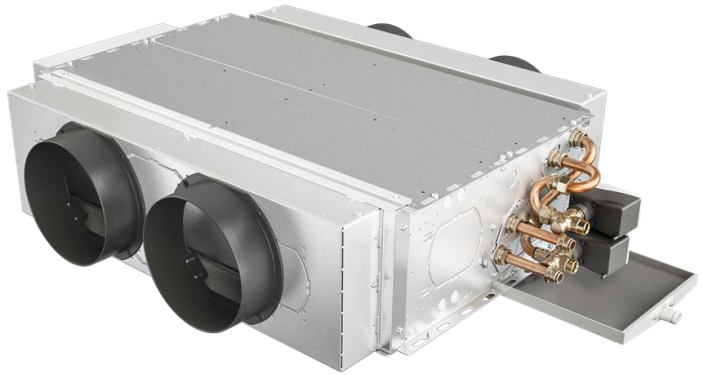
ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

HyFlex-Geko Fan Coil Unit, FläktGroup AB

EPD of a product with a scaling table for different sizes and variants.



EPD HUB, HUB-6866

Published on 02.07.2026, last updated on 02.07.2026, valid until 01.07.2031

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	FläktGroup AB
Address	Slovanská 781, 463 12 Liberec - Vesec, Czech Republic
Contact details	info-cz@flaktgroup.com
Website	www.flaktgroup.com

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and 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, B2,B6 and modules C1-C4, D
EPD author	Doubravka Šimáňová; FläktGroup
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Afzal khan Peerukhan as an authorized verifier for

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	FläktGroup HyFlex-Geko Fan Coil Unit
Additional labels	-
Product reference	GS3MH.UWWHI3.4EFG000.SS001F.0
Place(s) of raw material origin	Europe
Place of production	Liberec, Czech republic
Place(s) of installation and use	Europe
Period for data	calendar year 2025
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	10,2

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of HyFlex-Geko
Declared unit mass	23,6 kg
Mass of packaging	5,96 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	98,2
GWP-total, A1-A3 ($kgCO_2e$)	91,7
Secondary material, inputs (%)	10,9
Total energy use, A1-A3 (kWh)	1190000
Net freshwater use, A1-A3 (m^3)	2,07

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

ABOUT FLÄKTGROUP

FläktGroup designs and manufactures ventilation and air treatment products for use in commercial and industrial buildings. The company is headquartered in Germany and operates production facilities in Europe, Asia and the United States.

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, well-being, 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. With this in mind, FläktGroup aims to approach ventilation and air treatment with consideration for indoor environments, energy use, and environmental aspects throughout the building lifecycle.

PRODUCT DESCRIPTION

HyFlex-Geko is a flexible fancoil unit designed for heating, cooling, air filtration, and ventilation of indoor spaces. The unit is available in ducted and non-ducted configurations and can be installed horizontally or vertically, with or without casing. Its modular design enables adaptation to a wide range of applications in commercial buildings, typically offices, meeting rooms and hotel rooms.

The unit operates with a 2-pipe or 4-pipe system using water or a water/glycol mixture as the heat transfer medium. Cooling and heating capacity ranges from below 1 kW up to 11 kW. HyFlex-Geko is designed for standard indoor environments according to EN 60721-3-3 and complies with relevant European regulations. The product is Eurovent-certified and meets hygiene requirements such as VDI 6022 or DIN 1946-4. Seven sizes are available.

The unit is equipped with a centrifugal fan with either AC or high-efficiency EC motor, including advanced EC XT technology for optimized energy performance and low noise. Sound pressure level can be below 30 dB(A), and external static pressure can reach up to 70 Pa with those EC XT fans.

HyFlex-Geko can be optionally equipped with a filter in various filtration classes (according to ISO 16890), electrical heating, different types of valves, condensate pump, air-side accessories and ISYteq control system. ISYteq is integrated control system for energy-optimized operation and easy commissioning, supporting standard communication protocols and integration into building automation systems (BMS).

The declared unit is HyFlex-Geko size 3 (GS3MH.UWWHI3.4EFG000.SS001F.0), a fancoil unit for decentralized water-based cooling and heating applications. This configuration is a basic, horizontal unit without additional accessories (controls, water or air-side components, or casing) and operates with recirculating air in a 4-pipe system.

Other sizes (1 to 8) and product variations (2-pipe or 4-pipe systems, fan power stage, vertical or horizontal installation) are covered by the scaling approach in Annex I. Technical data related to the use phase of the product and the recalculation of the results to the functional unit can be found in Annex II.

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	78	Europe
Minerals	5	Europe
Fossil materials	17	Europe
Bio-based materials	0	-

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	2,027

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit of HyFlex-Geko
Mass per declared unit	23,6 kg
Functional unit	1 kWh of thermal energy exchanged with the room air in cooling and/or heating mode by a hydronic fan coil unit (FCU), as defined in EN 1397:2021.
Reference service life	20 years

SUBSTANCES, REACH - VERY HIGH CONCERN

Substances of very high concern	EC	CAS
Lead (Pb)	231-100-4	7439-92-1
Decabromodiphenyl ethane (DBDPE)	284-366-9	84852-53-9

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	X	ND	ND	ND	X	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.

The HyFlex-Geko fan coil unit is manufactured from galvanized steel sheets forming the structural frame and condensate drain pan, together with a range of supplied components, including the fan, heat exchanger, filter, electronic controls, optional electric heater, and other accessories. The steel structure is fabricated and assembled using rivets and bolts. The condensate drain pan is powder-coated to provide additional corrosion protection. Transport distances for supplied components are based on the locations of suppliers. Transport modes have been estimated using supplier information and transport provider statistics.

Production losses consist primarily of steel scrap (approximately 20% of steel input) and powder coating losses (approximately 30% of coating input). Steel scrap is collected and sent for recycling, while powder coating waste is assumed to be landfilled. A transport distance of 50 km to waste treatment facilities is assumed.
After assembly, the product is packaged in cardboard, placed on a custom wooden pallet, and wrapped in polyethylene (PE) film for shipment.

Electricity used in the manufacturing process is supplied from the national grid. Consumption data are based on the manufacturer's annual electricity records, and the corresponding electricity dataset was selected according to the production site location and voltage level.
Ancillary materials used during manufacturing include water, nitrogen, oxygen, acetylene, and argon for cutting and welding operations, as well as organic solvents for equipment cleaning. Consumption of ancillary materials has been allocated to the product based on mass, using annual factory consumption data and total annual production output.

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 transport distance is calculated based on a weighted average of sales, ensuring a representative distribution of transportation impacts.

The product is supplied ready for installation (A5), with no raw material waste generated during the installation process. Installation is performed using power tools for drilling holes for the fasteners in the wall, floor or ceiling to which the unit is attached. It is performed with power tools, using approximately 0.011 kWh of electric energy. Packaging materials used for transport, such as cardboard, LLDPE foil and wooden pallets, are sent to waste treatment and managed according to the average end-of-life scenario in the EU. Based on EUROSTAT data from 2021, 32% of wooden pallets are recycled, 30% are incinerated with energy recovery, and the remaining 38% are landfilled. For cardboard waste, 83% is recycled, 8% is incinerated, and the remaining 9% is landfilled. The plastic packaging is in 40% of cases recycled, 37% is incinerated with energy recovery, and the rest (23%) is landfilled. . The assumptions are based on EUROSTAT waste treatment statistics. Environmental benefits associated with material recycling and energy recovery are reported in Module D.

PRODUCT USE AND MAINTENANCE (B1-B7)

During the use stage, the product is operated and maintained in accordance with the instructions provided in the Operation and Maintenance Manual. Routine maintenance activities are limited to periodic inspection, cleaning, and replacement of filters when required to ensure proper product performance. The assessment includes the environmental impacts associated with maintenance activities, including the production, transport, and end-of-life treatment of replacement filters.
The use stage also includes the electricity consumption associated with product operation throughout its reference service life. Energy use has been assessed using operating scenarios representative of typical European conditions and based on an average European low-voltage electricity mix. Actual maintenance requirements, operating conditions, and energy consumption may vary depending on the specific application, installation conditions, and user behaviour. Therefore, the results reported for the use stage represent a reference scenario.

Replacement of components other than filters has not been considered in this assessment. Potential impacts on air, soil, and water during the use phase have not been assessed.
During the use phase, the product requires routine inspection of the filters every three months to ensure proper operation. If a filter is found to be dirty or clogged, it should be replaced. For the purposes of the EPD, it is assumed that the filters are replaced once per year under normal operating conditions. The environmental impacts associated with maintenance include the production and transport of replacement filters, as well as the management of the removed filters at end of life. No additional energy consumption or direct emissions are associated with the maintenance activities beyond those related to filter replacement.

Module B6 includes the electricity consumption associated with the operation of the fan coil unit throughout its service life. Energy consumption has been calculated according to the Technical Certification Rules of the Eurovent Certified Performance Mark, assuming annual operation of 1,500 heating hours (70% low speed, 25% medium speed, 5% high speed) and 1,100 cooling hours (65% low speed, 30% medium speed, 5% high speed). A service life of 20 years has been assumed.
The assessment is based on the average European low-voltage electricity mix, reflecting the primary market for the product. The environmental impacts associated with energy use are included in the functional unit.

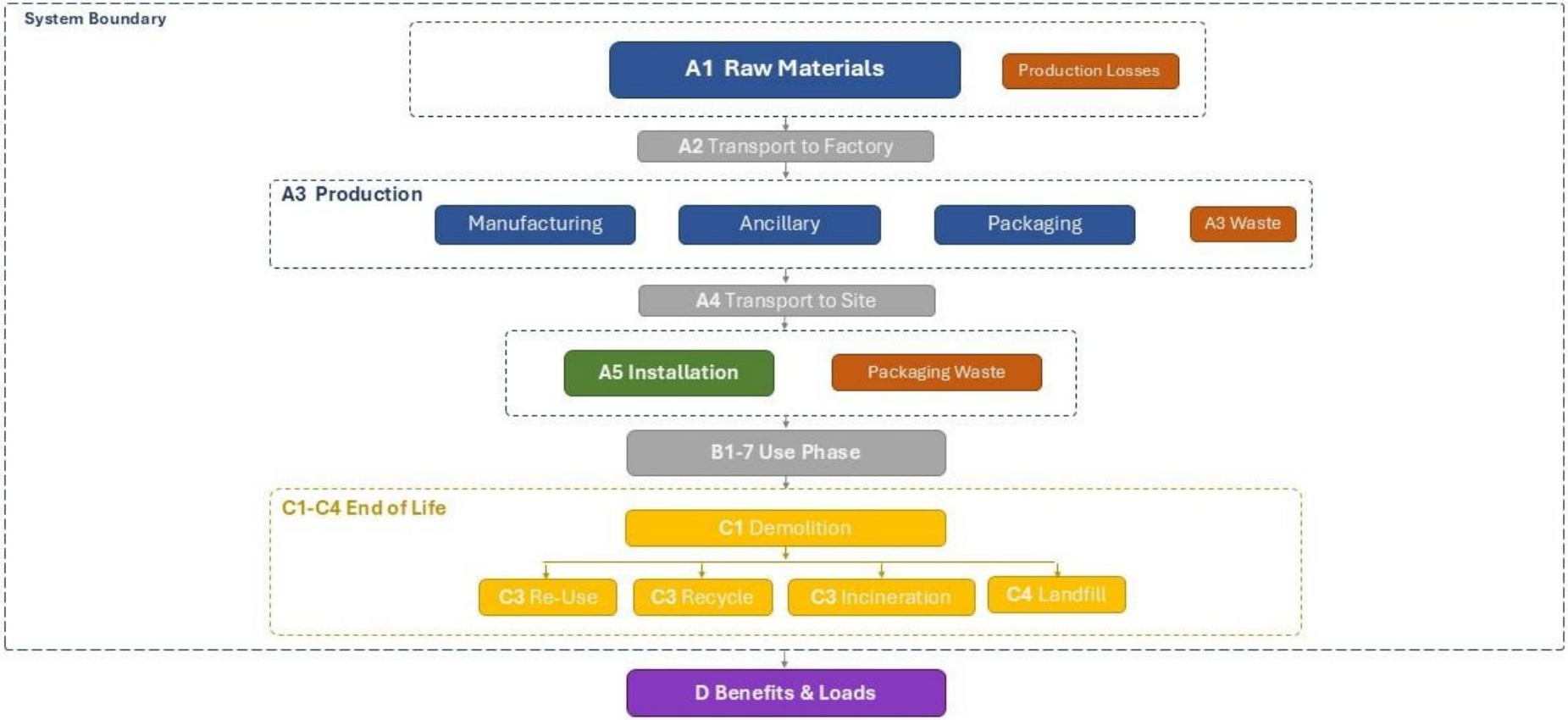
PRODUCT END OF LIFE (C1-C4, D)

At the end of its service life, the fan coil unit is assumed to be dismantled and separated into its main material fractions, including steel, aluminium, copper, plastics, electronic components, electric motor, fan assembly, and

insulation materials. Dismantling is assumed to be carried out using standard electrical tools, while the associated energy consumption is considered negligible (C1).

The separated waste fractions are assumed to be transported 50 km to the relevant waste treatment and recycling facilities (C2). This transport distance represents a generic scenario, as the actual end-of-life location depends on the installation site and cannot be determined in advance. Waste processing (C3) and final disposal (C4) are modelled according to current European waste management practices and considering the main markets where the product is sold. Metals such as steel, aluminium, and copper are directed to recycling processes, while plastics are allocated to recycling, energy recovery, or disposal routes depending on the material type and available treatment technologies. Electronic and electrical components are assumed to be collected separately and treated in accordance with EN 50693 and applicable WEEE requirements.
The recycling rates applied to individual materials the following sources: data for steel is from the World Steel Association (85% recycling rate), copper (40%) from the International Copper Association and electronic parts (39%) from European Environment Agency. Environmental benefits associated with the recovery of secondary materials and energy are reported in Module D using the avoided burden approach.

LIFE CYCLE FLOW 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 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.

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.

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	Not applicable
Ancillary materials	Physical Properties
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, %	-

This EPD is product and factory specific and does not contain average calculations. The environmental impact data presented are specific for the product GS3MH.UWWHI3.4EFG000.SS001F.0. The calculated GWP-GHG for other included variations and sizes for modules A1-A3 and B6 are shown in the Scaling table in Annex 1.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.5. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

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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. The results are based on the declared unit.

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_2e	8,48E+01	2,38E+00	4,47E+00	9,17E+01	4,38E+00	7,75E+00	ND	3,31E+00	ND	ND	ND	2,21E+02	ND	0,00E+00	5,81E-01	3,75E+00	3,06E-01	-3,03E+01
GWP – fossil	kg CO_2e	8,41E+01	2,38E+00	1,17E+01	9,82E+01	4,38E+00	3,25E-01	ND	3,31E+00	ND	ND	ND	2,14E+02	ND	0,00E+00	5,81E-01	3,76E+00	3,06E-01	-2,91E+01
GWP – biogenic	kg CO_2e	1,95E-01	1,00E-03	-7,35E+00	-7,15E+00	8,80E-04	7,43E+00	ND	1,16E-04	ND	ND	ND	6,47E+00	ND	0,00E+00	1,30E-04	-4,08E-03	-1,11E-04	-1,16E+00
GWP – LULUC	kg CO_2e	5,30E-01	8,59E-04	9,01E-02	6,21E-01	1,57E-03	2,66E-04	ND	9,49E-04	ND	ND	ND	4,69E-01	ND	0,00E+00	2,59E-04	5,36E-04	3,04E-05	-3,01E-02
Ozone depletion pot.	kg CFC-$_{11}$e	3,91E-06	4,51E-08	5,32E-07	4,49E-06	8,71E-08	2,94E-09	ND	4,60E-08	ND	ND	ND	2,92E-06	ND	0,00E+00	8,45E-09	5,57E-09	1,20E-09	-1,90E-07
Acidification potential	mol H^+e	1,55E+00	5,91E-03	4,59E-02	1,60E+00	9,21E-03	1,11E-03	ND	1,37E-02	ND	ND	ND	9,81E-01	ND	0,00E+00	1,97E-03	5,01E-03	3,29E-04	-3,70E-01
EP-freshwater[2)]	kg Pe	1,37E+00	1,95E-04	9,97E-03	1,38E+00	2,95E-04	5,87E-05	ND	3,53E-04	ND	ND	ND	2,70E-01	ND	0,00E+00	4,52E-05	2,54E-04	4,92E-06	-2,07E-01
EP-marine	kg Ne	1,32E-01	1,60E-03	1,39E-02	1,48E-01	2,21E-03	1,13E-03	ND	2,53E-03	ND	ND	ND	1,89E-01	ND	0,00E+00	6,43E-04	1,30E-03	1,20E-03	-1,01E-01
EP-terrestrial	mol Ne	5,12E+00	1,73E-02	1,07E-01	5,24E+00	2,39E-02	4,20E-03	ND	2,67E-02	ND	ND	ND	1,53E+00	ND	0,00E+00	7,00E-03	1,38E-02	1,36E-03	-1,40E+00
POCP ("smog")[3)]	kg NMVOCe	4,03E-01	8,83E-03	3,55E-02	4,47E-01	1,52E-02	1,44E-03	ND	1,03E-02	ND	ND	ND	4,63E-01	ND	0,00E+00	2,85E-03	3,99E-03	5,03E-04	-3,01E-01
ADP-minerals & metals[4)]	kg Sbe	5,11E+00	8,16E-06	2,18E-05	5,11E+00	1,46E-05	8,90E-07	ND	9,83E-03	ND	ND	ND	2,38E-03	ND	0,00E+00	1,71E-06	2,59E-05	9,29E-08	-5,95E-03
ADP-fossil resources	MJ	1,07E+03	3,34E+01	1,86E+02	1,29E+03	6,16E+01	2,70E+00	ND	2,74E+02	ND	ND	ND	3,83E+03	ND	0,00E+00	8,34E+00	5,63E+00	1,02E+00	-3,10E+02
Water use[5)]	m^3e depr.	5,74E+05	1,74E-01	4,07E+00	5,74E+05	3,06E-01	9,12E-02	ND	1,69E+01	ND	ND	ND	9,06E+01	ND	0,00E+00	4,04E-02	1,97E-01	2,50E-02	-1,14E+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	1,22E-05	1,63E-07	3,90E-07	1,28E-05	3,23E-07	2,66E-08	ND	1,88E-07	ND	ND	ND	3,38E-06	ND	0,00E+00	5,42E-08	6,91E-08	6,98E-09	-3,41E-06
Ionizing radiation[6]	kBq U235e	5,35E+04	4,12E-02	2,49E+00	5,35E+04	7,94E-02	9,38E-03	ND	1,85E-01	ND	ND	ND	8,56E+01	ND	0,00E+00	7,13E-03	3,80E-02	9,22E-04	-8,96E-01
Ecotoxicity (freshwater)	CTUe	2,40E+03	2,88E+01	6,78E+02	3,11E+03	8,19E+00	2,58E+01	ND	1,24E+02	ND	ND	ND	7,67E+02	ND	0,00E+00	1,25E+00	1,89E+01	2,87E+01	-2,99E+03
Human toxicity, cancer	CTUh	2,46E-07	3,76E-10	1,11E-08	2,57E-07	7,35E-10	1,63E-10	ND	4,12E-10	ND	ND	ND	5,80E-08	ND	0,00E+00	9,68E-11	4,75E-10	2,43E-11	-2,27E-08
Human tox. non-cancer	CTUh	3,43E-06	1,97E-08	7,35E-08	3,53E-06	3,90E-08	8,03E-09	ND	2,46E-08	ND	ND	ND	3,11E-06	ND	0,00E+00	5,34E-09	2,74E-08	2,95E-09	-8,80E-07
SQP[7]	-	3,87E+02	1,91E+01	9,69E+02	1,38E+03	3,72E+01	2,36E+00	ND	1,44E+01	ND	ND	ND	8,43E+02	ND	0,00E+00	7,31E+00	1,01E+01	2,09E+00	-2,80E+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	4,27E+06	5,66E-01	5,68E+01	4,27E+06	1,08E+00	-8,83E+01	ND	1,47E+01	ND	ND	ND	9,80E+02	ND	0,00E+00	1,15E-01	9,10E-01	1,44E-02	-6,29E+01
Renew. PER as material	MJ	4,02E-02	0,00E+00	8,44E+01	8,44E+01	0,00E+00	-8,44E+01	ND	0,00E+00	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	-3,09E-02	1,02E+01
Total use of renew. PER	MJ	4,27E+06	5,66E-01	1,41E+02	4,27E+06	1,08E+00	-1,73E+02	ND	1,47E+01	ND	ND	ND	9,80E+02	ND	0,00E+00	1,15E-01	9,10E-01	-1,66E-02	-5,28E+01
Non-re. PER as energy	MJ	9,79E+02	3,34E+01	1,76E+02	1,19E+03	6,16E+01	-1,35E+00	ND	2,74E+02	ND	ND	ND	3,83E+03	ND	0,00E+00	8,34E+00	-6,69E+01	-6,02E+01	-3,10E+02
Non-re. PER as material	MJ	1,06E+02	0,00E+00	8,17E+00	1,14E+02	0,00E+00	-8,32E+00	ND	0,00E+00	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	-6,04E+01	-4,56E+01	1,98E+00
Total use of non-re. PER	MJ	1,09E+03	3,34E+01	1,84E+02	1,30E+03	6,16E+01	-9,67E+00	ND	2,74E+02	ND	ND	ND	3,83E+03	ND	0,00E+00	8,34E+00	-1,27E+02	-1,06E+02	-3,08E+02
Secondary materials	kg	2,56E+00	1,43E-02	2,03E+00	4,61E+00	2,86E-02	2,45E-03	ND	8,99E-01	ND	ND	ND	6,51E-01	ND	0,00E+00	3,61E-03	8,40E-03	3,29E-04	1,19E+01
Renew. secondary fuels	MJ	1,85E-01	1,62E-04	1,77E+00	1,96E+00	3,62E-04	2,07E-05	ND	1,84E-04	ND	ND	ND	7,11E-03	ND	0,00E+00	4,59E-05	2,93E-04	6,61E-06	-6,73E-03
Non-ren. secondary fuels	MJ	5,55E-01	0,00E+00	0,00E+00	5,55E-01	0,00E+00	0,00E+00	ND	1,10E+01	ND	ND	ND	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	1,98E+00	4,15E-03	9,33E-02	2,07E+00	8,39E-03	-5,47E-03	ND	2,20E-01	ND	ND	ND	2,58E+00	ND	0,00E+00	1,19E-03	3,01E-03	-5,66E-03	-3,08E-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	1,97E+01	6,38E-02	5,29E-01	2,03E+01	8,95E-02	2,47E-02	ND	1,63E-01	ND	ND	ND	3,84E+01	ND	0,00E+00	1,43E-02	7,11E-02	4,65E-03	-7,34E+00
Non-hazardous waste	kg	3,58E+02	1,38E+00	7,88E+01	4,39E+02	1,89E+00	6,29E+00	ND	6,60E+00	ND	ND	ND	1,33E+03	ND	0,00E+00	2,65E-01	3,00E+00	8,66E+00	-5,40E+01
Radioactive waste	kg	3,58E-03	1,02E-05	6,00E-04	4,19E-03	1,97E-05	2,35E-06	ND	5,47E-04	ND	ND	ND	2,19E-02	ND	0,00E+00	1,75E-06	9,65E-06	2,26E-07	-2,21E-04

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	1,30E-02	0,00E+00	0,00E+00	1,30E-02	0,00E+00	0,00E+00	ND	0,00E+00	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	1,52E-01	0,00E+00	0,00E+00	1,52E-01	0,00E+00	2,86E+00	ND	1,07E+01	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	1,69E+01	0,00E+00	0,00E+00
Materials for energy rec	kg	6,58E-04	0,00E+00	0,00E+00	6,58E-04	0,00E+00	0,00E+00	ND	2,95E-12	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	1,63E-02	0,00E+00	0,00E+00	1,63E-02	0,00E+00	7,69E+00	ND	0,00E+00	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	1,54E+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	3,23E+00	ND	0,00E+00	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	6,48E+00	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	4,46E+00	ND	0,00E+00	ND	ND	ND	0,00E+00	ND	0,00E+00	0,00E+00	8,93E+00	0,00E+00	0,00E+00

ADDITIONAL INDICATOR – GWP-GHG

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	8,46E+01	2,38E+00	1,18E+01	9,88E+01	4,38E+00	3,25E-01	ND	3,31E+00	ND	ND	ND	2,14E+02	ND	0,00E+00	5,81E-01	3,76E+00	3,06E-01	-2,91E+01

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

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Heat, from municipal waste incineration to generic market for heat, district or industrial, other than natural gas, Czech Republic, Ecoinvent
2. Market for diesel, Albania, Ecoinvent, 0.93 kgCO2e/kg
3. Market for electricity, high voltage, Czech Republic, Ecoinvent, 0.68 kgCO2e/kWh
4. Heat production, natural gas, at industrial furnace >100kW, Albania, Ecoinvent, 0.0773 kgCO2e/MJ

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry 16-32 metric ton, EURO6, 780 km
2. Market for transport, freight, sea, ferry, 1 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	269
Volume capacity utilization factor	1

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	The dataset "market group for electricity, low voltage" (reference product: electricity, low voltage), representing the European electricity grid mix, was used for modelling, the total electricity consumption was estimated at 0.011 kWh per installation.
Water use (m^3)	-
Ancillary materials: type and mass (kg)	-
Waste materials: type and mass (kg)	Packaging waste generated during installation consists of 4.0 kg of wood (pallet), 0.1 kg of polyethylene (PE) film, and 1.86 kg of cardboard per declared unit. The assumption is based on the calculation.
Waste materials: output routes	Wood packaging waste is assumed to be 32% recycled and 30% incinerated with energy recovery. Polyethylene film is assumed to be 40% recycled and 37% incinerated with energy recovery. Cardboard packaging is assumed to be 83% recycled and 8% incinerated with energy recovery. The remaining fractions are disposed of via

	landfill or other waste treatment routes.
Direct emissions (kg)	-

Use stages scenario documentation - B2 Maintenance

Scenario information	Value
Maintenance process description	For the purposes of the EPD, it is assumed that the filters are replaced once per year under normal operating conditions. The environmental impacts associated with maintenance include the production and transport of replacement filters, as well as the management of the removed filters at the end of life.
Maintenance cycle (per RSL)	20
Energy use (kWh/cycle)	0
Water use (m3 or litres/cycle)	0
Ancillary materials (kg/cycle)	-
Waste materials (kg/cycle)	0,32

Use stages scenario documentation - B6-B7 Use of energy and use of water

Scenario information	Value
Type of energy, consumption (kWh)	Energy consumption has been calculated according to the Technical Certification Rules of the Eurovent Certified Performance Mark, assuming annual operation of 1,500 heating hours (70% low speed, 25% medium speed, 5% high speed) and 1,100 cooling hours (65% low speed, 30% medium speed, 5% high speed). A service life of 20 years has been assumed.
Freshwater consumption (m3)	
Performance characteristics, E.g, Power rating, efficiency, capacity	

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	23,1
Collection process: Mixed waste (kg)	1,5
Recovery: re-use (kg)	0
Recovery: recycling (kg)	16,9
Recovery: energy recovery (kg)	0
Disposal (kg)	0
Scenario assumptions e.g. transportation (mode, km) & other	50 km by lorry

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

Afzal khan Peerukhan as an authorized verifier for EPD Hub Limited 02.07.2026

VERIFIED ISO 14025

ANNEX I:

Table 1 is a scaling table of basic variations of HyFlex-Geko units, based on the results of a declared product with a code GS3MH.UWWHI3*. It shows the calculated Global Warming Potential (GWP-GHG) results for the climate impact in modules A1-A3 (Cradle-to-gate)and B6 (use stage) for selected fancoil variants per declared unit. The results can be recalculated per functional unit by dividing by the corresponding value of the Total Thermal energy (kWh) from the table in the Annex II.
The LCA was modelled for each of the mentioned units using OneClick LCA software.

Product code	Size	Mass	A1-A3, EN 15804+A2			Scaling factor A1-A3 GWP-total (kg CO2e)	Ref. energy use in 20 years (kWh)	B6, EN 15804+A2			Scaling factor B6 GWP - total (kg CO2e)
			GWP-total (kg CO2e)	GWP-fossil (kg CO2e)	GWP-biogenic (kg CO2e)			GWP-total (kg CO2e)	GWP-fossil (kg CO2e)	GWP-biogenic (kg CO2e)	
GS1MH.UWWHI3*	1	17 kg	**64,6**	**71,16**	**-7,12**	0,70	281,5	**122,08**	**118,24**	**3,58**	0,55
GS1MM.UWWHI3*	1	16,8 kg	**63,45**	**70,01**	**-7,13**	0,69	303,4	**131,59**	**127,45**	**3,86**	0,60
GS1MH.UWWVI3*	1	16,1 kg	**61,12**	**67,69**	**-7,13**	0,67	281,5	**122,08**	**118,24**	**3,58**	0,55
GS1MM.UWWVI3*	1	15,9 kg	**60,24**	**66,81**	**-7,14**	0,66	303,4	**131,59**	**127,45**	**3,86**	0,60
GS1HH.UWWHI3*	1	17,7 kg	**69,79**	**76,35**	**-7,13**	0,76	476,4	**206,66**	**200,16**	**6,06**	0,94
GS1HM.UWWHI3*	1	17,5 kg	**68,91**	**75,47**	**-7,13**	0,75	481,6	**208,86**	**202,29**	**6,13**	0,95
GS1HH.UWWVI3*	1	16,8 kg	**66,59**	**73,16**	**-7,14**	0,73	476,4	**206,66**	**200,16**	**6,06**	0,94
GS1HM.UWWVI3*	1	16,6 kg	**65,7**	**72,28**	**-7,14**	0,72	481,6	**208,86**	**202,29**	**6,13**	0,95
GS2MH.UWWHI3*	2	19,7 kg	**76,08**	**82,59**	**-7,1**	0,83	294,5	**127,73**	**123,72**	**3,75**	0,58
GS2MM.UWWHI3*	2	19,5 kg	**75,21**	**81,72**	**-7,11**	0,82	299,7	**129,99**	**125,91**	**3,81**	0,59
GS2MH.UWWVI3*	2	18,7 kg	**72,4**	**78,93**	**-7,12**	0,79	294,5	**127,73**	**123,72**	**3,75**	0,58
GS2MM.UWWVI3*	2	18,5 kg	**71,52**	**78,06**	**-7,12**	0,78	299,7	**129,99**	**125,91**	**3,81**	0,59
GS2HH.UWWHI3*	2	20,4 kg	**78,46**	**84,98**	**-7,11**	0,86	462,3	**200,45**	**194,14**	**5,88**	0,91
GS2HM.UWWHI3*	2	20,2 kg	**77,58**	**84,1**	**-7,11**	0,85	494,6	**214,51**	**207,76**	**6,29**	0,97
GS2HH.UWWVI3*	2	19,4 kg	**74,86**	**81,4**	**-7,12**	0,82	462,3	**200,45**	**194,14**	**5,88**	0,91
GS2HM.UWWVI3*	2	19,2 kg	**74,02**	**80,56**	**-7,13**	0,81	494,6	**214,51**	**207,76**	**6,29**	0,97

Product code	Size	Mass	A1-A3, EN 15804+A2			Scaling factor A1-A3 GWP-total (kg CO2e)	Ref. energy use in 20 years (kWh)	B6, EN 15804+A2			Scaling factor B6 GWP - total (kg CO2e)
			GWP-total (kg CO2e)	GWP-fossil (kg CO2e)	GWP-biogenic (kg CO2e)			GWP-total (kg CO2e)	GWP-fossil (kg CO2e)	GWP-biogenic (kg CO2e)	
GS3MH.UWWHI3*	**3**	**23,6 kg**	**91,66**	**98,19**	**-7,15**	**1**	**407**	**220,65**	**213,7**	**6,47**	**1**
GS3MM.UWWHI3*	3	23,4 kg	**90,35**	**96,88**	**-7,16**	0,99	409,6	**177,63**	**172,04**	**5,21**	0,81
GS3MH.UWWVI3*	3	22,6 kg	**88,12**	**94,67**	**-7,17**	0,96	407	**176,57**	**171,02**	**5,18**	0,80
GS3MM.UWWVI3*	3	22,4 kg	**86,55**	**93,11**	**-7,17**	0,94	409,6	**177,63**	**172,04**	**5,21**	0,81
GS3HH.UWWHI3*	3	25 kg	**96,47**	**103,01**	**-7,16**	1,05	671,4	**291,18**	**282,02**	**8,54**	1,32
GS3HM.UWWHI3*	3	24,8 kg	**94,75**	**101,29**	**-7,17**	1,03	706,3	**306,31**	**296,68**	**8,99**	1,39
GS3HH.UWWVI3*	3	24 kg	**92,87**	**99,43**	**-7,18**	1,01	671,4	**291,18**	**282,02**	**8,54**	1,32
GS3HM.UWWVI3*	3	23,8 kg	**91,37**	**97,94**	**-7,18**	1,00	706,3	**306,31**	**296,68**	**8,99**	1,39
GS4MH.UWWHI3*	4	26,5 kg	**103,73**	**110,22**	**-7,13**	1,13	386,6	**167,66**	**162,39**	**4,92**	0,76
GS4MM.UWWHI3*	4	26,3 kg	**103,03**	**109,52**	**-7,14**	1,12	391,8	**169,97**	**164,63**	**4,99**	0,77
GS4MH.UWWVI3*	4	25,4 kg	**100,06**	**106,57**	**-7,15**	1,09	386,6	**167,66**	**162,39**	**4,92**	0,76
GS4MM.UWWVI3*	4	25,2 kg	**99,06**	**105,58**	**-7,15**	1,08	391,8	**169,97**	**164,63**	**4,99**	0,77
GS4HH.UWWHI3*	4	27,9 kg	**108,74**	**115,24**	**-7,15**	1,19	732,3	**167,66**	**162,39**	**4,92**	0,76
GS4HM.UWWHI3*	4	27,7 kg	**107,74**	**114,24**	**-7,15**	1,18	750,5	**325,54**	**315,3**	**9,55**	1,48
GS4HH.UWWVI3*	4	26,8 kg	**104,77**	**111,29**	**-7,16**	1,14	732,3	**317,55**	**307,56**	**9,32**	1,44
GS4HM.UWWVI3*	4	26,6 kg	**103,77**	**110,3**	**-7,16**	1,13	750,5	**325,54**	**315,3**	**9,55**	1,48
GS5MH.UWWHI3*	5	29,2 kg	**115,98**	**122,47**	**-7,16**	1,27	399,6	**173,3**	**167,84**	**5,08**	0,79
GS5MM.UWWHI3*	5	29 kg	**114,65**	**121,15**	**-7,16**	1,25	402,2	**174,43**	**168,94**	**5,12**	0,79
GS5MH.UWWVI3*	5	28,1 kg	**111,99**	**118,5**	**-7,17**	1,22	399,6	**173,3**	**167,84**	**5,08**	0,79
GS5MM.UWWVI3*	5	27,8 kg	**110,81**	**117,32**	**-7,17**	1,21	402,2	**174,43**	**168,94**	**5,12**	0,79
GS5HH.UWWHI3*	5	30,6 kg	**120,69**	**127,18**	**-7,17**	1,32	772,4	**335**	**324,46**	**9,83**	1,52
GS5HM.UWWHI3*	5	30,4 kg	**119,54**	**126,04**	**-7,17**	1,30	790,6	**342,89**	**332,1**	**10,06**	1,55

Product code	Size	Mass	A1-A3, EN 15804+A2			Scaling factor A1-A3 GWP-total (kg CO2e)	Ref. energy use in 20 years (kWh)	B6, EN 15804+A2			Scaling factor B6 GWP - total (kg CO2e)
			GWP-total (kg CO2e)	GWP-fossil (kg CO2e)	GWP-biogenic (kg CO2e)			GWP-total (kg CO2e)	GWP-fossil (kg CO2e)	GWP-biogenic (kg CO2e)	
GS5HH.UWWVI3*	5	29,5 kg	**116,71**	**123,23**	**-7,18**	1,27	772,4	**335**	**324,46**	**9,83**	1,52
GS5HM.UWWVI3*	5	29,2 kg	**115,53**	**122,05**	**-7,19**	1,26	790,6	**342,89**	**332,1**	**10,06**	1,55
GS6MH.UWWHI3*	6	34,3 kg	**135,74**	**142,22**	**-7,19**	1,48	653,6	**283,42**	**274,5**	**8,31**	1,28
GS6MM.UWWHI3*	6	34 kg	**134,56**	**141,05**	**-7,19**	1,47	658,8	**285,71**	**276,72**	**8,38**	1,29
GS6MH.UWWVI3*	6	33,1 kg	**131,38**	**137,89**	**-7,2**	1,43	653,6	**283,42**	**274,5**	**8,31**	1,28
GS6MM.UWWVI3*	6	32,8 kg	**130,2**	**136,71**	**-7,21**	1,42	658,8	**285,71**	**276,72**	**8,38**	1,29
GS6HH.UWWHI3*	6	36,4 kg	**142,8**	**149,3**	**-7,21**	1,56	765,6	**331,99**	**321,54**	**9,74**	1,50
GS6HM.UWWHI3*	6	36,1 kg	**141,62**	**148,12**	**-7,21**	1,55	820,2	**355,72**	**344,52**	**10,44**	1,61
GS6HH.UWWVI3*	6	35,2 kg	**138,44**	**144,96**	**-7,22**	1,51	765,6	**331,99**	**321,54**	**9,74**	1,50
GS6HM.UWWVI3*	6	34,9 kg	**137,26**	**143,79**	**-7,23**	1,50	820,2	**355,72**	**344,52**	**10,44**	1,61
GS8MH.UWWHI3*	8	41,1 kg	**163,3**	**169,77**	**-7,23**	1,78	775	**336,18**	**325,6**	**9,86**	1,52
GS8MM.UWWHI3*	8	40,7 kg	**161,96**	**168,44**	**-7,23**	1,77	780,2	**338,37**	**327,72**	**9,93**	1,53
GS8MH.UWWVI3*	8	39,5 kg	**158,64**	**165,13**	**-7,24**	1,73	775	**336,18**	**325,6**	**9,86**	1,52
GS8MM.UWWVI3*	8	39,3 kg	**156,76**	**163,26**	**-7,25**	1,71	780,2	**338,37**	**327,72**	**9,93**	1,53
GS8HH.UWWHI3*	8	43,9 kg	**172,71**	**179,19**	**-7,25**	1,88	4997,9	**406,43**	**393,65**	**11,92**	1,84
GS8HM.UWWHI3*	8	43,5 kg	**171,38**	**177,88**	**-7,26**	1,87	953,8	**413,71**	**400,7**	**12,14**	1,87
GS8HH.UWWVI3*	8	42,3 kg	**167,85**	**174,36**	**-7,27**	1,83	4997,9	**406,43**	**393,65**	**11,92**	1,84
GS8HM.UWWVI3*	8	42,1 kg	**166,17**	**172,69**	**-7,27**	1,81	953,8	**413,71**	**400,7**	**12,14**	1,87

ANNEX II:

TECHNICAL DATA:

Thermal and Electrical Energy Calculation

The total thermal energy delivered to (heating mode) or removed from (cooling mode) the room air, as well as the total electrical energy consumption over the reference service life of the fan coil unit, are calculated according to the *Technical Certification Rules of the Eurovent Certified Performance Mark – Fan Coil Unit (Rev. 00, 2021)*.

Total Thermal Energy

$$\text{Total Thermal Energy (kWh)} = \text{Cooling Energy} + \text{Heating Energy}$$

where:

$$\text{Cooling Energy} = (0.05 \cdot P_{c,high} + 0.30 \cdot P_{c,med} + 0.65 \cdot P_{c,low}) \times h_{cooling} \times \text{RSL}$$
$$\text{Heating Energy} = (0.05 \cdot P_{h,high} + 0.25 \cdot P_{h,med} + 0.70 \cdot P_{h,low}) \times h_{heating} \times \text{RSL}$$

Total Electrical Energy Consumption

$$\text{Total Electrical Consumption (kWh)} = \text{Cooling Electrical Consumption} + \text{Heating Electrical Consumption}$$

where:

$$\text{Cooling Electrical Consumption} = (0.05 \cdot Pe_{c,high} + 0.30 \cdot Pe_{c,med} + 0.65 \cdot Pe_{c,low}) \times h_{cooling} \times \text{RSL}$$
$$\text{Heating Electrical Consumption} = (0.05 \cdot Pe_{h,high} + 0.25 \cdot Pe_{h,med} + 0.70 \cdot Pe_{h,low}) \times h_{heating} \times \text{RSL}$$

Parameters

- $P_{(c,high)}$, $P_{(c,med)}$, $P_{(c,low)}$ – total cooling capacity (kW) at high, medium and low fan speed in cooling mode under standard rating conditions according to EN 1397.
- $Pe_{(c,high)}$, $Pe_{(c,med)}$, $Pe_{(c,low)}$ – electrical power input (kW) at high, medium and low fan speed in cooling mode according to EN 1397.
- $P_{(h,high)}$, $P_{(h,med)}$, $P_{(h,low)}$ – heating capacity (kW) at high, medium and low fan speed in heating mode under standard rating conditions according to EN 1397.
- $Pe_{(h,high)}$, $Pe_{(h,med)}$, $Pe_{(h,low)}$ – electrical power input (kW) at high, medium and low fan speed in heating mode according to EN 1397.
- $h_{(cooling)}$ – annual operating hours in cooling mode (1,100 h/year).
- $h_{(heating)}$ – annual operating hours in heating mode (1,500 h/year).
- RSL – reference service life of the unit (20 years).

Functional Unit Conversion

The electricity use per functional unit is determined as the ratio of the total electrical energy consumption over the reference service life to the total thermal energy exchanged with the room air over the same period.

Note for EPD users
To recalculate the environmental impacts reported for module B6 per functional unit (1 kWh of thermal energy exchanged with the room air in cooling and/or heating mode), divide the results presented in Table 1 (Annex I) by the corresponding total thermal energy value (kWh) reported in Table 2.

The table 2 presents, for selected sizes and configurations, the total electricity consumption (kWh), the total thermal energy delivered (kWh), and the electricity use per functional unit (kWh/kWh).

code	size	heat exchanger	fan	fan speed - power input (kW)			fan speed - Cooling capacity (kW)			fan speed - Heating capacity (kW)			consuption (kWh) total (20 years)	Thermal Energy (kWh) total (20 years)	Electricity/FU (kWh) (1kWh exch. energy)
				low (1)	medium (3)	high (5)	low (1)	medium (3)	high (5)	low (1)	medium (3)	high (5)			
GS1MM*	1	M	M	0,003	0,007	0,038	0,99	1,46	2,48	1,04	1,55	2,6	**303,40**	63886	**0,0047**
GS1MH*	1	M	H	0,003	0,006	0,035	1,01	1,57	2,72	1,02	1,62	2,84	**281,50**	65627	**0,0043**
GS1HM*	1	H	M	0,003	0,013	0,074	0,55	1,16	1,85	0,57	1,01	1,45	**481,60**	39276	**0,0123**
GS1HH*	1	H	H	0,003	0,013	0,072	0,58	1,29	2,12	0,69	1,29	1,89	**476,40**	46140	**0,0103**
GS2MM*	2	M	M	0,003	0,006	0,042	1,2	1,65	3,02	1,25	1,71	3,15	**299,70**	75172	**0,0040**
GS2MH*	2	M	H	0,003	0,006	0,04	1,29	1,79	3,43	1,28	1,83	3,55	**294,50**	79964	**0,0037**
GS2HM*	2	H	M	0,003	0,013	0,079	0,64	1,38	2,34	0,72	1,29	1,91	**494,60**	48494	**0,0102**
GS2HH*	2	H	H	0,003	0,012	0,072	0,7	1,51	2,61	0,86	1,59	2,43	**462,30**	56477	**0,0082**
GS3MM*	3	M	M	0,004	0,01	0,049	1,71	2,75	4,27	1,78	2,85	4,45	**409,60**	112730	**0,0036**
GS3MH*	3	M	H	0,004	0,01	0,048	1,82	2,92	4,72	1,81	3	4,87	**407,00**	118305	**0,0034**
GS3HM*	3	H	M	0,006	0,017	0,098	1,23	1,95	3,17	1,26	1,79	2,58	**706,30**	77701	**0,0091**
GS3HH*	3	H	H	0,006	0,016	0,09	1,32	2,14	3,54	1,52	2,21	3,25	**671,40**	90264	**0,0074**
GS4MM*	4	M	M	0,004	0,008	0,053	2,06	3,01	5,01	2,12	3,11	5,2	**391,80**	130480	**0,0030**
GS4MH*	4	M	H	0,004	0,008	0,051	2,18	3,21	5,59	2,15	3,27	5,76	**386,60**	136824	**0,0028**
GS4HM*	4	H	M	0,006	0,017	0,115	1,46	2,35	3,93	1,51	2,17	3,21	**750,50**	93511	**0,0080**
GS4HH*	4	H	H	0,006	0,017	0,108	1,61	2,58	4,47	1,85	2,69	4,07	**732,30**	110098	**0,0067**
GS5MM*	5	M	M	0,004	0,008	0,057	2,17	3,2	5,58	2,22	3,29	5,78	**402,20**	138254	**0,0029**
GS5MH*	5	M	H	0,004	0,008	0,056	2,33	3,45	6,25	2,26	3,49	4,81	**399,60**	143814	**0,0028**
GS5HM*	5	H	M	0,006	0,018	0,125	1,63	2,59	4,38	1,72	2,44	3,65	**790,60**	105116	**0,0075**
GS5HH*	5	H	H	0,006	0,018	0,118	1,77	2,86	4,99	2,06	3,03	4,61	**772,40**	122576	**0,0063**
GS6MM*	6	M	M	0,006	0,014	0,096	3,09	4,69	7,97	3,18	4,84	8,25	**658,80**	199363	**0,0033**
GS6MH*	6	M	H	0,006	0,014	0,094	3,28	4,98	8,95	3,25	5,09	9,22	**653,60**	209872	**0,0031**
GS6HM*	6	H	M	0,005	0,025	0,112	1,01	2,4	3,87	1,57	2,87	3,9	**820,20**	94885	**0,0086**
GS6HH*	6	H	H	0,004	0,024	0,11	1,01	2,45	3,99	1,82	3,55	4,93	**765,60**	107242	**0,0071**
GS8MM*	8	M	M	0,007	0,019	0,102	3,59	5,83	9,27	3,68	6,02	9,59	**780,20**	236827	**0,0033**
GS8MH*	8	M	H	0,007	0,019	0,1	3,88	6,27	10,4	3,8	6,39	10,69	**775,00**	252066	**0,0031**
GS8HM*	8	H	M	0,005	0,033	0,12	1,32	3,05	4,55	2,07	3,68	4,76	**953,80**	122221	**0,0078**
GS8HH*	8	H	H	0,005	0,032	0,119	1,35	3,12	4,72	2,41	4,49	5,92	**937,10**	138254	**0,0068**