ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

Rectangular ventilation duct

Lindab A/S, Denmark

EPD HUB., HUB-0609
Publication date: 20 July 2023, last updated date 20 July 2023, valid until: 20 July 2028

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Lindab A/S
Address	Langkaer 20, 6100 Haderslev
Contact details	haderslev@lindab.dk
Website	www.lindab.dk

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Alice Andersen
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
EPD verifier	Magaly González Vázquez, EPD Hub

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	Rectangular ventilation duct
Additional labels	-
Product reference	LKR and LKRIF, rectangular ducts
Place of productions	Langkaer 20, 6100 Haderslev Svanningevej 6, 9220 Aalborg Hammerholmen 45F, 2650 Hvidovre Denmark
Period for data	Calendar year 2021
Averaging in EPD	Multiple places of productions
Variation in GWP-fossil for A1-A3	2.3 %

More information on page 7.

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of rectangular ventilation duct
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO2e)	2.97
GWP-total, A1-A3 (kgCO2e)	2.83
Secondary material, inputs (%)	6.95
Secondary material, outputs (%)	95.0
Total energy use, A1-A3 (kWh)	10.4
Total water use, A1-A3 (m3e)	0.00693

MANUFACTURER

ABOUT LINDAB

Lindab is a leading ventilation company in Europe, offering solutions for energy-efficient ventilation and a healthy indoor climate. The products are characterised by high quality, ease of installation and environmental thinking. In northern Europe, Lindab also offers an extensive range of roof, wall and rainwater systems.

FOR A BETTER CLIMATE

We want to create a better climate. Most of us spend the majority of our time indoors. The air we breathe, in our homes, at our workplaces and at school, affects our well-being. Since air is not visible, we do not always think about it. However, the indoor climate is crucial for how we feel, for our energy levels, and whether we stay healthy. Lindab wants to contribute to the architecture and indoor climate of tomorrow. We also want a better climate for our planet. That is why we develop energy-efficient solutions for healthy indoor environments

OUR VISION

We want to be the leading player in the area in which we are strongest – ventilation in Europe. We focus on air distribution and air diffusion. Since we offer high-quality products, we focus on Europe where demand for good ventilation is high, and we can offer superior availability. We specialise in those parts of the ventilation system where we are the strongest. We adapt our offering to the local market, with our core ventilation offering as the clear common denominator in all markets.

THE IMPORTANCE OF VENTILATION

About 90 percent of the global population breathes poor air every day. A common misconception is that outdoor air is more polluted due to emissions, smog, and harmful chemicals. In fact, indoor air in homes, schools, offices, and factories can be as much as five times more polluted. People nonetheless spend most of their life indoors. The most common causes of indoor air pollution are mould; chemicals in, for example, furniture and building materials; dust; radon; and cigarette smoke; but above all, airborne particles from combustion and industrial processes, which are so small they can enter the human bloodstream via the respiratory system. Today, air pollution is a risk factor in several of the world's most common causes of death, including heart disease, pneumonia, stroke, diabetes, and lung cancer. Ventilation is an efficient and convenient method to remove those indoor air pollutants.

SUSTAINABILITY PLAN

For us, sustainability is a way of thinking and working. This affects how we work with Lindab's strategy in all areas. Everything from the purchases we make, to the deliveries and the service we offer our customers. Lindab has three long-term, non-financial targets for the business, one that focuses on increasing our attractiveness as an employer, one for reducing our own carbon dioxide emissions, and one for a better working environment.

Read more about Lindab's sustainability work and non-financial targets on https://www.lindab.com/sustainability/for-a-better-climate/sustainability-plan/

STEEL – A SUSTAINABLE MATERIAL

Steel provides products with a long service life. Steel has many advantages over other materials – it has a very long service life, is non-combustible and meets hygiene requirements. Steel is a fully recyclable material and scrap steel has a strong market position: steel recovered from structures and end products at the end of their lifecycle is efficiently recycled and re-used. We prioritise cooperation with steel suppliers driving development towards fossil-free steel and whose carbon dioxide intensity values are good. The steel we use must be free of particularly hazardous substances.

The use of steel in Lindab's products is what contributes most to Lindab's CO_2 emissions. The transition to fossil-free steel is Lindab's most significant individual action in terms of its effect on the environment. Through our collaboration with SSAB and H2 Green Steel, we will also be among the first in Europe to have access to CO_2 reduced steel in 2026. When it becomes available, we will make use of it in a green product line.

PRODUCT

PRODUCT DESCRIPTION

Lindab ventilation duct LKR and LKRIF are produced in accordance with the European standard DS EN 1505.

They fulfil air tightness class ATC 3 and pressure class 2 (-750 to +1000 Pa) according to the European standard DS EN 1507.

This EPD includes the sealing band and bolds to obtain the air tightness.

PRODUCT RAW MATERIAL MAIN COMPOSITION VP

Raw material category	Amount, mass- %	Material origin
Metals	> 99%	EU
Minerals	-	-
Fossil materials	< 1%	EU
Bio-based materials	-	-

BIOGENIC CARBON CONTENT VP

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.04

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 kg
Functional unit	-
Reference service life[1]	50 years

[1] The reference service life of the product is depending on the conditions of use. Under normal conditions it can be longer than 50 years.

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm). More detailed information about the products material content can be found in the Building Product Declaration available online.

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	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR.

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.

The steel raw material is received from Lindabs own steel service center, Lindab Steel AB in Sweden. After a quality control the coils are transported to the place of production in Denmark by lorry. The coils are correctly slitted according to the manufacturing order to lower the amount of waste.

The slitted coil is rigged in the machine for rectangular ducts, followed by quality control of the first produced duct. If approved, the machine is set in auto mode and more ducts are produced.

Next the ends of each duct are finalized and sealed to ensure the high degree of air tightness. The manufacturing is “make to order”, which together with the efficient production reduces the production loss.

The produced ducts are placed on pallets and wrapped with plastic, labelled with the manufacturing order number. Ducts are stored and picked in the factory and sent to the customers by truck. A unique ID number is connected to each manufacturing order for traceability.

The waste and packaging are reused.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions. Installation spills and handling of packaging material is considered. Material loss during installation is estimated to be zero. Products are designed based on the project and prepared to be assembled.

Transport from production place to user (A4)

Type	Destination	Transportation method
Transportation	300	Lorry

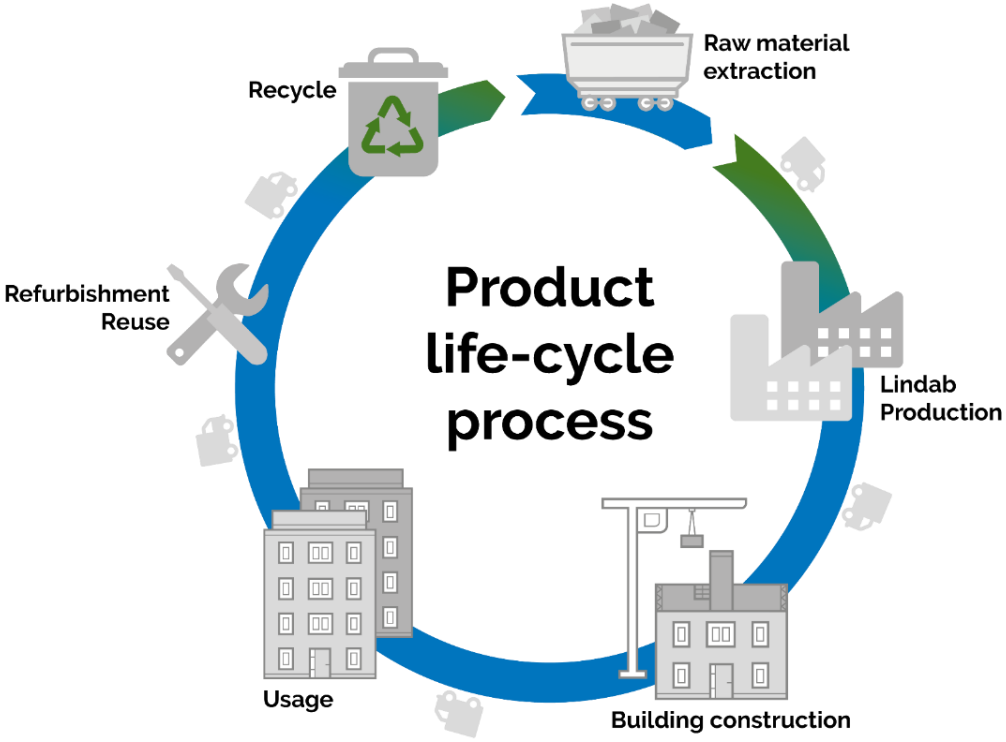
PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase. These life cycle stages are dependent on how the product is used and should be developed and included as part of a holistic assessment of specific construction works.

PRODUCT END OF LIFE (C1-C4, D)

The ventilation ducts are assumed dismantled using hand tools (C1) and transported 50 km by lorry to a local recycling (C2). The product is then dismantled assuming average recovery of materials of 95% (according to World Steel Association, 2017) (C3). That is to be seen as the proportion of the material in the product that will be recycled (or re-used) in a subsequent system. It is assumed that the remaining 5% steel is taken to landfill for disposal (C4). Due to the recycling process, the recycled metals are credited an avoided production of primary steel (D).

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. While cut-off criteria according to the PCR were employed, much data which would have fallen within that scope were included regardless, if available, resulting in a data set which is robust and captures all significant contributors to the LCA results.
There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

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 materials	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass and energy consumption

AVERAGES AND VARIABILITY

Type of average	Multiple production places
Averaging method	Averaged by shares of total mass
Variation in GWP-fossil for A1-A3	2.3%

The variability of the products is low. Based on calculations the maximum difference between the average EPD and EPD of the different ventilation ducts are less than 10%. The difference is due to the energy consumption and transportation. The raw materials, manufacturing process, the product design etc. are the same for all places of production.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. Ecoinvent 3.6 and One Click LCA databases were used as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

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_2e	2,77E0	5,23E-2	4,07E-3	2,83E0	8,43E-2	1,5E-1	MND	MND	MND	MND	MND	MND	MND	3,3E-3	4,55E-3	2,55E-2	2,64E-4	-1,67E0
GWP – FOSSIL	kg CO_2e	2,77E0	5,22E-2	1,46E-1	2,97E0	8,52E-2	2,59E-3	MND	MND	MND	MND	MND	MND	MND	3,3E-3	4,54E-3	2,71E-2	2,63E-4	-1,68E0
GWP – BIOGENIC	kg CO_2e	3,22E-4	3,79E-5	-1,42E-1	-1,42E-1	2,86E-5	1,47E-1	MND	MND	MND	MND	MND	MND	MND	9,17E-7	3,3E-6	-1,61E-3	5,22E-7	5,35E-3
GWP – LULUC	kg CO_2e	6,79E-4	1,57E-5	2,37E-4	9,31E-4	3,54E-5	1,16E-6	MND	MND	MND	MND	MND	MND	MND	2,79E-7	1,37E-6	3,18E-5	7,82E-8	-3,9E-4
OZONE DEPLETION POT.	kg $CFC._{11}$e	3,62E-8	1,23E-8	6,73E-9	5,52E-8	1,8E-8	3,3E-10	MND	MND	MND	MND	MND	MND	MND	7,1E-10	1,07E-9	3,31E-9	1,08E-10	-5,6E-8
ACIDIFICATION POTENTIAL	mol H^+e	7,77E-3	2,19E-4	5,89E-4	8,58E-3	2,49E-4	1,87E-5	MND	MND	MND	MND	MND	MND	MND	3,45E-5	1,91E-5	3E-4	2,5E-6	-8,4E-3
EP-FRESHWATER[2)]	kg Pe	2,27E-5	4,25E-7	1,13E-5	3,44E-5	9E-7	3,85E-8	MND	MND	MND	MND	MND	MND	MND	1,33E-8	3,7E-8	1,57E-6	3,18E-9	-1E-4
EP-MARINE	kg Ne	1,76E-3	6,61E-5	1,17E-4	1,95E-3	4,67E-5	7,72E-6	MND	MND	MND	MND	MND	MND	MND	1,52E-5	5,75E-6	6,66E-5	8,61E-7	-1,6E-3
EP-TERRESTRIAL	mol Ne	1,88E-2	7,3E-4	1,54E-3	2,11E-2	5,2E-4	8,22E-5	MND	MND	MND	MND	MND	MND	MND	1,67E-4	6,35E-5	7,68E-4	9,48E-6	-1,8E-2
POCP ("SMOG")[3)]	kg NMVOCe	6,22E-3	2,35E-4	4,22E-4	6,87E-3	1,92E-4	2,18E-5	MND	MND	MND	MND	MND	MND	MND	4,59E-5	2,04E-5	2,1E-4	2,75E-6	-8,6E-3
ADP-MINERALS & METALS[4)]	kg Sbe	1,61E-4	8,91E-7	9,34E-7	1,63E-4	2,89E-6	4E-8	MND	MND	MND	MND	MND	MND	MND	5,03E-9	7,75E-8	1,33E-6	2,41E-9	-3,0E-5
ADP-FOSSIL RESOURCE	MJ	2,96E1	8,12E-1	2,13E0	3,25E1	1,23E0	3,16E-2	MND	MND	MND	MND	MND	MND	MND	4,54E-2	7,07E-2	3,33E-1	7,36E-3	-1,39E1
WATER USE[5)]	m^3e depr.	6,12E-1	3,02E-3	3,08E-2	6,46E-1	4,92E-3	-5,72E-4	MND	MND	MND	MND	MND	MND	MND	8,46E-5	2,63E-4	5,26E-3	3,4E-4	-7,9E-1

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	2,21E0	1,02E-2	1,58E0	3,8E0	1,57E-2	8,4E-4	MND	MND	MND	MND	MND	MND	MND	2,45E-4	8,9E-4	4,6E-2	5,95E-5	-1,5E0
RENEW. PER AS MATERIAL	MJ	2,38E-6	0E0	1,41E0	1,41E0	0E0	-1,41E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
TOTAL USE OF RENEW. PER	MJ	2,21E0	1,02E-2	2,99E0	5,21E0	1,57E-2	-1,41E0	MND	MND	MND	MND	MND	MND	MND	2,45E-4	8,9E-4	4,6E-2	5,95E-5	-1,5E0
NON-RE. PER AS ENERGY	MJ	3,07E1	8,12E-1	1,99E0	3,35E1	1,23E0	3,16E-2	MND	MND	MND	MND	MND	MND	MND	4,54E-2	7,07E-2	3,33E-1	7,36E-3	-1,4E1
NON-RE. PER AS MATERIAL	MJ	3,58E-7	0E0	1,43E-1	1,43E-1	0E0	-1,4E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
TOTAL USE OF NON-RE. PER	MJ	3,07E1	8,12E-1	2,13E0	3,36E1	1,23E0	-1,08E-1	MND	MND	MND	MND	MND	MND	MND	4,54E-2	7,07E-2	3,33E-1	7,36E-3	-1,4E1
SECONDARY MATERIALS	kg	6,95E-2	0E0	4,57E-5	6,95E-2	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	6,5E-1
RENEW. SECONDARY FUELS	MJ	4,92E-23	0E0	0E0	4,92E-23	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
NON-REN. SECONDARY FUELS	MJ	5,78E-22	0E0	0E0	5,78E-22	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
USE OF NET FRESH WATER	m^3	6,28E-3	1,69E-4	4,74E-4	6,93E-3	2,06E-4	2,41E-5	MND	MND	MND	MND	MND	MND	MND	4,01E-6	1,47E-5	1,41E-4	8,05E-6	-1,1E-2

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	1,4E-1	7,89E-4	1,3E-2	1,53E-1	1,76E-3	4,76E-4	MND	MND	MND	MND	MND	MND	MND	4,88E-5	6,87E-5	0E0	6,87E-6	-6,37E-1
NON-HAZARDOUS WASTE	kg	1,21E0	8,73E-2	4,26E-1	1,72E0	7,72E-2	7,72E-2	MND	MND	MND	MND	MND	MND	MND	5,22E-4	7,6E-3	0E0	5E-2	-5,4E0
RADIOACTIVE WASTE	Kg	4,35E-4	5,57E-6	5,62E-6	4,47E-4	8,06E-6	1,33E-7	MND	MND	MND	MND	MND	MND	MND	3,18E-7	4,85E-7	0E0	4,87E-8	-5,41E-6

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	3,86E-6	0E0	0E0	3,86E-6	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
MATERIALS FOR RECYCLING	kg	2,34E-2	0E0	1,02E-2	3,36E-2	0E0	3E-3	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	9,5E-1	0E0	0E0
MATERIALS FOR ENERGY REC	kg	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
EXPORTED ENERGY	MJ	0E0	0E0	0E0	0E0	0E0	6,17E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

IMPACT CATEGORY	UNIT	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GLOBAL WARMING POT.	kg CO_2e	2,74E0	5,17E-2	1,42E-1	2,93E0	8,43E-2	2,54E-3	MND	MND	MND	MND	MND	MND	MND	3,27E-3	4,5E-3	2,65E-2	2,58E-4	-1,6E0
OZONE DEPLETION POT.	kg $CFC_{-11}e$	3,18E-8	9,75E-9	6,45E-9	4,8E-8	1,43E-8	2,7E-10	MND	MND	MND	MND	MND	MND	MND	5,63E-10	8,49E-10	2,71E-9	8,59E-11	-4,87E-8
ACIDIFICATION	kg SO_2e	6,91E-3	1,06E-4	4,59E-4	7,48E-3	1,82E-4	1,28E-5	MND	MND	MND	MND	MND	MND	MND	4,87E-6	9,25E-6	1,9E-4	1,04E-6	-6,91E-3
EUTROPHICATION	kg PO_4^3e	1,55E-3	2,15E-5	3,2E-4	1,9E-3	4,19E-5	1,5E-5	MND	MND	MND	MND	MND	MND	MND	8,57E-7	1,87E-6	7,32E-5	2,02E-7	-4,57E-3
POCP (“SMOG”)	kg C_2H_4e	7,57E-4	6,73E-6	2,79E-5	7,92E-4	1,04E-5	5,17E-7	MND	MND	MND	MND	MND	MND	MND	5,01E-7	5,86E-7	8,82E-6	7,64E-8	-1,08E-3
ADP-ELEMENTS	kg Sbe	1,61E-4	8,91E-7	9,34E-7	1,63E-4	2,89E-6	4E-8	MND	MND	MND	MND	MND	MND	MND	5,03E-9	7,75E-8	1,33E-6	2,41E-9	-2,95E-5
ADP-FOSSIL	MJ	2,96E1	8,12E-1	2,13E0	3,25E1	1,23E0	3,16E-2	MND	MND	MND	MND	MND	MND	MND	4,54E-2	7,07E-2	3,33E-1	7,36E-3	-1,39E1

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online

This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

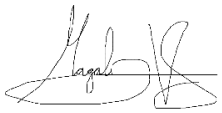
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited
20.07.2023



EPD Hub
VERIFIED ISO 14025

ANNEX: CONVERSION TO WEIGHT PER METER

Rectangular ducts – weight [kg/m]

a \ b	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1250	1400	1600	1799	1800	2000	2200	2400	2500	profil RJFP
100	2,4																								20
150	3,0	3,7																							20
200	3,7	4,3	4,9																						20
250	4,3	4,9	5,5	6,1																					20
300	4,9	5,5	6,1	6,7	7,3																				20
350	5,5	6,1	6,7	7,3	7,9	8,5																			20
400	6,1	6,7	7,3	7,9	8,5	9,1	9,7																		20
450	6,7	7,3	7,9	8,5	9,1	9,7	10,3	10,9																	20
500	7,3	7,9	8,5	9,1	9,7	10,3	10,9	11,5	12,2																20
600	8,5	9,1	9,7	10,3	10,9	11,5	12,2	12,8	13,4	14,6															20
700	9,7	10,3	10,9	11,5	12,2	12,8	13,4	14,0	14,6	15,8	17,0														20
800	11,0	11,7	12,3	13,0	13,6	14,3	14,9	15,6	16,2	17,5	18,9	20,9													20
900	12,2	13,0	13,5	14,2	14,8	15,5	16,2	16,8	17,5	18,8	20,1	22,2	23,5												20
1000	16,9	17,8	18,5	19,3	20,1	21,0	21,8	22,6	23,4	25,0	26,6	29,1	30,7	32,4											20
1200	20,0	20,9	21,6	22,4	23,2	24,0	24,8	25,6	26,4	28,1	29,7	32,4	34,0	35,6	38,8										20
1250	20,7	21,5	22,4	23,2	24,0	24,8	25,6	26,4	27,2	28,8	30,4	33,2	34,8	36,4	39,6	40,5									20
1400	23,6	24,5	25,3	26,1	27,0	27,8	28,6	29,5	30,3	31,9	33,6	36,5	38,2	39,8	43,1	44,0	46,5								30
1600	26,9	27,8	28,6	29,5	30,4	31,2	32,1	33,0	33,9	35,6	37,4	40,5	42,3	44,0	47,5	48,4	51,0	55,9							30
1799	30,0	30,9	31,8	32,6	33,5	34,4	35,2	36,1	37,0	38,7	40,5	43,8	45,6	47,3	50,8	51,7	54,3	59,4	62,9						30
1800	39,0	40,1	41,2	42,3	43,4	44,5	45,6	46,7	47,8	50,1	52,3	56,1	58,3	60,5	65,0	66,1	69,4	75,5	79,9	79,9					30
2000	43,1	44,2	45,3	46,4	47,5	48,6	49,7	50,8	51,9	54,1	56,4	60,4	62,6	64,8	69,2	70,3	73,7	79,9	84,3	84,3	88,8				30
2200	47,1	48,2	49,4	50,5	51,6	52,7	53,8	54,9	56,0	58,2	61,1	64,6	66,8	69,1	73,5	74,6	77,9	84,3	88,7	88,8	93,2	97,6			30
2400	51,2	52,3	53,4	54,5	55,7	56,8	57,9	59,0	60,1	62,3	64,5	68,9	71,1	73,3	77,8	78,9	82,2	88,8	93,2	93,2	97,6	102,1	106,5		30
2500	53,3	54,4	55,5	56,6	57,7	58,8	59,9	61,0	62,1	64,4	66,6	71,0	73,2	75,5	79,9	81,0	84,3	91,0	95,4	95,4	99,9	104,3	108,7	111,0	30

Plate thickness:
0,7 mm
0,9 mm
1,2 mm