 1+2+2)	
<b>Sound data</b>			
Sound effect level <small>EN12102 (LWA)</small>	dB(A)	36–43	
<b>Hot water efficiency and capacity</b>			
Amount of hot water 40°C <small>EN16147</small>	l	235	255
Max amount of domestic hot water (40 °C)**	l	350	
Efficiency class hot water heating / declared tap profile		A/XL	
<b>Refrigerant circuit</b>			
Type of refrigerant (GWP)		R290 (3)	
CO <sub>2</sub> equivalent	kg	0,456	0,912
Refrigerant quantity	g	152	2 x 152
<b>Weight and dimensions</b>			
Dimensions (W x D x H)	mm	600 x 620 x 1 850	
Weight	kg	145	175

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### SINGLE MODULE COMPLEMENT

Scale as your needs grow/change, increase the heating capacity by adding a single compressor unit. If a house expansion or pool is added to the property, an extra compressor unit ensures that the heating requirements are fulfilled.

# 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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