Environmental Product Declaration

In accordance with ISO 14025:2006, EN 15804:2012+A2:2019 / AC:2021 and c-PCR-018 Ventilation components (Adopted from NPCR 030:2021) for:

Centrifugal In-line Fans: JETLINE Series

EPD of multiple products based on a representative product.
Products included:
All models of the JETLINE series.
The directly represented products in the EPD are:

- **JETLINE-100 (220-240V50/60HZ) RE**
- **JETLINE-150 ECOWATT (230V50/60Hz) N8**
- **JETLINE-315 ECOWATT (230V50/60Hz) N8**

*See annexes for the list of all included products.

From:

S&P Sistemas de Ventilación, S.L

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD	EPD of multiple products, from a company
EPD registration number:	EPD-IES-0025146
Version date:	2025-08-08
Valid until:	2030-08-08

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com.

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EPD® THE INTERNATIONAL EPD® SYSTEM

General information

Programme information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
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Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR): PCR 2019:14 Construction products, version 2.0.1 published on 2025.06.05 and c-PCR-018 Ventilation components (Adopted from NPCR 030:2021).

PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Rob Rouwette (chair), Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/contact

Third-party Verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

☒ Individual EPD verification without a pre-verified LCA/EPD tool.

Third-party verifier: Elisabet Amat Guasch (Greenize Projects) (eamat@greenize.es)
Approved by: The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier:
☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.

For further information about comparability, see EN 15804 and ISO 14025.

Information about EPD owner

- **Owner of the EPD:** S&P SISTEMAS DE VENTILACIÓN, SL.
- **Address:** Calle Llevant, 4 - Polígono Industrial Llevant; 08150 Parets del Vallès (Barcelona).
- **Contact and LCA practitioner**: Martí Roig Rabadà (mroig@solerpalau.com), Product Sustainability Manager.
- **Description of the organisation:** Committed to improving indoor air quality and making it accessible to everyone, S&P develops highly energy-efficient, reliable, and durable ventilation solutions that benefit both our customers and the planet. Easy installation is a key pillar of our innovation, ensuring our products meet the needs of both users and installers. We also prioritize human well-being, which is why we are dedicated to designing exceptionally quiet equipment.

- **Product-related or management system-related certifications:** ISO 9001 (ES-257/2001) and ISO 14001 (ES-2001/0052).

Product information

- **Product name:** Centrifugal In-line Fans: JETLINE Series.
- **Product identification:** The JETLINE series is a range of in-line fans for circular ducts, designed for high aerodynamic performances with a very compact profiles and very low sound levels.
- **UN CPC code:** Ventilation and air-conditioning equipment installation services (CPC 54632, version 2.1 dated 2015).
- **Product description:** The JETLINE series covers a flow range of 260 m³/h to 1.610 m³/h across different diameters. It feature a low-profile galvanized steel casing with an integrated terminal box and mounting bracket. Optimally designed, injection-moulded plastic impellers, guide vanes, and outlet diffusers contribute to enhanced performance and reduced sound levels. Airtight joints and rubber gaskets ensure superior duct sealing. Silent-blocks effectively minimize vibrations, resulting in lower sound levels.
- **Name and location of production site(s):** The product is manufactured in one site of the S&P SISTEMAS DE VENTILACIÓN, SL group, located in the province of Barcelona.
- **Included products:** This EPD covers multiple products and is based on the JETLINE-150 ECOWATT, chosen as the representative model due to its average size and power characteristics within the product range.

All models of the JETLINE series are included in this EPD. The variability analysis covers the products with the lowest and highest impact in module A1–A3 across the entire range. A complete list of included products can be found in the annexes.

Content declaration

None of the components present in the final product and included in the “Candidate List of Substances of Extreme Concert in the authorization procedure” of the REACH regulation has a percentage higher than 0,1%.

The wooden pallet is allocated among the units placed on it during transport, considering only a single-use cycle.

Plastic film (stretch wrap) is allocated at the factory level based on product mass.

- **Product mass:** The mass of the products included is listed below.

Product Case	Product name	Mass (Kg)*
Best case	JETLINE-100 (220-240V50/60HZ) RE	3,75
Ref. Product	JETLINE-150 ECOWATT (230V50/60Hz) N8	4,86
Worst case	JETLINE-315 ECOWATT (230V50/60Hz) N8	9,64

* Including packaging except wooden pallet and plastic film.

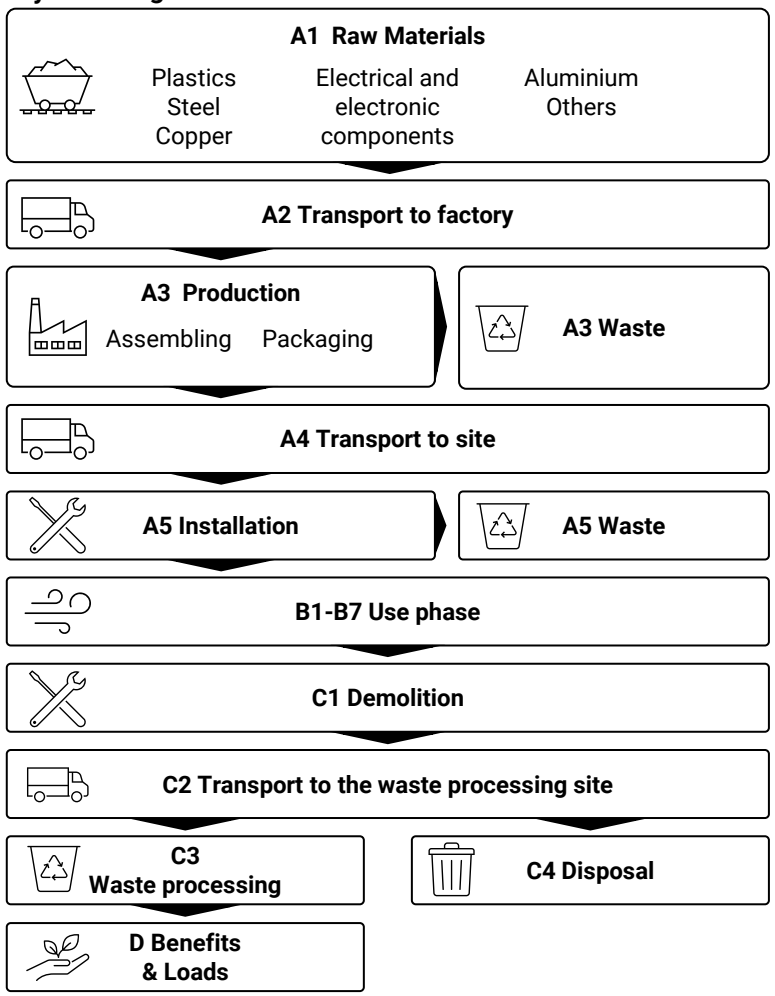
Product components	Reference Product Mass, kg	Best case Product Mass, kg	Worst case Product Mass, kg	Post-consumer material, Mass-%	Biogenic material, Mass, kg C/kg
Steel	2,72	1,77	5,31	0%	-
Aluminium	0,08	0,47	0,42	0%	-
Copper	0,11	0,27	0,21	0%	-
Plastics	0,78	0,50	1,53	0%	-
Electrical and electronic components	0,24	0,08	0,47	0%	-
TOTAL	**3,94**	**3,09**	**7,94**	**0%**	-

Packaging materials	Reference Product Mass, kg	Best case Product Mass, kg	Worst case Product Mass, kg	Mass-% (versus the reference product)	Mass biogenic carbon, kg C/kg
Cardboard	0,80	0,54	1,58	20%	0,55
Paper	0,12	0,12	0,12	3%	0,55
Wood	0,63	0,55	1,56	16%	0,45
Plastic film	0,00	0,00	0,00	0%	-
TOTAL	**1,55**	**1,21**	**3,26**	**40%**	**0,50**

LCA information

- **Declared unit:** 1 unit of JETLINE-150 ECOWATT.
- **Reference service life:** The product is maintained for 17 years. The period has been selected to seek present and future harmonization with other international environmental product declaration programs as for example PEP Ecopassport.
- **Technical service life:** 25 years.
- **Time representativeness:** All specific data related to the production plants and use, used for the study date from 2024.
- **Geographical scope:** The product is manufactured in Spain. LCA downstream scenario considered is Europe, however product can be used globally.
- **Database(s) and LCA software used:** The primary inventory data has been obtained from S&P, corresponding to the references listed above, produced in 2024 at S&P production site in Barcelona province, Spain. The secondary data has been extracted from the Ecoinvent version 3.10.1 database, included in the OneClick LCA software and internationally recognized. Whenever possible, inventory data related to Spain has been selected; otherwise, data from Europe in general has been used.
- **EPD/LCA Tool used:** OneClick LCA.
- **Description of system boundaries:** Cradle to gate with options, modules A4-A5, modules B1-B7, modules C1–C4, and module D.

- **System diagram:**



- **Hypothesis and considerations applied:**

  PRODUCT STAGE (A1-A3): Encompasses the manufacturing of raw materials, their transportation to the production facility, and all stages of the product manufacturing process.

  - **Raw materials supply (A1):** This stage includes the procurement of raw materials and pre-assembled components used in the product's manufacturing.
  - **Transport (A2):** This stage accounts for the transportation of raw materials and pre-assembled components from direct suppliers to S&P production site.
  - **Manufacturing (A3):** This stage covers full product assembly, and quality testing.

    Mass allocation has been applied to accurately determine the share of resources.

    Electricity used during the manufacturing process is backed by a certificate of origin issued by the National Commission on Markets and Competition (CNMC), ensuring that it is 100% sourced from renewable energy — specifically, wind power. The modelled energy mix for A3 module has an emission factor of 0,025 kg CO_{2eq}/kWh. The transformation losses have been included.

    Water consumption during manufacturing is negligible, as the process uses a closed-loop system.

  CONSTRUCTION PROCESS STAGE (A4-A5): The construction process stage includes the transportation of the product to the installation site and the processes required for its installation.

  - **Transportation to site (A4):** Transportation to the installation site is calculated based on the product's sales distribution in 2024. The distance to the site is estimated according to the geographic location of sales. Transportation is assumed to cover 792 km by lorries (16–32 metric tons, EURO5) and 8.651 km by freight sea container ship.
  - **Installation (A5):** The installation process has a negligible impact, as it is performed manually. However, the impact of the product packaging that is generated as a waste during this phase is accounted for. Recycling processes have been modeled based on EUROSTAT statistics.

  USE STAGE (B1- B7): Includes all impacts associated with the operation, maintenance, and repair of the product throughout its lifespan.

  - **Use, Maintenance, Repair, Replacement, and Refurbishment (B1-B5):** These submodules are considered negligible because the product does not generate additional impacts during its use, requires no maintenance, and is not expected to need repairs, replacements, or refurbishments during its operational life.
  - **Operational Energy Use (B6):** The operational energy consumption (B6) has been calculated at a typical and realistic operating point. The equipment is assumed to operate continuously (24 hours per day) for 17 years. The annual energy consumption of one unit under these conditions is 394,2 kWh. For more information on equipment consumption, please visit our website where you can find all the technical data.

    As the product can be used across Europe, an average market dataset for European low voltage electricity is used. The emission factor for the used dataset is 0,33 Kg CO_{2eq}/kWh.

    Additional analysis of the impact of the B6 module in different countries and geographies has also been included in the Additional LCA results.
  - **Operational Water Use (B7):** This submodule is negligible, as the product does not require water for its operation.

END OF LIFE STAGE (C1-C4): Includes all processes related to the product's disposal, such as deconstruction, transport, waste processing, and final disposal.

- **Deconstruction (C1):** Deconstruction impacts are modeled according to the PCR, considering the default diesel consumption per tonne during dismantling.
- **Transport (C2):** The default transport distance defined in the PCR has been assumed for the waste transported from the product deinstallation point to the waste management facility. Transport is assumed to be carried out using 16–32 metric ton EURO 5 freight lorries in Europe.
- **Waste processing and disposal (C3-C4):** Waste management has been modeled using a conservative and realistic scenario, although the recyclability potential of the equipment is higher than what is stated in the LCA. The percentages for recycling, incineration (with or without energy recovery), and landfill disposal have been defined based on the norm EN 50693. These are as follows for the entire product: 62% of the product is recycled, 10% of the equipment is incinerated (with or without energy recovery), and 28% of the equipment is landfilled.

  Transport is assumed to be carried out using 16–32 metric ton EURO 5 freight lorries in Europe.

  Additionally, as stated in the PCR, exclusive waste management scenarios (100% landfilled, 100% recycled, and 100% incinerated) have been included as Additional LCA results.

Soler&Palau encourages the proper management of the equipment's waste and to increase the recyclability ratio at the end of its useful life, as the **product's recyclability potential is >90%.**

BENEFITS AND LOADS (D): Accounts for the potential environmental benefits and loads associated with the reuse, recycling, or energy recovery of materials after the product's end-of-life. These benefits are reported beyond the system boundaries.

- **Benefits and loads (D):** To ensure a realistic and evidence-based approach in modeling the impacts of Module D, data points generated by OneClick LCA and based on ECOINVENT data have been used. The quantities imputed to the different datapoints correspond only to waste that does not go to landfill.

Material	End of Life Stage (C1-C4) Scenario	Benefits and Loads (D) Scenario
Steel	80% is recycled 20% is landfilled	Generation of steel scrap
Aluminium	70% is recycled 30% is landfilled	Generation of aluminium scrap
Copper	60% is recycled 40% is landfilled	Generation of copper scrap
Polypropylene	20% is recycled 40% is incinerated with energy recovery 40% is landfilled	Generation of recycled Polypropylene Energy recovery
Other Plastics	50% is incinerated with energy recovery 25% is incinerated without energy recovery 25% is landfilled	Energy recovery
Electric Components	100% is landfilled	-
Cardboard Paper	83% is recycled 8% is incinerated 9% is landfilled	Generation of recycled cardboard Energy recovery
Wood	32% is recycled 30% is incinerated 38% is landfilled	Generation of recycled wood Energy recovery

- **Cut-off rules:** In accordance with the provisions of the PCR 2019:14 construction products, version 2.0.1 and the standard UNE-EN 15804:2012+A2:2020, at least 95% of total inflows and outflows (mass and energy) per module have been included. The "polluter pays" principle has been applied. Additionally, the following processes have been excluded from the study scope:
  - Manufacture of equipment used in production.
  - Business trips.
  - Maintenance activities at the production plants.
  - Transportation of personnel to and within the plants.
  - Diffuse particle emissions during the transport and storage of raw materials.

- **Data Quality Assessment:** All process-specific data was collected for the 2024 operating year and is therefore up to date.

  Manufacturing-related data is based on factory averages, and mass allocation factors have been applied.

  Primary data accounts for 4% of the overall dataset. The credibility and consistency of the collected data were verified using primary records; where these were unavailable, secondary sources were used.

  Dataset selection considered geographic relevance, prioritizing regional and country-specific data where available to best reflect actual operational locations. From a technical perspective, when specific data was not available, the most representative proxy datasets were used, selected based on technological equivalence and process similarity. The overall data quality is good.

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Raw materials	Database	Ecoinvent v3.10	2024	Secondary data	0%
Transport of raw materials to manufacturing site	Database	Ecoinvent v3.10	2024	Primary data	100%
Manufacturing of the product	Collected data	EPD Owner	2024	Primary data	100%
Total share of primary data, of GWP-GHG results for A1-A3					4%

Modules Declared

The variation in GWP-GHG between the representative product (JETLINE-150 ECOWATT) and the product with the highest impact (JETLINE-315 ECOWATT) in stages A1-A3 is 126%, primarily due to a mass difference of approximately 98% (~4,78 kg).

Module	Product stage			Construction Process stage		Use stage							End of Life stage				Resource Recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Geography	GLO	GLO	ES	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27	EU 27
Share of primary data	4% (GWP-GHG)			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	126% (GWP-GHG)			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Environmental performance

Mandatory impact category indicators according to EN 15804

A declared unit of one unit of JETLINE-150 ECOWATT (230V50/60Hz) N8 with a mass of 4,86Kg is considered (excluding wooden pallet). The impact assessment is based on EF3.1. The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks. The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3). When comparing results from different Environmental Product Declarations (EPDs), exercise caution due to varying methodologies and inherent uncertainties across programs.

Results per declared unit																
Indicator	**Unit**	**A1 - A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	Kg $CO_{2eq.}$	3,60E+01	1,16E+00	5,94E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,19E+03	0,00E+00	1,55E-03	6,28E-02	9,24E-01	1,50E-01	-2,96E+00
GWP-biogenic	Kg $CO_{2eq.}$	-2,45E+00	2,14E-04	2,45E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,92E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,05E-03
GWP-luluc	Kg $CO_{2eq.}$	9,38E-02	4,95E-04	5,10E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,73E+00	0,00E+00	1,59E-07	2,25E-05	9,42E-05	2,91E-05	-1,01E-03
GWP-total	Kg $CO_{2eq.}$	3,37E+01	1,16E+00	2,51E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,21E+03	0,00E+00	1,55E-03	6,28E-02	9,24E-01	1,51E-01	-2,96E+00
ODP	kg $CFC11_{eq.}$	6,39E-07	2,07E-08	6,88E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,04E-05	0,00E+00	2,37E-11	1,25E-09	9,51E-10	3,30E-10	-2,26E-08
AP	mol $H^{+}_{eq.}$	2,43E-01	1,42E-02	2,39E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,29E+01	0,00E+00	1,40E-05	1,40E-04	8,54E-04	1,48E-04	-2,08E-02
EP-freshwater	kg $P_{eq.}$	2,15E-02	6,27E-05	1,32E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,04E+00	0,00E+00	4,47E-08	4,22E-06	3,92E-05	6,60E-06	-8,77E-03
EP-marine	kg $N_{eq.}$	1,63E-01	3,51E-03	3,37E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,02E+00	0,00E+00	6,49E-06	3,64E-05	2,44E-04	1,87E-04	-4,67E-03
EP-terrestrial	mol $N_{eq.}$	4,47E-01	3,89E-02	8,23E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,81E+01	0,00E+00	7,11E-05	3,94E-04	2,51E-03	4,91E-04	-6,99E-02
POCP	kg $NMVOC_{eq.}$	1,51E-01	1,20E-02	3,01E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,97E+00	0,00E+00	2,12E-05	2,30E-04	7,13E-04	1,57E-04	-1,70E-02
ADP-minerals&metals*	kg $Sb_{eq.}$	3,41E-03	2,85E-06	2,75E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,96E-02	0,00E+00	5,56E-10	2,09E-07	3,79E-06	1,34E-07	-1,79E-04
ADP-fossil*	MJ	4,67E+02	1,55E+01	6,09E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,10E+04	0,00E+00	2,03E-02	8,83E-01	9,71E-01	3,53E-01	-3,42E+01
WDP*	m^3	1,38E+01	6,58E-02	1,67E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,39E+03	0,00E+00	5,07E-05	4,38E-03	4,57E-02	1,07E-02	7,53E-03

Acronyms: GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption.

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Additional mandatory and voluntary impact category indicators

Results per declared unit															
Indicator	**Unit**	**A1 - A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG (1)	Kg $CO_{2eq.}$	3,61E+01	1,16E+00	5,94E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E+03	0,00E+00	1,55E-03	6,28E-02	9,24E-01	1,51E-01	-2,96E+00
PM	Disease inc.	2,55E-06	6,65E-08	3,85E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-05	0,00E+00	3,98E-10	4,67E-09	1,10E-08	2,06E-09	-2,52E-07
IRP (2)	kBq U-235_{eq}	5,05E+00	1,56E-02	2,80E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,41E+03	0,00E+00	8,98E-06	1,14E-03	4,65E-03	1,74E-03	-1,04E-01
ETP-fw (3)	CTUe	9,92E+02	1,75E+00	1,19E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,78E+03	0,00E+00	1,12E-03	1,17E-01	1,03E+00	4,89E+00	-8,30E+01
HTP-c (3)	CTUh	3,81E-08	2,14E-10	3,48E-11	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,41E-07	0,00E+00	1,59E-13	1,06E-11	9,63E-11	1,61E-11	6,89E-10
HTP-nc (3)	CTUh	1,20E-06	7,78E-09	1,87E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,84E-05	0,00E+00	2,52E-12	5,58E-10	4,89E-09	1,14E-09	1,39E-07
SQP (3)	Pt	4,04E+02	6,62E+00	5,12E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,14E+04	0,00E+00	1,42E-03	5,33E-01	1,55E+00	4,12E-01	-1,89E+01

Acronyms: **GWP-fossil = GWP-GHG**: Global warming potential-Greenhouse gas; **PM**= particulate matter; **IRP** =Ionizing radiation, human health; **ETP-fw**=Ecotoxicity tap water-organic; **HTP-c**= human health, carcinogenic effects; **HTP-nc**= human health , non-carcinogenic effects; **SQP** = Land use related impacts/ Soil quality.

1)This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero.

2)This impact category refers to the eventual impacts of low amounts of ionizing radiation on human health from the nuclear fuel cycle. It does not consider the effects due to possible nuclear accidents or occupational exposure due to possible nuclear accidents or occupational exposure due to radon or from some construction materials.

3)The results of this environmental impact category must be used wisely, as the uncertainties in the results are elevated and the results are elevated and the experience with this parameter is limited.

Resource use indicators

Results per declared unit																
Indicator	**Unit**	**A1 - A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	5,23E+01	2,20E-01	-2,40E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,40E+04	0,00E+00	1,28E-04	1,54E-02	1,37E-01	2,51E-02	-5,69E+00
PERM	MJ	2,14E+01	0,00E+00	-2,14E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	7,37E+01	2,20E-01	-4,54E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,40E+04	0,00E+00	1,28E-04	1,54E-02	1,37E-01	2,51E-02	-5,69E+00
PENRE	MJ	4,35E+02	1,55E+01	4,57E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,10E+04	0,00E+00	2,03E-02	8,83E-01	-1,66E+01	-1,21E+01	-3,54E+01
PENRM	MJ	2,69E+01	0,00E+00	-8,37E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,66E+01	-9,38E+00	5,06E+00
PENRT	MJ	4,62E+02	1,55E+01	-3,80E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,10E+04	0,00E+00	2,03E-02	8,83E-01	-3,32E+01	-2,15E+01	-3,03E+01
SM	kg	1,84E+00	7,28E-03	7,13E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,44E+00	0,00E+00	8,42E-06	4,09E-04	1,41E-03	1,16E-04	1,52E+00
RSF	MJ	4,11E-01	6,58E-05	4,94E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,74E-02	0,00E+00	2,20E-08	5,18E-06	4,37E-05	8,49E-06	-5,71E-04
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	3,34E-01	1,76E-03	-9,73E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,41E+01	0,00E+00	1,34E-06	1,20E-04	7,57E-04	-8,50E-04	-7,64E-02

Acronyms: PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water.

Waste indicators

Results per declared unit																
Indicator	**Unit**	**A1 - A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	6,41E+00	2,19E-02	7,15E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,29E+02	0,00E+00	2,26E-05	1,28E-03	1,59E-02	3,22E-03	-1,31E+00
Non-hazardous waste disposed	kg	1,47E+02	4,09E-01	1,99E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,99E+03	0,00E+00	3,08E-04	2,71E-02	5,60E-01	1,63E+00	2,68E+01
Radioactive waste disposed	kg	4,53E-03	3,87E-06	7,10E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,62E-01	0,00E+00	2,20E-09	2,83E-07	1,17E-06	4,26E-07	-2,69E-05

Output flow indicators

Results per declared unit																
Indicator	**Unit**	**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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00E+00	0,00E+00	9,72E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,42E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	5,70E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,67E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	8,03E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,30E+00	0,00E+00	0,00E+00

Additional LCA results

Variability analysis

The table below shows the variation in results for the specific products included in the EPD relative to the reference product. Percentage differences are presented for the combined impacts of modules A1–A3 and A–C. The EPD includes both the model with the lowest and the highest manufacturing impact, thus covering the worst-case scenario.

Differences in module A1–A3 are mainly due to equipment mass, and the type of motor. Over the full life cycle (A–C), module B6 accounts for the highest impact.

Variation (%) of Results per Declared Unit					
Indicator	**Unit**	**JETLINE - 100 (220-240V50/60HZ) RE**		**JETLINE - 315 ECOWATT (230V50/60Hz) N8**	
		A1-A3	**A-C**	**A1-A3**	**A-C**
GWP-fossil	Kg $CO_{2eq.}$	-8%	-191%	125%	177%
GWP-biogenic	Kg $CO_{2eq.}$	-28%	-198%	113%	179%
GWP-luluc	Kg $CO_{2eq.}$	-81%	-198%	108%	177%
GWP-total	Kg $CO_{2eq.}$	-7%	-192%	127%	176%
ODP	kg $CFC11_{eq.}$	-40%	-194%	114%	176%
AP	mol $H^{+}_{eq.}$	19%	-185%	123%	176%
EP-freshwater	kg $P_{eq.}$	5%	-193%	113%	177%
EP-marine	kg $N_{eq.}$	-287%	-204%	123%	174%
EP-terrestrial	mol $N_{eq.}$	3%	-184%	126%	177%
POCP	kg $NMVOC_{eq.}$	-1%	-185%	125%	177%
ADP-minerals&metals*	kg $Sb_{eq.}$	2%	-147%	103%	170%
ADP-fossil*	MJ	-19%	-196%	118%	178%
WDP*	m^3	-37%	-196%	109%	177%

Acronyms: GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption.

* EPD International Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

End of Life scenarios

Below, as indicated by the PCR, are the impacts associated with different waste management scenarios: 100% landfilling, 100% recycling, and 100% incineration. None of these scenarios is realistic, as the waste management of EEE equipment is typically carried out through a combination of methods, and some components cannot be feasibly recycled.

End of Life scenarios (Module C) results							
Indicator	**Unit**	**100% Landfilled**		**100% Recycled**		**100% Incinerated**	
		C3	**C4**	**C3**	**C4**	**C3**	**C4**
GWP-fossil	Kg $CO_{2eq.}$	0,00E+00	1,05E-01	4,06E-01	0,00E+00	2,49E+00	0,00E+00
GWP-biogenic	Kg $CO_{2eq.}$	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	Kg $CO_{2eq.}$	0,00E+00	3,29E-05	1,86E-04	0,00E+00	1,46E-04	0,00E+00
GWP-total	Kg $CO_{2eq.}$	0,00E+00	1,05E-01	4,06E-01	0,00E+00	2,49E+00	0,00E+00
ODP	kg $CFC11_{eq.}$	0,00E+00	1,00E-09	1,71E-09	0,00E+00	7,42E-09	0,00E+00
AP	mol $H^{+}_{eq.}$	0,00E+00	2,63E-04	1,18E-03	0,00E+00	1,38E-03	0,00E+00
EP-freshwater	kg $P_{eq.}$	0,00E+00	7,48E-06	6,95E-05	0,00E+00	2,11E-04	0,00E+00
EP-marine	kg $N_{eq.}$	0,00E+00	1,71E-03	3,40E-04	0,00E+00	5,21E-04	0,00E+00
EP-terrestrial	mol $N_{eq.}$	0,00E+00	1,01E-03	3,20E-03	0,00E+00	4,89E-03	0,00E+00
POCP	kg NMVOC $_{eq.}$	0,00E+00	3,80E-04	9,63E-04	0,00E+00	1,61E-03	0,00E+00
ADP-minerals&metals*	kg $Sb_{eq.}$	0,00E+00	1,59E-07	5,51E-06	0,00E+00	1,97E-06	0,00E+00
ADP-fossil*	MJ	0,00E+00	8,21E-01	1,68E+00	0,00E+00	4,06E+00	0,00E+00
WDP*	m^3	0,00E+00	6,31E-03	5,43E-02	0,00E+00	1,67E-01	0,00E+00

Acronyms: GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption.

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Geographical variability analysis

Below are the impacts of the JETLINE-150 ECOWATT module B6 when the product operates under the defined scenario across various countries and geographies. The dataset used corresponds to low-voltage electricity (market activity).

Results per declared unit - B6								
Indicator	**Unit**	**FRANCE**	**GERMANY**	**BELGIUM**	**NORWAY**	**ITALY**	**GREAT BRITAIN**	**MIDDLE EAST**
GWP-fossil	Kg $CO_{2eq.}$	5,85E+02	2,61E+03	1,37E+03	1,60E+02	2,37E+03	1,74E+03	6,21E+03
GWP-biogenic	Kg $CO_{2eq.}$	1,04E+00	1,32E+01	2,01E+00	2,78E+00	9,71E+00	1,02E+00	8,37E-01
GWP-luluc	Kg $CO_{2eq.}$	5,85E-01	5,39E+00	3,68E+00	7,50E-01	5,13E-01	2,17E+00	5,74E-01
GWP-total	Kg $CO_{2eq.}$	5,87E+02	2,63E+03	1,38E+03	1,64E+02	2,38E+03	1,75E+03	6,21E+03
ODP	kg $CFC11_{eq.}$	2,07E-05	3,36E-05	5,86E-05	4,32E-06	5,46E-05	8,83E-05	1,03E-04
AP	mol $H^{+}_{eq.}$	4,08E+00	7,54E+00	4,37E+00	2,22E+00	9,98E+00	6,47E+00	2,55E+01
EP-freshwater	kg $P_{eq.}$	2,45E-01	3,56E+00	3,03E-01	1,69E-01	5,28E-01	3,13E-01	2,46E-01
EP-marine	kg $N_{eq.}$	7,77E-01	1,94E+00	9,09E-01	1,93E-01	1,49E+00	1,40E+00	3,98E+00
EP-terrestrial	mol $N_{eq.}$	6,45E+00	1,43E+01	9,30E+00	2,35E+00	1,62E+01	1,62E+01	4,34E+01
POCP	kg NMVOC $_{eq.}$	2,21E+00	4,62E+00	2,94E+00	7,15E-01	6,96E+00	4,53E+00	1,95E+01
ADP-minerals&metals*	kg $Sb_{eq.}$	2,81E-02	3,33E-02	3,15E-02	2,55E-02	2,98E-02	2,95E-02	2,93E-02
ADP-fossil*	MJ	7,59E+04	4,08E+04	5,42E+04	1,94E+03	3,80E+04	4,73E+04	9,21E+04
WDP*	m^3	9,63E+02	6,79E+02	6,39E+02	8,41E+03	1,46E+03	4,67E+02	4,55E+02

Acronyms: GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption.

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Annexes

Products included in the EPD

The following products are included in the scope of this EPD.

JETLINE-100

Product name AC Versions
JETLINE-100
JETLINE-125
JETLINE-150
JETLINE-160
JETLINE-200
JETLINE-250
JETLINE-315
JETLINE-03
JETLINE-06
JETLINE-10
JETLINE-12
JETLINE-16

JETLINE–250 ECOWATT

Product name ECOWATT Versions
JETLINE-100 ECOWATT
JETLINE-125 ECOWATT
JETLINE-150 ECOWATT
JETLINE-160 ECOWATT
JETLINE-200 ECOWATT
JETLINE-250 ECOWATT
JETLINE-315 ECOWATT
JETLINE-03 ECOWATT
JETLINE-06 ECOWATT
JETLINE-10 ECOWATT
JETLINE-12 ECOWATT
JETLINE-16 ECOWATT

Abbreviations

All abbreviations used in the EPD are described below:

Abbreviation	Definition
CEN	European Committee for Standardization
CNMC	Comisión Nacional de los Mercados y la Competencia
CPC	Central Product Classification
EEE	Electrical and Electronic Equipment
EF	Environmental Footprint
EN	European Norm (Standard)
EPD	Environmental Product Declaration
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life-Cycle Assessment
PCR	Product Category Rules
PEP	Product Environmental Profile
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals

References

- PCR 2019:14. Construction products. Version 2.0.1. Valid until 07/04/2030.
- c-PCR-018 Ventilation components (Adopted from NPCR 030:2021).
- ISO 14025:2010: Environmental labels and declarations-Type III Environmental Declarations-Principles and procedures.
- ISO 14040: Environmental management-Life Cycle Assessment-Principles and framework (2006).
- ISO 14044: Environmental management-Life Cycle Assessment-Requirements and guidelines (2006).
- EN 15804:2012+A2:2019/AC:2021: Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.
- General Programme Instructions for international EPD System version 5.0.0 (2024-06-19).
- LCA Report Memoria Centrifugal In-line Fans: JETLINE Series.
- Product Environmental Footprint report. Representative product study for: Unidirectional Residential Ventilation Units (URVU), Bidirectional Residential Ventilation Units (BRVU), Non-residential Ventilation Units (NRVU), Fans (>125W); EVIA.
- Packaging waste by waste management operations; EUROSTAT; 2025.
- EN 50693:2020 - Product category rules for life cycle assessments of electronic and electrical products and systems

Version History

A. Original Version of the EPD, 2029-08-08.

Soler&Palau Ventilation Group

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