



QVANTUM QA50

Air-to-Water Heat Pump for Multi-Residential Buildings

With innovation at its core and clear technological leadership, Quantum is redefining low-carbon heating solutions. The QA50 air-to-water heat pump provides a highly efficient and flexible system for residential developments, when combined with the Quantum QG water-to-water apartment heat pump. Together, they help deliver reliable performance, operational efficiency, and long-term sustainability.

Built on decades of expertise, engineering excellence, and proven performance, the QA50 forms part of a fully integrated energy solution. Intelligent controls, compact design, and scalable system architecture enable efficient energy distribution across larger and more complex buildings while simplifying installation, operation, and maintenance.

Scalable Performance with Intelligent Control

The QA50 is a high-capacity air-to-water heat pump designed for projects where heating systems must be efficient, compact, and capable of meeting varying energy demands.

Utilising the natural refrigerant R290, the QA50 delivers reliable, future-ready performance with a lower environmental impact. Its modular design allows multiple units to be combined, creating a scalable solution that can be tailored to project requirements while maximising the use of available plant room space.

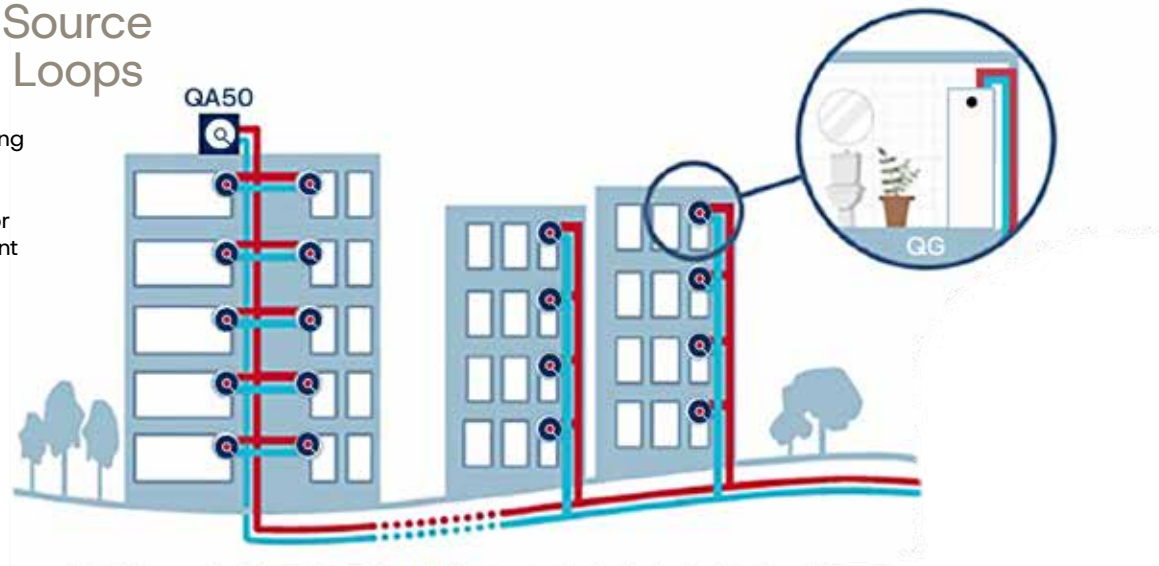
The QC PRO controller provides centralised management through a single intelligent platform. This enables multiple heat pumps and system components to operate seamlessly together, simplifying system control, improving operational efficiency, and providing complete visibility across the entire heating system.

Combining compact dimensions, intelligent controls, and scalable performance, the QA50 is an ideal solution for residential developments and light commercial projects requiring a flexible, high-efficiency heating system.

HEATING CAPACITY: 50kW

The Energy Source for Ambient Loops

The QA50's wide operating window makes it suitable as the central plant/primary energy source for a low temperature ambient loop system.



High performance

- **Compact design** for optimised space utilisation
- **Cost-effective and energy-efficient operation** to help reduce running costs
- **High performance** heating and cooling capabilities
- **Supports domestic hot water production** as part of an integrated building system
- **Simple system integration** with existing and new energy systems
- **Complete residential ambient loop system** with Quantum QG
- **Scalable system architecture** allowing multiple units to be combined as demands grow
- **Natural refrigerant R290** for lower environmental impact
- **Reliable year-round operation** across varying conditions
- **Optimised lifecycle performance** supporting long-term efficiency and reliability
- **Remote connectivity and diagnosis** via Q Service

One Platform. Complete Control. QCPro

Integrate and manage heating, cooling, hot water, pumps, mixing valves, immersion heaters and auxiliary systems from a single intelligent control platform for maximum efficiency and performance.

- **One QCPro controller** for centralised management of multi-unit systems
- **Integrated control** of heating, cooling and domestic hot water
- **Seamless management** of pumps, mixing valves and auxiliary boilers
- **Intelligent optimisation** for improved efficiency and performance



Qvantum QA50



A+++

QA50: Product efficiency for space heating, 35 °C.

A++

QA50: Product efficiency for space heating, 55 °C.

The information provided in this document is believed to be accurate at the time of publication. Specifications, features, and availability are subject to change without notice. Date of issue: 09 / 2026

TECHNICAL DATA	QA50
Heating efficiency and capacity ASHP conditions	
Product efficiency — 35°C/55°C	A+++ / A++
SCOP — average climate, 35°C / 55°C (EN 14825)	4.52/3.26
Rated heating output, P _{designh} — 35°C / 55°C (EN 14825)	25.56 / 25.53 kW
Maximum heating capacity — A7/W35	50.00 kW
Maximum heating capacity — A7/W55	46.00 kW
Maximum heating capacity — A-10/W55	30.30 kW
COP — A7/W35	3.12
Heating efficiency and capacity ambient loop conditions	
Maximum heating capacity — A-3/W25	40.85kW
COP — A-3/W25	3.04
Maximum cooling capacity — A35/W25	51.93kW
EER — A35/W25	3.17
Technical data QA50	
Maximum leaving water temperature, WTOL (EN 14825)	70°C
Ambient operating temperature range	-25°C to +43°C
Heating medium connection size	DN40 internal thread
Refrigerant type (GWP AR6)	R290 (0.02)
Refrigerant charge	2 × 1.5 kg
Electrical supply	380 V / 3N~ / 50 Hz
Maximum power input	24 kW
Maximum current input	30 A
Enclosure class	IPX4
Sound power level, LWA (EN 12102)	75 dB(A)
Sound pressure level at 1 m	70 dB(A)
Net weight	363 kg
Dimensions (W x D x H)	1195×980×1900 mm

HEATING & COOLING PERFORMANCE

OPERATING CONDITION	CAPACITY (kW)
Heating — A-3/W35	38.51
Heating — A-3/W55	36.62
Cooling — A35/W7	32.75
Cooling — A35/W18	41.92

QVANTUM UK

London Office

Unit 5, Floor 3
25 Christopher Street
London
EC2A 2BS
0330 822 6643 | Qvantum.com/uk



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