Environmental Product Declaration

Type II Self-declared Environmental Claims

Swegon Group AB

RE:used ALS

Produced: 2026-05-20

GENERAL INFORMATION

Summary:

Declared unit:	1 kg of RE:used ALS plenum box
Declared unit mass:	1 kg
Reference service life:	50 years
GWP-Fossil:	0,438 kg CO_2e/kg (Full table for all sizes in Appendix)
GWP-GHG:	0,482 kg CO_2e/kg (Full table for all sizes in Appendix)

Declaration type:

Environmental labels and declarations - Self-declared environmental claims (Type II environmental product declaration (EPD)). Calculations are in accordance with ISO 14040 and 14044.

Due to insufficient historical data, a Type II EPD has been identified as the most appropriate approach for assessing RE:used products from Swegon. Within this declaration, certain life cycle stages that would require scenario-based assumptions have been excluded. For example, variables such as the number of diffusers transported to the factory on a wooden pallet have been excluded, which otherwise could have a disproportionate impact on the results. Given the overall low environmental impact, inclusion of such parameters without a historical base for allocation, would introduce significant uncertainty and reduce the robustness of the assessment.

The goal is to transition to a Type III EPD once more reliable data on incoming products becomes available. At that stage, improved data quality and consistency will allow for a more accurate and representative assessment.

Owner of the declaration:

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About the organisation:

People spend most of their time indoors, which is why we need a sound indoor climate for our health, well-being and happiness. Swegon's ambition is to achieve the world's best indoor environment with the least possible impact on the external environment. Our business models, services, products and systems are all designed to provide the right solution for each individual project.

Swegon Group AB is a market leading supplier in the field of indoor environment, offering solutions for ventilation, heating, cooling and climate optimization, as well as connected services and expert technical support. Swegon has subsidiaries and distributors all over the world and 21 production plants in Europe, North America and India.

Declared unit:

1 kg of RE:used ALS plenum box

Declared unit mass:

1 kg

Reference service life:

50 years

PRODUCT INFORMATION

Product name: RE:used ALS

Places of raw material origin: Europe & Asia

Place of refurbishment: Tomelilla, Sweden

Period for data: 2025

Product description: The ALS plenum box is part of Swegon's RE:use initiative, where selected products are refurbished and quality assured for continued use. Ensuring the same functional performance as new units but with significantly lower climate impact. Each plenum box undergoes a defined refurbishment process that includes inspection, internal and external cleaning, replacement of polymer components when required and performance checks such as leakage testing and verification of airflow characteristics.

Surface imperfections such as scratches, dents or wear may be present due to previous use. However, these do not affect performance, efficiency or service life of the product.

All refurbished products are delivered with updated labelling and CE marking when applicable, confirming compliance with current standards.

For more information visit: https://www.swegon.com/sustainability/re3/reuse/

Further information can be found on: www.swegon.com

Raw material composition:

Raw material category	Amount, mass %
Metals	90%-92%
Fossil material	8%-10%

Biogenic carbon:

Biogenic carbon content in product, kg C	-
Biogenic carbon content in packaging, kg C	0,053

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

PRODUCT LIFE CYCLE

System boundaries: This Type II 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 product stage includes impacts from raw material production, packaging, fuel use in manufacturing, waste handling, material losses during production and electricity transmission. Electricity use is modelled with a market-based mix. The Tomelilla facility operates on hydropower, with renewable energy use verified through contractual instruments (e.g. GOs, RECs).

According to EN 15804, reused products carry no environmental burden from their initial life cycle stage according to the polluters pay principle. Therefore, in the product stage (A1-A3) only the raw material emission relating to the changed components are included.

The ALS units intended for reuse are dismantled and inspected on the building site. Suitable units are then palletized and transported to Swegon's facility in Tomelilla for refurbishment.

Due to uncertainties, electricity for dismantling, pallet utilization (e.g., the number of units per pallet) and transport from the customer to the Tomelilla manufacturing site is not included in the assessment. Instead, a customer specific approach is recommended:

- For dismantling: Swedish electricity mix typical value: 0,037 kg CO_2e/kWh GWP-GHG *(Boverket, 2026)*.
- For transport to Tomelilla: 0,0002 kg CO_2e/kgkm GWP-GHG *(Boverket, 2026)*. Assumed parameters included that, the fuel is diesel MK1 and transport energy intensity is 2,5 MJ/tonkm.
- For packaging: Reused pallet, 0 kg CO_2e (EN 15804+A2). Newly produced pallet: 2,41 kg CO_2e per pallet *(Boverket, 2026)*. Assumed 98% sawn timber, 2% fasteners and a pallet weight of 21 kg.

At the Tomelilla facility, the units are tested for airtightness, cleaned and refurbished. The sealing strip, insulation and plastic hoes are replaced, followed by a second airtightness test. Finally, the units are sealed with protective dust covers and packaged for storage or delivery.

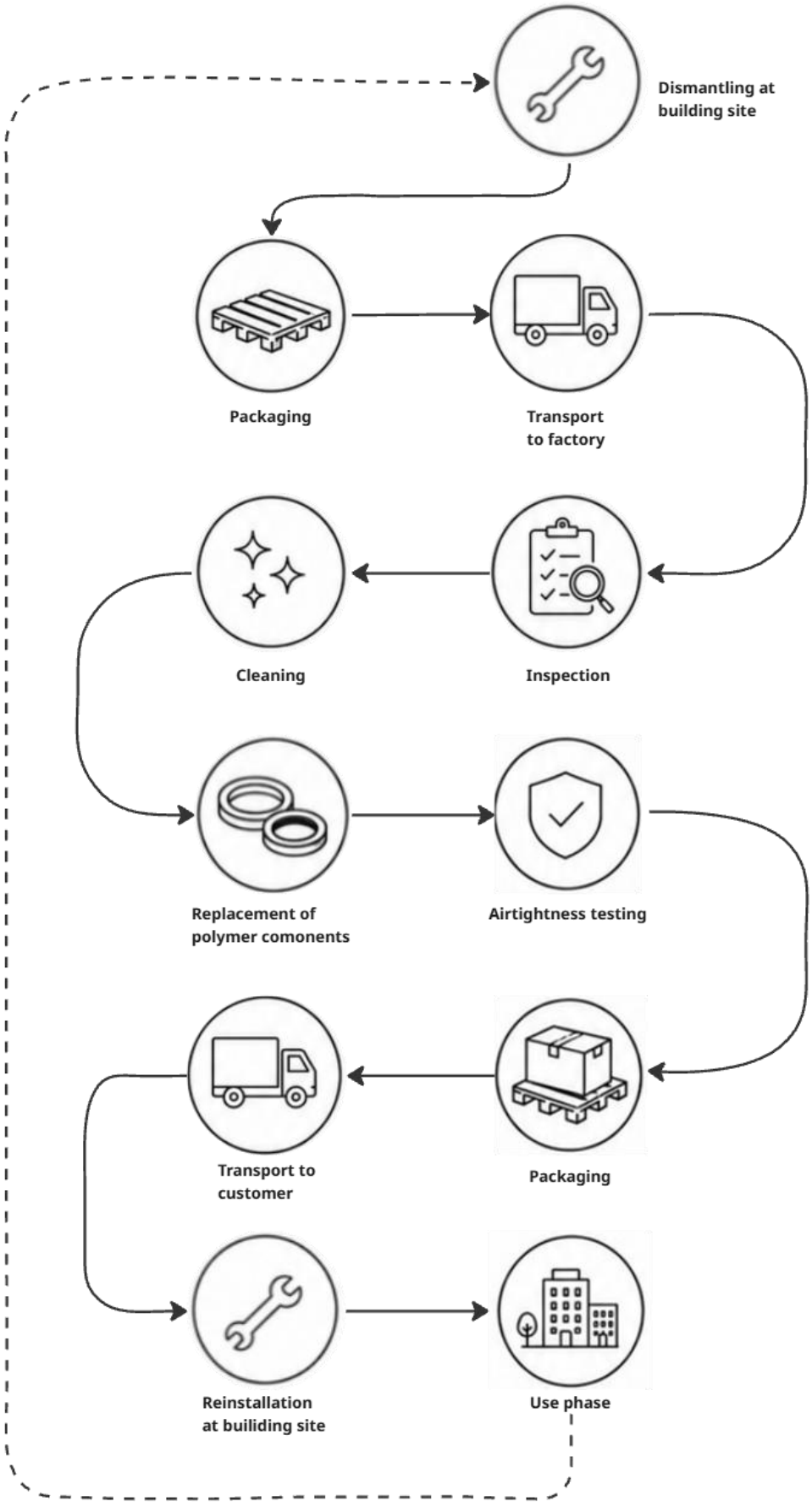
Transportation and installation (A4-A5): Environmental impacts from the final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions. Transportation to the construction site is calculated based on an assumption that all transport happens to Swedish customers.

The product is sold ready to be installed and no raw material waste is generated from installation (A5). The end-of-life treatment of product packaging is declared and average EU-scenarios per packaging material has been applied with different ratios of recycling, incineration and disposal in landfill.

Product use and maintenance (B1-B7): Module B is not declared. Air, soil, and water impacts during the use phase have not been studied.

Product end of life (C1-C4, D): At the end of product life, the plenum box is assumed to be demolished. The impact of deconstruction (C1) is modelled based on literature data for energy use in demolition. Waste processing (C3) and disposal (C4) is modelled with consideration to the European market. The applied scenarios, which are based on literature data, include different ratios of material recycling, incineration and landfill for the main materials steel and plastics.

FLOW CHART


Dismantling at building site
Packaging
Transport to factory
Cleaning
Inspection
Replacement of polymer comonents
Airtightness testing
Transport to customer
Packaging
Reinstallation at builiding site
Use phase

LIFE CYCLE ASSESSMENT

Cut-off criteria:

The study aims to comprehensively include all processes defined as mandatory under EN 15804+A2, without excluding any hazardous materials or substances. All significant raw material and energy inputs are accounted for. Furthermore, all available inputs and outputs of unit processes within modules A1-A3 that are not scenario-dependent are included in the calculations.

Scenario-based processes within modules A1-A2 are excluded from the result table. These include:

- Electricity used for dismantling the ALS.
- Production of pallets for returning the ALS to the Swegon factory.
- Transportation from the dismantling site to the Swegon facility in Tomelilla.

Although excluded from the result tables, these processes are transparently described to enable customer-specific calculations.

The exclusion of these processes, despite potentially exceeding the 1% mass/energy flow and 5% total energy/mass threshold is justified by the lack of reliable historical data. Including such highly variable, scenario-dependent elements would introduce disproportionate uncertainty into the results, given the overall low environmental impact of the product stage.

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 also excluded.

Allocation:

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 standard EN15804+A2. In this study, allocation has been done in the following ways:

Data type:	Allocation:
Raw materials	No allocation
Packaging materials	Product specific packaging, like dust covers, is not allocated. Pallets, plastic wrapping and cardboard used after the refurbishment which is not product specific is allocated based on mass.
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by mass

Averages and variability:

Type of average	Multiple products
Averaging method	Representative product
Variation in GWP-fossil for A1-A3	+18%/-4%

To investigate variations in environmental impact, two extreme product cases were modelled and analysed. Based on these two models, the high runner ALS 160-200 was chosen to represent the ALS RE:use series. GWP fossil for modules A1-A3 for the size with the highest respective lowest impact included in this EPD, differs from the representative product with +18% respective -4%. Please see list of included products and their corresponding weight in the annex.

LCA-software:

The results from this Type II EPD study has been generated using One Click LCA EPD Generator. The LCA and EPD have been prepared mostly following EN15804+A2 and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

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-B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	1,87E-01	8,36E-03	1,14E-01	3,09E-01	1,15E-01	2,10E-01	ND	4,33E-04	4,03E-02	1,71E-01	3,82E-03	-1,25E-01
GWP – fossil	kg CO_2e	1,80E-01	8,35E-03	2,49E-01	4,38E-01	1,15E-01	1,48E-02	ND	3,84E-04	4,02E-02	1,72E-01	3,82E-03	-7,41E-02
GWP – biogenic	kg CO_2e	6,17E-03	1,02E-06	-1,80E-01	-1,74E-01	2,30E-05	1,95E-01	ND	1,24E-05	8,91E-06	-1,32E-04	1,21E-06	-5,12E-02
GWP – LULUC	kg CO_2e	1,34E-04	3,32E-06	4,43E-02	4,44E-02	4,12E-05	8,10E-06	ND	3,73E-05	1,44E-05	2,28E-05	6,68E-07	-1,04E-04
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	2,97E-07	1,56E-10	1,76E-09	2,99E-07	2,28E-09	1,29E-10	ND	1,31E-11	8,05E-10	2,60E-10	3,12E-11	-1,03E-09
Acidification potential	mol H^+e	9,56E-04	6,18E-05	4,74E-04	1,49E-03	2,39E-04	3,56E-05	ND	4,49E-06	8,79E-05	2,31E-04	8,06E-06	-4,51E-04
EP-freshwater[2)]	kg Pe	5,69E-05	5,08E-07	2,24E-05	7,99E-05	7,72E-06	1,52E-06	ND	3,29E-07	2,71E-06	1,21E-05	1,05E-07	-4,22E-05
EP-marine	kg Ne	2,00E-04	1,53E-05	1,75E-04	3,91E-04	5,73E-05	3,05E-05	ND	7,04E-07	2,23E-05	5,75E-05	2,28E-05	-6,85E-05
EP-terrestrial	mol Ne	1,88E-03	1,68E-04	1,81E-03	3,85E-03	6,18E-04	1,41E-04	ND	7,49E-06	2,41E-04	6,28E-04	3,36E-05	-6,78E-04
POCP ("smog")[3)]	kg NMVOCe	9,16E-04	5,90E-05	6,81E-04	1,66E-03	3,97E-04	4,94E-05	ND	1,91E-06	1,45E-04	1,82E-04	1,27E-05	-2,31E-04
ADP-minerals & metals[4)]	kg Sbe	1,45E-06	2,40E-08	3,94E-07	1,87E-06	3,82E-07	2,41E-08	ND	4,05E-08	1,34E-07	1,25E-06	1,83E-09	-1,03E-07
ADP-fossil resources	MJ	3,38E+00	1,15E-01	1,37E+00	4,86E+00	1,61E+00	1,05E-01	ND	4,73E-02	5,66E-01	2,56E-01	2,75E-02	-1,25E+00
Water use[5)]	m^3e depr.	7,80E-02	5,25E-04	1,46E+00	1,54E+00	8,02E-03	2,64E-03	ND	2,18E-03	2,82E-03	8,60E-03	1,18E-03	-2,23E-02

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-B7	C1	C2	C3	C4	D
Particulate matter	Incidence	8,18E-09	5,44E-10	2,85E-08	3,72E-08	8,45E-09	7,84E-10	ND	3,84E-11	3,01E-09	3,17E-09	1,85E-10	-3,97E-09
Ionizing radiation[6)]	kBq U235e	1,62E-02	1,29E-04	7,40E-03	2,37E-02	2,08E-03	2,22E-04	ND	3,36E-03	7,28E-04	2,08E-03	1,80E-05	-2,03E-02
Ecotoxicity (freshwater)	CTUe	4,04E+00	1,42E-02	5,69E+00	9,74E+00	2,15E-01	2,08E-01	ND	4,56E-02	9,43E-02	1,99E+00	3,92E-02	-1,54E+00
Human toxicity, cancer	CTUh	9,75E-11	1,47E-12	2,37E-10	3,35E-10	1,92E-11	3,73E-12	ND	5,91E-13	7,00E-12	2,52E-11	2,80E-13	-1,20E-11
Human tox. non-cancer	CTUh	1,60E-09	6,47E-11	1,47E-09	3,14E-09	1,02E-09	1,68E-10	ND	3,53E-11	3,61E-10	1,41E-09	2,21E-11	-4,93E-10
SQP[7)]	-	6,77E-01	5,88E-02	1,87E+01	1,94E+01	9,75E-01	8,57E-02	ND	1,24E-02	3,42E-01	4,65E-01	5,64E-02	-3,39E-01

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-B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	-9,08E-03	1,79E-03	6,73E+00	6,72E+00	2,82E-02	-1,97E+00	ND	3,00E-02	9,88E-03	4,42E-02	2,84E-04	2,00E-01
Renew. PER as material	MJ	1,82E-01	0,00E+00	2,01E+00	2,19E+00	0,00E+00	-2,01E+00	ND	0,00E+00	0,00E+00	-1,24E-01	-5,83E-02	5,11E-01
Total use of renew. PER	MJ	1,73E-01	1,79E-03	8,74E+00	8,91E+00	2,82E-02	-3,99E+00	ND	3,00E-02	9,88E-03	-7,97E-02	-5,80E-02	7,10E-01
Non-re. PER as energy	MJ	1,88E+00	1,15E-01	-9,04E-01	1,09E+00	1,61E+00	-1,46E-01	ND	4,73E-02	5,66E-01	-1,53E+00	-9,23E-01	-1,25E+00
Non-re. PER as material	MJ	1,67E+00	0,00E+00	3,91E-01	2,06E+00	0,00E+00	-3,91E-01	ND	0,00E+00	0,00E+00	-1,15E+00	-5,22E-01	1,44E-01
Total use of non-re. PER	MJ	3,55E+00	1,15E-01	-5,14E-01	3,15E+00	1,61E+00	-5,36E-01	ND	4,73E-02	5,66E-01	-2,68E+00	-1,45E+00	-1,11E+00
Secondary materials	kg	2,03E-04	5,34E-05	1,50E-02	1,53E-02	7,49E-04	7,12E-05	ND	8,74E-06	2,63E-04	3,27E-04	7,42E-06	2,52E-03
Renew. secondary fuels	MJ	1,36E-04	5,76E-07	6,57E-02	6,58E-02	9,47E-06	7,51E-07	ND	4,59E-08	3,33E-06	1,39E-05	1,53E-07	-3,30E-06
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	4,93E-04	1,43E-05	3,37E-02	3,42E-02	2,20E-04	-1,60E-04	ND	5,07E-05	7,68E-05	1,67E-04	-6,92E-05	-5,24E-04

8) PER =Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Hazardous waste	kg	7,11E-03	1,65E-04	7,44E-03	1,47E-02	2,35E-03	5,77E-04	ND	4,79E-05	8,23E-04	3,55E-03	3,45E-05	-4,92E-03
Non-hazardous waste	kg	1,48E-01	3,27E-03	3,34E-01	4,85E-01	4,95E-02	1,80E-01	ND	1,75E-03	1,74E-02	1,15E-01	7,21E-02	-2,57E-01
Radioactive waste	kg	1,22E-06	3,20E-08	1,85E-06	3,10E-06	5,17E-07	5,52E-08	ND	7,17E-07	1,81E-07	5,31E-07	4,38E-09	-5,19E-06

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1-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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,93E-02	ND	0,00E+00	0,00E+00	7,86E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	8,01E-02	8,01E-02	0,00E+00	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,45E-01	ND	0,00E+00	0,00E+00	5,73E-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	1,02E-01	ND	0,00E+00	0,00E+00	2,41E-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	1,43E-01	ND	0,00E+00	0,00E+00	3,32E-01	0,00E+00	0,00E+00

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	1,80E-01	8,36E-03	2,94E-01	4,82E-01	1,15E-01	1,48E-02	ND	4,21E-04	4,03E-02	1,72E-01	3,82E-03	-7,42E-02

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

APPENDIX

This Type II EPD concerns the RE:used ALS plenum boxes with the high runner ALS 160-200 representing an average environmental performance for several sizes as listed in the table below. The GWP impact presented per size below has been calculated based on the GWP-fossil and GWP-GHG for A1-A3 presented in this EPD, multiplied with the respective weight.

Product	Item number:	Weight [kg]:	GWP-fossil [kg CO_2e]:	GWP-GHG [kg CO_2e]:
ALS REUd 315-400	85 270 REU	11,5	5,02	5,52
ALS REUd 250-315	85 265 REU	7,7	3,36	3,69
ALS REUd 200-250	85 260 REU	5,2	2,28	2,51
ALS REUd 160-200	85 255 REU	3,7	1,62	1,79
ALS REUd 125-160	85 250 REU	2,7	1,17	1,29
ALS REUd 100-125	85 245 REU	2,0	0,85	0,94
ALS REUd 80-100	85 240 REU	1,4	0,59	0,65
ALS REUd 250-315-L	85 320 REU	8,0	3,52	3,88
ALS REUd 200-250-L	85 315 REU	6,5	2,83	3,12
ALS REUd 160-200-L	85 310 REU	4,2	1,85	2,03
ALS REUd 125-160-L	85 305 REU	3,0	1,32	1,45
ALS REUd 100-125-L	85 300 REU	2,2	0,97	1,07
ALS REUd 250-400	85 520 REU	8,5	3,70	4,07
ALS REUd 200-315	85 515 REU	6,3	2,76	3,04
ALS REUd 160-250	85 510 REU	4,4	1,94	2,14
ALS REUd 125-200	85 505 REU	3,1	1,36	1,50
ALS REUd 100-160	85 500 REU	2,4	1,04	1,14
ALS REUd 200-315-L	85 365 REU	6,2	2,69	2,96
ALS REUd 160-250-L	85 360 REU	4,0	1,77	1,94
ALS REUd 125-200-L	85 355 REU	2,8	1,22	1,34
ALS REUd 100-160-L	85 350 REU	2,1	0,93	1,03

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