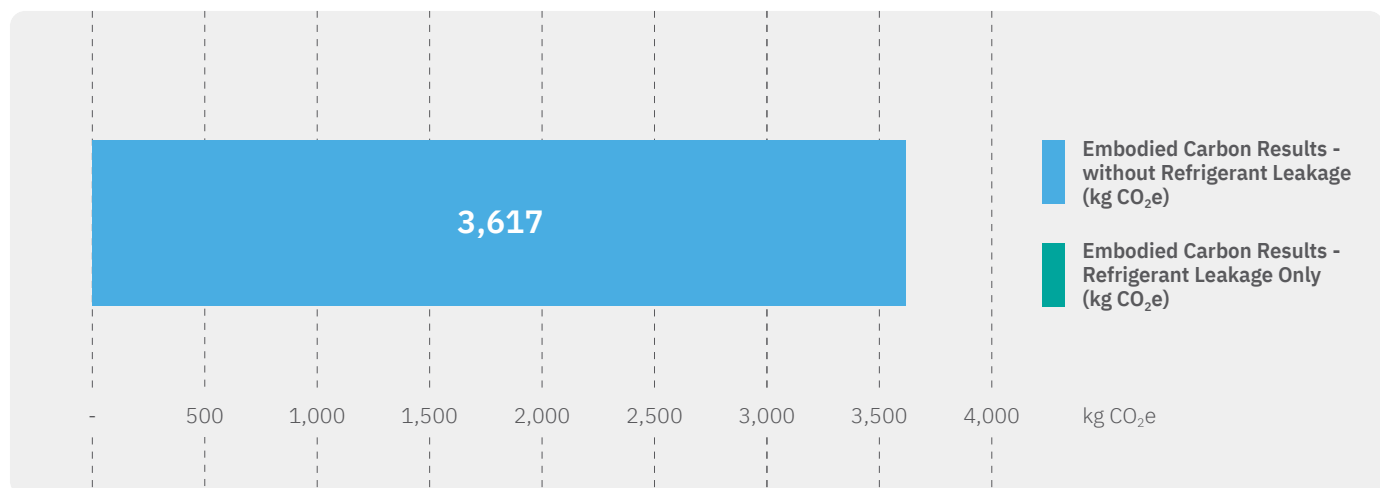


QAHV-N560YA-HPB

CIBSE TM65 Embodied Carbon Mid-level Calculation

<p>Assesment Date: 14th July 2021</p> <p>Assessor / Organisation: Mitsubishi Electric</p> <p>Contact: embodied.carbon@meuk.mee.com</p>	<p>Embodied Carbon Result with 'Mid-level TM65 Calculation' Method Total:</p> <div style="background-color: #76b82a; color: white; padding: 10px; border-radius: 5px; display: inline-block; font-weight: bold; font-size: 1.2em;">3,619 (kg CO₂e)</div>
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QAHV-N560YA-HPB - Product Information

Type of product	A2W Heat Pump
Capacity of equipment (kW)	40
Product weight (kg)	400
Material breakdown for at least 95% of the product weight? (Y/N)	Y
Service life of the product (years)	15
Type of refrigerant	R744
Refrigerant GWP	1
Energy consumption of the factory per unit of product (kWh)	30.8
Location of manufacture	Japan
Product Complexity	Category 3: High



QAHV-N560YA-HPB

CIBSE TM65 Embodied Carbon Mid-level Calculation



Embodied Carbon Results Breakdown (kg CO₂e)

A1: Material extraction	2,051
A2: Transport	317
A3: Manufacturing	55
A4: Transport to Site	91
B1: Use	2
B3: Repair	253
C1: Deconstruction	0.07
C2: Transport	5
C3: Waste Processing	9
C4: Disposal	1

Embodied Carbon Results - without Refrigerant Leakage (kg CO₂e)

A1-C4 (excluding B1,C1)	2,782
A1-C4 with Buffer Factor (excluding B1, C1)	3,617

Embodied Carbon Result - Refrigerant Leakage Only (kg CO₂e)

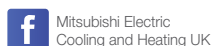
B1 (Refrigerant leakage during use) + C1 (Refrigerant leakage end of life)	2
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Assumptions

A1: Material carbon coefficient source	TM65 Table 2.1 & The ICE Database
B1: Refrigerant annual leakage rate (%)	2 (TM65 Assumption)
C1: Refrigerant end of life recovery rate (%)	99 (TM65 Assumption)
B3: Materials replaced as part of repair (%)	10 (TM65 Assumption)
C4: Percentage of product going to landfill (%)	30 (TM65 Assumption)



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Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

Effective as of August 2021

