Air Conditioning | TM65 Calculation

MITSUBISHI ELECTRIC

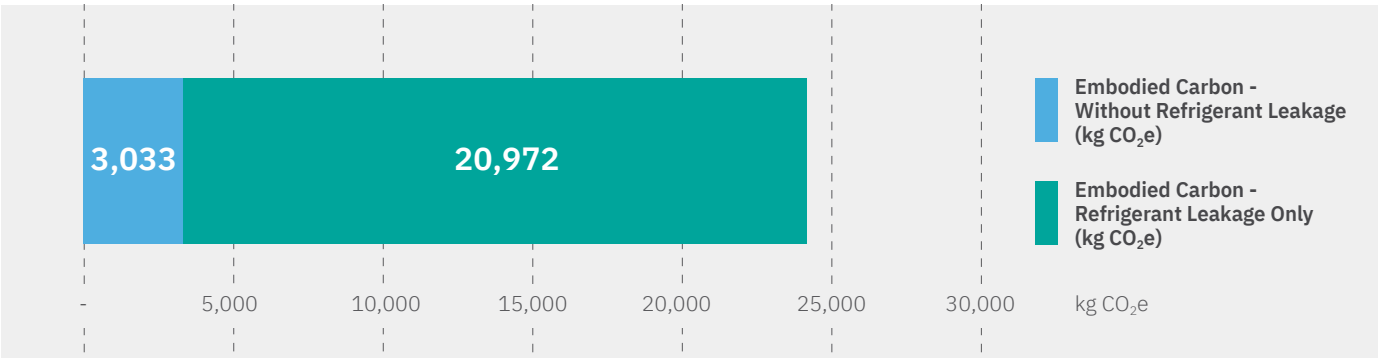
PURY-P450-YNW-A2

CIBSE TM65 Embodied Carbon Mid-level Calculation

Assesment Date:	28th August 2023
Assessor / Organisation:	RI / Mitsubishi Electric LES UK
Contact:	embodied.carbon@meuk.mee.com

Embodied Carbon with 'Mid-level TM65 Calculation' Method (kg CO_2e) Total:	**24,005**

Capacities (kW)*	50
Embodied Carbon Result per kW (kg CO_2e/kW):	480



PURY-P450-YNW-A2 - Product Information

Type of product	**VRF Outdoor Unit**
Capacity of equipment (kW)*	**50**
Product weight (kg)	**289**
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)	**15.25**
Location of manufacture	**Japan**
Product Complexity	**Category 3: High**

*Nominal cooling capacity conditions as per data book

MITSUBISHI ELECTRIC

PURY-P450-YNW-A2

CIBSE TM65 Embodied Carbon Mid-level Calculation

Embodied Carbon Results Breakdown (kg CO_2e)	
A1: Material extraction	**1,779**
A2: Transport	**229**
A3: Manufacturing	**28**
A4: Transport to Site	**68**
B1: Use	**20,295**
B3: Repair	**212**
C1: Deconstruction	**677**
C2: Transport	**4**
C3: Waste Processing	**13**
C4: Disposal	**1**

Embodied Carbon Results - without Refrigerant Leakage (kg CO_2e)	
A1-C4 (excluding B1,C1)	**2,333**
A1-C4 with Buffer Factor (excluding B1, C1)	**3,033**

Embodied Carbon Result - Refrigerant Leakage Only (kg CO_2e)	
B1 (Refrigerant leakage during use) + C1 (Refrigerant leakage end of life)	**20,972**

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**

MITSUBISHI ELECTRIC
Changes for the Better

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

@meuk_les
@green_gateway
Mitsubishi Electric Living Environmental Systems UK
Mitsubishi Electric Cooling and Heating UK
mitsubishielectricuk_les
Mitsubishi Electric Living Environmental Systems UK
BLOG thehub.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)

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

Green Gateway greengateway.mitsubishielectric.co.uk