

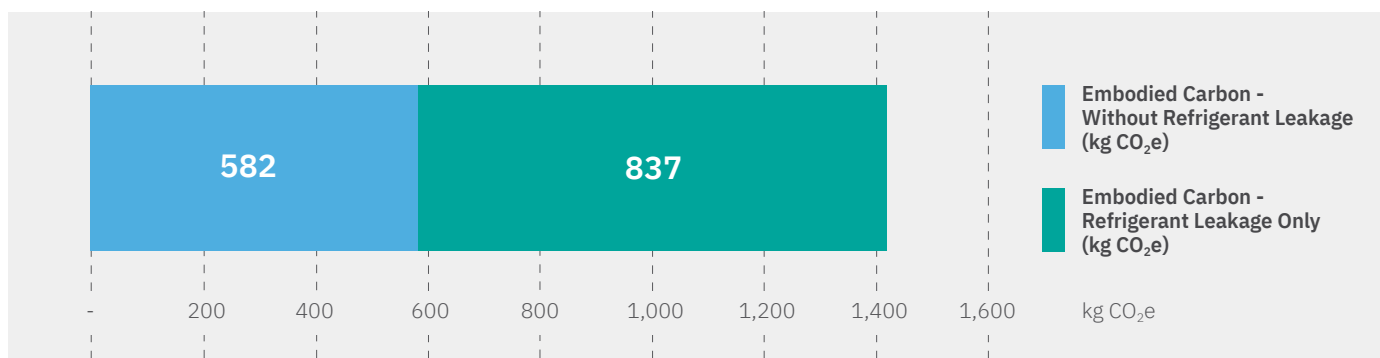
# PUZ-ZM35/50VKA2

## CIBSE TM65 Embodied Carbon Mid-level Calculation

<b>Assesment Date:</b>	2nd April 2024
<b>Assessor / Organisation:</b>	RI / Mitsubishi Electric LES UK
<b>Contact:</b>	embodied.carbon@meuk.mee.com

<b>Embodied Carbon with 'Mid-level TM65 Calculation' Method (kg CO<sub>2</sub>e) Total:</b>	<b>1,419</b>
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	Capacities (kW)*	3.6	5.0
Embodied Carbon Result per kW (kg CO <sub>2</sub> e/kW):		394	284



### PUZ-ZM35/50VKA2 - Product Information

Type of product	<b>VRF Outdoor Unit</b>
Capacity of equipment (kW)*	<b>3.6 / 5.0</b>
Product weight (kg)	<b>46</b>
Material breakdown for at least 95% of the product weight? (Y/N)	<b>Y</b>
Service life of the product (years)	<b>15</b>
Type of refrigerant	<b>R32</b>
Refrigerant GWP	<b>675</b>
Energy consumption of the factory per unit of product (kWh)	<b>14.67</b>
Location of manufacture	<b>Japan</b>
Product Complexity	<b>Category 3: High</b>



\*Nominal cooling capacity conditions as per data book

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### Embodied Carbon Results Breakdown (kg CO<sub>2</sub>e)

A1: Material extraction	325
A2: Transport	36
A3: Manufacturing	30
A4: Transport to Site	11
B1: Use	810
B3: Repair	41
C1: Deconstruction	27
C2: Transport	1
C3: Waste Processing	4
C4: Disposal	0

### Embodied Carbon Results - without Refrigerant Leakage (kg CO<sub>2</sub>e)

A1-C4 (excluding B1,C1)	448
A1-C4 with Buffer Factor (excluding B1, C1)	582

### Embodied Carbon Result - Refrigerant Leakage Only (kg CO<sub>2</sub>e)

B1 (Refrigerant leakage during use) + C1 (Refrigerant leakage end of life)	837
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### Assumptions

A1: Material carbon coefficient source	TM65 Table 2.1 & The ICE Database
B1: Refrigerant annual leakage rate (%)	4
C1: Refrigerant end of life recovery rate (%)	98
B3: Materials replaced as part of repair (%)	10 (TM65 Assumption)
C4: Percentage of product going to landfill (%)	30



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Note: The fuse rating is for guidance only and 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), R290 (GWP:3), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R454C (GWP:148), 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 June 2024

