

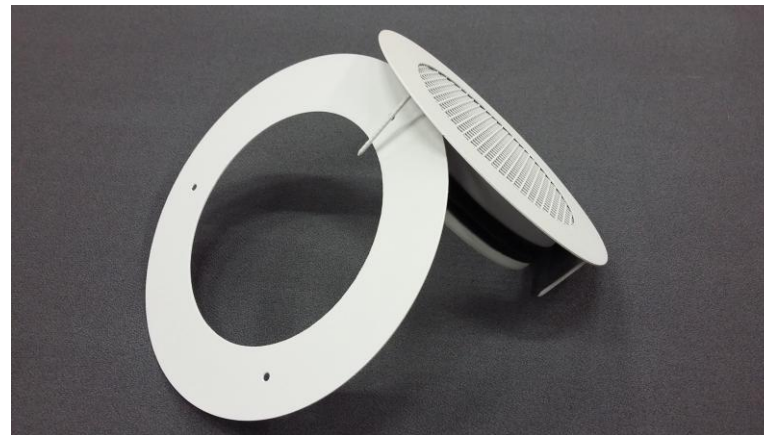


ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

This EPD Covers Fastening frames and Airvalves.

REC Indovent AB **Air Valves**



EPD HUB

Published on
last updated on
valid until

HUB-5863

09.06.2026,
09.06.2026,
08.06.2031

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



Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	REC Indovent AB
Address	Betagatan 1, 431 49 Mölndal, SWEDEN
Contact details	Info@REC-Indovent.se
Website	www.rec-indovent.se

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 & ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Fredrik Nilsson REC Indovent AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
EPD verifier	D.V, as authorized verifier acting for EPD HUB Limited

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

PRODUCT

Product name	Rec Indovent Air valves
Additional labels	Ceiling diffusers TT, TV. CKS, CNK, CKÖ, CRT, CRP, CKT, KSOF, CTVB, CTVK, STQA, CKK, CKK- S, CKE, BKZ-R, BKZ-RR Fastening frames are also covered by this EPD: ZRT, ZRL, ZR
Product reference	-
Place(s) of raw material origin	Finland, Lithuania, Italy, Germany, Indonesia(paint)
Place of production	Šiauliai, Lithuania
Place(s) of installation and use	northern Europe
Period for data	Jan 2024 - Dec 2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	0%
A1-A3 Specific data (%)	82,8

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg Rec Indovent Air Valve
Declared unit mass	1 kg
Mass of packaging	0,1595 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	2,47
GWP-total, A1-A3 (kgCO ₂ e)	2,25
Secondary material, inputs (%)	0,1
Secondary material, outputs (%)	94,5
Total energy use, A1-A3 (kWh)	4,35
Net freshwater use, A1-A3 (m ³)	0,2

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Manufacturer of supreme quality flexible smoke and ventilation pipes/ducts. As well as manufacturing ventilation units and other ventilation components.

PRODUCT DESCRIPTION

Air valves are made of sheet steel and electrostatically coated. with white epoxy paint (RAL 9003), providing a glossy and dirt-repellent surface.

The valve is fitted with an elastic ring that seals against the frame.

The EPD covers the following air vents: Ceiling diffusers TT, TV, KSOF, CKS, CNK, CKÖ, CRT, CRP, CKT, CTVB, CTVK, STQA, CKK, CKK-S, CKE, BKZ-R, BKZ-RR, the following fastening frames are also covered by the EPD: ZRT, ZRL, ZR

Further information can be found at:
www.rec-indovent.se

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	88%	Finland, Germany,
Minerals	0%	Not part of product
Fossil materials	12%	Paint Indonesia, EPDM Poland
Bio-based materials	0%	Not part of product

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0,299545

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg Rec Indovent Air Valve with fastening frame
Mass per declared unit	1 kg

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

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

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

Not declared = ND.

MANUFACTURING AND PACKAGING (A1-A3)

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

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

The production of the air valves begins with large sheet-metal panels, which are precision-punched into smaller actuator blanks. These blanks are then folded, pressed, and formed, before welded into their final shape. Once assembled, the actuators are coated with durable powder and cured in an oven, ensuring long-lasting performance and resistance to corrosion. Finished actuators are individually packaged in protective plastic bags, placed in cartons; the cartons are then placed on pallets for transport. The highest material loss occurs during the punching operation, where excess sheet-metal material is removed; all offcuts are collected and sent for recycling. Other stages generate little to no additional waste, as the workflow is largely assembly-focused rather than subtractive manufacturing.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) to cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

REC keeps transport losses down through cooperation with local suppliers of constituent components. Transport is calculated based on a weighted average of 115 km for sales and transport in 2024. Transport from facility in Lithuania to Sweden is assumed to be 280 km by freight ship and 590km by truck. The product is sold ready for installation; no raw material waste is generated by the installation (A5). Screws and minimal consumption of electricity for use of power tools in installation are also part of the scope. Post-treatment of product packaging is declared, and the average EU scenario per packaging material has been applied with different quotas regarding recycling, incineration, and landfill.

PRODUCT USE AND MAINTENANCE (B1-B7)

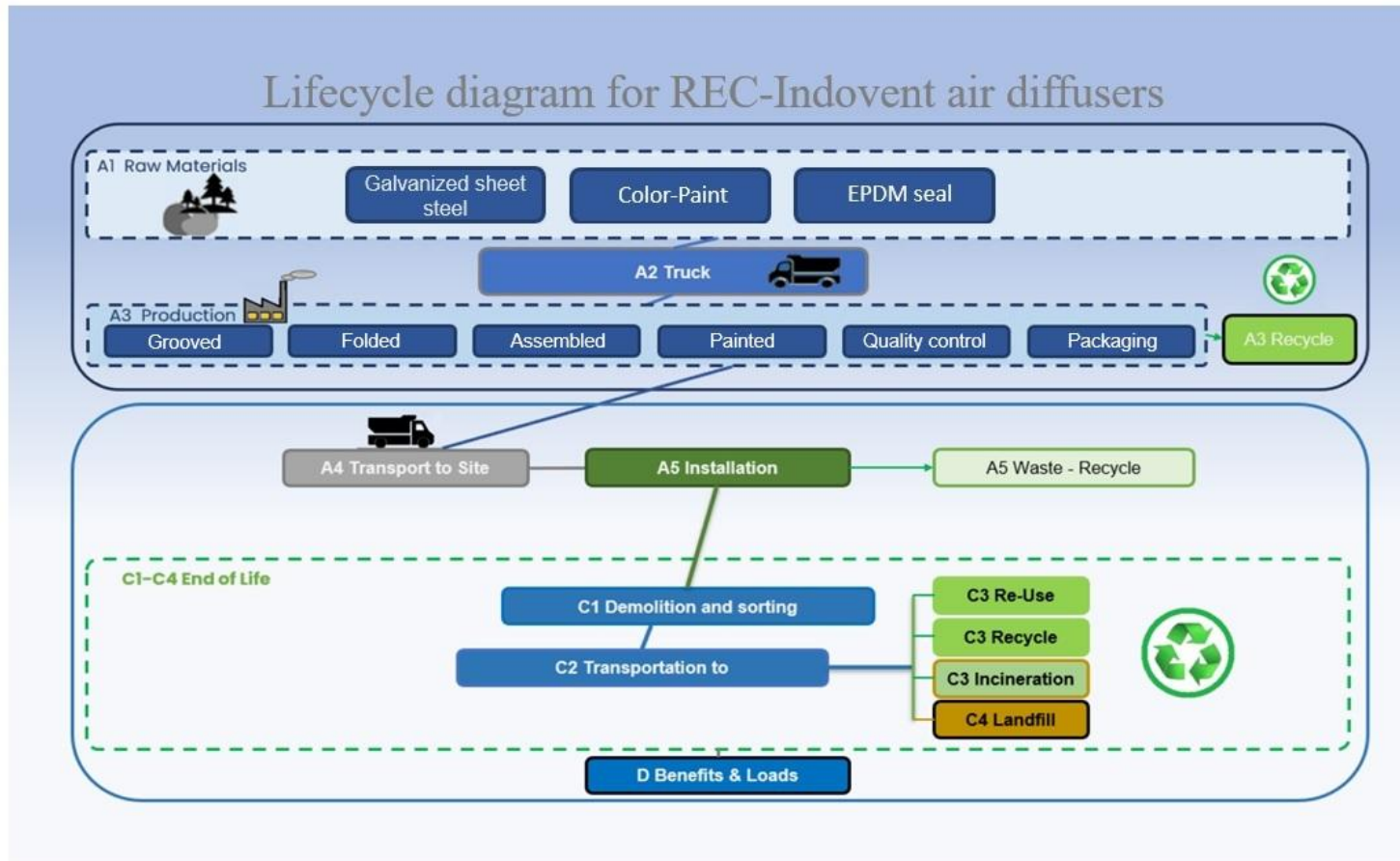
This EPD does not cover the use phase. Air, soil, and water impacts during the use phase have not been applied.

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

PRODUCT END OF LIFE (C1-C4, D)

The product is dismantled using an electric power tool, disassembled and sorted by steel and rubber. 100% of the waste is collected and transported for waste treatment. The transport distance to treatment is assumed to be 50 km, and the mode of transport is assumed to be a truck. The material is assumed to be sorted and recycled in accordance with Swedish waste management standards. 88% of the product is steel, where 95% is assumed to be recycled and 5 % is assumed to be landfilled. The rubber is assumed to be recycled to 47% and incineration 41%.

SYSTEM DIAGRAM



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

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

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

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1. Two EPDS were used in modelling. One for paint and one for steel. Datapoint for EPDM is generic.

Note on indicator consistency: A technical inconsistency between PENRT (Total use of non-renewable primary energy) and ADP-fossil (Abiotic depletion potential for fossil resources) results in modules A1-A3 has been

identified. A contribution analysis shows that the remaining discrepancy originates from the specific characterization factors in the background environmental profiles of the primary raw materials cold rolled steel and EPDM. These inconsistencies are inherent to the third-party verified EPDs and background databases used and cannot be adjusted by the practitioner.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

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

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

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	0%

The percentage of average material in the product is calculated for one Kg. The finished product is manufactured in several sizes and weights. Scaling of materials is linear and therefore is 1 kg representative for all products covered by this EPD.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.3. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11 environmental data sources follow the methodology - allocation, Cut-off, EN 15804+A2.

ENVIRONMENTAL IMPACT DATA

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

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

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	2,23E+00	2,97E-02	-1,53E-02	2,25E+00	1,14E-01	3,07E-01	ND	ND	ND	ND	ND	ND	ND	7,38E-05	5,47E-03	2,01E-01	1,57E-03	-1,61E+00
GWP – fossil	kg CO ₂ e	2,21E+00	2,97E-02	2,37E-01	2,47E+00	1,14E-01	5,32E-02	ND	ND	ND	ND	ND	ND	ND	6,35E-05	5,47E-03	1,87E-01	1,57E-03	-1,61E+00
GWP – biogenic	kg CO ₂ e	2,53E-02	6,70E-06	-2,55E-01	-2,29E-01	2,11E-05	2,54E-01	ND	ND	ND	ND	ND	ND	ND	1,41E-06	1,24E-06	1,41E-02	-1,53E-07	3,44E-04
GWP – LULUC	kg CO ₂ e	2,49E-03	1,33E-05	2,76E-03	5,26E-03	5,35E-05	2,39E-05	ND	ND	ND	ND	ND	ND	ND	8,92E-06	2,45E-06	1,93E-05	1,93E-07	-3,05E-04
Ozone depletion pot.	kg CFC ₁₁ e	2,24E-05	4,38E-10	1,28E-08	2,24E-05	1,67E-09	3,58E-10	ND	ND	ND	ND	ND	ND	ND	1,88E-12	8,07E-11	1,94E-10	1,28E-11	-1,15E-08
Acidification potential	mol H ⁺ e	7,50E-03	1,01E-04	1,10E-03	8,69E-03	1,92E-03	1,36E-04	ND	ND	ND	ND	ND	ND	ND	3,56E-07	1,86E-05	1,18E-04	2,95E-06	-6,37E-03
EP-freshwater ²⁾	kg Pe	6,15E-04	2,31E-06	6,13E-05	6,79E-04	6,03E-06	2,42E-06	ND	ND	ND	ND	ND	ND	ND	2,28E-08	4,26E-07	8,30E-06	3,26E-08	-6,70E-04
EP-marine	kg Ne	1,50E-03	3,32E-05	3,10E-04	1,84E-03	4,98E-04	5,30E-05	ND	ND	ND	ND	ND	ND	ND	1,06E-07	6,13E-06	5,22E-05	3,01E-05	-1,37E-03
EP-terrestrial	mol Ne	1,62E-02	3,62E-04	2,71E-03	1,93E-02	5,52E-03	4,28E-04	ND	ND	ND	ND	ND	ND	ND	9,76E-07	6,67E-05	3,58E-04	1,25E-05	-1,50E-02
POCP (“smog”) ³⁾	kg NMVOce	5,74E-03	1,49E-04	8,72E-04	6,76E-03	1,59E-03	1,51E-04	ND	ND	ND	ND	ND	ND	ND	2,45E-07	2,75E-05	1,02E-04	4,89E-06	-5,54E-03
ADP-minerals & metals ⁴⁾	kg Sbe	4,61E-05	8,27E-08	6,81E-07	4,68E-05	2,08E-07	2,16E-07	ND	ND	ND	ND	ND	ND	ND	1,48E-09	1,53E-08	3,82E-07	7,64E-10	-1,54E-05
ADP-fossil resources	MJ	2,24E+01	4,30E-01	3,57E+00	2,64E+01	1,53E+00	5,24E-01	ND	ND	ND	ND	ND	ND	ND	1,05E-02	7,93E-02	1,87E-01	1,02E-02	-1,81E+01
Water use ⁵⁾	m ³ e depr.	9,69E-01	2,13E-03	1,20E+00	2,18E+00	5,86E-03	1,27E-02	ND	ND	ND	ND	ND	ND	ND	5,76E-04	3,92E-04	1,48E-02	4,31E-05	-2,84E-01

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

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

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	3,36E-09	2,97E-09	7,90E-09	1,42E-08	7,30E-09	1,74E-09	ND	ND	ND	ND	ND	ND	ND	6,17E-12	5,47E-10	1,83E-09	6,79E-11	-9,88E-08
Ionizing radiation ⁶⁾	kBq I1235e	1,24E+01	3,75E-04	5,19E-02	1,24E+01	9,98E-04	1,14E-03	ND	ND	ND	ND	ND	ND	ND	7,63E-04	6,91E-05	2,48E-03	9,78E-06	2,66E-02
Ecotoxicity (freshwater)	CTUe	1,81E+01	6,09E-02	8,56E-01	1,90E+01	1,66E-01	1,15E-01	ND	ND	ND	ND	ND	ND	ND	5,61E-04	1,12E-02	5,22E-01	4,44E-03	-3,86E+00
Human toxicity, cancer	CTUh	9,12E-08	4,90E-12	1,82E-10	9,14E-08	2,12E-11	6,88E-12	ND	ND	ND	ND	ND	ND	ND	5,86E-14	9,03E-13	2,53E-11	1,04E-13	-2,59E-10
Human tox. non-cancer	CTUh	3,38E-08	2,79E-10	1,44E-09	3,56E-08	6,95E-10	4,04E-10	ND	ND	ND	ND	ND	ND	ND	1,83E-12	5,14E-11	6,41E-10	8,96E-12	-1,29E-08
SQP ⁷⁾	-	1,25E-01	4,33E-01	1,55E+01	1,60E+01	8,74E-01	2,34E-01	ND	ND	ND	ND	ND	ND	ND	2,24E-03	7,99E-02	7,86E-01	2,15E-02	-4,77E+00

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

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	5,23E-01	5,90E-03	7,03E-01	1,23E+00	1,61E-02	-2,41E+00	ND	ND	ND	ND	ND	ND	ND	7,14E-03	1,09E-03	3,73E-02	1,69E-04	-1,20E+00
Renew. PER as material	MJ	4,65E-02	0,00E+00	2,21E+00	2,26E+00	0,00E+00	-2,21E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-4,12E-02	-5,13E-03	-2,38E-03
Total use of renew. PER	MJ	5,69E-01	5,90E-03	2,91E+00	3,49E+00	1,61E-02	-4,62E+00	ND	ND	ND	ND	ND	ND	ND	7,14E-03	1,09E-03	-3,90E-03	-4,97E-03	-1,20E+00
Non-re. PER as energy	MJ	1,04E+01	4,30E-01	3,55E+00	1,44E+01	1,53E+00	3,61E-01	ND	ND	ND	ND	ND	ND	ND	1,05E-02	7,94E-02	-3,53E+00	-4,99E-01	-1,86E+01
Non-re. PER as material	MJ	2,55E+00	0,00E+00	2,65E-01	2,81E+00	0,00E+00	-2,65E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-2,24E+00	-3,06E-01	1,84E+00
Total use of non-re. PER	MJ	1,29E+01	4,30E-01	3,82E+00	1,72E+01	1,53E+00	9,60E-02	ND	ND	ND	ND	ND	ND	ND	1,05E-02	7,94E-02	-5,77E+00	-8,04E-01	-1,68E+01
Secondary materials	kg	1,04E-03	1,83E-04	6,70E-02	6,83E-02	6,57E-04	2,51E-04	ND	ND	ND	ND	ND	ND	ND	1,25E-06	3,38E-05	4,30E-04	3,03E-06	8,52E-01
Renew. secondary fuels	MJ	1,96E-04	2,33E-06	5,34E-02	5,36E-02	5,09E-06	1,97E-04	ND	ND	ND	ND	ND	ND	ND	4,01E-09	4,29E-07	2,32E-05	5,79E-08	-1,70E-04
Non-ren. secondary fuels	MJ	2,62E-05	0,00E+00	0,00E+00	2,62E-05	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m ³	2,01E-01	6,36E-05	2,48E-03	2,04E-01	1,66E-04	2,36E-04	ND	ND	ND	ND	ND	ND	ND	1,36E-05	1,17E-05	2,67E-04	-5,58E-05	-4,60E-03

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,43E-01	7,29E-04	5,98E-03	3,50E-01	2,24E-03	1,42E-03	ND	ND	ND	ND	ND	ND	ND	7,46E-06	1,34E-04	7,27E-03	1,25E-05	-4,83E-01
Non-hazardous waste	kg	4,00E-01	1,35E-02	2,96E-01	7,09E-01	3,72E-02	1,48E-01	ND	ND	ND	ND	ND	ND	ND	1,47E-04	2,49E-03	1,78E-01	8,11E-02	-4,95E+00
Radioactive waste	kg	7,26E-05	9,18E-08	7,09E-06	7,98E-05	2,44E-07	4,03E-07	ND	ND	ND	ND	ND	ND	ND	1,63E-07	1,69E-08	6,27E-07	2,33E-09	7,03E-06

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	1,93E-03	0,00E+00	1,23E-01	1,25E-01	0,00E+00	6,15E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	9,08E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	1,04E-03	0,00E+00	1,05E-05	1,05E-03	0,00E+00	8,70E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	4,90E-02	0,00E+00	0,00E+00
Exported energy	MJ	3,07E-03	0,00E+00	0,00E+00	3,07E-03	0,00E+00	1,07E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	5,60E-01	0,00E+00	0,00E+00
Exported energy – Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,85E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	2,40E-01	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,82E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	3,20E-01	0,00E+00	0,00E+00

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Electricity, Lithuania, residual mix, 2024, Lithuania, One Click LCA, 0.70 kgCO₂e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry >32 metric ton, EURO5, 450 km
2. Market for transport, freight, sea, ferry, 420 km

Installation scenario documentation - A5 (Installation resources)

1. Screw from hot-dip galvanized steel, manufacturers average, Ecoinvent, 0.01 kg
2. Market for electricity, medium voltage, Ecoinvent, 0.0025 kWh

Installation scenario documentation - A5 (Installation waste)

1. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.001 kg
2. Treatment of waste polyethylene, municipal incineration, Ecoinvent, Materials for energy recovery, 0.003 kg
3. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 4.0E-5 kg
4. Exported Energy: Electricity, Ecoinvent, 0.015 MJ
5. Exported Energy: Electricity, Ecoinvent, 0.01 MJ
6. Exported Energy: Electricity, Ecoinvent, 0.36 MJ
7. Exported Energy: Thermal, Ecoinvent, 0.028 MJ
8. Exported Energy: Thermal, Ecoinvent, 0.014 MJ
9. Exported Energy: Thermal, Ecoinvent, 0.64 MJ
10. Treatment of waste paperboard, unsorted, sorting, Ecoinvent, Materials for recycling, 0.052 kg
11. Treatment of waste packaging paper, municipal incineration, Ecoinvent, 0.005 kg
12. Treatment of waste packaging paper, sanitary landfill, Ecoinvent, 0.0056 kg
13. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, Materials

for energy recovery, 0.084 kg

14. Wood chipping, industrial residual wood, stationary electric chipper, Ecoinvent, Materials for recycling, 0.0084 kg

15. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 9.3E-4 kg

End-of-life scenario documentation - C1-C4 (Data source)

1. Market for electricity, medium voltage, Ecoinvent, 0.0025 kWh
2. Treatment of metal scrap, mixed, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.85215 kg
3. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.04485 kg
4. Exported Energy: Electricity, Ecoinvent, 0.24 MJ
5. Exported Energy: Thermal, Ecoinvent, 0.32 MJ
6. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.056 kg
7. Treatment of waste rubber, unspecified, municipal incineration, Ecoinvent, Materials for energy recovery, 0.049 kg
8. Treatment of waste plastic, mixture, sanitary landfill, Ecoinvent, 0.014 kg

Scenario information	Value
Scenario assumptions e.g. transportation	Assumed transportation distance: 50 km. Assumed waste steel scenario: 95% recycling, 5% landfill. Assumed waste EPDM rubber scenario: 47% recycling, 41% incineration, 12% landfill

THIRD-PARTY VERIFICATION STATEMENT

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

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

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

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

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

Verified tools

Tool verifier: Magaly Gonzalez Vazquez

Tool verification validity: 27 March 2025 - 26 March 2028

D.V, as authorized verifier acting for EPD HUB Limited 09.06.2026



ANNEX

		Average weight		0,4 Kg	0,99	Kg CO2e/Item
GTIN	Artikelkod	Product name	1 Kg	GWP-Fossil A1-A3	2,47E+00	
7340215104517	70009100	 KSOF Brandventil Ø100 inkl. ZRT Ram	0,4	0,99	Kg CO2e/Item	
7340215104524	70009125	 KSOF Brandventil Ø125 inkl. ZRT Ram	0,5	1,31	Kg CO2e/Item	
7340215104531	70009160	 KSOF Brandventil Ø160 inkl. ZRT Ram	0,8	1,85	Kg CO2e/Item	
7340215104548	70009200	 KSOF Brandventil Ø200 inkl. ZRT Ram	1,0	2,42	Kg CO2e/Item	
7340215104371	70002100	 CKS VENTIL Ø100	0,3	0,69	Kg CO2e/Item	
7340215104395	70002125	 CKS VENTIL Ø125	0,4	0,89	Kg CO2e/Item	
7340215104401	70002160	 CKS VENTIL Ø160	0,5	1,16	Kg CO2e/Item	
7340215104425	70002200	 CKS VENTIL Ø200	0,7	1,78	Kg CO2e/Item	
7340215104708	70016080	 CNK VENTIL Ø80	0,1	0,31	Kg CO2e/Item	
7340215104715	70016100	 CNK VENTIL Ø100	0,2	0,42	Kg CO2e/Item	
7340215104722	70016125	 CNK VENTIL Ø125	0,2	0,56	Kg CO2e/Item	
7340215104739	70016150	 CNK VENTIL Ø150	0,3	0,82	Kg CO2e/Item	
7340215104746	70016160	 CNK VENTIL Ø160	0,4	1,00	Kg CO2e/Item	
7340215104753	70016200	 CNK VENTIL Ø200	0,5	1,28	Kg CO2e/Item	

GTIN	Artikelkod	Product name	1 Kg	GWP-Fossil A1-A3	2,47E+00
7340215105408	70102100	CKÖ VENTIL Ø100	0,3	0,77	Kg CO2e/Item
7340215105415	70102125	CKÖ VENTIL Ø125	0,4	0,98	Kg CO2e/Item
7340215105422	70102160	CKÖ VENTIL Ø160	0,5	1,29	Kg CO2e/Item
7340215105439	70102200	CKÖ VENTIL Ø200	0,8	1,97	Kg CO2e/Item
7340215105446	70103100	CKÖ-D DÄMPARE Ø100	1,0	2,45	Kg CO2e/Item
7340215105453	70103125	CKÖ-D DÄMPARE Ø125	0,2	0,43	Kg CO2e/Item
7340215105460	70103160	CKÖ-D DÄMPARE Ø160	0,5	1,28	Kg CO2e/Item
7340215105477	70103200	CKÖ-D DÄMPARE Ø200	1,0	2,54	Kg CO2e/Item
7340215106771	R70102100	CKÖ VENTIL Ø100 m. dämpare	1,3	3,21	Kg CO2e/Item
7340215106788	R70102125	CKÖ VENTIL Ø125 m. dämpare	0,6	1,41	Kg CO2e/Item
7340215106795	R70102160	CKÖ VENTIL Ø160 m. dämpare	1,0	2,56	Kg CO2e/Item
7340215106801	R70102200	CKÖ VENTIL Ø200 m. dämpare	1,8	4,50	Kg CO2e/Item
7340215105149	70031080	CRT VENTIL Ø80	0,1	0,20	Kg CO2e/Item
7340215105156	70031100	CRT VENTIL Ø100	0,1	0,35	Kg CO2e/Item
7340215105163	70031125	CRT VENTIL Ø125	0,2	0,57	Kg CO2e/Item
7340215105170	70031160	CRT VENTIL Ø160	0,4	0,86	Kg CO2e/Item
7340215105187	70031200	CRT VENTIL Ø200	0,4	1,04	Kg CO2e/Item
7340215105194	70031250	CRT VENTIL Ø250	0,9	2,15	Kg CO2e/Item
7340215105200	70031315	CRT VENTIL Ø315	1,1	2,72	Kg CO2e/Item
Average weight			0,4 Kg	0,99	Kg CO2e/Item

GTIN	Artikelkod	Product name	1 Kg	GWP-Fossil A1-A3	2,47E+00
7340215105248	70034100	CRP VENTIL Ø100 Trä	0,1	0,35	Kg CO2e/Item
7340215105255	70034125	CRP VENTIL Ø125 Trä	0,2	0,57	Kg CO2e/Item
7340215105262	70034160	CRP VENTIL Ø160 Trä	0,4	0,86	Kg CO2e/Item
7340215104630	70012100	CKT VENTIL Ø100	0,3	0,67	Kg CO2e/Item
7340215104647	70012125	CKT VENTIL Ø125	0,4	1,06	Kg CO2e/Item
7340215104654	70012160	CKT VENTIL Ø160	0,6	1,43	Kg CO2e/Item
7340215104760	70019100	CTVB VENTIL Ø100	0,6	1,36	Kg CO2e/Item
7340215104777	70019125	CTVB VENTIL Ø125	0,7	1,65	Kg CO2e/Item
7340215104784	70019160	CTVB VENTIL Ø160	0,9	2,15	Kg CO2e/Item
7340215105286	70039100	CTVK VENTIL Ø100	0,4	0,99	Kg CO2e/Item
7340215105293	70045100	STQA VENTIL Ø100	0,4	0,99	Kg CO2e/Item
7340215105309	70045125	STQA VENTIL Ø125	0,4	0,99	Kg CO2e/Item
7340215104302	70001080	CKK VENTIL Ø80	0,2	0,37	Kg CO2e/Item
7340215104319	70001100	CKK VENTIL Ø100	0,2	0,48	Kg CO2e/Item
7340215104326	70001125	CKK VENTIL Ø125	0,3	0,77	Kg CO2e/Item
7340215104333	70001150	CKK VENTIL Ø150	0,3	0,82	Kg CO2e/Item
7340215104340	70001160	CKK VENTIL Ø160	0,5	1,16	Kg CO2e/Item
7340215104357	70001200	CKK VENTIL Ø200	0,7	1,63	Kg CO2e/Item

GTIN	Artikelkod	Product name	1 Kg	GWP-Fossil A1-A3	2,47E+00
7340215105378	70101100	CKK-S VENTIL 100 MM. ROSTFRI INKL. RAN	0,2	0,55	Kg CO2e/Item
7340215105385	70101125	CKK-S VENTIL 125 MM. ROSTFRI INKL. RAN	0,4	0,87	Kg CO2e/Item
7340215105392	70101160	CKK-S VENTIL 160 MM. ROSTFRI INKL. RAN	0,5	1,26	Kg CO2e/Item
7340215104555	70010080	CKE VENTIL Ø80	0,1	0,35	Kg CO2e/Item
7340215104562	70010100	CKE VENTIL Ø100	0,2	0,47	Kg CO2e/Item
7340215104579	70010125	CKE VENTIL Ø125	0,3	0,77	Kg CO2e/Item
7340215104586	70010150	CKE VENTIL Ø150	0,3	0,82	Kg CO2e/Item
7340215104593	70010160	CKE VENTIL Ø160	0,5	1,24	Kg CO2e/Item
7340215104609	70010200	CKE VENTIL Ø200	0,7	1,80	Kg CO2e/Item
7340215104616	70011100	Tilluftsventil BKZ-R-100 Fyrkantig	0,3	0,69	Kg CO2e/Item
7340215104623	70011125	Tilluftsventil BKZ-R-125 Fyrkantig	0,3	0,69	Kg CO2e/Item
7340215104685	70015100	Tilluftsventil BKZ-RR-100 Rund	0,3	0,69	Kg CO2e/Item
7340215104692	70015125	Tilluftsventil BKZ-RR-125 Rund	0,3	0,69	Kg CO2e/Item

Average weight 0,4 Kg 0,99 Kg CO2e/Item

GTIN	Artikelkod	Product name	1 Kg	GWP-Fossil A1-A3	2,47E+00
7340215104845	70022080	 ZRT RAM Ø80	0,1	0,21	Kg CO2e/Item
7340215104852	70022100	 ZRT RAM Ø100	0,1	0,23	Kg CO2e/Item
7340215104869	70022125	 ZRT RAM Ø125	0,1	0,33	Kg CO2e/Item
7340215104876	70022150	 ZRT RAM Ø150	0,2	0,44	Kg CO2e/Item
7340215104883	70022160	 ZRT RAM Ø160	0,2	0,38	Kg CO2e/Item
7340215104890	70022200	 ZRT RAM Ø200	0,2	0,53	Kg CO2e/Item
7340215105040	70027080	 ZRL RAM Ø80	0,1	0,20	Kg CO2e/Item
7340215105057	70027100	 ZRL RAM Ø100	0,1	0,25	Kg CO2e/Item
7340215105064	70027125	 ZRL RAM Ø125	0,1	0,30	Kg CO2e/Item
7340215105071	70027150	 ZRL RAM Ø150	0,2	0,44	Kg CO2e/Item
7340215105088	70027160	 ZRL RAM Ø160	0,2	0,47	Kg CO2e/Item
7340215105095	70027200	 ZRL RAM Ø200	0,2	0,59	Kg CO2e/Item
7340215105101	70029100	 ZRTF RAM 100 MM	0,1	0,23	Kg CO2e/Item
7340215105118	70029125	 ZRTF RAM 125 MM	0,1	0,24	Kg CO2e/Item
7340215105217	70032100	 ZRV Ram 100 utan gummi, 3hål	0,1	0,23	Kg CO2e/Item
7340215105224	70032125	 ZRV Ram 125 utan gummi, ohålad	0,1	0,33	Kg CO2e/Item
7340215105231	70032160	 ZRV Ram 160 utan gummi, ohålad	0,1	0,33	Kg CO2e/Item
7340215104814	70021125	 ZR RAM Ø125	0,1	0,16	Kg CO2e/Item
7340215104821	70021160	 ZR RAM Ø160	0,1	0,25	Kg CO2e/Item
7340215104838	70021200	 ZR RAM Ø200	0,1	0,35	Kg CO2e/Item