Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

VISIBLE LINEAR & LINEAR RETRACTING DIFFUSERS IN PVC from Tecnosystemi S.p.A Benefit Company

---

EPD of multiple products based on a representative product (LINEAR DIFFUSER IN PVC WITH DAMPER AND CENTRAL BAFFLE).
Product recently on the market – Results of this EPD shall be used with care as the LCI data is not yet based on 1 year of production which may result in increased uncertainty

Programme	The International EPD® System, www.environdec.com
Programme operator	EPD International AB
Type of EPD	EPD of multiple products based on a representative product
EPD registration number	EPD-IES-0026644
Version date	2025/11/10
Validity date	2030/11/09

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

GENERAL INFORMATION

Programme	The International EPD® System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm, Sweden
Website	www.environdec.com
E-mail	info@environdec.com

Product Category Rules (PCR)

- CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
- Product Category Rules (PCR): PCR 2019:14 v2.0.1

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

- c-PCR, if applicable: Ventilation components (c-PCR under PCR 2019:14) (Adopted from EPD Norway)

Third-party verification

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

- EPD verification by accredited certification body
- Third-party verification: TÜV Italia SRL, Viale Fulvio Testi 280/6, 20126 Milano
- The certification body is accredited by: ACCREDIA, No 00077

Procedure for follow-up of data during EPD validity involves third party verifier:

Yes ● No ○

Technical support for LCA study:
Soin Company srls
Via Orgnani 1
33034 Fagagna (UD)
www.soincompany.com

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

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same 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 equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; 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: TECNOSYSTEMI SPA SOCIETÀ BENEFIT

Address: via dell'Industria 2/4 - 31029 - Vittorio Veneto (TV)

Contact: Antonello Palamin, Quality Management antonello.palamin@tecnosystemi.com

Contact and LCA practitioner: Lisa Suanno (lisa.suanno@soincompany.com), Bernardo Mobilio Rodriguez (bernardo.rodriguez@soincompany.com)

Description of the organization

Tecnosystemi is a Benefit Company It was officially established in 1992 and began its history by selling a small range of air conditioning accessories. In 1996 it also became a production company, thus beginning a virtuous path that is still evolving today.

The turning point came in 2013, with the definitive move of the headquarters to Vittorio Veneto and the transfer of ownership to the Anna Munari and Giorgio Rigoni family. The passion for their work and the vision of a company of the future led the owners to invest in technological means, transforming a small Veneto company into a large enterprise. With the construction of the third warehouse in 2019, Tecnosystemi expanded to cover an area of 33,000 m² and a covered area of 22,000 m².

The Company designs and manufactures a diversified range of accessories for air conditioning, ventilation and air exchange, always aiming at a strategy of diversification to meet the needs of different customers in Italy and abroad. Thanks to research and the recognised value of internal production know-how, Tecnosystemi continuously invests in new production technologies.

Product-related or management system-related certifications

PRODUCT INFORMATION

Product name
VISIBLE LINEAR & LINEAR RETRACTING DIFFUSERS IN PVC

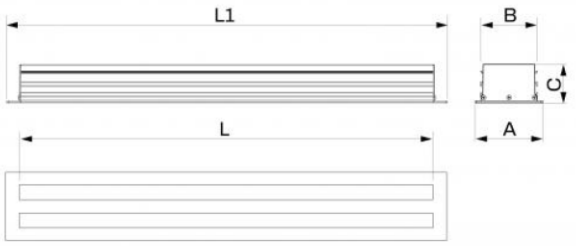
Product identification and description

The products included in the EPD are part of the PROJECT WIND line, which includes a wide range of accessories for ventilation, air conditioning and air exchange, manufactured at the plants in via dell'Industria 2/4 – Plant 1.

Tecnosystemi offers several variants of visible linear diffusers in PVC to suit specific installation and performance requirements. The main differences concern the number of slots and the presence of adjustment elements. The choice of the number of slots depends on the required air flow rate and the desired throw length. Some models are equipped with internal central deflectors and dumpers, which can be adjusted manually. They are made of rigid self-extinguishing white PVC, to blend in with most false ceilings and walls. The material also ensures considerable lightness and ease of installation.

The linear retracting diffusers in PVC are specially designed for installation in false ceilings or plasterboard walls. These products are distinguished by a minimalist and integrated design, which aims to make the air diffusion terminal practically invisible once installed. The aesthetic integration is further guaranteed by the possibility of selecting the diffusers in different colour finishes, white or black, to best adapt to the surrounding environment. In addition to the finish, the products are available in a wide range of sizes (lengths and sections) and configurations to meet specific air flow, velocity and installation needs in different architectural contexts, always guaranteeing high technical performance and optimal air distribution. The linear retracting diffusers in PVC are available in two main types that differ in the presence and type of air flow regulation elements.

The product chosen as a reference is the visible linear diffuser in anti-condensation PVC with damper and central baffle, code PWD301500, as it is the best-selling during the study reference period. All environmental performance indicators have been calculated taking it as a reference.



Product	CODE	L [mm]	L1 [mm]	A [mm]	B [mm]	C [mm]	Airflow range [m3/hr]	Weight [kg]
Visible linear diffuser in anti-condensate PVC with damper and central baffle	PWD301500	800	845	105	110	88	240-530	1.843
Technical features	• Material: Anti-condensate PVC • Colour: White • Flammability rating: V0 • Operating temperature: -30°C / +60°C							

The following table shows a description of the components of the product.

Component	Description
SIDE MEMBERS	Structural PVC elements that make up the body of the diffuser. They include: the side profile (which defines the housing in the false ceiling/wall and the central baffle (often a pendulum, used to direct the front throw or the Coanda effect).
LATERAL CAPS	PVC end elements used to close the ends of the diffuser side members, ensuring the concealed aesthetic finish and insulation.
BLOCKS	Small joining and support elements, made of PVC. They perform the function of baffles holder (support for orienting the baffles), contain the rotation pin and include the fastening block.
DAMPERS	PVC sliding device used for calibrating and regulating the air flow (flow rate) entering or leaving the diffuser, allowing the system to be balanced.
SCREWS	Stainless steel fastening elements used to assemble the diffuser structure.

UN CPC Code

369 Other plastics products

CONTENT DECLARATION

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Side members (polyvinyl chloride)	1.512	0.0 %	0.000
Lateral caps (polyvinyl chloride)	0.055	0.0 %	0.000
Blocks (polyvinyl chloride)	0.086	0.0 %	0.000
Dampers (polyvinyl chloride)	0.184	0.0 %	0.000
Screws (galvanized stainless steel)	0.006	0.0 %	0.000
TOTAL	**1.843**	**0.0 %**	**0.000**

Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Corrugated cardboard	0.180	9.7%	0.089
Pallet	0.003	0.2%	0.002
LDPE packaging film	0.005	0.3%	0.000
Polystyrene sheet	0.010	0.5%	0.000
TOTAL	**0.405**	**10.7%**	**0.091**

The product and relative packaging materials do not include any substance present in the “Candidate list of substances of very high concern for authorization” in percentage greater than 0.1%.

LCA INFORMATION

Declared unit: 1 unit of visible diffuser in anti-condensation PVC with damper 800 mm and central baffle

Time representativeness: Feb 2025-April 2025

Geographical scope: Italy for all Modules.

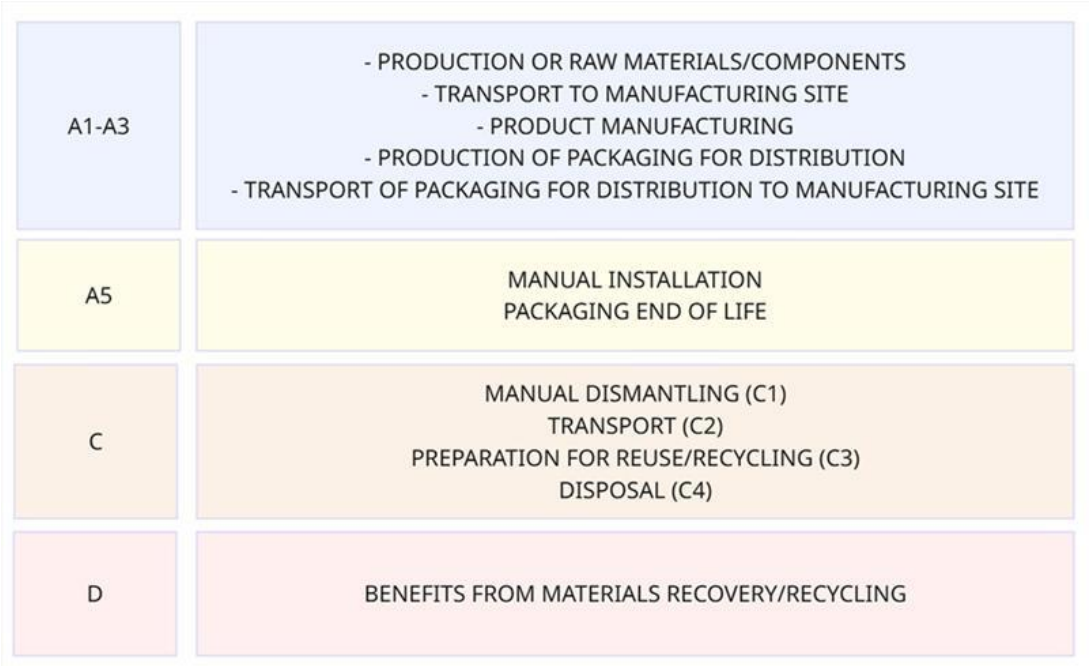
Database(s) and LCA software used: Ecoinvent 3.11 – Allocation, cut-off; SimaPro Craft, v. 10.2.0.1
EN 15804 reference package: EF 3.1

Description of system boundaries
Cradle-to-gate with options, modules C1-C4, module D and optional module A5. Module A4 and modules B1-B7 are excluded.

System boundaries include:

- A1 – A3 Raw material extraction and processing; Transport of raw materials to Tecnosystemi plants; Manufacturing of the product (energy and waste); upstream production and transport of packaging for distribution to Tecnosystemi plants;
- A5 – Packaging disposal;
- C1 – Manual disassembly;
- C2 – Transport of waste products to treatment or disposal facilities;
- C3 – Waste processing for reuse, recovery and/or recycling;
- C4 – Final disposal;
- D – Estimate of the potential benefits and/or impacts beyond the system boundaries, related to recycling/recovery at the end of life.

System diagram



Allocation methods

Allocation procedures were used for energy consumption (electricity and natural gas) and waste produced, based on the material processed (kg) at each Plant in the Feb-Apr 2025 quarter. Additional mass-based allocation procedures were applied for the packaging used to transport PVC and screws to the facility (big bags, cardboard boxes) and for distribution packaging.

Cut off rules
The cut-offs were applied to:

- water consumption used in the plants and wastewater treatment,
- consumption of auxiliary materials and products for cleaning the machines.

Consistent with what is indicated in the PCR, finally, the following were not considered:

- business trips of company employees;
- home-work mobility of employees;
- research and development activities.

Recycled materials
The products under study do not contain recycled material. However, some components are made from internally recovered PVC, specifically from scraps and defective products resulting from PVC extrusion and injection moulding processes. This waste is reground to create new granules which are reintroduced into the production cycle.
Specifically for the representative product, the total mass of PVC scraps represents:

- 15% of the total weight of all PVC components used in the assembly of the diffuser.
- 14% of the total weight of the assembled diffuser, excluding packaging.

Electricity mix

To model the electricity used in the Plants, the emission factor for renewable hydroelectric production with storage, certified by Guarantees of Origin (GO)[1], and the emission factor for on-site photovoltaic generation were used. For Plant 1, the electricity mix is 78% from GO and 22% from photovoltaics and the Global Warming Potential (GWP - GHG) indicator associated is 0.0236 kg CO_2-eq per kilowatt-hour (kWh).

End of life scenario (C1-C4)

In the end-of-life stage, the following aspects were considered:

- Transport to the final waste treatment/disposal site (C2). As indicated in the PCR, 80 km between the destination and the landfill/recycling centre, and 130 km for incineration, due to the lack of specific data;
- Treatment and disposal of waste (C3-C4). Waste management has been modelled using different scenario for PVC and steel.

Material/Component	End of Life Stage (C1-C4) Scenario
PVC (SIDE MEMBERS, DAMPERS, CAPS, BLOCKS)	• 71.5% recycling (based on “Rapporto Rifiuti Speciali Edizione 2025 – ISPRA”) • 28.5% incineration
Steel (SCREWS)	• 88.8% recycling (based on “Rapporto Rifiuti Speciali Edizione 2025 – ISPRA”) • 11.2% landfill

No impacts were assigned to the disassembly phase (C1), as it mainly consists of manual operations with negligible environmental effects.

Benefits and loads beyond the system boundary (module D)
The benefits from materials recovery (PVC and steel of screws) were considered.

Summary of data quality assessment

The following table provides a summary of the data quality assessment for the datasets that contribute to at least 80% of the results for each of the declared environmental impact indicators.

Data Quality Aspect	Details / Description

[1] Assuming the same energy mix as in 2024

Data Collection for raw data	1st February 2025-30th April 2025. Product recently on the market
Sites Used	via dell'Industria 2/4 – Plant 1, in Vittorio Veneto (TV)
Geography	The product is manufactured in the Italy and commercialized In Europe (mainly in Italy)
Technology	The product consists of several components that are manufactured in Plant 1 using extrusion (SIDE MEMBERS, DAMPERS) and injection moulding processes (LATERAL CAPS, BRIDGES) after purchasing the PVC. SCREWS are produced by external suppliers.
LCI/LCA database	Ecoinvent 3.11 – Allocation, cut-off; SimaPro Craft, v. 10.2.0.1
EPD used	-
Data Quality Scheme	Data Quality Rating-DQR criteria and data quality level according to PEF method (COMMISSION RECOMMENDATION (EU) 2021/2279 of 15 December 2021)
Use of Fair data with more than 30 % of a core impact	No fair data used
Use of poor data	No poor data used
Other information	The quality assessment covers data that together contribute to at least 80% of the results of each of the declared environmental impact indicators, corresponding to the processes included in modules A1-A3 and C4. The total DQR is 2.1 (Good quality).

The data quality information presented in this EPD has been prepared and reported in accordance with the requirements set forth in UNI EN 15941:2024 and complies with the data quality criteria specified in EN 15804:2012+A2:2019.

As required by PCR, the following table provides information on the quality of the data used for processes contributing more than 10% to the overall GWP-GHG indicator value for the Module A1-A3. No single primary data contributes more than 10% to the overall GWP-GHG.

Process	Source Type	Source	Reference year[2]	Data category	Share of primary data, of GWP-GHG results for A1-A3
Production of PVC (raw material)	Database	Ecoinvent 3.11	2024	Secondary	0%
Generation of electricity used in manufacturing site	Database	Ecoinvent 3.11	2024	Primary	1.2%
Natural gas used in manufacturing site	Database	Ecoinvent 3.11	2024	Primary	4.9%
Waste produced in manufacturing site	Database	Ecoinvent 3.11	2024	Primary	0.2%
Transport of raw material to manufacturing site	Database	Ecoinvent 3.11	2024	Primary	3.0%
Transport of packaging for distribution to manufacturing site	Database	Ecoinvent 3.11	2024	Primary	0.02%
				Total	**9.3%**

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

[2] Refers to the last year of validity of the dataset.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results)

	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
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	●	●	●	ND	●	ND	ND	ND	ND	ND	ND	ND	●	●	●	●	●
Geography	IT	IT	IT	-	IT	-	-	-	-	-	-	-	-	IT	IT	IT	IT
Specific data used	9.3%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	-88.2%/+124.1%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	Not applicable			-	-	-	-	-	-	-	-	-	-	-	-	-	-

RESULTS OF THE ENVIRONMENTAL PERFORMANCE INDICATORS

The environmental performance results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins 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).

Mandatory impact category indicators according to EN 15804

Results per 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP total	kg CO_2 eq.	4.60E+00	1.10E-01	0.00E+00	3.30E-02	1.15E-03	1.21E+00	-2.35E+00
GWP fossil	kg CO_2 eq.	4.60E+00	3.45E-02	0.00E+00	3.30E-02	1.09E-03	1.20E+00	-2.33E+00
GWP biogenic	kg CO_2 eq.	-4.01E-02	7.58E-02	0.00E+00	2.26E-05	5.69E-05	7.59E-04	-2.47E-02
GWP luluc	kg CO_2 eq.	4.98E-03	4.62E-06	0.00E+00	1.09E-05	1.48E-07	5.50E-05	-1.92E-03
ODP	kg CFC 11 eq.	2.65E-06	1.92E-10	0.00E+00	7.20E-10	2.72E-11	1.43E-09	-1.55E-06
AP	mol H+ eq.	1.54E-02	6.30E-05	0.00E+00	1.06E-04	3.63E-06	4.73E-04	-7.85E-03
EP-freshwater	kg P eq.	1.56E-03	1.64E-06	0.00E+00	2.25E-06	2.51E-07	3.05E-05	-8.29E-04
EP-marine	kg N eq.	3.50E-03	2.91E-05	0.00E+00	3.57E-05	6.62E-07	1.67E-04	-1.66E-03
EP-terrestrial	mol N eq.	3.29E-02	2.55E-04	0.00E+00	3.88E-04	6.91E-06	1.74E-03	-1.57E-02
POCP	kg NMVOC eq.	1.71E-02	9.65E-05	0.00E+00	1.61E-04	2.86E-06	4.95E-04	-8.75E-03
ADP-minerals and metals*	kg Sb eq.	5.21E-05	5.58E-08	0.00E+00	1.11E-07	2.09E-09	2.85E-07	-2.80E-05
ADP-fossil*	MJ	1.04E+02	1.60E-01	0.00E+00	4.68E-01	1.82E-02	8.15E-01	-5.56E+01
WDP*	m^3	5.58E+00	1.89E-04	0.00E+00	1.81E-03	5.30E-04	1.07E-01	-1.89E+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 and 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 of these results are high or as there is limited experience with the indicator.*

Additional mandatory and voluntary impact category indicators

Results per 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG	kg CO_2 eq.	4.62E+00	4.10E-02	0.00E+00	3.30E-02	1.09E-03	1.20E+00	-2.33E+00

Additional voluntary environmental indicators are not declared in this EPD.

Resource use indicators

Results per 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1.19E+01	5.31E-03	0.00E+00	7.39E-03	6.06E-03	4.45E-02	-3.08E+00
PERM	MJ	3.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.50E+01	5.31E-03	0.00E+00	7.39E-03	6.06E-03	4.45E-02	-3.08E+00
PENRE	MJ	7.11E+01	1.70E-01	0.00E+00	4.98E-01	1.98E-02	8.71E-01	-5.98E+01
PENRM	MJ	4.13E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.12E+02	1.70E-01	0.00E+00	4.98E-01	1.98E-02	8.71E-01	-5.98E+01
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.38E-01	1.98E-05	0.00E+00	5.84E-05	1.48E-05	3.73E-03	-4.90E-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 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	2.99E-03	1.09E-06	0.00E+00	3.19E-06	8.70E-08	9.88E-06	-1.72E-03
Non-hazardous waste disposed	kg	1.83E+00	1.05E-02	0.00E+00	2.24E-02	4.33E-05	1.92E-01	-1.70E-01
Radioactive waste disposed	kg	1.48E-04	1.21E-07	0.00E+00	1.38E-07	4.02E-08	4.74E-07	-8.24E-05

Output flow indicators

Results per 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**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
Material for recycling	kg	1.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+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
Exported energy. electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+00	0.00E+00
Exported energy. thermal	MJ	0.00E+00	0.00E+00	1.00E+00	0.00E+00	0.00E+00	3.62E+00	0.00E+00

ADDITIONAL LCA RESULTS

Variability analysis

As indicated by PCR, the range of variation in modules A-C more than 10%, is given below for each mandatory indicator. These variations are mainly due to differences in weight between the various products in the family.

Indicator	Variation (min)	Variation (max)
Climate change - Total	-88.5%	+124.2%
Climate change - Fossil	-88.7%	+124.3%
Climate change - Biogenic	-54.8%	+88.2%
Climate change - Land use and LU change	-75.9%	+114.9%
Ozone depletion	-91.4%	+125.9%
Acidification	-87.0%	+123.3%
Eutrophication, freshwater	-86.4%	+122.8%
Eutrophication, marine	-84.8%	+121.8%
Eutrophication, terrestrial	-85.6%	+122.4%
Photochemical ozone formation	-87.8%	+123.9%
Resource use, minerals and metals	-88.5%	+124.2%
Resource use, fossils	-89.1%	+124.6%
WDP	-89.6%	+125.2%
GWP-GHG	-88.6%	+124.3%
PERE	-97.3%	+129.6%
PERM	-48.1%	+76.3%
PERT	-85.6%	+122.7%
PENRE	-88.3%	+124.1%
PENRM	-90.6%	+125.5%
PENRT	-89.1%	+124.6%
FW	-89.4%	+125.0%
HWD	-91.0%	+125.7%

Indicator	Variation (min)	Variation (max)
NHWD	-81.1%	+121.9%
RWD	-88.9%	+124.5%
MFR	-78.0%	+121.0%
EE	-91.8%	+126.1%
ET	-91.8%	+126.1%

End of Life scenarios

As required by the PCR the impacts associated with different waste management scenarios are reported below: 100% landfilling, 100% recycling, and 100% incineration. None of these scenarios are realistic, because the product end-of-life is typically carried out through different methods and some components cannot be feasibly recycled.

End of Life scenarios (Module C)										
	Unit	100% recycling			100% incineration			100% landfill		
		C2	C3	C4	C2	C3	C4	C2	C3	C4
GWP total	kg CO2 eq	2.81E-02	2.97E-02	0.00E+00	4.56E-02	0.00E+00	3.92E+00	2.81E-02	0.00E+00	1.24E-01
GWP fossil	kg CO2 eq	2.80E-02	2.95E-02	0.00E+00	4.55E-02	0.00E+00	3.91E+00	2.80E-02	0.00E+00	1.24E-01
GWP biogenic	kg CO2 eq	1.92E-05	9.88E-05	0.00E+00	3.12E-05	0.00E+00	6.23E-03	1.92E-05	0.00E+00	8.76E-05
GWP luluc	kg CO2 eq	9.28E-06	9.49E-06	0.00E+00	1.51E-05	0.00E+00	4.83E-04	9.28E-06	0.00E+00	1.20E-05
ODP	kg CFC11 eq	6.12E-10	6.50E-10	0.00E+00	9.94E-10	0.00E+00	1.83E-08	6.12E-10	0.00E+00	5.12E-10
AP	mol H+ eq	9.00E-05	9.50E-05	0.00E+00	1.46E-04	0.00E+00	2.95E-03	9.00E-05	0.00E+00	1.44E-04
EP-freshwater	kg P eq	1.91E-06	2.26E-06	0.00E+00	3.11E-06	0.00E+00	1.85E-04	1.91E-06	0.00E+00	2.08E-06
EP-marine	kg N eq	3.03E-05	3.12E-05	0.00E+00	4.92E-05	0.00E+00	8.58E-04	3.03E-05	0.00E+00	6.98E-04
EP-terrestrial	mol N eq	3.30E-04	3.39E-04	0.00E+00	5.36E-04	0.00E+00	7.89E-03	3.30E-04	0.00E+00	5.90E-04
POCP	kg NMVOC eq	1.36E-04	1.40E-04	0.00E+00	2.22E-04	0.00E+00	2.56E-03	1.36E-04	0.00E+00	2.32E-04
ADP- minerals and metals	kg Sb eq	9.45E-08	9.75E-08	0.00E+00	1.54E-07	0.00E+00	2.64E-06	9.45E-08	0.00E+00	3.80E-08
ADP-fossil	MJ	3.98E-01	4.23E-01	0.00E+00	6.46E-01	0.00E+00	6.49E+00	3.98E-01	0.00E+00	4.50E-01
WDP	m3 depriv.	1.54E-03	2.28E-03	0.00E+00	2.50E-03	0.00E+00	3.15E+00	1.54E-03	0.00E+00	-2.92E-01

ADDITIONAL ENVIRONMENTAL AND SOCIAL INFORMATION

Two photovoltaic systems with a capacity of 1,172 kWp (Plant 1) and 427 kWp (Plant 2) are installed on the two Tecnosystemi plants, covering a significant percentage of the company's electricity consumption.

Always focused to sustainability issues in their most complete vision (social, environmental and economic), in 2021 Tecnosystemi marks a new beginning by becoming a **Benefit Company**, thus rewriting its corporate purpose and officially declaring its serious intention to generate a positive impact on the environment and the community, continuing a path that had already begun years earlier.

In 2023, Tecnosystemi carried out a major redevelopment of the areas outside the factories, designing a **real urban forest** signed by an internationally renowned landscape architect, João Ferreira Nunes, who interpreted the Company's vision and turned it into reality: circularity, sustainability, compensation, are the key elements of this project, designed for the entire community and all the people who work in the Company.

ANNEX I. PRODUCTS INCLUDED IN EPD

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

PWD301700 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L1000mm slot 20mm BLACK
PWD301699 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L1000mm slot 20mm WHITE
PWD301702 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L1000mm slot 30mm BLACK
PWD301701 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L1000mm slot 30mm WHITE
PWD301704 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L1500mm slot 20mm BLACK
PWD301703 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L1500mm slot 20mm WHITE
PWD301706 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L1500mm slot 30mm BLACK
PWD301705 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L1500mm slot 30mm WHITE
PWD301708 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L2000mm slot 20mm BLACK
PWD301707 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L2000mm slot 20mm WHITE
PWD301710 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L2000mm slot 30mm BLACK
PWD301709 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L2000mm slot 30mm WHITE
PWD301692 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L600mm slot 20mm BLACK
PWD301691 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L600mm slot 20mm WHITE
PWD301694 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L600mm slot 30mm BLACK
PWD301693 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L600mm slot 30mm WHITE
PWD301696 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L800mm slot 20mm BLACK
PWD301695 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L800mm slot 20mm WHITE
PWD301698 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L800mm slot 30mm BLACK
PWD301697 Linear retracting diffuser in anti-condensate PVC with damper and central baffle L800mm slot 30mm WHITE
PWD301720 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L1000mm slot 20mm BLACK
PWD301719 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L1000mm slot 20mm WHITE
PWD301722 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L1000mm slot 30mm BLACK
PWD301721 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L1000mm slot 30mm WHITE
PWD301724 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L1500mm slot 20mm BLACK
PWD301723 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L1500mm slot 20mm WHITE
PWD301726 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L1500mm slot 30mm BLACK
PWD301725 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L1500mm slot 30mm WHITE
PWD301728 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L2000mm slot 20mm BLACK
PWD301727 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L2000mm slot 20mm WHITE
PWD301730 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L2000mm slot 30mm BLACK
PWD301729 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L2000mm slot 30mm WHITE
PWD301712 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L600mm slot 20mm BLACK
PWD301711 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L600mm slot 20mm WHITE
PWD301714 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L600mm slot 30mm BLACK
PWD301713 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L600mm slot 30mm WHITE
PWD301716 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L800mm slot 20mm BLACK
PWD301715 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L800mm slot 20mm WHITE
PWD301718 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L800mm slot 30mm BLACK
PWD301717 Linear retracting diffuser in anti-condensate PVC with damper and side baffles L800mm slot 30mm WHITE
PWD301512 Linear diffuser in anti-condensation PVC 3 slots with damper and central baffle L1000mm WHITE
PWD301521 Linear diffuser in anti-condensation PVC 3 slots with damper and central baffle L1500mm WHITE
PWD301530 Linear diffuser in anti-condensation PVC 3 slots with damper and central baffle L2000mm WHITE
PWD301494 Linear diffuser in anti-condensation PVC 3 slots with damper and central baffle L600mm WHITE
PWD301503 Linear diffuser in anti-condensation PVC 3 slots with damper and central baffle L800mm WHITE

PWD301669 Linear diffuser in anti-condensation PVC 4 slots with damper and central baffle L1000mm WHITE
PWD301672 Linear diffuser in anti-condensation PVC 4 slots with damper and central baffle L1500mm WHITE
PWD301675 Linear diffuser in anti-condensation PVC 4 slots with damper and central baffle L2000mm WHITE
PWD301663 Linear diffuser in anti-condensation PVC 4 slots with damper and central baffle L600mm WHITE
PWD301666 Linear diffuser in anti-condensation PVC 4 slots with damper and central baffle L800mm WHITE
PWD301511 Linear diffuser in anti-condensation PVC with damper 3 slots L1000mm WHITE
PWD301520 Linear diffuser in anti-condensation PVC with damper 3 slots L1500mm WHITE
PWD301529 Linear diffuser in anti-condensation PVC with damper 3 slots L2000mm WHITE
PWD301493 Linear diffuser in anti-condensation PVC with damper 3 slots L600mm WHITE
PWD301502 Linear diffuser in anti-condensation PVC with damper 3 slots L800mm WHITE
PWD301668 Linear diffuser in anti-condensation PVC with damper 4 slots L1000mm WHITE
PWD301671 Linear diffuser in anti-condensation PVC with damper 4 slots L1500mm WHITE
PWD301674 Linear diffuser in anti-condensation PVC with damper 4 slots L2000mm WHITE
PWD301662 Linear diffuser in anti-condensation PVC with damper 4 slots L600mm WHITE
PWD301665 Linear diffuser in anti-condensation PVC with damper 4 slots L800mm WHITE
PWD301506 Linear diffuser in anti-condensation PVC with damper and central baffle L1000mm 1 slot WHITE
PWD301509 Linear diffuser in anti-condensation PVC with damper and central baffle L1000mm 2 slots WHITE
PWD301515 Linear diffuser in anti-condensation PVC with damper and central baffle L1500mm 1 slot WHITE
PWD301518 Linear diffuser in anti-condensation PVC with damper and central baffle L1500mm 2 slots WHITE
PWD301524 Linear diffuser in anti-condensation PVC with damper and central baffle L2000mm 1 slot WHITE
PWD301527 Linear diffuser in anti-condensation PVC with damper and central baffle L2000mm 2 slots WHITE
PWD301488 Linear diffuser in anti-condensation PVC with damper and central baffle L600mm 1 slot WHITE
PWD301491 Linear diffuser in anti-condensation PVC with damper and central baffle L600mm 2 slots WHITE
PWD301497 Linear diffuser in anti-condensation PVC with damper and central baffle L800mm 1 slot WHITE
PWD301500 Linear diffuser in anti-condensation PVC with damper and central baffle L800mm 2 slots WHITE
PWD301505 Linear diffuser in anti-condensation PVC with damper L1000mm 1 slot WHITE
PWD301508 Linear diffuser in anti-condensation PVC with damper L1000mm 2 slots WHITE
PWD301514 Linear diffuser in anti-condensation PVC with damper L1500mm 1 slot WHITE
PWD301517 Linear diffuser in anti-condensation PVC with damper L1500mm 2 slots WHITE
PWD301523 Linear diffuser in anti-condensation PVC with damper L2000mm 1 slot WHITE
PWD301526 Linear diffuser in anti-condensation PVC with damper L2000mm 2 slots WHITE
PWD301487 Linear diffuser in anti-condensation PVC with damper L600mm 1 slot WHITE
PWD301490 Linear diffuser in anti-condensation PVC with damper L600mm 2 slots WHITE
PWD301496 Linear diffuser in anti-condensation PVC with damper L800mm 1 slot WHITE
PWD301499 Linear diffuser in anti-condensation PVC with damper L800mm 2 slots WHITE
PWD301510 Linear intake diffuser in anti-condensation PVC 3 slots L1000mm WHITE
PWD301519 Linear intake diffuser in anti-condensation PVC 3 slots L1500mm WHITE
PWD301528 Linear intake diffuser in anti-condensation PVC 3 slots L2000mm WHITE
PWD301492 Linear intake diffuser in anti-condensation PVC 3 slots L600mm WHITE
PWD301501 Linear intake diffuser in anti-condensation PVC 3 slots L800mm WHITE
PWD301667 Linear intake diffuser in anti-condensation PVC 4 slots L1000mm WHITE
PWD301670 Linear intake diffuser in anti-condensation PVC 4 slots L1500mm WHITE
PWD301673 Linear intake diffuser in anti-condensation PVC 4 slots L2000mm WHITE
PWD301661 Linear intake diffuser in anti-condensation PVC 4 slots L600mm WHITE
PWD301664 Linear intake diffuser in anti-condensation PVC 4 slots L800mm WHITE
PWD301504 Linear intake diffuser in anti-condensation PVC L1000mm 1 slot WHITE
PWD301507 Linear intake diffuser in anti-condensation PVC L1000mm 2 slots WHITE
PWD301513 Linear intake diffuser in anti-condensation PVC L1500mm 1 slot WHITE
PWD301516 Linear intake diffuser in anti-condensation PVC L1500mm 2 slots WHITE
PWD301522 Linear intake diffuser in anti-condensation PVC L2000mm 1 slot WHITE
PWD301525 Linear intake diffuser in anti-condensation PVC L2000mm 2 slots WHITE

PWD301486 Linear intake diffuser in anti-condensation PVC L600mm 1 slot WHITE
PWD301489 Linear intake diffuser in anti-condensation PVC L600mm 2 slots WHITE
PWD301495 Linear intake diffuser in anti-condensation PVC L800mm 1 slot WHITE
PWD301498 Linear intake diffuser in anti-condensation PVC L800mm 2 slots WHITE

Abbreviations

Abbreviation	Definition
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
GO	Guarantee of Origin
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CPC	Central product classification
DQR	Data Quality Rating
PEF	Product Environmental Footprint

References

- Product Category Rules (PCR): PCR 2019:14 v2.0.1
- c-PCR NPCR 030:2021 Part B for ventilation components - version 1
- EN 15804:2012+A2:2019. Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.
- General Programme Instructions for the International EPD System, v. 5.0.1
- UNI EN ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations
- UNI EN ISO 14040:2021, Environmental management - Life cycle assessment - Principles and framework
- UNI EN ISO 14044:2021, Environmental management. Life cycle assessment - Requirements and guidelines
- ISPRA (2025). *Rapporto Rifiuti Speciali Edizione 2025* – RAPPORTI 416/2025 ISPRA. https://www.isprambiente.gov.it/it/pubblicazioni/rapporti/rapporto-rifiuti-speciali-edizione-2025
- ISPRA (2024) *Rapporto Rifiuti Urbani - Edizione 2024*. https://www.isprambiente.gov.it/it/pubblicazioni/rapporti/rapporto-rifiuti-urbani-edizione-2024
- “LCA_REPORT_VISIBLE_LINEAR_&_LINEAR_RETRACTING_DIFFUSERS_PVC_ENG”, Rev 01 of 2025/10/28

Version history

Original version of EPD, date 2025/11/10.

Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

LINEAR RETRACTING DIFFUSERS IN PVC WITH INSULATED PLENUM from Tecnosystemi S.p.A Benefit Company

---

EPD of multiple products based on a representative product (LINEAR RETRACTING INTAKE DIFFUSERS IN PVC WITH INSULATED PLENUM, SIDE BUFFLES 800 mm AND DUMPER 20 mm).
Product recently on the market – Results of this EPD shall be used with care as the LCI data is not yet based on 1 year of production which may result in increased uncertainty

Programme	The International EPD® System, www.environdec.com
Programme operator	EPD International AB
Type of EPD	EPD of multiple products based on a representative product
EPD registration number	EPD-IES-0026652
Version date	2025/11/10
Validity date	2030/11/09

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

GENERAL INFORMATION

Programme	The International EPD® System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm, Sweden
Website	www.environdec.com
E-mail	info@environdec.com

Product Category Rules (PCR)

- CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
- Product Category Rules (PCR): PCR 2019:14 v2.0.1

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

- c-PCR, if applicable: Ventilation components (c-PCR under PCR 2019:14) (Adopted from EPD Norway)

Third-party verification

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

- EPD verification by accredited certification body
- Third-party verification: TÜV Italia SRL, Viale Fulvio Testi 280/6, 20126 Milano
- The certification body is accredited by: ACCREDIA, No. 00077

Procedure for follow-up of data during EPD validity involves third party verifier:

Yes ● No ○

Technical support for LCA study:
Soin Company srls
Via Orgnani 1
33034 Fagagna (UD)
www.soincompany.com

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

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same 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 equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; 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: TECNOSYSTEMI SPA SOCIETÀ BENEFIT

Address: via dell'Industria 2/4 - 31029 - Vittorio Veneto (TV)

Contact: Antonello Palamin, Quality Management antonello.palamin@tecnosystemi.com

Contact and LCA practitioner: Lisa Suanno (lisa.suanno@soincompany.com), Bernardo Mobilio Rodriguez (bernardo.rodriguez@soincompany.com)

Description of the organization

Tecnosystemi is a Benefit Company It was officially established in 1992 and began its history by selling a small range of air conditioning accessories. In 1996 it also became a production company, thus beginning a virtuous path that is still evolving today.

The turning point came in 2013, with the definitive move of the headquarters to Vittorio Veneto and the transfer of ownership to the Anna Munari and Giorgio Rigoni family. The passion for their work and the vision of a company of the future led the owners to invest in technological means, transforming a small Veneto company into a large enterprise. With the construction of the third warehouse in 2019, Tecnosystemi expanded to cover an area of 33,000 m² and a covered area of 22,000 m².

The Company designs and manufactures a diversified range of accessories for air conditioning, ventilation and air exchange, always aiming at a strategy of diversification to meet the needs of different customers in Italy and abroad. Thanks to research and the recognised value of internal production know-how, Tecnosystemi continuously invests in new production technologies.

Product-related or management system-related certifications

PRODUCT INFORMATION

Product name
LINEAR RETRACTING DIFFUSER IN ANTICONDENSATE PVC WITH INSULATED PLENUM

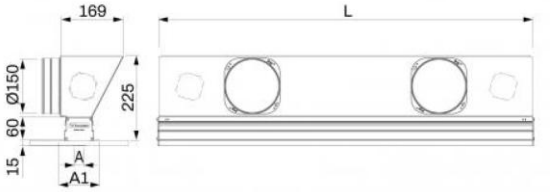
Product identification and description

The products included in the EPD are part of the PROJECT WIND line, which includes a wide range of accessories for ventilation, air conditioning and air exchange, manufactured at the plants in via dell'Industria 2/4 – Plant 1 and via Caduti del Lavoro 7 – Plant 2, in Vittorio Veneto (TV).
The anti-condensate linear retracting PVC diffusers of the PROJECT WIND line by Tecnosystemi, complete with insulated plenum, are available in four main types that differ in the presence and type of air flow regulation elements:

- Linear retracting intake diffuser in anti-condensate PVC with insulated plenum
- Linear retracting diffuser in anti-condensate PVC with damper and insulated plenum
- Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles
- Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle.

The following table shows a description of the components of the product.

Component	Description
SIDE MEMBERS	Structural PVC elements that make up the body of the diffuser. They include: the side profile (which defines the housing in the false ceiling/wall), the side baffles (for orienting the side air flow) and the central baffle (often a pendulum, used to direct the front throw or the Coanda effect).
LATERAL CAPS	PVC end elements used to close the ends of the diffuser side members, ensuring the concealed aesthetic finish and insulation.
BRIDGES	Small joining and support elements, made of PVC. They perform the function of baffles holder (support for orienting the baffles), contain the rotation pin and include the hook protection for assembly.
DAMPERS	PVC sliding device used for calibrating and regulating the air flow (flow rate) entering or leaving the diffuser, allowing the system to be balanced.
PLENUM - METAL SHEET	Metal container in galvanized steel sheet, which receives the air flow from the ducted duct and distributes it evenly to the diffuser.
PLENUM - INSULATION	Closed-cell polyethylene layer applied externally to the sheet metal plenum to reduce thermal dispersion and prevent the formation of condensate on the external surface of the plenum.
COLLARS	Circular PVC connection elements, used to hermetically connect the plenum to the ventilation system ducts.
SCREWS	Stainless steel fastening elements used to assemble the diffuser structure (to join the PVC diffuser to the plenum) and for structural fastening.
PLATES	Metal brackets in galvanized steel sheet, for fixing the diffuser to the supporting structure.



The product chosen as a reference is the linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles, code PWD301435, as it is the best-selling during the study reference period. All environmental performance indicators have been calculated taking it as a reference.

Product	CODE	L [mm]	A [mm]	A1 [mm]	Coupling Ø150	Airflow range [m3/hr]	Weight [kg]
Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles	PWD301435	800	30	110	2	210-465	4.252
Technical features	• Material: Anti-condensate PVC • Colour: Black • Flammability rating: V0 • Operating temperature: -30°C / +60°C						

UN CPC Code

369 Other plastics products

CONTENT DECLARATION

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Side members (polyvinyl chloride)	1.306	0.0 %	0.000
Lateral caps (polyvinyl chloride)	0.051	0.0 %	0.000
Bridges (polyvinyl chloride)	0.070	0.0 %	0.000
Dampers (polyvinyl chloride)	0.157	0.0 %	0.000
Plenum (galvanized steel sheet)	2.421	0.0 %	0.000
Plenum insulation (polyethylene)	0.030	0.0 %	0.000
Collars (Polyvinyl chloride)	0.124	0.0 %	0.000
Screws (galvanized stainless steel)	0.018	0.0 %	0.000
Plates (galvanized steel sheet)	0.075	0.0 %	0.000
TOTAL	**4.252**	**0.0 %**	**0.000**

Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Corrugated cardboard	0.374	8.8 %	0.159
Pallet	0.013	0.3 %	0.005
LDPE packaging film	0.018	0.4 %	0.000
TOTAL	**0.405**	**9.5 %**	**0.164**

The product and relative packaging materials do not include any substance present in the “Candidate list of substances of very high concern for authorization” in percentage greater than 0.1%.

LCA INFORMATION

Declared unit: 1 unit of linear retracting diffuser in PVC with insulated plenum

Time representativeness: Feb 2025-April 2025

Geographical scope: Italy for all Modules.

Database(s) and LCA software used: Ecoinvent 3.11 – Allocation, cut-off; SimaPro Craft, v. 10.2.0.1
EN 15804 reference package: EF 3.1

Description of system boundaries
Cradle-to-gate with options, modules C1-C4, module D and optional module A5. Module A4 and modules B1-B7 are excluded.

System boundaries include:

- A1 – A3 Raw material extraction and processing; Transport of raw materials to Tecnosystemi plants; Manufacturing of the product (energy and waste); upstream production and transport of packaging for distribution to Tecnosystemi plants;
- A5 – Packaging disposal;
- C1 – Manual disassembly;
- C2 – Transport of waste products to treatment or disposal facilities;
- C3 – Waste processing for reuse, recovery and/or recycling;
- C4 – Final disposal;
- D – Estimate of the potential benefits beyond the system boundaries related to materials recovery/recycling.

System diagram

A1-A3	- PRODUCTION OR RAW MATERIALS/COMPONENTS - TRANSPORT TO MANUFACTURING SITE - PRODUCT MANUFACTURING - PRODUCTION OF PACKAGING FOR DISTRIBUTION - TRANSPORT OF PACKAGING FOR DISTRIBUTION TO MANUFACTURING SITE
A5	MANUAL INSTALLATION PACKAGING END OF LIFE
C	MANUAL DISMANTLING (C1) TRANSPORT (C2) PREPARATION FOR REUSE/RECYCLING (C3) DISPOSAL (C4)
D	BENEFITS FROM MATERIALS RECOVERY/RECYCLING

Allocation methods

Allocation procedures were used for energy consumption (electricity and natural gas) and waste produced, based on the material processed (kg) at each Plant in the Feb-Apr 2025 quarter. Additional mass-based allocation procedures were applied for the packaging used to transport PVC, steel and other components to the facility (big bags, cardboard boxes and pallets) and for distribution packaging.

Cut off rules
The cut-offs were applied to:

- water consumption used in the plants and wastewater treatment,
- transport of the plenum from Plant 2, where it is cut, bent and insulated, to Plant 1, where the product assembly takes place,
- consumption of auxiliary materials and products for cleaning the machines,
- the thin layer of aluminium on the polyethylene and the adhesives used to bond it to the plenum.

Consistent with what is indicated in the PCR, finally, the following were not considered:

- business trips of company employees;
- home-work mobility of employees;
- research and development activities.

Recycled materials
The products under study do not contain recycled material. However, some components are made from internally recovered PVC, specifically from scraps and defective products resulting from PVC extrusion and injection moulding processes. This waste is reground to create new granules which are reintroduced into the production cycle.
Specifically for the representative product, the total mass of PVC scraps represents:

- 13% of the total weight of all PVC components used in the assembly of the diffuser.
- 5% of the total weight of the assembled diffuser, excluding packaging.

Electricity mix

To model the electricity used in the Plants, the emission factor for renewable hydroelectric production with storage, certified by Guarantees of Origin (GO)[1], and the emission factor for on-site photovoltaic generation were used. For Plant 1, the electricity mix is 78% from GO and 22% from photovoltaics. For Plant 2, the mix is 71% from GO and 29% from photovoltaics.

The Global Warming Potential (GWP - GHG) indicator associated is 0.0236 kg CO_2-eq per kilowatt-hour (kWh) for Plant 1 and 0.0289 kg CO_2-eq per kilowatt-hour (kWh) for Plant 2.

End of life scenario (C1-C4)

In the end-of-life stage, the following aspects were considered:

- Transport to the final waste treatment/disposal site (C2). As indicated in the PCR, 80 km between the destination and the landfill/recycling centre, and 130 km for incineration, due to the lack of specific data;
- Treatment and disposal of waste (C3-C4). Waste management has been modelled using different scenario for PVC and steel.

Material/Component	End of Life Stage (C1-C4) Scenario
PVC (SIDE MEMBERS, DAMPERS, LATERAL CAPS, BRIDGES)	• 71.5% recycling (based on “Rapporto Rifiuti Speciali Edizione 2025 – ISPRA”) • 28.5% incineration
Steel (PLATES, SCREWS)	• 88.8% recycling (based on “Rapporto Rifiuti Speciali Edizione 2025 – ISPRA”) • 11.2% landfill
Plenum (STEEL AND INSULATION)	• 100% landfill

No impacts were assigned to the disassembly phase (C1), as it mainly consists of manual operations with negligible environmental effects.

Benefits and loads beyond the system boundary (module D)
The benefits from materials recovery (PVC and steel of plates and screws) were considered.

Summary of data quality assessment

[1] Assuming the same energy mix as in 2024

The following table provides a summary of the data quality assessment for the datasets that contribute to at least 80% of the results for each of the declared environmental impact indicators.

Data Quality Aspect	Details / Description
Data Collection for raw data	1st February 2025-30th April 2025. Product recently on the market
Sites Used	via dell'Industria 2/4 – Plant 1 and via Caduti del Lavoro 7 – Plant 2, in Vittorio Veneto (TV)
Geography	The product is manufactured in Italy and commercialized In Europe (mainly in Italy)
Technology	The product consists of several components. Some of these are manufactured in Plant 1 using extrusion (SIDE MEMBERS, DAMPERS) and injection moulding processes (LATERAL CAPS, BRIDGES), after purchasing the PVC. The PLENUM is produced in Plant 2 by laser cutting and press bending the steel sheet and gluing the polyethylene insulation and then transferred to Plant 1 for assembly. The PLATE is also produced in Plant 2 using laser cutting of steel sheet and then transferred to Plant1. COLLARS and SCREWS are produced by external suppliers.
LCI/LCA database	Ecoinvent 3.11 – Allocation, cut-off; SimaPro Craft, v. 10.2.0.1
EPD used	-
Data Quality Scheme	Data Quality Rating-DQR criteria and data quality level according to PEF method (COMMISSION RECOMMENDATION (EU) 2021/2279 of 15 December 2021)
Use of Fair data with more than 30 % of a core impact	No fair data used
Use of poor data	No poor data used
Other information	The quality assessment covers data that together contribute to at least 80% of the results of each of the declared environmental impact indicators, corresponding to the processes included in modules A1-A3. The total DQR of Modules A1-A3 is 2.1 (Good quality).

The data quality information presented in this EPD has been prepared and reported in accordance with the requirements set forth in UNI EN 15941:2024 and complies with the data quality criteria specified in EN 15804:2012+A2:2019.

As required by PCR, the following table provides information on the quality of the data used for processes contributing more than 10% to the overall GWP-GHG indicator value for the Module A1-A3. No single primary data contributes more than 10% to the overall GWP-GHG.

Process	Source Type	Source	Reference year[2]	Data category	Share of primary data, of GWP-GHG results for A1-A3
Production of PVC (raw material)	Database	Ecoinvent 3.11	2024	Secondary	0%
Production of Steel (raw material)	Database	Ecoinvent 3.11	2024	Secondary	0%
Generation of electricity used in manufacturing site	Database	Ecoinvent 3.11	2024	Primary	0.6%
Natural gas used in manufacturing site	Database	Ecoinvent 3.11	2024	Primary	3.9%
Waste produced in manufacturing site	Database	Ecoinvent 3.11	2024	Primary	0.2%
Transport of raw material to manufacturing site	Database	Ecoinvent 3.11	2024	Primary	1.5%
Transport of packaging for distribution to manufacturing site	Database	Ecoinvent 3.11	2024	Primary	0.02%
				Total	**6.2%**

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

[2] Refers to the last year of validity of the dataset.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results)

	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
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	●	●	●	ND	●	ND	ND	ND	ND	ND	ND	ND	●	●	●	●	●
Geography	IT	IT	IT	-	IT	-	-	-	-	-	-	-	-	IT	IT	IT	IT
Specific data used	6.2%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	-33.7%/+82.5%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	Not applicable			-	-	-	-	-	-	-	-	-	-	-	-	-	-

RESULTS OF THE ENVIRONMENTAL PERFORMANCE INDICATORS

The environmental performance results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins 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).

Mandatory impact category indicators according to EN 15804

Results per 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP total	kg CO_2 eq.	1.14E+01	2.16E-01	0.00E+00	6.94E-02	1.40E-03	1.14E+00	-2.70E+00
GWP fossil	kg CO_2 eq.	1.16E+01	5.30E-02	0.00E+00	6.93E-02	1.34E-03	1.14E+00	-2.68E+00
GWP biogenic	kg CO_2 eq.	-9.14E-02	1.63E-01	0.00E+00	4.76E-05	5.64E-05	7.13E-04	-2.70E-02
GWP luluc	kg CO_2 eq.	1.22E-02	9.59E-06	0.00E+00	2.30E-05	1.61E-07	5.99E-05	-2.16E-03
ODP	kg CFC 11 eq.	2.55E-06	3.95E-10	0.00E+00	1.51E-09	3.23E-11	1.76E-09	-1.68E-06
AP	mol H+ eq.	4.50E-02	1.28E-04	0.00E+00	2.23E-04	5.38E-06	5.48E-04	-9.15E-03
EP-freshwater	kg P eq.	4.58E-03	3.41E-06	0.00E+00	4.73E-06	2.52E-07	2.97E-05	-1.00E-03
EP-marine	kg N eq.	1.05E-02	5.88E-05	0.00E+00	7.50E-05	7.98E-07	1.97E-04	-1.93E-03
EP-terrestrial	mol N eq.	1.08E-01	5.17E-04	0.00E+00	8.15E-04	8.38E-06	2.07E-03	-1.85E-02
POCP	kg NMVOC eq.	4.17E-02	1.97E-04	0.00E+00	3.38E-04	3.68E-06	6.24E-04	-9.96E-03
ADP-minerals and metals*	kg Sb eq.	3.70E-04	1.15E-07	0.00E+00	2.34E-07	2.13E-09	2.87E-07	-3.17E-05
ADP-fossil*	MJ	1.84E+02	3.29E-01	0.00E+00	9.83E-01	2.12E-02	1.13E+00	-6.17E+01
WDP*	m^3	8.35E+00	1.31E-04	0.00E+00	3.81E-03	5.27E-04	1.16E-01	-2.08E+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 and 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 of these results are high or as there is limited experience with the indicator.*

Additional mandatory and voluntary impact category indicators

Results per 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG	kg CO_2 eq.	1.16E+01	6.68E-02	0.00E+00	6.94E-02	1.35E-03	1.14E+00	-2.68E+00

Additional voluntary environmental indicators are not declared in this EPD.

Resource use indicators

Results per 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1.68E+01	1.11E-02	0.00E+00	1.55E-02	6.01E-03	4.48E-02	-3.52E+00
PERM	MJ	7.96E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.47E+01	1.11E-02	0.00E+00	1.55E-02	6.01E-03	4.48E-02	-3.52E+00
PENRE	MJ	1.59E+02	3.49E-01	0.00E+00	1.05E+00	2.30E-02	1.21E+00	-6.64E+01
PENRM	MJ	3.88E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.97E+02	3.49E-01	0.00E+00	1.05E+00	2.30E-02	1.21E+00	-6.64E+01
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	2.12E-01	3.44E-05	0.00E+00	1.23E-04	1.47E-05	3.86E-03	-5.39E-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 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	5.17E-03	2.25E-06	0.00E+00	6.70E-06	1.02E-07	1.16E-05	-1.87E-03
Non-hazardous waste disposed	kg	2.58E+00	2.28E-02	0.00E+00	4.71E-02	4.42E-05	2.64E+00	-1.97E-01
Radioactive waste disposed	kg	2.50E-04	2.55E-07	0.00E+00	2.89E-07	4.01E-08	4.96E-07	-9.09E-05

Output flow indicators

Results per 1 unit of product								
Indicator	**Unit**	**A1-A3**	**A5**	**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
Material for recycling	kg	1.55E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+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
Exported energy. electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E+00	0.00E+00
Exported energy. thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E+00	0.00E+00

ADDITIONAL LCA RESULTS

Variability analysis

As indicated by PCR, the range of variation in modules A-C more than 10%, is given below for each mandatory indicator. These variations are mainly due to differences in weight between the various products in the family.

Indicator	Variation (min)	Variation (max)
Climate change - Total	-35.1%	+82.7%
Climate change - Fossil	-35.0%	+82.7%
Climate change - Biogenic	-32.1%	+86.4%
Climate change - Land use and LU change	-32.6%	+82.7%
Ozone depletion	-49.2%	+84.6%
Acidification	-32.5%	+82.1%
Eutrophication, freshwater	-32.3%	+81.6%
Eutrophication, marine	-32.3%	+82.4%
Eutrophication, terrestrial	-31.8%	+82.3%
Photochemical ozone formation	-33.8%	+82.7%
Resource use, minerals and metals	-28.6%	+81.9%
Resource use, fossils	-37.4%	+83.0%
Water (user) deprivation potential	-38.3%	+83.7%
GWP-GHG	-35.0%	+82.7%
PERE	-39.3%	+82.3%
PERM	-27.5%	+84.1%
PERT	-35.4%	+82.9%
PENRE	-34.9%	+82.7%
PENRM	-48.7%	+84.2%
PENRT	-37.5%	+83.0%
FW	-38.2%	+83.5%

Indicator	Variation (min)	Variation (max)
HWD	-38.1%	+83.4%
NHWD	-31.5%	+83.0%
RWD	-39.1%	+82.5%
MFR	-35.1%	+82.0%
EE	-50.2%	+84.9%
ET	-50.2%	+84.9%

End of Life scenarios

As required by the PCR the impacts associated with different waste management scenarios are reported below: 100% landfilling, 100% recycling, and 100% incineration. None of these scenarios are realistic, because the product end-of-life is typically carried out through different methods and some components cannot be feasibly recycled.

End of Life scenarios (Module C) results										
Indicator	Unit	100% recycling			100% incineration			100% landfill		
		C2	C3	C4	C2	C3	C4	C2	C3	C4
GWP total	kg CO2 eq	6.22E-02	1.14E-02	0.00E+00	1.01E-01	0.00E+00	3.69E+00	6.22E-02	0.00E+00	1.31E-01
GWP fossil	kg CO2 eq	6.21E-02	1.13E-02	0.00E+00	1.01E-01	0.00E+00	3.68E+00	6.21E-02	0.00E+00	1.31E-01
GWP biogenic	kg CO2 eq	4.26E-05	1.78E-04	0.00E+00	6.92E-05	0.00E+00	5.85E-03	4.26E-05	0.00E+00	8.92E-05
GWP luluc	kg CO2 eq	2.06E-05	8.86E-07	0.00E+00	3.34E-05	0.00E+00	4.71E-04	2.06E-05	0.00E+00	2.02E-05
ODP	kg CFC11 eq	1.36E-09	2.46E-10	0.00E+00	2.20E-09	0.00E+00	1.79E-08	1.36E-09	0.00E+00	9.19E-10
AP	mol H+ eq	1.99E-04	6.47E-05	0.00E+00	3.24E-04	0.00E+00	2.99E-03	1.99E-04	0.00E+00	2.45E-04
EP-freshwater	kg P eq	4.24E-06	8.81E-07	0.00E+00	6.89E-06	0.00E+00	2.05E-04	4.24E-06	0.00E+00	3.32E-06
EP-marine	kg N eq	6.71E-05	6.32E-06	0.00E+00	1.09E-04	0.00E+00	8.95E-04	6.71E-05	0.00E+00	6.91E-04
EP-terrestrial	mol N eq	7.30E-04	6.76E-05	0.00E+00	1.19E-03	0.00E+00	8.39E-03	7.30E-04	0.00E+00	1.02E-03
POCP	kg NMVOC eq	3.02E-04	3.42E-05	0.00E+00	4.91E-04	0.00E+00	2.75E-03	3.02E-04	0.00E+00	3.84E-04
ADP-minerals and metals	kg Sb eq	2.09E-07	8.19E-09	0.00E+00	3.40E-07	0.00E+00	2.58E-06	2.09E-07	0.00E+00	5.86E-08
ADP-fossil	MJ	8.81E-01	1.52E-01	0.00E+00	1.43E+00	0.00E+00	6.77E+00	8.81E-01	0.00E+00	8.07E-01
WDP	m3 depriv.	3.42E-03	1.71E-03	0.00E+00	5.55E-03	0.00E+00	2.95E+00	3.42E-03	0.00E+00	-2.55E-01

ADDITIONAL ENVIRONMENTAL AND SOCIAL INFORMATION

Two photovoltaic systems with a capacity of 1,172 kWp (Plant 1) and 427 kWp (Plant 2) are installed on the two Tecnosystemi plants, covering a significant percentage of the company's electricity consumption.

Always focused to sustainability issues in their most complete vision (social, environmental and economic), in 2021 Tecnosystemi marks a new beginning by becoming a **Benefit Company**, thus rewriting its corporate purpose and officially declaring its serious intention to generate a positive impact on the environment and the community, continuing a path that had already begun years earlier.

In 2023, Tecnosystemi carried out a major redevelopment of the areas outside the factories, designing a **real urban forest** signed by an internationally renowned landscape architect, João Ferreira Nunes, who interpreted the Company's vision and turned it into reality: circularity, sustainability, compensation, are the key elements of this project, designed for the entire community and all the people who work in the Company.

ANNEX I. PRODUCTS INCLUDED IN EPD

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

PWD301441 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L1000mm slot 20mm BLACK
PWD301440 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L1000mm slot 20mm WHITE
PWD301449 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L1000mm slot 30mm BLACK
PWD301448 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L1000mm slot 30mm WHITE
PWD301457 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L1500mm slot 20mm BLACK
PWD301456 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L1500mm slot 20mm WHITE
PWD301465 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L1500mm slot 30mm BLACK
PWD301464 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L1500mm slot 30mm WHITE
PWD301473 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L2000mm slot 20mm BLACK
PWD301472 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L2000mm slot 20mm WHITE
PWD301481 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L2000mm slot 30mm BLACK
PWD301480 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L2000mm slot 30mm WHITE
PWD301409 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L600mm slot 20mm BLACK
PWD301408 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L600mm slot 20mm WHITE
PWD301417 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L600mm slot 30mm BLACK
PWD301416 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L600mm slot 30mm WHITE
PWD301425 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L800mm slot 20mm BLACK
PWD301424 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L800mm slot 20mm WHITE
PWD301433 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L800mm slot 30mm BLACK
PWD301432 Linear retracting diffuser in anti-condensate PVC with insulated plenum and damper L800mm slot 30mm WHITE
PWD301445 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L1000mm slot 20mm BLACK
PWD301444 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L1000mm slot 20mm WHITE
PWD301453 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L1000mm slot 30mm BLACK
PWD301452 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L1000mm slot 30mm WHITE
PWD301461 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L1500mm slot 20mm BLACK
PWD301460 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L1500mm slot 20mm WHITE
PWD301469 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L1500mm slot 30mm BLACK
PWD301468 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L1500mm slot 30mm WHITE
PWD301477 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L2000mm slot 20mm BLACK
PWD301476 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L2000mm slot 20mm WHITE
PWD301485 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L2000mm slot 30mm BLACK
PWD301484 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L2000mm slot 30mm WHITE
PWD301413 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L600mm slot 20mm BLACK
PWD301412 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L600mm slot 20mm WHITE
PWD301421 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L600mm slot 30mm BLACK
PWD301420 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L600mm slot 30mm WHITE
PWD301429 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L800mm slot 20mm BLACK
PWD301428 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L800mm slot 20mm WHITE
PWD301437 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L800mm slot 30mm BLACK
PWD301436 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and central baffle L800mm slot 30mm WHITE
PWD301443 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L1000mm slot 20mm BLACK
PWD301442 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L1000mm slot 20mm WHITE
PWD301451 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L1000mm slot 30mm BLACK
PWD301450 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L1000mm slot 30mm WHITE
PWD301459 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L1500mm slot 20mm BLACK
PWD301458 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L1500mm slot 20mm WHITE
PWD301467 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L1500mm slot 30mm BLACK
PWD301466 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L1500mm slot 30mm WHITE

PWD301475 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L2000mm slot 20mm BLACK

PWD301474 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L2000mm slot 20mm WHITE

PWD301483 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L2000mm slot 30mm BLACK

PWD301482 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L2000mm slot 30mm WHITE

PWD301411 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L600mm slot 20mm BLACK

PWD301410 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L600mm slot 20mm WHITE

PWD301419 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L600mm slot 30mm BLACK

PWD301418 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L600mm slot 30mm WHITE

PWD301427 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L800mm slot 20mm BLACK

PWD301426 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L800mm slot 20mm WHITE

PWD301435 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L800mm slot 30mm BLACK

PWD301434 Linear retracting diffuser in anti-condensate PVC with damper, insulated plenum and side baffles L800mm slot 30mm WHITE

PWD301439 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L1000mm slot 20mm BLACK

PWD301438 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L1000mm slot 20mm WHITE

PWD301447 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L1000mm slot 30mm BLACK

PWD301446 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L1000mm slot 30mm WHITE

PWD301455 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L1500mm slot 20mm BLACK

PWD301454 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L1500mm slot 20mm WHITE

PWD301463 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L1500mm slot 30mm BLACK

PWD301462 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L1500mm slot 30mm WHITE

PWD301471 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L2000mm slot 20mm BLACK

PWD301470 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L2000mm slot 20mm WHITE

PWD301479 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L2000mm slot 30mm BLACK

PWD301478 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L2000mm slot 30mm WHITE

PWD301407 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L600mm slot 20mm BLACK

PWD301406 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L600mm slot 20mm WHITE

PWD301415 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L600mm slot 30mm BLACK

PWD301414 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L600mm slot 30mm WHITE

PWD301423 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L800mm slot 20mm BLACK

PWD301422 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L800mm slot 20mm WHITE

PWD301431 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L800mm slot 30mm BLACK

PWD301430 Linear retracting intake diffuser in anti-condensate PVC with insulated plenum L800mm slot 30mm WHITE

Abbreviations

Abbreviation	Definition
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
GO	Guarantee of Origin
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CPC	Central product classification
DQR	Data Quality Rating
PEF	Product Environmental Footprint

References

- Product Category Rules (PCR): PCR 2019:14 v2.0.1
- c-PCR NPCR 030:2021 Part B for ventilation components - version 1
- EN 15804:2012+A2:2019. Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.
- General Programme Instructions for the International EPD System, v. 5.0.1
- UNI EN ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations
- UNI EN ISO 14040:2021, Environmental management - Life cycle assessment - Principles and framework
- UNI EN ISO 14044:2021, Environmental management. Life cycle assessment - Requirements and guidelines
- ISPRA (2025). *Rapporto Rifiuti Speciali Edizione 2025* – RAPPORTI 416/2025 ISPRA. https://www.isprambiente.gov.it/it/pubblicazioni/rapporti/rapporto-rifiuti-speciali-edizione-2025
- ISPRA (2024) *Rapporto Rifiuti Urbani - Edizione 2024*. https://www.isprambiente.gov.it/it/pubblicazioni/rapporti/rapporto-rifiuti-urbani-edizione-2024
- “LCA_REPORT_LINEAR_RETRACTING_DIFFUSER_PVC_PLENUM_ENG”, Rev 01 of 2025/10/28

Version history

Original version of the EPD, date 2025/11/10.