

QAHV

Monobloc Air Source Heat Pump


Renewable Heating Technology

A Highly Efficient, Carbon Saving Solution for Commercial Sanitary Hot Water Production



QAHV Monobloc Air Source Heat Pump

Specifically designed for commercial sanitary hot water application, where gas boilers, combined heat and power systems (CHP) or electric water heating have been traditionally utilised, the QAHV provides a low carbon solution for hospitals, hotels, leisure centres and student accommodation.

Utilising the natural and stable refrigerant CO₂ (R744), the environmentally clean solution enables compliance to strict local planning laws and boosts BREEAM points. Compounded by the increasing decarbonisation of the electrical grid and the UK's commitment to Net Zero 2050, the QAHV provides a high efficiency, low carbon hot water delivery solution with leaving water temperature up to 90°C.



High efficiency at high flow temperatures



Utilises CO₂ refrigerant with a GWP of 1



Uses a unique twisted and spiral gas cooler to enhance energy efficiency



Full heating capacity down to -3°C outdoor temperature and operates down to -25°C



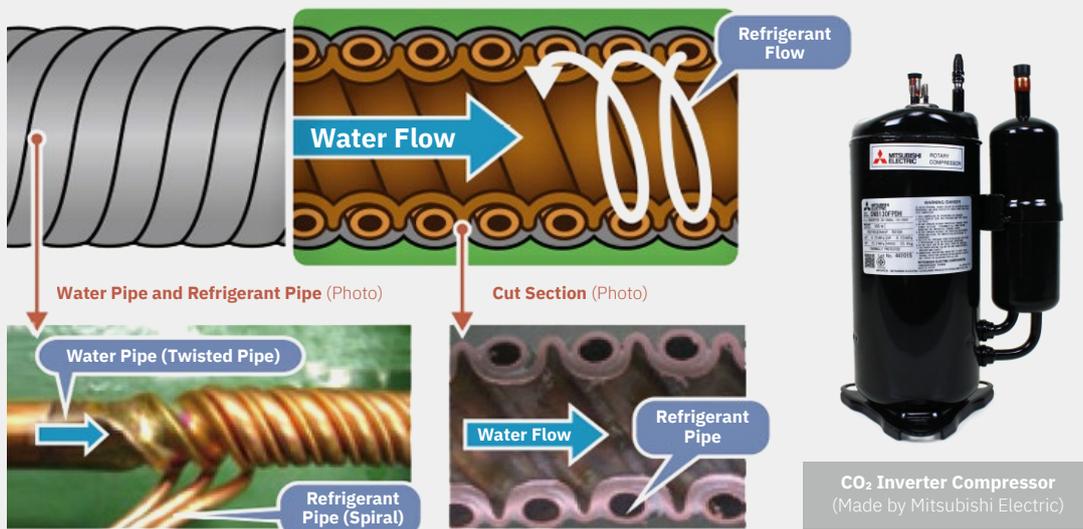
Super low noise levels



Patented Technology

QAHV utilises a unique twisted and spiral gas cooler, the 3 connected refrigerant pipes are wound around the twisted water pipe which maximizes heat transfer.

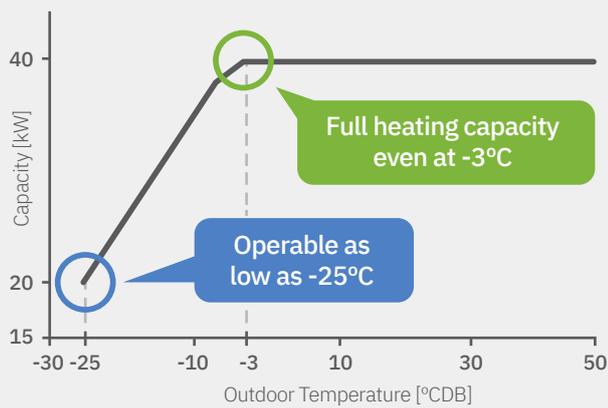
The continuous spiral grooves in the twisted pipe accelerates the turbulence effect of water and also helps to reduce pressure loss within the heat exchanger which contribute to enhance efficiency. Equipped with the latest inverter scroll compressor, QAHV can significantly increase the annual efficiency.



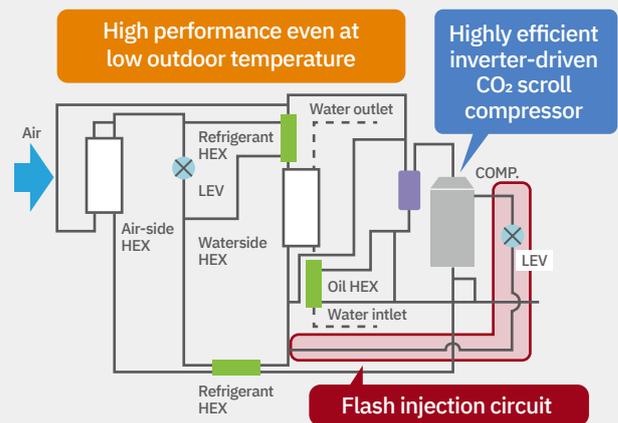
High Performance

High efficiency levels provide significant savings in running costs and carbon emissions against direct electric heating systems.

QAHV is able to provide full heating capacity even at ambient temperatures of -3°C . Furthermore, the unit can supply hot water in ambient temperatures as low as -25°C .



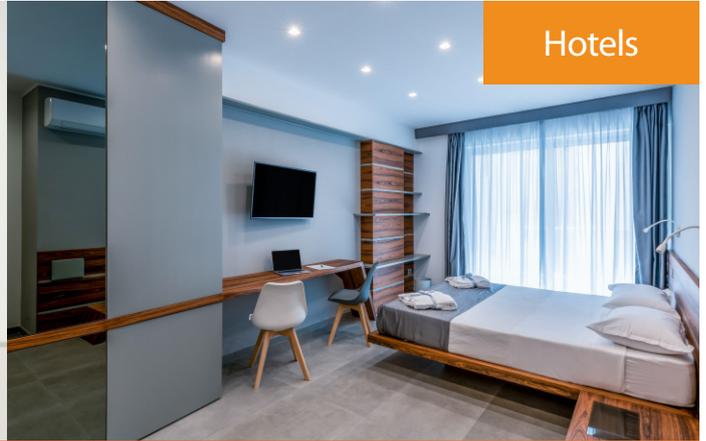
The technology behind this is an injection circuit which provides optimum amount of refrigerant to the system via a compressor through a specially designed injection port to ensure a particularly stable operation.



Healthcare



Hotels



QAHV is ideal for applications with demand for **Low Carbon High Temperature Hot Water**

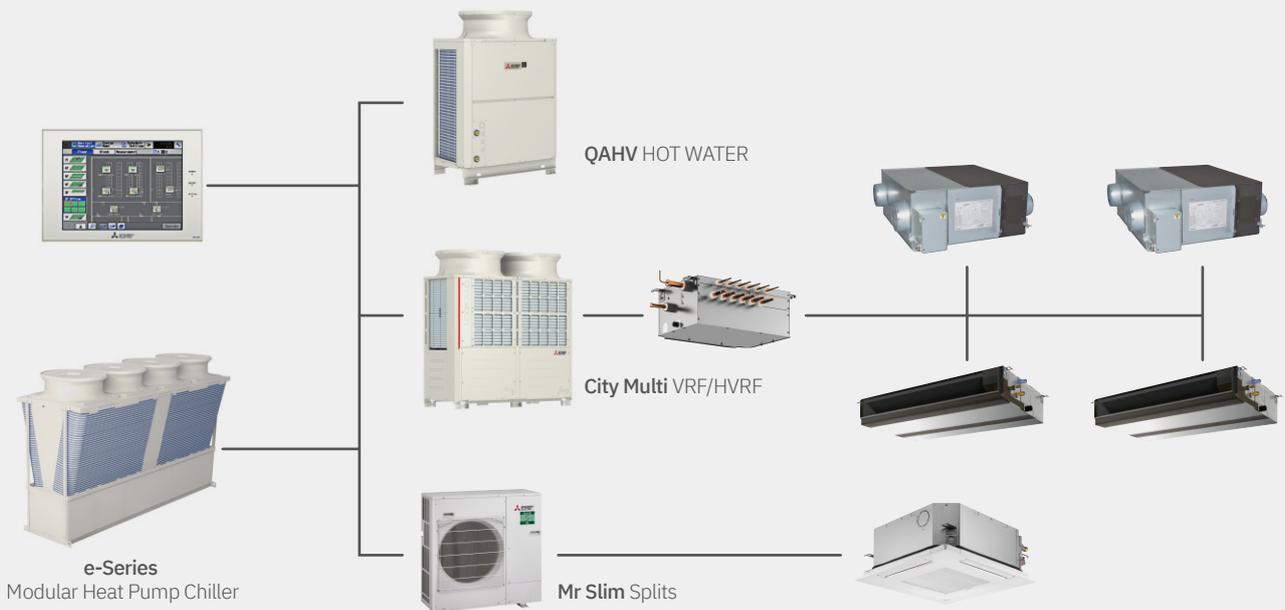
Leisure



Student Accommodation



With an M-NET ready connection, the QAHV solution can be controlled alongside Mitsubishi Electric's City Multi, Mr Slim, e-Series Chillers and others.

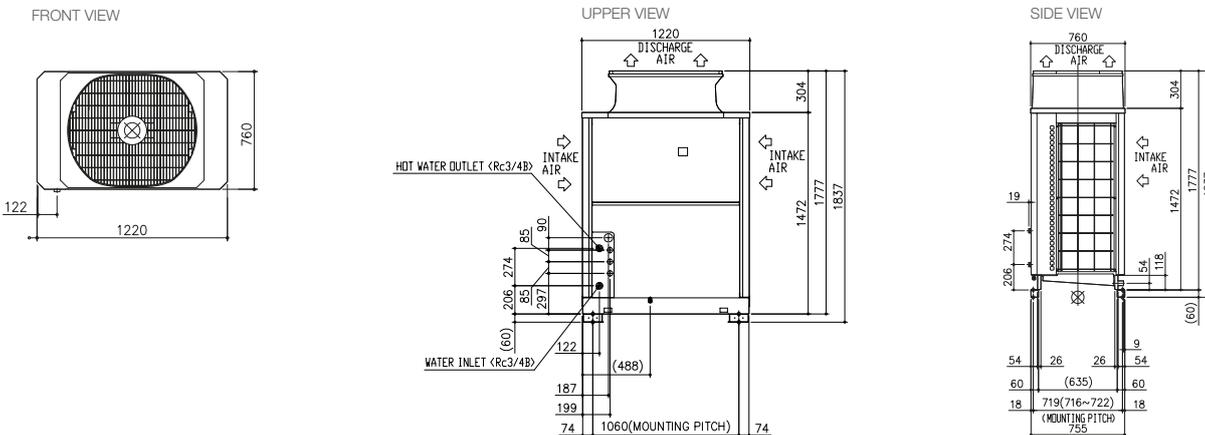




OUTDOOR UNIT		QAHV-N560YA-HPB
WATER HEATING 65°C ¹	CAPACITY (kW)	40
	POWER INPUT (kW)	10.31
	CURRENT INPUT (A)	16.3
	COP	3.88
WATER HEATING 65°C ²	CAPACITY (kW)	40
	POWER INPUT (kW)	10.97
	CURRENT INPUT (A)	18.3
	COP	3.65
WATER HEATING 65°C ³	CAPACITY (kW)	40
	POWER INPUT (kW)	11.6
	CURRENT INPUT (A)	18.7
	COP	3.44
WATER HEATING ENERGY EFFICIENCY CLASS TEMPERATURE RANGE	FOR MEDIUM TEMPERATURE APPLICATION	A
	INLET WATER TEMPERATURE (°C)	5 ~ 63
	OUTLET WATER TEMPERATURE (°C)	55 ~ 90
	OUTDOOR TEMPERATURE (°C)	-25~43
ELECTRICAL	MAX CURRENT INPUT (A)	33.8
	ELECTRICAL SUPPLY (V / Hz)	380-415v, 50Hz
	PHASE	3
	FUSE RATING - MCB SIZES (A) ⁵	40
WATER DETAIL	INLET / OUTLET (mm (in.))	19.05 (Rc 3/4"), screw pipe / 19.05 (Rc 3/4"), screw pipe
	ALLOWABLE EXTERNAL PUMP HEAD (kPa)	77
DIMENSIONS (mm)	WIDTH	1220
	DEPTH	760
	HEIGHT	1837 (1777 without legs)
WEIGHT (kg)		400
NOISE LEVEL	SOUND PRESSURE ⁴ (dB(A))	56
REFRIGERANT	TYPE	R744 (GWP 1)
	REFRIGERANT CHARGE (kg) / CO ₂ EQUIVALENT (t)	6.5 / 0.0065

Notes: ¹ Under Normal heating conditions at the outdoor temp, 16°CDB/12°CWB, the outlet water temperature 65°C, and the inlet water temperature 17°C.
² Under Normal heating conditions at the outdoor temp, 7°CDB/6°CWB, the outlet water temperature 65°C, and the inlet water temperature 9°C.
³ Under Normal heating conditions at the outdoor temp, 7°CDB/6°CWB, the outlet water temperature 65°C, and the inlet water temperature 15°C.
⁴ Measured 1m from the front of the unit in an anechoic room. ⁵ MCB Sizes BS EN60898-2 & BS EN60947-2

QAHV-N560YA-HPB DIMENSIONS



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