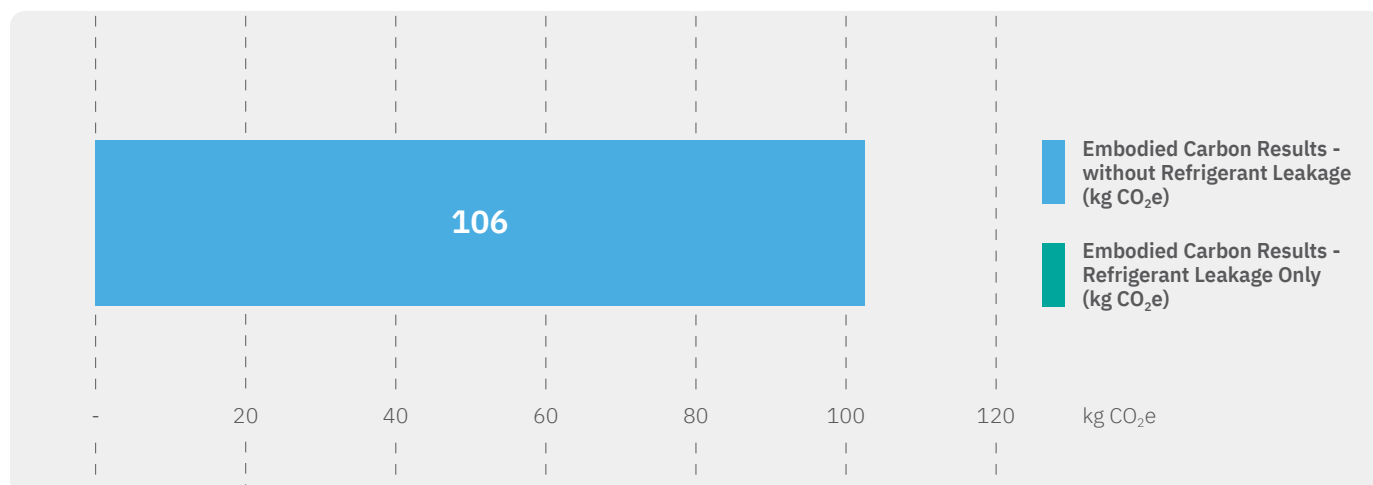


MSZ-AP20VGK

CIBSE TM65 Embodied Carbon Mid-level Calculation

Assesment Date:	17th April 2021	Embodied Carbon Result with 'Mid-level TM65 Calculation' Method Total: <div style="background-color: #76b82a; color: white; padding: 10px; border-radius: 5px; display: inline-block; font-weight: bold; font-size: 1.2em;">106 (kg CO₂e)</div>
Assessor / Organisation:	Mitsubishi Electric	
Contact:	embodied.carbon@meuk.mee.com	



MSZ-AP20 - Product Information

Type of product	Split Type Indoor
Capacity of equipment (kW)	2
Product weight (kg)	8.2
Material breakdown for at least 95% of the product weight? (Y/N)	Y
Service life of the product (years)	15
Type of refrigerant	R32
Refrigerant GWP	675
Energy consumption of the factory per unit of product (kWh)	0.0026
Location of manufacture	Asia
Product Complexity	Category 3: High



MSZ-AP20

CIBSE TM65 Embodied Carbon Mid-level Calculation



Embodied Carbon Results Breakdown (kg CO₂e)

A1: Material extraction	65
A2: Transport	6
A3: Manufacturing	0.47
A4: Transport to Site	2
B1: Use	-
B3: Repair	7
C1: Deconstruction	-
C2: Transport	0.11
C3: Waste Processing	0
C4: Disposal	0.02

Embodied Carbon Results - without Refrigerant Leakage (kg CO₂e)

A1-C4 (excluding B1,C1)	82
A1-C4 with Buffer Factor (excluding B1, C1)	106

Embodied Carbon Result - Refrigerant Leakage Only (kg CO₂e)

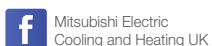
B1 (Refrigerant leakage during use) + C1 (Refrigerant leakage end of life)	-
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Assumptions

A1: Material carbon coefficient source	TM65 Table 2.1 & The ICE Database
B1: Refrigerant annual leakage rate (%)	4 (TM65 Assumption)
C1: Refrigerant end of life recovery rate (%)	98 (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 July 2021

