

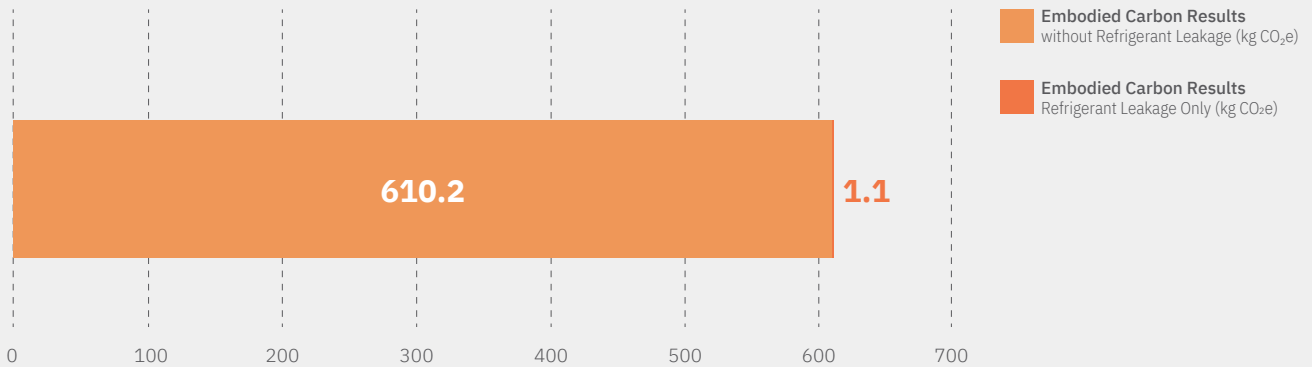
# PUZ-WZ50VAA

## CIBSE TM65 Embodied Carbon Mid-level Calculation

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

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

**611.3 (kg CO<sub>2</sub>e)**



### PUZ-WZ50VAA - Product Information

Type of product	<b>A2W Heat Pump</b>
Capacity of equipment (kW)	<b>5</b>
Product weight (kg)	<b>89</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>R290</b>
Refrigerant GWP*	<b>3</b>
Energy consumption of the factory per unit of product (kWh)	<b>26.657</b>
Location of manufacture	<b>UK</b>
Product Complexity	<b>Category 3: High</b>

\*IPCC AR5





# PUZ-WZ50VAA

## CIBSE TM65 Embodied Carbon Mid-level Calculation

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

A1: Material extraction	314.6
A2: Transport	70.5
A3: Manufacturing	31.8
A4: Transport to Site	0.7
B1: Use	1.1
B3: Repair	42.7
C1: Deconstruction	0.0
C2: Transport	1.2
C3: Waste Processing	7.7
C4: Disposal	0.2

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

A1-C4 (excluding B1,C1)	469.4
A1-C4 with Buffer Factor (excluding B1, C1)	610.2

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

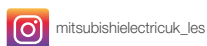
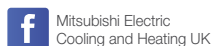
B1 (Refrigerant leakage during use) + C1 (Refrigerant leakage end of life)	1.1
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### Assumptions

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

