

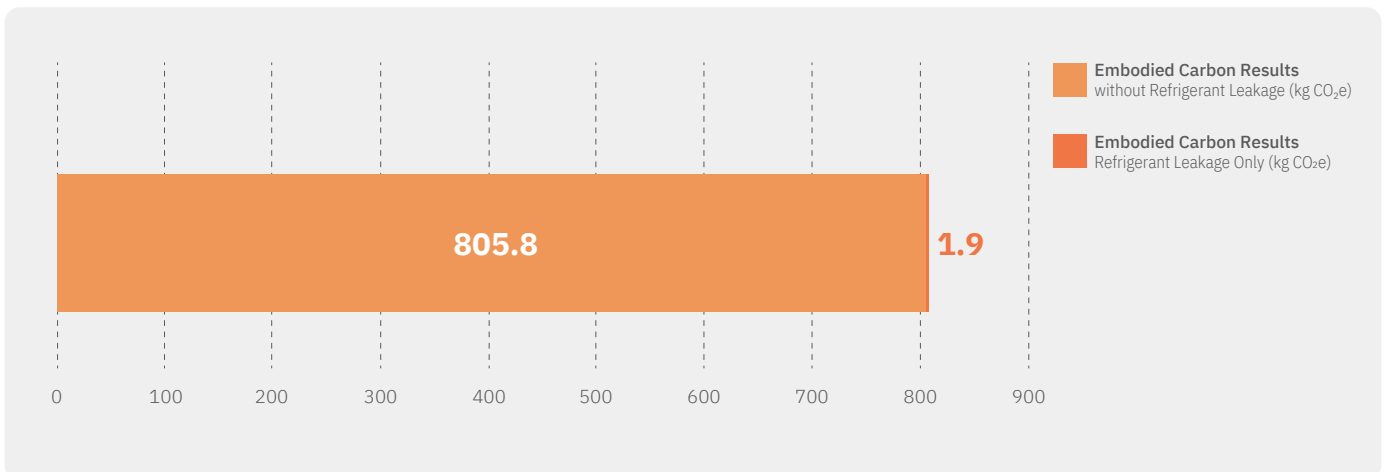
PUZ-WZ80VAA

CIBSE TM65 Embodied Carbon Mid-level Calculation

Assessment date:	29th of September 2023
Assessor:	Residential Product Marketing
Organisation:	Mitsubishi Electric
Contact:	embodied.carbon@meuk.mee.com

**Embodied Carbon Result with
'Mid-level TM65 Calculation'
Method Total:**

807.6 (kg CO₂e)



PUZ-WZ80VAA - Product Information

Type of product	A2W Heat Pump
Capacity of equipment (kW)	8
Product weight (kg)	117
Material breakdown for at least 95% of the product weight? (Y/N)	Y
Service life of the product (years)	15
Type of refrigerant	R290
Refrigerant GWP*	3
Energy consumption of the factory per unit of product (kWh)	26.657
Location of manufacture	UK
Product Complexity	Category 3: High

*IPCC AR5





PUZ-WZ80VAA

CIBSE TM65 Embodied Carbon Mid-level Calculation

Embodied Carbon Results Breakdown (kg CO₂e)

A1: Material extraction	428.6
A2: Transport	92.7
A3: Manufacturing	31.8
A4: Transport to Site	0.9
B1: Use	1.8
B3: Repair	56.3
C1: Deconstruction	0.1
C2: Transport	1.5
C3: Waste Processing	7.7
C4: Disposal	0.3

Embodied Carbon Results - without Refrigerant Leakage (kg CO₂e)

A1-C4 (excluding B1,C1)	619.8
A1-C4 with Buffer Factor (excluding B1, C1)	805.8

Embodied Carbon Result - Refrigerant Leakage Only (kg CO₂e)

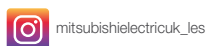
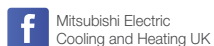
B1 (Refrigerant leakage during use) + C1 (Refrigerant leakage end of life)	1.9
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Assumptions

A1: Material carbon coefficient source	TM65 Table 2.1 & The ICE Database
B1: Refrigerant annual leakage rate (%)	2
C1: Refrigerant end of life recovery rate (%)	99
B3: Materials replaced as part of repair (%)	10 (TM65 Assumption)
C4: Percentage of product going to landfill (%)	30
B6: Grid emission factors	HM Greenbook Data



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Effective as of November 2023

