Environmental Product Declaration

In accordance with ISO 14025:2017 and
EN 15804:2012+A2:2019/AC:2021 for:

JUST 32
for MOVE IT 25/25 S

from XAL GmbH

Programme:
The International EPD® System
www.environdec.com

Programme operator:
EPD International AB

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05.06.2029

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

EPD®
THE INTERNATIONAL EPD® SYSTEM

ECO PLATFORM
EPD
VERIFIED

General information

Programme information

Programme	The International EPD® System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website	www.environdec.com
E-mail	info@environdec.com

Product category rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
PCR 2019:14 version 1.3.3. Construction products, valid until 2024-12-20, UN CPC code(s) – 4653 Lighting Equipment

PCR review was conducted by
The Technical Committee of the International EPD® System

Life Cycle Assessment (LCA) accountability
XAL GmbH, Auer-Welsbach-Gasse 36, 8055 Graz, Austria

Independent third-party verification of the declaration and data, according to ISO 14025:2006

☒ EPD verification by individual verifier

Third party verifier
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Approved by
The International EPD® System

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804:2012+A2:2019/AC:2021, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/declared units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterization factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804:2012+A2:2019/AC:2021 and ISO 14025:2006.

Company information

Owner of the EPD

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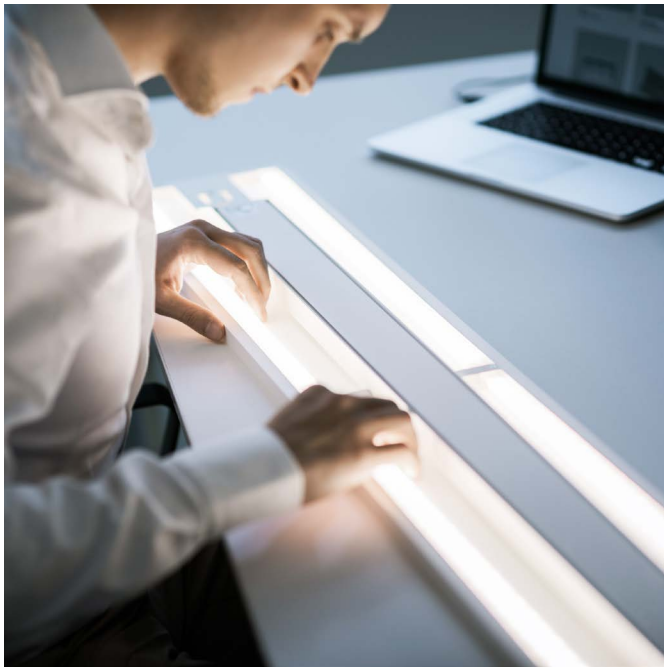


Description of the organisation

XAL is an internationally operating manufacturer of high-end luminaires and lighting solutions for shop, office, hotel and residential lighting. For 30 years, XAL has been working with lighting designers, architects and planners to develop custom luminaires of the highest technical standard, with a focus on style and aesthetics. While XAL mainly targets B2B costumers, we also provide our standard portfolio to B2C costumers.

With its headquarters in Graz, Austria, the XAL Group currently employs 1300 people worldwide and has 30 international subsidiaries. We are continuously working on further improving our products – whether in terms of durability, efficiency, the carbon footprint, or also with regard to the replaceability and reusability of components and materials.

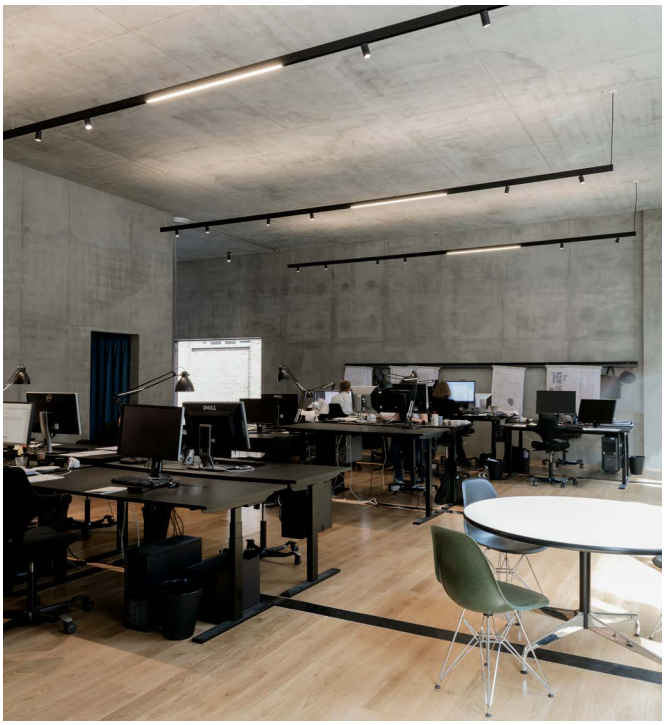
Product-related or management system-related certifications

XAL is certified according to several management and CSR standards.

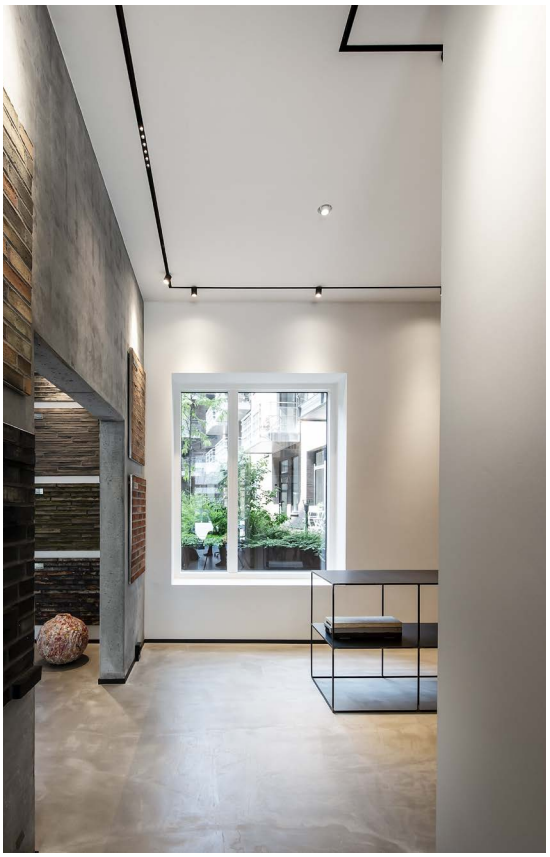
- **ISO 9001** – Quality management systems
- **ISO 14001** – Environmental management systems
- **ISO 45001** – Occupational health and safety management systems
- **Ecovadis** – regular evaluation of our corporate social responsibility based on objective criteria with a focus on the environment, labour and human rights, ethics and responsible procurement.
- **UN Global Compact initiative** – our interactions with each other and our stakeholders, our supply chain management and our resource strategies are guided by the principles of the UN Global compact.

Name and location of production site(s):
The production sites are located in Murska Sobota (XAL Svetila d.o.o., Slovenia) and in Graz (XAL GmbH, Austria)

More information
xal.com



Product name
JUST 32 for MOVE IT 25 / 25 S



Product identification

The JUST insets are held in place by magnetic force along the entire track. No tools are needed for installation. They offer the flexibility to be rotated, slid into various positions, and adjusted at any time. This innovative technology is implemented in both spotlights and suspended luminaires. The installation process remains tool-free, allowing for safe release and adjustment of spots, which can then be securely clicked back into place.

Product information

Product description

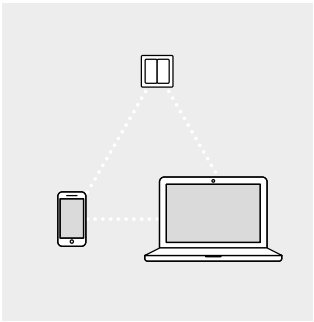
Cylindrical spotlight made of aluminium; spotlight can be installed and moved without tools by means of magnetic holders+locking; spotlight head rotates 360° and tilts 90°; surface powder coated; COB (Chip on Board) technology for maximum efficiency; no multiple shadows; energy-efficient LEDs with very good colour rendering; good glare reduction due to recessed light point plane; incl. high quality plano-convex glass lens; precise object focusing through adjustable lens; adjustable beam angle of 17-43°; focusing by means of patented slider on the spotlight head; optical attachments available as accessories; hot plug protection, DALI single control.

Technical product information

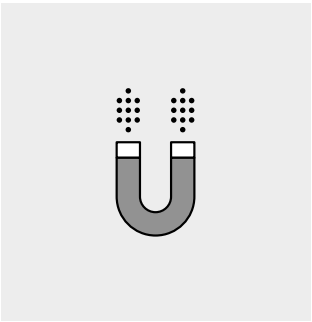
Round or square recessed spotlight; installation without tools in mounting set with ball plunger system; surface matt silver, white, black, copper or gold; with trim; choice of ADJUSTABLE 360° rotatable and 30° tiltable) and DOWNLIGHT with fixed symmetric (360° rotatable) light emission characteristic; variants with symmetric light emission characteristic (UGR ≤ 16) with 3 different beam angles – precise due to high quality lens system; passive cooling of LEDs with optimised heat sink geometry; COB (Chip on Board) technology for maximum efficiency; no multiple shadows; efficient LEDs with very good colour rendering; binning initial ≤ 2 MacAdam; light colour 2700 K, 3000 K or 4000 K; CRI ≥ 90; L80 / 50000 h; degree of protection from below IP 20, IP 40 or IP 44 (from above IP 20); PC II (power supply) or PC III (spotlights); either non dimmable, 1-10V dimmable or DALI-2 control.

The products covered by this EPD are not only thoroughly tested in our externally accredited in-house facilities but are also third-party tested: CB and ENEC are available.

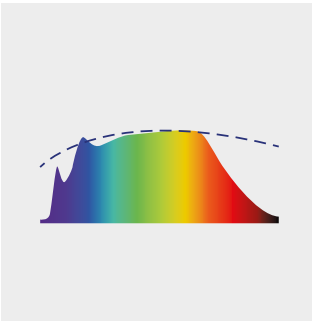
UN CPC code:
- UN CPC Version 2.1
- 4653 – Lighting Equipment



Control Options
Easy control of the luminaires



Magnetic Mounting
Installation and assembly are quick and easy



Full spectrum LED
Healthy and eye-friendly light

LCA information

Declared unit

The declared unit is one piece of the JUST 32 including the LED-Converter. The JUST 32 is used for the MOVE IT TRACK 25 / 25 S. The weight of the product per declared unit is 0,364 kg.

For better comparison with other types of luminaires, conversion factors are also available to convert the results to 1000 lumens during a reference lifetime of 35000 hours. The conversion factors are available under „Additional environmental information“.

The principles of “Modularity” and “Polluter Pay” have been followed.

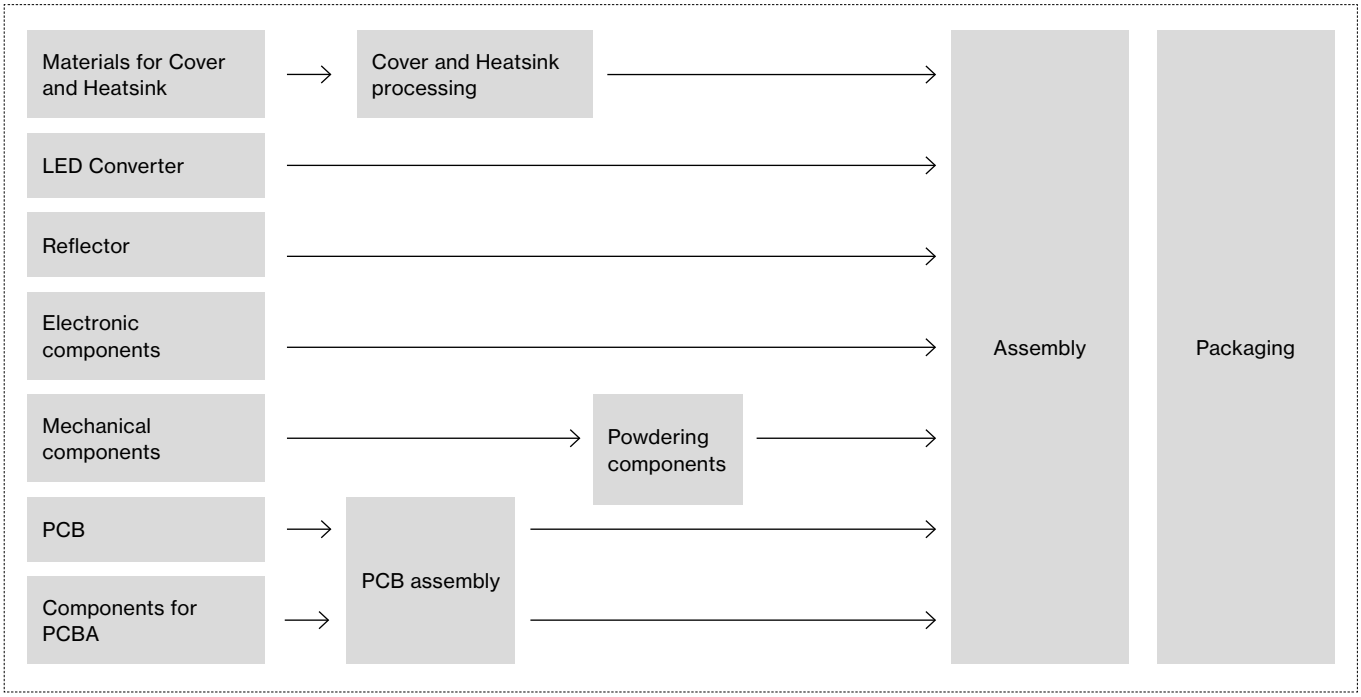
Reference service life
13.25 years

Time representativeness
2023

Database(s) and LCA software used
LCA for Experts 10.7.1.28

Description of system boundaries
Cradle to gate with options: modules A1–A3, C1–C4, D and optional modules A4, A5 and B6.

System diagram



Product stage (A1–A3)

Raw materials are found in the components used for the luminaire production. The raw materials and the necessary process steps have been modelled using LCA for Experts. Turning of the Cover and the Heatsink and Population of the PCBA is done in Graz, Austria. The components are then supplied to Murska Sobota, Slovenia where components for the Heatsink, PCB Carrier and Hinge Joint are powdered, and the final assembly of the luminaire is done. The corresponding electricity mix has been used for all manufacturing steps. Transportation of all the components is incorporated. For the components which are delivered from China, aggregated data has been used, since transportation involved various routes and transport vehicles. Packaging for the components has been accounted for using a worst-case approach. The ESD-packaging is reused one time within the company, therefore only ½ of the weight is taken into account for the production and the recycling.

Transport to building (A4)

Transport is modelled for countries where the sales share is more than > 4 % and modelled to the capital cities (Berlin, Zurich, Copenhagen, London, Vienna, Rome and Stockholm).

Weighted distance	1087,5 km
Truck used	Class EURO 6, 26 – 28 t
Fuel type	Diesel (0,00287 l / 100 km)

Installation into building (A5)

No emissions occur during the installation. This module includes the waste treatment of the packaging. For the transport-packaging, the euro pallet is reused 36 times, therefore only 1/36 of the weight is taken into account for the production and the end of life of the pallet.

Packaging Waste	Weight (kg)
Cardboard	0,2324
Polyethylene film	0,0038
Wooden pallet	0,0026

Use phase (B6)

Electricity consumption during the use stage is modelled based on the technical parameters of the luminaires and is representative for a weighted average of the following applications – office (60 %), hotel (15 %), restaurant (15 %), and retail (10 %). Geography of the electricity mix is modelled by sales shares and is representative for European countries (92.33 % – EU-28) and rest of world countries (7.67 %). For the rest of world countries, an electricity mix for China is used following a worst-case approach.

The energy consumption is calculated using the formula from EN 15193:2007
Energy consumption [kWh] = {Pa x FCP x FO x (FD x tD + FN x tN) + Pp x ty} x 1/1.000 x a

The results are presented in the „Additional environmental information“ chapter.

End-of-life stage (C1 – C4)

The JUST32 is presumed to be decomposed manually, therefore no emissions should occur. For the corresponding waste destinations, the following distances are used:
- To recycling facility – 250 km
- To incineration facility – 50 km
- To landfill – 100 km for metal and electronic parts, 20 km for plastic parts and packaging waste

Based on official statistics and literature, waste treatment options are taken into account for Europe and rest of the world countries.

Modul D

According to the guidelines of EN 15804+A2 and the PCR from EPD International, calculations are made for Module D. The loads and benefits result from the export of secondary materials and the energy which comes from incineration and landfilling. In Module D also the benefits from the product packaging waste are included.

Cut-off rules

Consistent with the PCR, a minimum of 95 % of total inflows (mass and energy) are included. In addition, materials and processes with insignificant contributions of less than 1% are also included. For the use and end-of-life stage, scenarios are used, factoring in geographical conditions (such as electricity mix) and applications (waste treatment practices).

The following processes have been excluded
- Manufacture of equipment used in production, buildings or any other capital goods
- The transportation of personnel to the plant
- Transportation of personnel within the plant
- Research and development activities
- Long-term emissions

Data quality

Based on site specific information, this LCA study reflects the production for 2022. Components are supplied by external vendors, therefore manufacturing processes are modelled using LCA for Experts, with the best fitting representative geographical conditions and applications.

Electricity grid

For the manufacturing in Graz, Austria, the corresponding electricity grid mix as stated on the invoice is used: Hydro (87.3 %), Wind (8.4 %), Solar (2 %), Biomass (1.4 %), other RE (0.9 %). Since only renewable energy is used, the climate impact for CO_2 emissions is 0.

For Murska Sobota, Slovenia, the corresponding electricity grid mix is 100 % Hydro.

Environmental impact of the electricity used in AUT and SLO	
CO_2 Emissions (g/kWh)	0,00
Radioactive waste (mg/kWh)	0,00

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results)

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stagered
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Geography	GLO	GLO	AUT, SLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used		90 %				-	-	-	-	-	-	-	-	-	-	-	-
Variation – products		-				-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites		-				-	-	-	-	-	-	-	-	-	-	-	-
Acronyms	GLO = Global | AUT = Austria | SLO = Slovenia																

Content information

Product components	**Weight, kg**	**Weight - % (versus total weight)**	**Post - consumer material, weight - %**	**Biogenic material, weight - % and kg C / kg**
Aluminum	1,68E - 01	46,22 %	0,00 %	0,00E + 00
Polycarbonate	4,45E - 02	12,22 %	0,00 %	0,00E + 00
Zinc in alloy	2,60E - 02	7,14 %	0,00 %	0,00E + 00
Steel	2,13E - 02	5,85 %	76,80 %*	0,00E + 00
Copper	1,37E - 02	3,77 %	0,00 %	0,00E + 00
Ferrites	1,07E - 02	2,93 %	0,00 %	0,00E + 00
Epoxy resin	1,04E - 02	2,86 %	0,00 %	0,00E + 00
Silicone	1,01E - 02	2,76 %	0,00 %	0,00E + 00
Polyester	9,00E - 03	2,47 %	0,00 %	0,00E + 00
Glass fibers	8,94E - 03	2,45 %	0,00 %	0,00E + 00
Copper in alloy	5,54E - 03	1,52 %	0,00 %	0,00E + 00
Nickel	4,25E - 03	1,17 %	0,00 %	0,00E + 00
Tin	3,50E - 03	0,96 %	0,00 %	0,00E + 00
TOTAL	**3,64E - 01**	**100,00 %**	**10,71 %**	**0,10 %**

*No primary data on the share of secondary materials have been collected for the product. However, the LCI datasets used, contain market-standard recycled content rates.

Packaging materials	**Weight, kg**	**Weight - % (versus the product)**	**Weight biogenic carbon, kg C / kg**
Paper	1,23E - 02	3,37 %	6,76E - 03
PET	3,30E - 04	0,09 %	
Cardboard	1,07E - 01	29,26 %	1,03E - 01
TOTAL	**1,19E - 01**	**32,73 %**	**30,08 %**

The products do not contain any REACH and RoHS SVHC substances in amounts greater than 0.1 % (1000 ppm).

Results of the environmental performance indicators

Mandatory impact category indicators according to EN 15804

Indicator	Unit	Tot. A1 – A3	A4	A5	Tot. B1 – B5	B6	B7	C1	C2	C3	C4	D
GWP – fossil	kg CO_2 eq.	1,37E+01	7,53E-02	1,14E-02	0,00E+00	1,08E+02	0,00E+00	0,00E+00	7,39E-03	1,83E-01	4,52E-03	-2,68E+00
GWP – biogenic	kg CO_2 eq.	-6,45E-01	0,00E+00	6,44E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,22E-03
GWP – luluc	kg CO_2 eq.	5,67E-03	7,11E-04	4,99E-05	0,00E+00	2,23E-02	0,00E+00	0,00E+00	6,86E-05	3,43E-06	6,75E-06	-4,55E-04
GWP – total	**kg CO_2 eq.**	**1,31E+01**	**7,53E-02**	**6,55E-01**	**0,00E+00**	**1,08E+02**	0,00E+00	**0,00E+00**	**7,39E-03**	**1,83E-01**	**4,52E-03**	**-2,68E+00**
ODP	kg CFC 11 eq.	1,72E-10	6,72E-15	1,31E-14	0,00E+00	1,94E-09	0,00E+00	0,00E+00	6,48E-16	1,33E-13	9,31E-15	-2,33E-12
AP	mol H+ eq.	6,28E-02	1,10E-04	2,81E-05	0,00E+00	3,53E-01	0,00E+00	0,00E+00	1,06E-05	5,01E-05	2,45E-05	-1,32E-02
EP – freshwater	kg P eq.	8,10E-05	2,80E-07	2,27E-07	0,00E+00	3,88E-04	0,00E+00	0,00E+00	2,70E-08	3,09E-08	6,14E-09	-8,09E-07
EP – marine	kg N eq.	1,08E-02	4,05E-05	1,24E-05	0,00E+00	6,38E-02	0,00E+00	0,00E+00	3,91E-06	1,50E-05	6,24E-06	-1,65E-03
EP – terrestrial	mol N eq.	1,16E-01	4,81E-04	1,19E-04	0,00E+00	6,75E-01	0,00E+00	0,00E+00	4,63E-05	2,29E-04	6,86E-05	-1,81E-02
POCP	kg NMVOC eq.	3,22E-02	9,64E-05	3,66E-05	0,00E+00	1,78E-01	0,00E+00	0,00E+00	9,30E-06	3,99E-05	1,91E-05	-5,04E-03
ADP – minerals & metals*	kg Sb eq.	7,30E-04	4,99E-09	4,69E-10	0,00E+00	1,91E-05	0,00E+00	0,00E+00	4,81E-10	1,78E-09	3,17E-10	-1,15E-04
ADP – fossil*	MJ	1,79E+02	1,04E+00	1,15E-01	0,00E+00	2,09E+03	0,00E+00	0,00E+00	1,01E-01	1,65E-01	6,34E-02	-3,69E+01
WDP*	m^3	3,08E+00	8,85E-04	5,02E-03	0,00E+00	2,35E+01	0,00E+00	0,00E+00	8,53E-05	2,04E-02	2,53E-04	-1,73E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption											

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Additional mandatory and voluntary impact category indicators

Indicator	Unit	Tot. A1 – A3	A4	A5	Tot. B1 – B5	B6	B7	C1	C2	C3	C4	D
GWP – GHG[1]	kg CO_2 eq.	1,24E+01	7,53E-02	1,14E-02	0,00E+00	1,08E+02	0,00E+00	0,00E+00	7,39E-03	1,83E-01	4,52E-03	-2,68E+00
PM	disese inc.	8,67E-07	8,86E-10	2,08E-10	0,00E+00	3,43E-06	0,00E+00	0,00E+00	8,55E-11	5,39E-10	2,92E-10	-1,25E-07
IRP – HE**	kg U235-EQ	1,35E+00	1,95E-04	3,03E-04	0,00E+00	2,80E+01	0,00E+00	0,00E+00	1,88E-05	2,36E-03	9,29E-05	-5,40E-01
ETP – fw*	CTUe	6,42E+01	7,35E-01	7,54E-02	0,00E+00	4,98E+02	0,00E+00	0,00E+00	7,09E-02	5,67E-02	2,76E-02	-8,72E+00
HTP – c*	CTUh	1,07E-08	1,48E-11	2,53E-12	0,00E+00	3,73E-08	0,00E+00	0,00E+00	1,43E-12	4,77E-12	3,91E-12	-1,14E-09
HTP – nc*	CTUh	2,07E-07	6,55E-10	1,83E-10	0,00E+00	5,36E-07	0,00E+00	0,00E+00	6,31E-11	2,86E-10	4,05E-10	-3,06E-08
SQP	dimension-less	3,97E+01	4,36E-01	3,75E-02	0,00E+00	8,79E+02	0,00E+00	0,00E+00	4,20E-02	5,83E-02	9,75E-03	5,85E+01
Acronyms	PM = particulate matter emissions. IRP-HE = ionizing radiation potential-human exposure. ETP-fw = ecotoxicity (freshwater). HTP-c = human toxicity potential. cancer effects. HTP-nc = human toxicity potential. non-cancer effects. SQP = land use related impacts.											

[1] The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Results of the environmental performance indicators

Resource use indicators

Indicator	Unit	Tot. A1–A3	A4	A5	Tot. B1 – B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	5,58E+01	7,39E-02	1,36E-02	0,00E+00	1,35E+03	0,00E+00	0,00E+00	7,13E-03	7,68E-02	7,71E-03	-3,32E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	5,58E+01	7,39E-02	1,36E-02	0,00E+00	1,35E+03	0,00E+00	0,00E+00	7,13E-03	7,68E-02	7,71E-03	-3,32E+00
PENRE	MJ	1,79E+02	1,05E+00	1,16E-01	0,00E+00	2,09E+03	0,00E+00	0,00E+00	1,01E-01	1,65E-01	6,34E-02	-3,69E+01
PENRM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,79E+02	1,05E+00	1,16E-01	0,00E+00	2,09E+03	0,00E+00	0,00E+00	1,01E-01	1,65E-01	6,34E-02	-3,69E+01
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	1,19E-01	8,14E-05	1,24E-04	0,00E+00	7,18E-01	0,00E+00	0,00E+00	7,85E-06	5,04E-04	8,83E-06	-2,42E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water											

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

Waste indicators

Indicator	Unit	Tot. A1–A3	A4	A5	Tot. B1 – B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1,99E-06	3,87E-12	2,51E-12	0,00E+00	-1,87E-07	0,00E+00	0,00E+00	3,73E-13	-3,65E-13	4,19E-12	-2,11E-08
Non-hazard-ous waste disposed	kg	1,62E+00	1,51E-04	2,00E-02	0,00E+00	1,80E+00	0,00E+00	0,00E+00	1,45E-05	2,06E-02	2,14E-01	-5,67E-01
Radioactive waste disposed	kg	8,41E-03	1,35E-06	1,90E-06	0,00E+00	3,01E-01	0,00E+00	0,00E+00	1,31E-07	1,55E-05	7,21E-07	-2,47E-03

Output flow indicators

Indicator	Unit	Tot. A1–A3	A4	A5	Tot. B1 – 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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	4,96E-02	0,00E+00	1,99E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,31E-01
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,68E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,28E-02	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Biogenic carbon content information

Note 1 kg of biogenic carbon is equivalent to 44/12 kg CO_2

Biogenic carbon content	Unit	Quantity
Biogenic carbon content in the product	kg C	3,33E-04
Biogenic carbon content in the packaging	kg C	1,76E-01

Additional environmental information

Reference service life (per application)

Office	Hospital	Hotel	Restaurant	Retail
60	0	15	15	10

Use phase (B6)

Scenario	JUST 32	Unit
Electricity use (13.25 years)	318,85	kWh
Active power	7,14	W
Passive power	0,20	w
Total active time	41 406,25	hours
Total passive time	74 663,75	hours
Dimmable	non-dimmable, DALI-2 control	-
Presence control	No	-

End-of-Life (C1–C4)

Scenario	JUST 32	Unit
Collected separately	0,364	kg
Collected with mixed (construction) waste	0	kg
For reuse	0	kg
For recycling	0,146	kg
For energy recovery	0,050	kg
For final disposal	0,166	kg

Module D

Scenario (contributing materials, incl. packaging)	JUST 32	Unit
Materials for recycling	3,44E-01	kg
Materials for export of secondary fuels	0	kg
Materials for incineration	7,28E-02	kg
Materials for landfilling	1,90E-01	kg

Results for 1,000 lumens during a reference life of 35,000 hours produced by 1 JUST 32 luminaire
A conversion factor can be used for converting the results to 1000 lumens during a reference life of 35000 hours.

	A1–A3: Production	A4: Transport	A5: Installation	B6: Use stage	C1–C4: End of life	D: Resource - recovery
Conversion factor	2,72	2,72	2,72	2,30	2,72	2,72

Information related to the sectorial EPD

This EPD is not sectoral.

Differences from previous versions

This is the first version of the EPD.

References

General Programme Instructions of the International EPD® System. Version 4.0.

Product category rules (PCR) 2019:14 Construction products version 1.3.3., 2024, The EPD International, 2024

EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products.

EN 15193-1:2021 Energy performance of buildings – Energy requirements for lighting

ISO 14025:2006 - Environmental labels and declarations - Type III environmental declarations - Principles and procedures

ISO 14040:2021 Environmental management – Life cycle assessment – Principles and framework

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LCA for Experts 10.7.1.28

Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE)

European court of auditors, EU actions and existing challenges on electronic waste, Review No. 4, 2021

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