

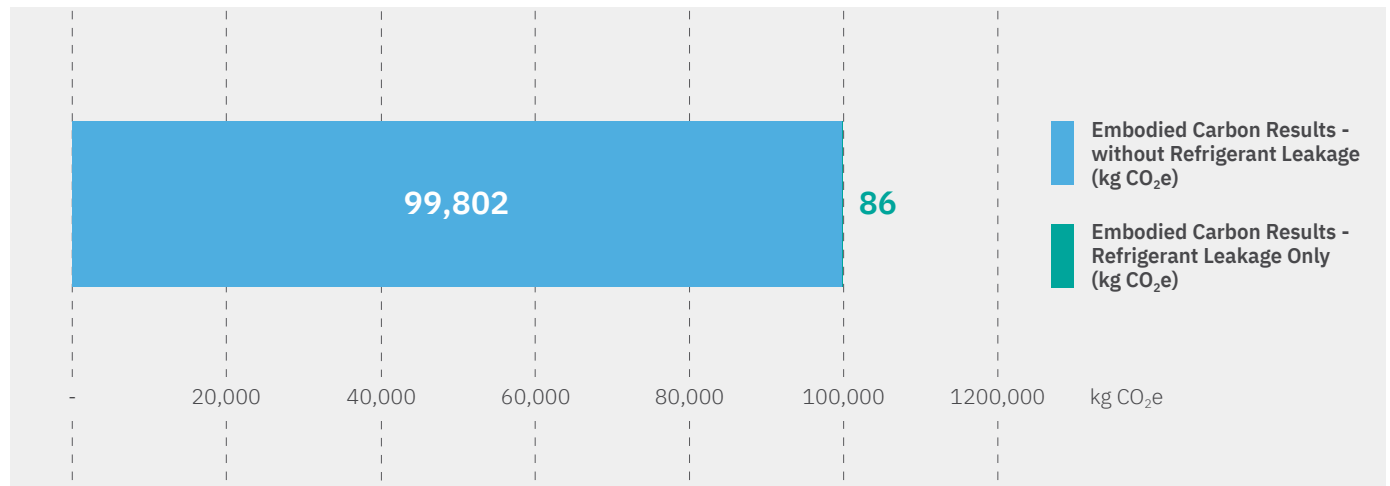
# i-FX2-G04-E 1323

## CIBSE TM65 Embodied Carbon Mid-level Calculation

**Assesment Date:** 3rd September 2025  
**Assessor / Organisation:** Mitsubishi Electric LES UK  
**Contact:** embodied.carbon@meuk.mee.com

**Embodied Carbon with 'Mid-level TM65 Calculation' Method (kg CO<sub>2</sub>e) Total:**

**99,887**



### i-FX2-G04-E 1323 - Product Information

Type of product	Chiller
Capacity of equipment (kW)	1327
Product weight (kg)	10834
Material breakdown for at least 95% of the product weight? (Y/N)	Y
Service life of the product (years)	15
Type of refrigerant	HFO1234ze
Refrigerant GWP	1
Energy consumption of the factory per unit of product (kWh)	3270.4
Location of manufacture	Europe
Product Complexity	Category 3: High





# i-FX2-G04-E 1323

## CIBSE TM65 Embodied Carbon Mid-level Calculation

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

A1: Material extraction	53,544
A2: Transport	8,581
A3: Manufacturing	4,448
A4: Transport to Site	2,103
B1: Use	83
B3: Repair	6,979
C1: Deconstruction	3
C2: Transport	139
C3: Waste Processing	948
C4: Disposal	28

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

A1-C4 (excluding B1,C1)	76,770
A1-C4 with Buffer Factor (excluding B1, C1)	99,802

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

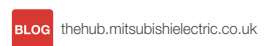
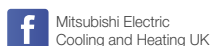
B1 (Refrigerant leakage during use) + C1 (Refrigerant leakage end of life)	86
--	----

### 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



Telephone: 01707 282880  
email: [embodied.carbon@meuk.mee.com](mailto:embodied.carbon@meuk.mee.com)  
[les.mitsubishielectric.co.uk](http://les.mitsubishielectric.co.uk)



UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division, Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England. Telephone: 01707 282880

IRELAND Mitsubishi Electric Europe, Plunkett House, Grange Castle Business Park, Nangor Road, Dublin 22, Ireland. Telephone: (00353) 1 4198800 Email: [sales.info@meir.mee.com](mailto:sales.info@meir.mee.com) Web: [les.mitsubishielectric.ie](http://les.mitsubishielectric.ie)

Country of origin: United Kingdom - Italy - Turkey - Japan - Thailand - Malaysia. ©Mitsubishi Electric Europe 2025. Mitsubishi and Mitsubishi Electric are trademarks of Mitsubishi Electric Europe B.V. The company reserves the right to make any variation in technical specification to the equipment described, or to withdraw or replace products without prior notification or public announcement. Mitsubishi Electric is constantly developing and improving its products. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. All goods are supplied subject to the Company's General Conditions of Sale, a copy of which is available on request. Third-party product and brand names may be trademarks or registered trademarks of their respective owners.

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), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R515B (GWP:292), 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. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a hydrocarbon, R290 (GWP:0.02). \*These GWP values are based on IPCC 6th edition.

Effective as of September 2025

