



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Acoustic Solution Top Box & Enclosure Kit
Volution Ventilation



EPD HUB, HUB-6163

Published on 02.05.2026, last updated on 02.05.2026, valid until 02.05.2031

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.



Created with One Click LCA



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Volution Ventilation
Address	Fleming Way, CRAWLEY, West Sussex, United Kingdom RH10 9YX
Contact details	EPD@Volution-Group.co.uk
Website	https://www.volutiongroupplc.com/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Andrew Jackson
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification
EPD verifier	Yazan Badour as an authorized verifier for EPD Hub

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Acoustic Solution Top Box & Enclosure Kit
Additional labels	
Product reference	See Annex 1
Place(s) of raw material origin	UK, Europe
Place of production	Dudley, United Kingdom
Place(s) of installation and use	UK, Europe
Period for data	01-09-2024 to 31-08-2025
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	
GTIN (Global Trade Item Number)	See Annex 1
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	2.87

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 Unit
Declared unit mass	27 kg
Mass of packaging	11 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	112
GWP-total, A1-A3 (kgCO ₂ e)	95.5
Secondary material, inputs (%)	16.5
Total energy use, A1-A3 (kWh)	404
Net freshwater use, A1-A3 (m ³)	1.05

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Founded in 1936, Vent-Axia improves the indoor environment by providing ventilation solutions across the Residential and commercial New build, Repair and maintenance segments of the UK construction market with a focus in Private and Public housing, New Build developments and Commercial and Industrial buildings. In December 2002, Volution Group was formed through a buy-out. In June 2014 Volution Group PLC became a listed company on the London Stock Exchange (LSE: FAN). Volution have acquired many brands over the years in the UK, mainland Europe, Australia and New Zealand.

PRODUCT DESCRIPTION

The Acoustic Enclosures for the Econiq & Sentinel Range of MVHR's fit securely around the MVHR unit for reduced breakout noise. The Acoustic Enclosure is of steel construction lined with class 0 acoustic foam. To reduce in-duct noise, the Acoustic Top Box provides attenuation to the 4 ducts of the unit. This Acoustic Top Box is of steel construction lined with acoustic class 0 foam with the MVHR spigots linked to the Top Box via 4 separate attenuated ducts. The acoustic enclosure and top box have been independently tested for noise to BS EN 13141-7.

Further information can be found at:
<https://www.volutiongroupplc.com/>

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	73.5	EU, Asia & UK
Minerals	26.5	EU & UK
Fossil materials		
Bio-based materials	0	

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	3

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 Unit
Mass per declared unit	27 kg
Functional unit	
Reference service life	20 years

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0.1% (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
x	x	x	x	x	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Not declared = ND.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions. A sales volume-based weighted average is considered for defining the distribution to the customer. Average distance of transportation from production plant to building site was calculated using our most common country of sale and using the capital city of this country as the destination. Vehicle capacity utilisation volume factor is assumed to be 100% which means full load. In reality, it may vary but as role of transportation emissions in total results is small, the variety in load is assumed to be negligible. To be conservative, empty returns are considered as modelled in the ecoinvent database. Transportation does not cause losses as product are packaged properly. Also, volume capacity utilisation factor is assumed to be 100% for the nested packaged products. Transportation impacts that occur from delivery of the product cover direct exhaust emissions of fuel, environmental impacts of fuel production, as well as related infrastructure emissions. Environmental impacts from installation into the building include waste packaging materials (A5) and release of biogenic carbon dioxide from waste processing of cardboard and wood pallets. Steel bolts and copper pipes are considered as part of the installation process. Quantities are assumed as it varies for different products.

The nuts, bolts and screws are part of the manufacturing process to hold the unit together. No screws are supplied to install the unit in a fixed location.

PRODUCT USE AND MAINTENANCE (B1-B7)

The reference service life is 20 years. The product does not consume electricity and is an acoustic product of our Mechanical Ventilation Heat Recovery (MVHR) products.

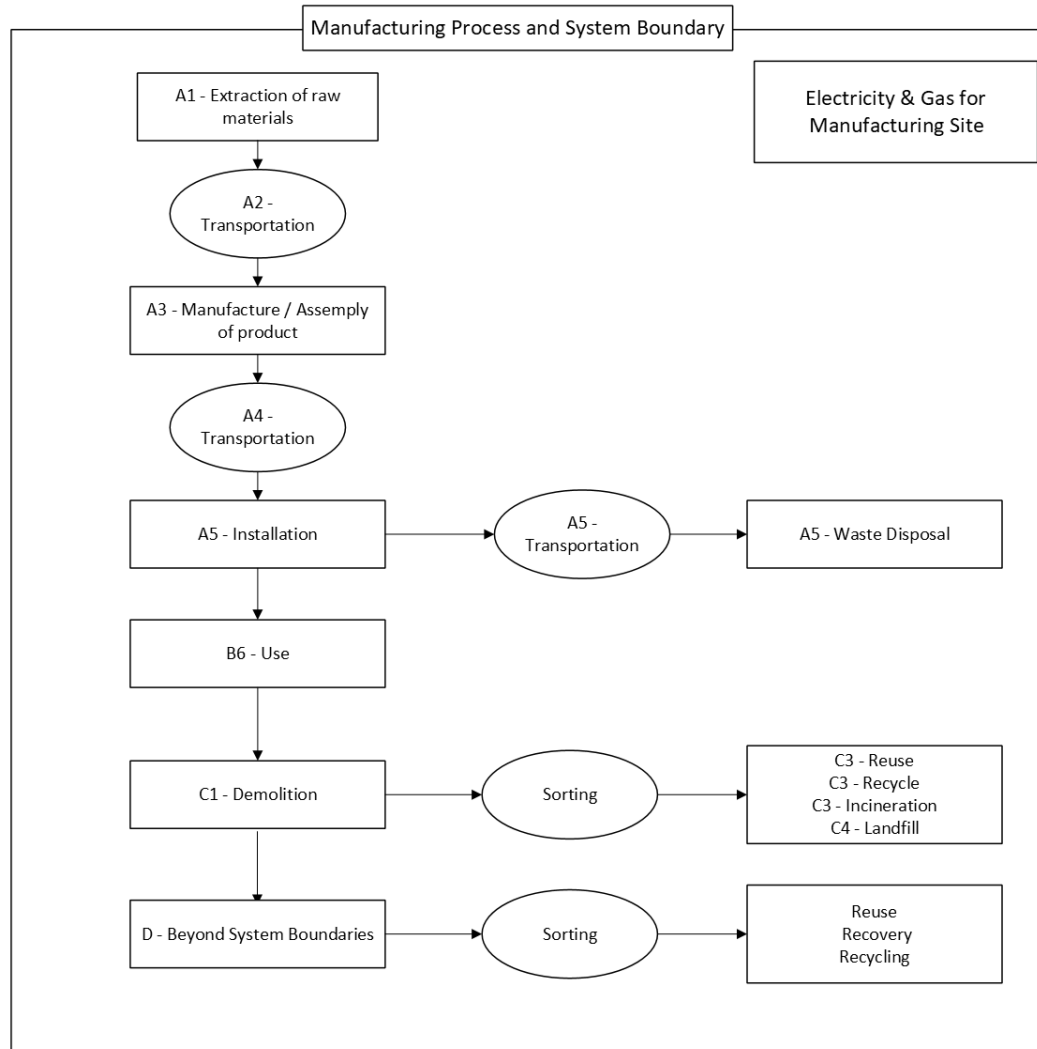
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Consumption of energy and natural resources in demolition process is assumed to be negligible. It is assumed that the waste is collected separately and transported to the waste treatment centre. Transportation distance to treatment is assumed as 250 km to recycling sites, 150 km to incineration and 50 km to landfill, and the transportation method is assumed to be lorry (C2). According to EN 50693:2019, the sequence of treatment operations occurring to the product shall include de-pollution, fractions separation and preparation (dismantling, crushing, shredding, sorting), recycling, other material recovery, energy recovery and disposal. In this study, the default values from table G.4 of EN 50693 is used for treating materials in different waste treatment methods.

Benefits and loads beyond the system boundary were taken into consideration in this study. Specifically, the loads from recycling and incineration of the raw materials in the end of life, and the packaging in A5. Any recycled contents in the materials were discounted in Module D as per the EN 15804+A2.

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

Stages B1-B5 (Use, Maintenance, Repair, Replacement & Refurbishment) are excluded from the EPD as they are dependent on the specific building and how the product is used.

B7 (Operational Water Use) is excluded as the unit does not require water.

Our metal components are pressed on site and the waste is negligible.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-

Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	Allocated by mass or volume
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	

This EPD is product and factory specific.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.5. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

ENVIRONMENTAL IMPACT DATA

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	1.03E+02	2.59E+00	-1.03E+01	9.55E+01	1.00E+00	1.84E+01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.44E-01	1.45E+01	2.36E-01	-1.56E+01
GWP – fossil	kg CO ₂ e	1.02E+02	2.59E+00	7.42E+00	1.12E+02	1.00E+00	3.87E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.43E-01	1.45E+01	2.36E-01	-1.56E+01
GWP – biogenic	kg CO ₂ e	9.04E-02	5.16E-04	-1.80E+01	-1.79E+01	2.11E-04	1.80E+01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.40E-04	-2.30E-03	-1.52E-04	0.00E+00
GWP – LULUC	kg CO ₂ e	6.49E-01	1.04E-03	2.58E-01	9.08E-01	3.76E-04	3.78E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.69E-04	6.62E-04	4.56E-05	3.54E-02
Ozone depletion pot.	kg CFC-11e	1.99E-06	5.08E-08	2.08E-07	2.25E-06	2.01E-08	5.00E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.05E-08	1.74E-08	1.43E-09	-8.01E-09
Acidification potential	mol H ⁺ e	4.80E-01	5.68E-03	3.43E-02	5.20E-01	3.23E-03	1.82E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.14E-03	1.92E-02	4.49E-04	-6.59E-02
EP-freshwater ²⁾	kg Pe	3.69E-02	2.03E-04	3.73E-03	4.09E-02	6.75E-05	9.36E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.78E-05	3.03E-04	8.70E-06	-9.59E-03
EP-marine	kg Ne	1.02E-01	1.36E-03	1.63E-02	1.20E-01	1.10E-03	2.42E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.08E-04	1.91E-02	4.35E-02	-1.44E-02
EP-terrestrial	mol Ne	1.05E+00	1.47E-02	1.18E-01	1.18E+00	1.19E-02	6.62E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	7.70E-03	9.33E-02	1.82E-03	-2.02E-01
POCP (“smog”) ³⁾	kg NMVOCe	3.72E-01	8.93E-03	3.52E-02	4.16E-01	5.27E-03	2.32E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	3.21E-03	2.29E-02	6.00E-04	-5.78E-02
ADP-minerals & metals ⁴⁾	kg Sbe	1.15E-03	1.10E-05	3.14E-05	1.19E-03	2.76E-06	1.86E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.89E-06	2.69E-05	1.10E-07	-6.65E-04
ADP-fossil resources	MJ	1.40E+03	3.62E+01	1.14E+02	1.55E+03	1.45E+01	4.41E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	9.24E+00	1.31E+01	1.26E+00	-1.16E+02
Water use ⁵⁾	m ³ e depr.	3.88E+01	2.04E-01	4.34E+00	4.33E+01	7.43E-02	1.19E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.56E-02	1.09E+00	7.31E-03	5.14E+00

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO₄e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	6.45E-06	1.50E-07	3.82E-07	6.99E-06	9.96E-08	2.86E-08	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.02E-08	3.26E-07	8.83E-09	-1.15E-06
Ionizing radiation ⁶⁾	kBq 11235e	4.33E+00	6.45E-02	7.93E-01	5.19E+00	1.75E-02	1.93E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	9.16E-03	2.60E-02	1.83E-03	7.38E-01
Ecotoxicity (freshwater)	CTUe	2.41E+03	6.22E+00	5.94E+01	2.47E+03	1.71E+00	7.86E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.28E+00	3.93E+01	9.81E+00	-3.76E+01
Human toxicity, cancer	CTUh	1.87E-07	4.61E-10	1.03E-08	1.97E-07	1.65E-10	2.40E-10	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.07E-10	3.12E-09	3.26E-11	4.22E-09
Human tox. non-cancer	CTUh	1.31E-06	2.20E-08	5.95E-08	1.39E-06	9.42E-09	1.29E-08	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.93E-09	6.92E-08	5.25E-09	1.03E-06
SQP ⁷⁾	-	3.60E+02	1.76E+01	9.50E+02	1.33E+03	1.46E+01	3.72E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	8.17E+00	1.10E+01	2.47E+00	-6.85E+02

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	1.16E+02	8.39E-01	2.28E+01	1.39E+02	2.36E-01	-1.60E+02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.37E-01	9.59E-01	2.59E-02	-1.13E+02
Renew. PER as material	MJ	0.00E+00	0.00E+00	1.55E+02	1.55E+02	0.00E+00	-1.55E+02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.98E+01
Total use of renew. PER	MJ	1.16E+02	8.39E-01	1.78E+02	2.95E+02	2.36E-01	-3.15E+02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.37E-01	9.59E-01	2.59E-02	-2.31E+01
Non-re. PER as energy	MJ	1.17E+03	3.62E+01	1.10E+02	1.31E+03	1.45E+01	4.41E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	9.24E+00	-1.61E+02	-6.33E+01	-1.18E+02
Non-re. PER as material	MJ	2.39E+02	0.00E+00	5.44E+00	2.44E+02	0.00E+00	-5.44E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	-1.43E+02	-9.55E+01	1.69E+00
Total use of non-re. PER	MJ	1.41E+03	3.62E+01	1.16E+02	1.56E+03	1.45E+01	-1.03E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	9.24E+00	-3.05E+02	-1.59E+02	-1.16E+02
Secondary materials	kg	4.44E+00	1.93E-02	6.60E+00	1.11E+01	6.27E-03	4.88E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.02E-03	9.04E-03	4.01E-04	1.36E+01
Renew. secondary fuels	MJ	7.06E-03	2.12E-04	3.21E+00	3.22E+00	7.91E-05	3.48E-05	ND	ND	ND	ND	ND	ND	ND	0.00E+00	5.10E-05	3.73E-04	7.50E-06	-2.46E-03
Non-ren. secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water	m ³	9.39E-01	5.67E-03	1.05E-01	1.05E+00	2.14E-03	-7.45E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.33E-03	2.24E-02	-7.09E-03	-3.88E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	2.41E+01	5.62E-02	4.49E-01	2.46E+01	2.10E-02	4.88E-02	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.49E-02	2.92E-01	2.30E-03	-8.44E+00
Non-hazardous waste	kg	2.20E+02	1.33E+00	1.15E+01	2.33E+02	4.20E-01	1.49E+01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.87E-01	7.60E+00	1.08E+01	2.07E+02
Radioactive waste	kg	1.09E-03	1.62E-05	2.03E-04	1.31E-03	4.33E-06	4.88E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	2.26E-06	6.45E-06	4.46E-07	1.86E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.58E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	1.64E+01	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	5.94E+01	0.00E+00	0.00E+00
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	2.50E+01	0.00E+00	0.00E+00
Exported energy – Heat	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.10E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	3.44E+01	0.00E+00	0.00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO ₂ e	1.02E+02	2.57E+00	7.76E+00	1.13E+02	9.94E-01	1.10E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.39E-01	1.45E+01	2.27E-01	-1.55E+01
Ozone depletion Pot.	kg CFC ₁₁ e	1.86E-06	4.05E-08	1.70E-07	2.07E-06	1.60E-08	4.05E-09	ND	ND	ND	ND	ND	ND	ND	0.00E+00	8.37E-09	1.46E-08	1.14E-09	-1.44E-08
Acidification	kg SO ₂ e	3.88E-01	4.56E-03	2.48E-02	4.17E-01	2.45E-03	1.37E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.63E-03	1.37E-02	3.24E-04	-5.06E-02
Eutrophication	kg PO ₄ ³ e	6.89E-01	1.17E-03	7.81E-02	7.69E-01	6.19E-04	1.26E-03	ND	ND	ND	ND	ND	ND	ND	0.00E+00	4.02E-04	5.67E-03	1.65E-03	7.01E-03
POCP (“smog”)	kg C ₂ H ₄ e	4.96E-02	4.60E-04	2.80E-03	5.29E-02	2.30E-04	2.77E-04	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.48E-04	9.46E-04	5.32E-05	-1.03E-02
ADP-elements	kg Sbe	1.04E-03	1.07E-05	3.15E-05	1.08E-03	2.70E-06	1.81E-06	ND	ND	ND	ND	ND	ND	ND	0.00E+00	1.84E-06	2.65E-05	1.07E-07	-6.66E-04

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP-fossil	MJ	1.33E+03	3.51E+01	9.97E+01	1.47E+03	1.42E+01	4.08E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	9.09E+00	1.27E+01	1.23E+00	-1.29E+02

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	1.03E+02	2.59E+00	7.68E+00	1.13E+02	1.00E+00	3.88E-01	ND	ND	ND	ND	ND	ND	ND	0.00E+00	6.43E-01	1.46E+01	2.36E-01	-1.56E+01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH₄ fossil, CH₄ biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO₂ is set to zero

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Electricity, medium voltage, residual mix, Malta, Ecoinvent, 0.55 kgCO₂e/kWh
2. Heat production, natural gas, at industrial furnace >100kW, Albania, Ecoinvent, 0.0773 kgCO₂e/MJ

Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry >32 metric ton, EURO5, 217.26 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	
Bulk density of transported products	0.00E+00
Volume capacity utilization factor	

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	
Water use (m ³)	
Ancillary materials: type and mass (kg)	
Waste materials: type and mass (kg)	
Waste materials: output routes	
Direct emissions (kg)	

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	
Collection process: Mixed waste (kg)	
Recovery: re-use (kg)	0
Recovery: recycling (kg)	16.4
Recovery: energy recovery (kg)	0
Disposal (kg)	0
Scenario assumptions e.g. transportation (mode, km) & other	

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15804+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez

Tool verification validity: 27 March 2025 - 26 March 2028

Yazan Badour as an authorized verifier for EPD Hub Limited 02.05.2026



ANNEX 1 PART NUMBERS

TOP BOXES

Part Number	Part Description	Weight
414088	Econiq Acoustic Top Box	14
478071	Sentinel Kinetic BH Top Box	11
478072	Sentinel Kinetic FH Top Box	11
478073	Sentinel Kinetic Plus Top Box	17
478074	Sentinel Kinetic High Flow Top Box	17

ACOUSTIC ENCLOSURES

Part Number	Part Description	Weight
414085	Econiq Acoustic Enclosure	27
478076	Sentinel Kinetic BH Acoustic Enclosure	19
478077	Sentinel Kinetic FH Acoustic Enclosure	19
478078	Sentinel Kinetic Plus Acoustic Enclosure	33
478079	Sentinel Kinetic High Flow Acoustic Enclosure	33

ANNEX 2 SCALING TABLE

Part Number	Mass (Kg)	EN 15804+A1
Reference	1	4.173
478071	11	45.903
478072	11	45.903
414088	14	58.421
478073	17	70.940
478074	17	70.940
478076	19	79.286
478077	19	79.286
414085	27	112.670
478078	33	137.708
478079	33	137.708