

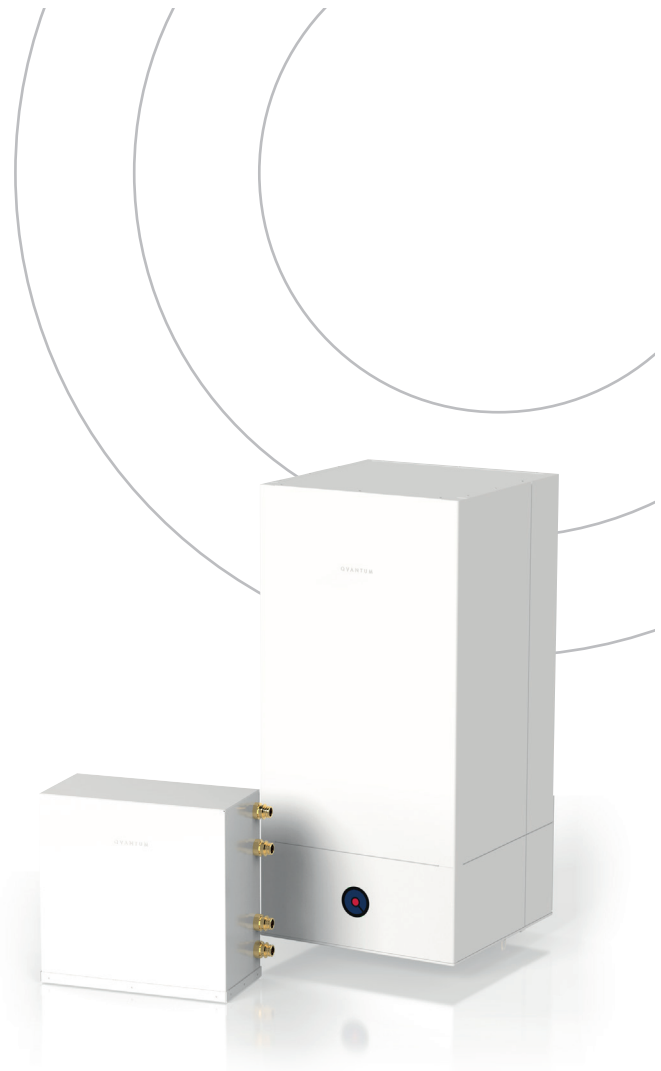
## QVANTUM QG<sup>®</sup>

### Apartment heat pump

The Qvantum wall-mounted, ultra-compact sized hydro unit is a pre-plumbed indoor unit with all necessary functions and connections. Domestic hot water is produced instantaneously with heat from the integrated buffer tank. The buffer tank can also be used to avoid energy peak prices for both heating and hot water. It also has integrated support for active cooling.

Combined with the single compressor module, QG-6 (M), the hydro unit offers a complete heat pump solution that fits in any apartment. It is the ideal companion to a single Qvantum compressor module. The technology behind the Qvantum modular heat pump is protected by multiple patents.

The modular design makes it possible to install the compressor module and the hydro unit with various types of energy grids, in this way offering the perfect product to replace gas boilers.



## DESIGN PLUS

powered by: **ISH**

**R290**

Natural refrigerant R290

**A+++**

System efficiency class room heating, 55 °C.

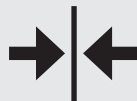
**A** 

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



### ALL-IN-ONE

Integrated heating, cooling & hot water in one system



### ULTRA COMPACT

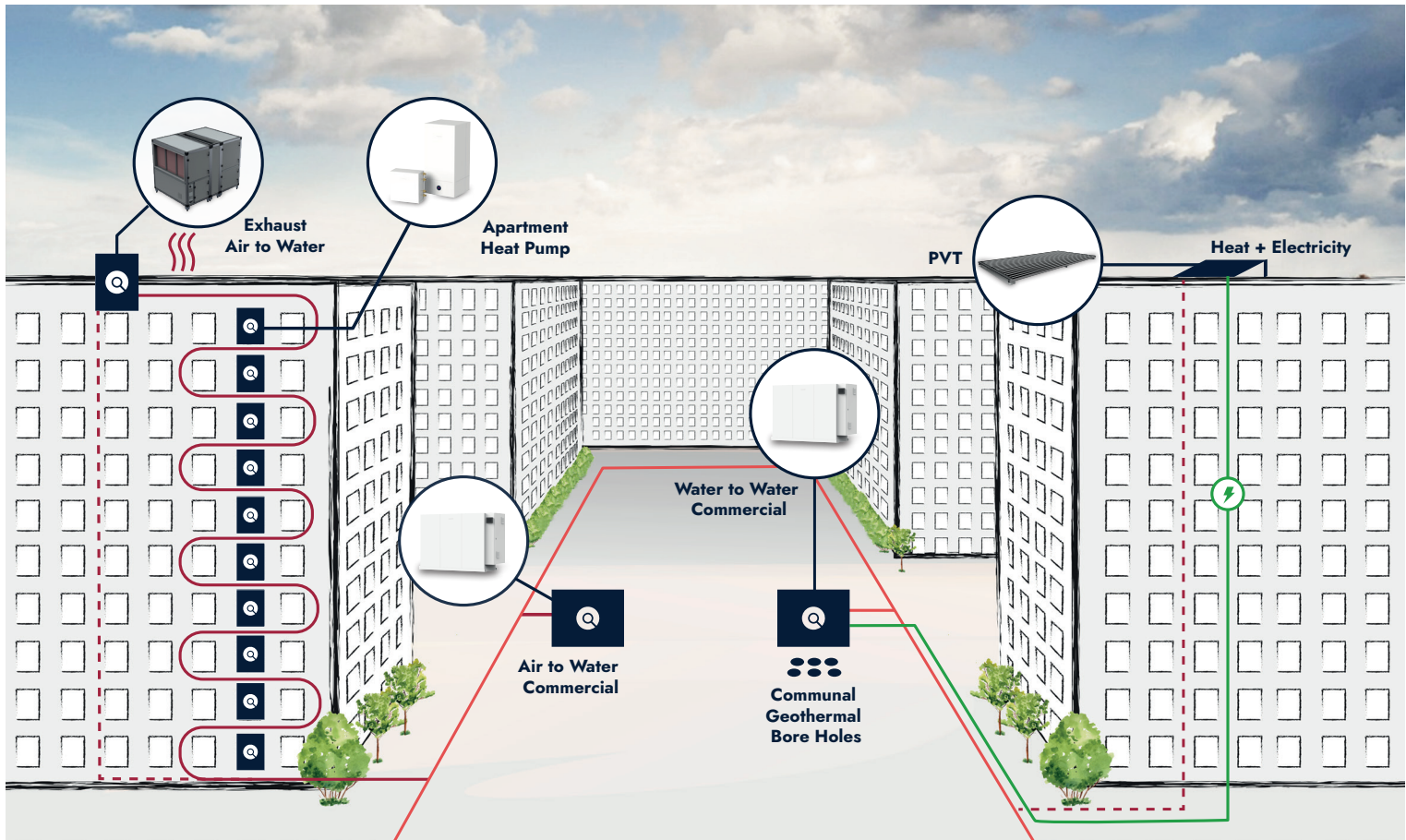
Fits in any apartment  
Gas boiler replacement unit



### Q CLOUD

Open API & smart algorithms  
– integrated connectivity

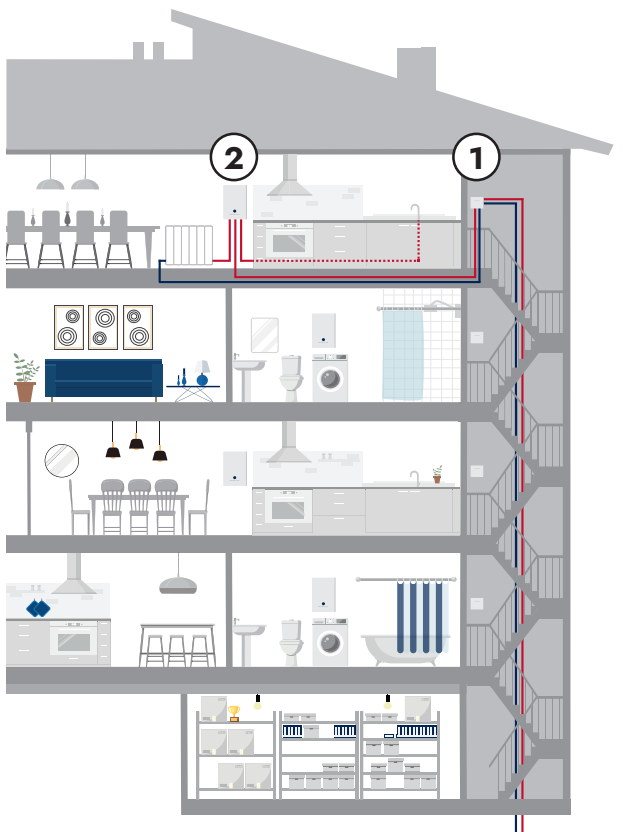




## INSTALLATION POSSIBILITIES

Modular concept enables flexible installation.

- 1) Qvantum Compressor unit QG-6 (M)
- 2) Qvantum hydro unit QH Large (wall mounted)



## KEY FEATURES

- Ultra-compact design enables installation in any type of apartment.
- Low refrigerant quantity enables installation anywhere.
- Hydro unit with all necessary functions pre-plumbed.
- Support for active cooling as standard.
- Excellent serviceability through click-fittings.
- 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.
- Natural refrigerant R290 in the compressor unit allows 70 °C supply flow temperature.
- Suitable for single – and three phase connections.
- Simple installation through low weight and compact dimensions.
- Modular design which enables multiple installation options.

# FUTURE PROOF

Quantum HP series is designed for the needs of the future energy landscape. In an integrated way, both the hardware and the software are designed to be able to support increased thermal storage, increased flexibility, faster response times for electrical grid services and more. You connect to the system using Wi-Fi or Bluetooth and the supporting cloud with its open API, enable smart home management capabilities.

This makes it possible to let the heat pump optimise its operation to maximise synergies with your own PV installation, peak shifting to avoid high hourly electricity tariffs as well as with grid power and frequency control markets.

The system also enables predictive maintenance – this heat pump will let you know when it needs your attention.



# AWARDWINNING TECHNOLOGY

Quantum's Apartment heat pump is a winner of the prestigious Design Plus powered by ISH 2023 award. This modular designed small heat pump is especially designed to be used for apartments in low temperature networks using incoming circuit water of typically 10–20 °C as source. The 6 kW heat pump uses that energy to create either heating or cooling. It then sends back the water with a lower or higher temperature to the circuit where 100's or 1000's of other heat pumps help balance the temperature in the circuit. The heat pump generates 4 kWh of heat for every kWh of power used and uses a refrigerant (R290) with an ultra-low Global Warming Potential.

This has made it possible to make the Apartment Heat Pump so small that it can fit anywhere where a gas boiler is installed or even under a sink. It can be mounted on a wall to a stairwell and fitted with a service hatch so that service can be performed from outside the apartment. The heat pump is connected to a wall mounted hydro unit that can replace a gas boiler or a traditional hot water tank.



## DESIGN PLUS

powered by: **ISH**



PRELIMINARY TECHNICAL DATA		QG-6 (M) AND QH-L	
Space heating efficiency class of the system 35°C / 55°C		A+++/A+++	
Space heating efficiency class 35°C / 55°C		A+++/A+++	
SCOP <sub>EN14825</sub> average climate, 35°C / 55°C		4,42/3,81	
Nominal heating output <sub>(Pdesignh)</sub>	kW	6	
Operational range source side		-10 to 40	
Operational range sink side		25–75	
<b>Electrical data</b>			
Rated voltage	V	400V 3N ~ 50Hz / 230V 1N ~ 50Hz / 230V 2N ~ 50Hz	
Max power immersion heater		5kW	
<b>Sound</b>			
Sound effect level <sub>EN12102</sub> (LWA)	dB(A)	36–43	
<b>Hot water efficiency and capacity</b>			
Amount of hot water (40°C) <sub>EN16147</sub>	l	145	
Efficiency class hot water heating / declared tap profile		A/L	
<b>Refrigerant circuit</b>			
Type of refrigerant (GWP)		R290 (3)	
CO <sub>2</sub> -equivalent	kg	0,456	
Refrigerant quantity	g	152	
<b>Weight and dimensions</b>			
Dimensions compressor module (W x D x H)	mm	230 x 430 x 410	
Dimensions hydro unit (W x D x H)		500 x 500 x 1 050	
Weight compressor module	kg	30	
Weight hydro unit	kg	95	

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## MASS DEPLOYMENT OF HEAT PUMPS IN URBAN AREAS

Heat pumps have been available for many years, but as a technology reserved for those who have their own houses. However, most people live in apartments in densely populated urban areas, where fossil fuel heating has been the go-to solution. Traditional heat pumps have been too large and too expensive for use in apartments and have often required an outdoor unit that is usually not allowed, or even possible, to install. Heat pump systems are the missing puzzle pieces for the net-zero future and a key enabler to meeting the increasing renewable heating and cooling demands. Quantum's heat pump technology and system design enable the installation of apartment heat pumps as replacement for gas boilers and thus contributes to the decarbonisation of the cities in Europe.

## 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.

**Quantum**

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