

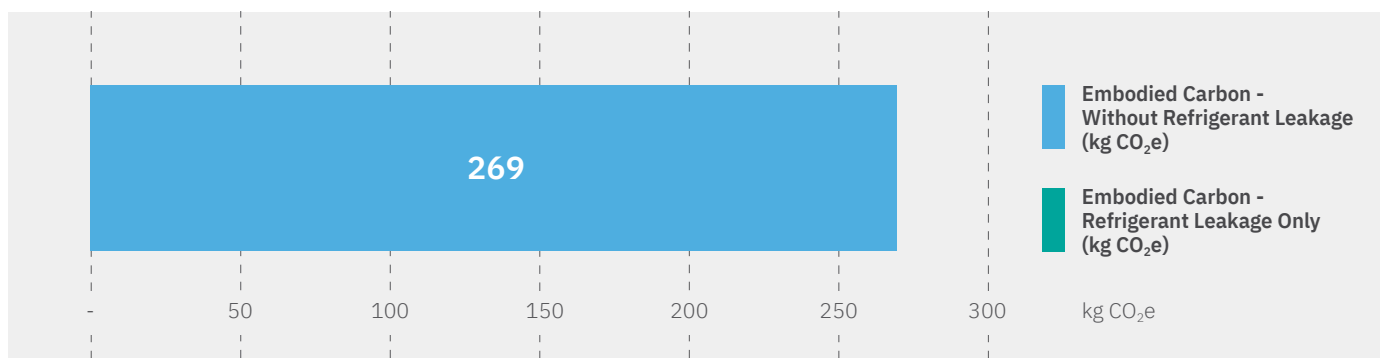
PKFY-P63/100VKM-E

CIBSE TM65 Embodied Carbon Mid-level Calculation

Assesment Date:	30th March 2023
Assessor / Organisation:	RI / Mitsubishi Electric LES UK
Contact:	embodied.carbon@meuk.mee.com

Embodied Carbon with 'Mid-level TM65 Calculation' Method (kg CO₂e) Total:	269
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	Capacities (kW)*	7.1	11.2
Embodied Carbon Result per kW (kg CO ₂ e/kW):		38	24



PKFY-P63/100VKM-E - Product Information

Type of product	VRF Indoor Unit
Capacity of equipment (kW)*	7.1/11.2
Product weight (kg)	21
Material breakdown for at least 95% of the product weight? (Y/N)	Y
Service life of the product (years)	15
Type of refrigerant	R410A
Refrigerant GWP	2088
Energy consumption of the factory per unit of product (kWh)	14.67
Location of manufacture	Japan
Product Complexity	Category 3: High



*Nominal cooling capacity conditions as per data book

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CIBSE TM65 Embodied Carbon Mid-level Calculation

Embodied Carbon Results Breakdown (kg CO₂e)

A1: Material extraction	132
A2: Transport	17
A3: Manufacturing	30
A4: Transport to Site	5
B1: Use	-
B3: Repair	19
C1: Deconstruction	-
C2: Transport	0
C3: Waste Processing	4
C4: Disposal	0

Embodied Carbon Results - without Refrigerant Leakage (kg CO₂e)

A1-C4 (excluding B1,C1)	207
A1-C4 with Buffer Factor (excluding B1, C1)	269

Embodied Carbon Result - Refrigerant Leakage Only (kg CO₂e)

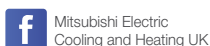
B1 (Refrigerant leakage during use) + C1 (Refrigerant leakage end of life)	-
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Assumptions

A1: Material carbon coefficient source	TM65 Table 2.1 & The ICE Database
B1: Refrigerant annual leakage rate (%)	6
C1: Refrigerant end of life recovery rate (%)	97
B3: Materials replaced as part of repair (%)	10 (TM65 Assumption)
C4: Percentage of product going to landfill (%)	30



Telephone: 01707 282880
 email: embodied.carbon@meuk.mee.com
les.mitsubishielectric.co.uk



UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division, Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England. Telephone: 01707 282880 Fax: 01707 278881
 IRELAND Mitsubishi Electric Europe, Westgate Business Park, Ballymount, Dublin 24, Ireland. Telephone: (01) 419 8800 Fax: (01) 419 8890 International code: (003531)

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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 September 2023

