ENVIRONMENTAL PRODUCT DECLARATION

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

FläktGroup iQ STAR LYRA® II CHILLED BEAM
FläktGroup AB

EPD HUB, HUB-2110
Published on 06.10.2024, last updated on 17.10.2024, valid until 06.10.2029.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	FläktGroup AB
Address	Fläktgatan 1, 553 02, Jönköping
Contact details	info.se@flaktgroup.com
Website	https://www.flaktgroup.com/

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 1.1, 5 Dec 2023
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	Zulnasree Binadam
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited

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	FläktGroup iQ STAR LYRA® II CHILLED BEAM
Additional labels	iQ STAR LYRA® II CHILLED BEAM
Product reference	
Place of production	Jönköping, Sweden
Period for data	2023
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of Lyra II Chilled Beam
Declared unit mass	29 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	1,91E+02
GWP-total, A1-A3 ($kgCO_2e$)	1,73E+02
Secondary material, inputs (%)	28.1
Secondary material, outputs (%)	98.5
Total energy use, A1-A3 (kWh)	839
Net freshwater use, A1-A3 (m^3)	1.65

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

ABOUT FLÄKTGROUP

FläktGroup is a leader in air technology, delivering best in class, innovative and energy-efficient solutions to ensure comfort, safety, and performance, whilst reducing customer's carbon footprint. FläktGroup's premier brands, have been setting technological standards for more than 100 years and can fulfil the most demanding customer requirements.

Headquartered in Germany, FläktGroup operates all over the world with production sites across Europe, Asia, and the USA.

FOR WELLBEING, SAFETY, AND ENVIRONMENT

Today we spend more than 90% of our time indoors and the air we breathe has a big impact on our performance, wellbeing, and comfort. Our buildings need mechanical ventilation and air treatment to deliver safe and comfortable building spaces.

At the same time buildings account for up to 40% the energy consumption where ventilation systems play a big part. The challenge is to lower the energy consumption and here FläktGroup is one of the key drivers providing superior quality products whilst protecting the environment.

OUR PURPOSE

Our purpose is simple: we care for your air whilst protecting the environment.

BEING AN EMPLOYER OF CHOICE

As we aim to be an employer of choice, this comes with a responsibility.

We need to act and care as responsible Corporate Citizen for our people, our community, and our shared environment. We also must deliver sustainable solutions to help our customers to fulfil or exceed environmental demands and legislation.

FläktGroup is committed to deliver smart energy efficient ventilation solutions that make buildings sustainable, comfortable, healthy, and safe. FläktGroup delivers on this commitment while creating an environment of equality, respect, and fairness and by adhering to the highest level of ethical and compliance standards. FläktGroup's roadmap is aligned with the UN sustainability goals and the European Green Deal objectives and is translated into annual investments that support our objectives.

PRODUCT DESCRIPTION

The LYRA II chilled beam cassette is a compact chilled beam for ventilation, cooling and heating. It provides comfort with low air velocities in the room by mixing the supply air with the ambient air. LYRA diffuses air in 4 directions. This gives a high cooling effect. It is available with comfort control - FläktGroup adjustable induction-and flow pattern control. These two features give high flexibility. LYRA is equipped with Coanda Safety Control. This function is necessary if a low air flow setting is used, to guarantee an optimal indoor climate. LYRA can also be supplied with integrated control to offer a plug and play system.

Further information can be found at https://www.flaktgroup.com/.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	98.07	EU
Minerals		
Fossil materials	1.93	EU
Bio-based materials		

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	
Biogenic carbon content in packaging, kg C	4.81

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit of Lyra II Chilled Beam
Mass per declared unit	29 kg
Functional unit	
Reference service life	

The reference service life of the product is depending on the conditions of use. Under good conditions it can be longer than 25 years.

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	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	Deconstruction/ demolition	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.

Metal coils are purchased and received from the steel manufacturer via truck. These are then cut using a laser, punched, and subsequently bent. Depending on the part that needs to be bent, this is done either by a robot or manually, where an operator feeds it into a manual press brake. The insulation used in the chilled beam is cut using a water jet. After that, the various parts of the chilled beams are shaped according to the required forms.

Once this is completed, the parts that need to be painted are sent to the paint shop and then proceed to an assembly station where all the parts are assembled. After assembly, a leak test is conducted to check for air and water leakage. Once this is completed, photos are taken as a precautionary measure to allow for traceability in case of any issues. After this, the product is packed on custom-built pallets, and plastic is placed on the sides of the chilled beam to prevent dirt from entering. Finally, protective wrapping is applied to safeguard the product

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.

The transportation covers the delivery for the final product to the construction site. It also covers the spills of packaging material. Material loss of the chilled beam during the installation phase is estimated to be zero.

PRODUCT USE AND MAINTENANCE (B1-B7)

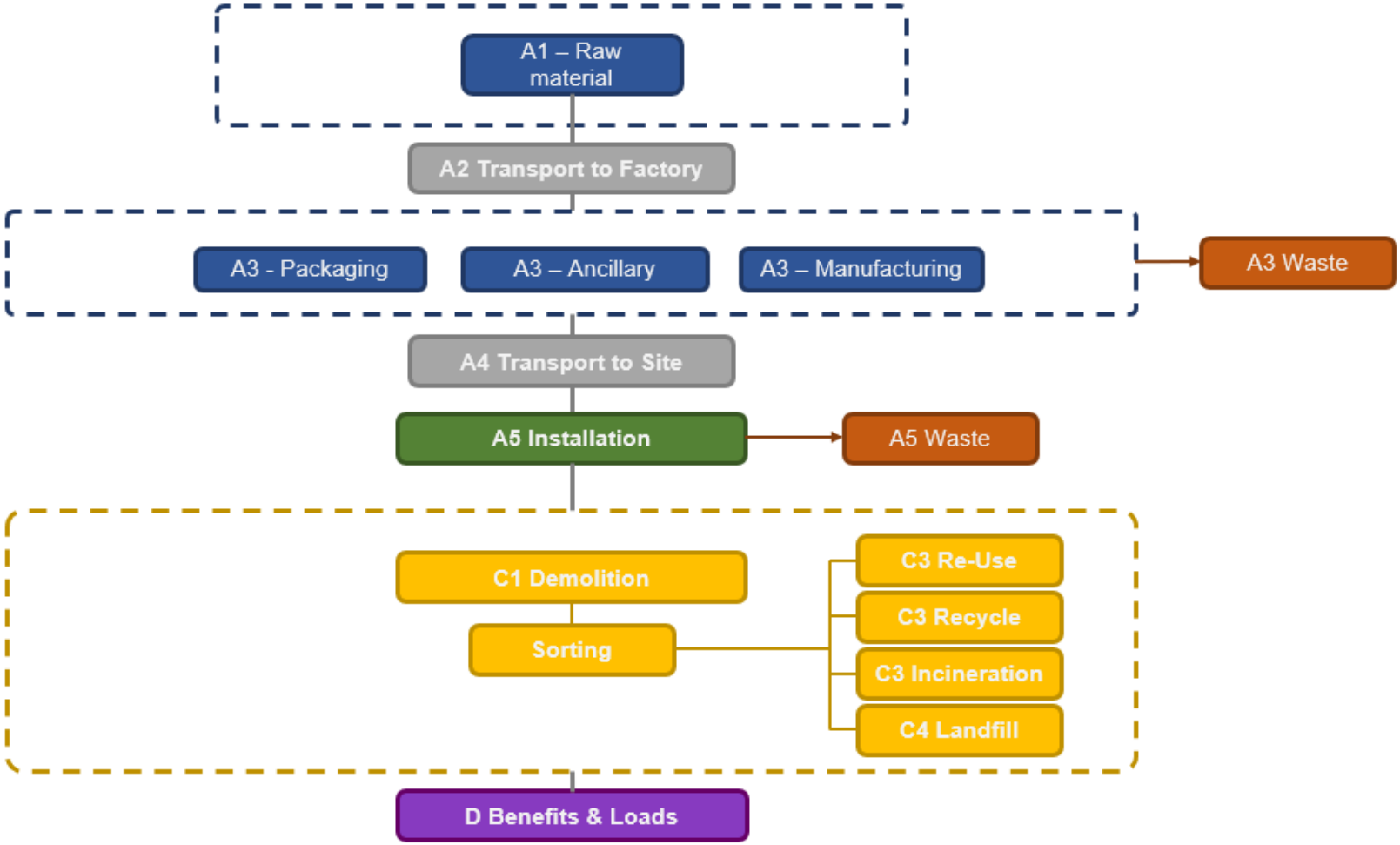
This EPD excludes the products use phase. The impacts during this phase vary depending on usage patterns and should be addressed separately within a comprehensive evaluation of specific construction projects.

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

PRODUCT END OF LIFE (C1-C4, D)

The chilled beam is assumed to be dismantled using hand tools (C1) and these are then transported 5km to the local recycling site (C2). At the recycling site the product is dismantled into different categories where each raw-material is divided into each category such as different kinds of metals and plastics, depending on material the average recovery of material differs. (C3). The remaining that is not recycled is then taken to landfill for disposal (C4). The recycled materials are then credited in module 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. 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	No allocation
Packaging material	No allocation
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	%

This EPD is product and factory specific and does not contain average calculations.

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. The EPD Generator uses Ecoinvent v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases 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	1,82E+02	4,71E+00	-1,40E+01	1,73E+02	2,14E+00	1,82E+01	MND	MND	MND	MND	MND	MND	MND	1,67E-03	7,40E-01	1,08E+00	2,36E-03	-6,90E+01
GWP – fossil	kg CO_2e	1,82E+02	4,71E+00	3,63E+00	1,91E+02	2,14E+00	5,26E-01	MND	MND	MND	MND	MND	MND	MND	1,67E-03	7,40E-01	1,07E+00	2,35E-03	-6,82E+01
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	-1,76E+01	-1,76E+01	8,67E-04	1,76E+01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP – LULUC	kg CO_2e	2,16E-01	2,13E-03	1,29E-02	2,31E-01	8,56E-04	2,59E-04	MND	MND	MND	MND	MND	MND	MND	3,90E-06	4,42E-04	1,23E-03	2,09E-06	-7,92E-01
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	9,24E-06	1,06E-06	4,18E-07	1,07E-05	4,96E-07	7,75E-08	MND	MND	MND	MND	MND	MND	MND	8,44E-11	1,62E-07	8,06E-08	8,91E-10	-5,11E-06
Acidification potential	mol H^+e	1,57E+00	1,88E-02	4,22E-02	1,63E+00	6,08E-03	2,82E-03	MND	MND	MND	MND	MND	MND	MND	9,51E-06	2,13E-03	7,09E-03	2,07E-05	-3,77E-01
EP-freshwater[2)]	kg Pe	8,86E-03	3,85E-05	4,19E-04	9,31E-03	1,53E-05	6,12E-06	MND	MND	MND	MND	MND	MND	MND	1,77E-07	7,41E-06	2,99E-05	2,33E-08	-5,62E-03
EP-marine	kg Ne	1,84E-01	4,45E-03	1,14E-02	2,00E-01	1,21E-03	1,06E-03	MND	MND	MND	MND	MND	MND	MND	1,26E-06	3,83E-04	1,65E-03	7,22E-06	-5,12E-02
EP-terrestrial	mol Ne	3,59E+00	4,94E-02	1,46E-01	3,78E+00	1,35E-02	1,13E-02	MND	MND	MND	MND	MND	MND	MND	1,43E-05	4,28E-03	1,84E-02	7,90E-05	-5,82E-01
POCP ("smog")[3)]	kg NMVOCe	6,53E-01	1,64E-02	2,72E-02	6,97E-01	5,18E-03	3,04E-03	MND	MND	MND	MND	MND	MND	MND	3,92E-06	1,66E-03	5,09E-03	2,30E-05	-2,48E-01
ADP-minerals & metals[4)]	kg Sbe	1,48E-02	1,86E-05	1,39E-04	1,50E-02	7,74E-06	2,80E-06	MND	MND	MND	MND	MND	MND	MND	1,53E-08	4,68E-06	6,50E-05	5,10E-09	-5,75E-04
ADP-fossil resources	MJ	2,20E+03	6,95E+01	2,24E+02	2,49E+03	3,19E+01	5,93E+00	MND	MND	MND	MND	MND	MND	MND	3,53E-02	1,08E+01	8,44E+00	6,04E-02	-8,25E+02
Water use[5)]	m^3e depr.	6,05E+01	3,47E-01	3,88E+01	9,97E+01	1,49E-01	7,63E-01	MND	MND	MND	MND	MND	MND	MND	9,36E-04	6,70E-02	1,67E-01	1,93E-04	-9,97E+00

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, PEF

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	1,61E-05	3,86E-07	5,11E-07	1,70E-05	1,72E-07	3,78E-08	MND	MND	MND	MND	MND	MND	MND	3,11E-11	4,27E-08	9,54E-08	4,18E-10	-4,25E-06
Ionizing radiation[6)]	kBq U235e	1,53E+01	3,61E-01	8,97E+00	2,47E+01	1,67E-01	3,06E-02	MND	MND	MND	MND	MND	MND	MND	9,47E-04	6,14E-02	8,94E-02	2,74E-04	-5,94E+00
Ecotoxicity (freshwater)	CTUe	8,16E+03	6,09E+01	1,60E+02	8,38E+03	2,66E+01	9,08E+00	MND	MND	MND	MND	MND	MND	MND	2,40E-02	1,01E+01	3,83E+01	4,68E-02	-1,75E+03
Human toxicity, cancer	CTUh	1,16E-06	1,96E-09	6,09E-09	1,17E-06	8,17E-10	7,18E-10	MND	MND	MND	MND	MND	MND	MND	7,84E-13	4,02E-10	1,20E-09	9,95E-13	-1,35E-07
Human tox. non-cancer	CTUh	8,88E-06	5,80E-08	1,23E-07	9,06E-06	2,60E-08	2,87E-08	MND	MND	MND	MND	MND	MND	MND	2,58E-11	9,28E-09	4,37E-08	2,71E-11	4,19E-06
SQP[7)]	-	6,70E+02	5,33E+01	8,59E+01	8,09E+02	2,26E+01	2,81E+00	MND	MND	MND	MND	MND	MND	MND	6,40E-03	5,37E+00	1,78E+01	1,29E-01	-1,93E+02

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	2,34E+02	1,07E+00	3,11E+02	5,46E+02	4,63E-01	1,59E-01	MND	MND	MND	MND	MND	MND	MND	7,00E-03	2,33E-01	1,26E+00	5,30E-04	-2,43E+02
Renew. PER as material	MJ	0,00E+00	0,00E+00	1,54E+02	1,54E+02	0,00E+00	-1,54E+02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,34E+02	1,07E+00	4,64E+02	7,00E+02	4,63E-01	-1,54E+02	MND	MND	MND	MND	MND	MND	MND	7,00E-03	2,33E-01	1,26E+00	5,30E-04	-2,43E+02
Non-re. PER as energy	MJ	2,18E+03	6,95E+01	2,23E+02	2,47E+03	3,19E+01	5,94E+00	MND	MND	MND	MND	MND	MND	MND	3,52E-02	1,08E+01	8,44E+00	6,04E-02	-8,10E+02
Non-re. PER as material	MJ	0,00E+00	0,00E+00	1,07E-01	1,07E-01	0,00E+00	-1,07E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	2,18E+03	6,95E+01	2,23E+02	2,48E+03	3,19E+01	5,83E+00	MND	MND	MND	MND	MND	MND	MND	3,52E-02	1,08E+01	8,44E+00	6,04E-02	-8,10E+02
Secondary materials	kg	8,14E+00	2,61E-02	1,12E+00	9,29E+00	1,08E-02	6,20E-03	MND	MND	MND	MND	MND	MND	MND	3,60E-06	5,70E-03	2,68E+00	1,28E-05	1,59E+01
Renew. secondary fuels	MJ	3,76E-02	2,88E-04	7,58E-02	1,14E-01	1,19E-04	4,52E-05	MND	MND	MND	MND	MND	MND	MND	2,94E-08	6,81E-05	4,85E-04	3,36E-07	-4,18E-03
Non-ren. secondary fuels	MJ	1,43E-20	0,00E+00	0,00E+00	1,43E-20	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	1,39E+00	9,52E-03	2,41E-01	1,65E+00	4,06E-03	2,07E-05	MND	MND	MND	MND	MND	MND	MND	2,98E-05	1,78E-03	5,05E-03	6,62E-05	-4,63E-01

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	3,85E+01	9,22E-02	3,23E-01	3,89E+01	3,62E-02	8,75E-03	MND	MND	MND	MND	MND	MND	MND	1,27E-04	1,71E-02	5,97E-02	0,00E+00	-2,20E+01
Non-hazardous waste	kg	3,84E+02	1,60E+00	6,94E+00	3,92E+02	6,44E-01	1,11E+01	MND	MND	MND	MND	MND	MND	MND	8,06E-03	3,16E-01	1,85E+00	4,17E-01	-1,47E+02
Radioactive waste	kg	1,42E-02	4,71E-04	3,57E-03	1,82E-02	2,19E-04	2,95E-05	MND	MND	MND	MND	MND	MND	MND	2,55E-07	7,27E-05	5,00E-05	0,00E+00	-3,36E-03

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	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	1,35E-03	0,00E+00	1,44E+01	1,44E+01	0,00E+00	4,55E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	2,86E+01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	4,05E-02	4,05E-02	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	2,35E+00	2,35E+00	0,00E+00	2,01E+02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	2,14E-01	0,00E+00	0,00E+00

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	1,78E+02	4,66E+00	3,84E+00	1,86E+02	2,12E+00	5,15E-01	MND	MND	MND	MND	MND	MND	MND	1,65E-03	7,33E-01	1,09E+00	2,28E-03	-6,68E+01
Ozone depletion Pot.	kg CFC_{-11}e	8,29E-06	8,44E-07	3,60E-07	9,49E-06	3,93E-07	6,26E-08	MND	MND	MND	MND	MND	MND	MND	7,32E-11	1,28E-07	6,51E-08	7,05E-10	-5,13E-06
Acidification	kg SO_2e	1,21E+00	1,51E-02	2,87E-02	1,25E+00	4,99E-03	2,10E-03	MND	MND	MND	MND	MND	MND	MND	8,06E-06	1,76E-03	5,68E-03	1,57E-05	-3,24E-01
Eutrophication	kg PO_4^3e	4,29E-01	3,10E-03	1,14E-02	4,43E-01	1,08E-03	1,73E-03	MND	MND	MND	MND	MND	MND	MND	6,20E-06	4,30E-04	3,33E-03	9,60E-06	-1,27E-01
POCP (“smog”)	kg C_2H_4e	6,95E-02	6,38E-04	1,65E-03	7,18E-02	2,52E-04	8,46E-05	MND	MND	MND	MND	MND	MND	MND	3,30E-07	9,32E-05	2,37E-04	6,77E-07	-3,52E-02
ADP-elements	kg Sbe	1,48E-02	1,82E-05	1,22E-04	1,49E-02	7,56E-06	2,68E-06	MND	MND	MND	MND	MND	MND	MND	1,53E-08	4,58E-06	6,49E-05	5,02E-09	-5,72E-04
ADP-fossil	MJ	2,18E+03	6,95E+01	2,19E+02	2,47E+03	3,19E+01	5,93E+00	MND	MND	MND	MND	MND	MND	MND	3,52E-02	1,08E+01	8,44E+00	6,04E-02	-8,23E+02

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	1,82E+02	4,71E+00	3,63E+00	1,91E+02	2,14E+00	5,26E-01	MND	MND	MND	MND	MND	MND	MND	1,67E-03	7,40E-01	1,07E+00	2,35E-03	-6,82E+01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.

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.

06.10.2024

ANNEX I: DIFFERENT LYRA II CHILLED BEAMS (RECESSED) IN LENGTH AND WEIGHT

Weight			
Length, aaa	**060 cm, recessed**	**120 cm, recessed**	**180cm, recessed**
Dry, kg	16	29	49
Water filled, cooling, kg	17	31	52
Water filled, cooling and heating, kg	18	32	53

ANNEX II: DIFFERENT LYRA II CHILLED BEAMS (EXPOSED) IN LENGTH AND WEIGHT

Weight		
Length, aaa	**060 cm, exposed**	**120 cm, exposed**
Dry, kg	18	31
Water filled, cooling, kg	19	33
Water filled, cooling and heating, kg	20	34