QVANTUM

QVANTUM QE

Exhaust air heat pump

The Qvantum QE is a highly efficient, all-in-one exhaust air heat pump designed to provide heating, cooling, ventilation, and instant hot water in a single compact unit. 90°C

The exhaust air heat pump recovers energy for the ventilation extract air from the property.

Inverter control automatically adjusts heat output to match the demands of the home whilst maximizing efficiency.

Featuring an intergrated thermal store to produce instant hot water, the QE can further optimise energy use by operating during periods of low electricity cost and is capable of boosting the store upto 90°C.

HEATING EFFECT:

4kw
6kw

Thermal battery

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

Built for the future

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

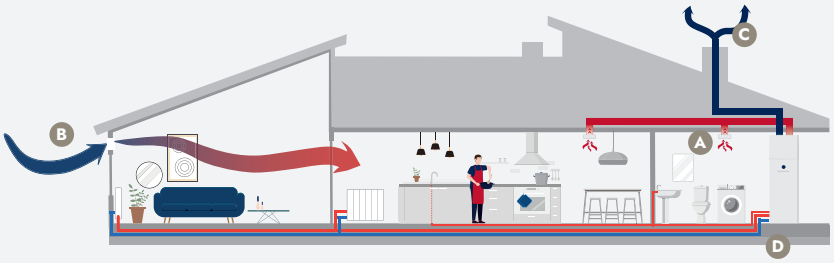
Balancing services

All of Qvantum's residential heat pumps are prepared for the flexibility market such as price control, capacity market and frequency market.

How does an exhaust heat pump work?

Principle

An exhaust air heat pump is a type of heat pump that provides mechanical ventilation, heating and hot water. By combining these, the heat pump extracts waste air from the home and uses this as an energy source to efficiently operate the heat pump.



A The heat pump provides ventilation by extracting stale air from the kitchen, bathrooms and utility rooms.

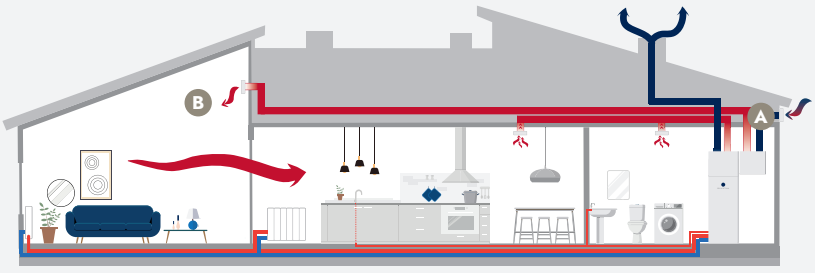
B Extracting air creates a slight negative pressure allowing fresh air to be introduced to the home by background (non mechanical) ventilation to the living rooms and bedrooms.

C Once the heat has been recovered from the extract air it is discharged to the outside via insulated ductwork as it can be up to 30°C cooler than the initial extracted air from the building.

D The heat pump uses the heat recovered from ventilation, via the vapour compression cycle, to efficiently produce heating and hot water for the home.

4-duct solution

The addition of the QS supply air unit removes the need for background ventilators and introduces filtered pre-warmed fresh air to the home via ductwork (similar to a mechanical heat recovery ventilation system (MVHR)).



A Fresh air is drawn into the QS unit where it passes across filters to improve the air quality before prewarming the air across a heater, supplied by the heat pump.

B The filtered pre-warmed air is then supplied to the living rooms and bedrooms via ductwork and diffusers. This provides an elegant solution if the home is located in an area where outdoor noise and air quality are of concern.

The Qvantum QS

An optional supply air module designed to work with the Qvantum QE, preheating incoming air when needed.

Compact Design

Draws in, filters, and preheats fresh air in a compact unit.

Cost-Effective

An efficient and economical solution when paired with the Qvantum QE.

Seamless Integration

Works in perfect harmony with the Qvantum QE to deliver balanced ventilation.

Features & benefits

- Combined ventilation, heating, 14° cooling and hot water solution
- Integrated thermal store
- Instantaneous domestic hot water for comfort and efficient legionella prevention
- Over-the-air updates for futureproof connectivity
- Pre-plumbed packaged system with no outdoor unit for faster installation
- Optional QS – supply air module
- Easy to use Qvantum app also supports remote diagnostics
- Available as 4kW and 6kW

Qvantum QE

TECHNICAL DATA

QE-4: Product efficiency in room heating, 35/55 °C.

QE-6: Product efficiency in room heating, 35/55 °C.

Product efficiency class and hot water tap profile.

TECHNICAL DATA		QE-4	QE-6
Ventilation			
Recommended airflow	l/s	25–55	40–70
Heating efficiency and capacity			
The Product's efficiency class, average climate 35°C/55°C		A+++/A+++	A++/A++
The System's efficiency class, average climate 35°C/55°C		A+++/A+++	A++/A++
SCOP $_{EN14825}$ average climate, 35°C/55°C		4.68/3.86	3.84/3.23
Nominal heating output $_{(Pdesignh)}$	kW	4	6
Operating range extract air / sink side *	°C	5–35/20–80	
Cooling**	°C	14	
Electrical data			
Rated voltage	V	400V 3N ~ 50Hz / 230V 1N ~ 50Hz	
Max power immersion heater	kW	5.0 (1+2+2)	
Sound data			
Sound power level $_{EN12102\ (LWA)}$	dB(A)	39–52	40–54
Sound pressure level in installation room ($L_{P(A)}$)***	dB(A)	36–48	36–50
Hot water efficiency and capacity			
Amount of hot water (40°C) EN16147 (Vmax)****	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)		R513A (631)	
CO_2 equivalent	kg	757	853
Refrigerant quantity	kg	1,2	1,35
Weight and dimensions			
Ventilation connections Ø	mm	125	
Dimensions (W x D x H)******	mm	600 × 620 × 2 045	
Net weight	kg	190 / 365	195 / 370

* With immersion heater ** Condensation within the unit is highly unlikely but may occur in rare situations where humidity rises rapidly (e.g. from tumble dryers or cooking) faster than the system can respond. As a precaution, we recommend installing a drain pan and lift pump beneath the unit to prevent potential water damage; the pump may never operate but provides an added safety measure. Condensation within the unit is highly unlikely but may occur in rare situations where humidity rises rapidly (e.g. from tumble dryers or cooking) faster than the system can respond. As a precaution, we recommend installing a drain pan and lift pump beneath the unit to prevent potential water damage; the pump may never operate but provides an added safety measure.
*** The stated value applies to 4 dB sound attenuation. The sound pressure level is affected by the room's soundproofing properties.
**** Depending on system settings and tap water flow.
***** When operating mode "Extra hot water" is active.
****** Height without ventilation connections.

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