Environmental Product Declaration

In accordance with ISO 14025 for:

Spider

Irreversible Electromechanical Gearmotor for Residential Garage Doors (up to 1200 N)

From:
Nice S.p.A.

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0011928
Version:	Version 3
Publication date:	2024-02-08
Updated:	2025-07-25
Valid until:	2029-02-07

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

Company information

True freedom is an open world.

This is the aspiration, the *vision* of Nice, a global leader in the **Home Management Solutions**.

A *mission* that aims to improve people's quality of life by **simplifying the everyday**, while making experiences enjoyable and places more sustainable.

The Nice world

Founded in 1993 in Oderzo (Treviso) by Lauro Buoro, current Chairman, Nice designs, manufactures and commercialises integrated and connected solutions for applications in residential, commercial and industrial contexts, in the field of:

- Gates and Barriers
- Doors & Industrial Doors
- Sun Shading
- Smart Home
- Audio/Video and Power Management
- Smart Security

Today Nice count on an organization of more than 2,000 people on 5 continents, with a rich background of competences and different cultures, as well as 15 R&D centers (Italy, Germany, Poland, Brazil, USA, South Africa, Canada, China, Australia) and 15 production plants (Germany, Italy, Poland, Brazil, USA, Australia, South Africa and Canada) serving its partners and customers in over 100 countries worldwide.

Thanks to its global presence, Nice contributes to promoting the excellence, style and know-how of *Made in Italy* in the world with the high quality of its Home Automation solutions: products that skilfully combine technology, design, innovation and ease of use.

The value of Sustainability – Nice*Love*Earth

For Nice sustainability means ensuring comfort and wellbeing, simplifying people's daily gestures, thanks to the quality and advanced technology of its products, which reduce the environmental impact of living spaces.

For people

Nice is actively committed to improving people's quality of life, making it more sustainable, by creating connected, comfortable, secure and sustainable spaces. Wellbeing and safety are top priorities for Nice, through solutions that optimize the management of natural light and heat, ensure air quality, and provide intelligent heating, cooling and humidity control. Nice also guarantees the protection and safety of its employees and all stakeholders in its value chain by selecting suppliers that meet defined social standards and ensure respect for the fundamental rights of workers.

For products

Nice is committed to lowering the environmental impact of its products, following ecodesign principles, reducing the energy consumption of home automations and using recycled materials. The packaging of the products is made of natural cardboard, 100% recyclable, all plastic parts have been removed and instructions are available in digital format. Furthermore, in a circular economy perspective, Nice works to limit the production of industrial waste, encouraging recovery systems.

For buildings

Nice technology makes life for individuals and communities more connected, easier and safer, ensuring greater well-being inside buildings. The application of Nice solutions contributes to making buildings sustainable, minimising the environmental impact of our homes, promoting energy efficiency through intelligent control of heating, cooling, lighting and monitoring of electrical loads to reduce consumption. Nice is a facilitator of simple daily gestures that can have a great impact on the entire planet and encourage the green evolution of buildings.

NiceLoveEarth

Product information

Spider is a 24 Vdc irreversible electromechanical gear motor for residential use. It is suitable for installations on sectional doors. The product was also designed with built-in WiFi, in this way, it links with Yubii, a single ecosystem to connect, simplify and control all home automations. Besides, thanks to the WiFi technology, Spider can be easily programmed via the MyNice Pro App. The product is equipped with a built-in anti-intrusion system to detect forced opening of the garage door and an Eye check system to monitor automation status at all times.

This EPD refers to the following products:

- Spider800 and Spider800 Wifi: It is suitable for installations on sectional doors up to 11,5 sq. m and up-and-over doors up to 12,6 sq. m.
- Spider1200: It is suitable for installations on sectional doors up to 16,9 sq. m and up-and-over doors up to 19,5 sq. m. It is equipped with a Brushless motor designed for intensive use (up to 150 cycles per day).

The functional unit is a motor that can provide a mechanical power rating of 10 W for moving an object. Mechanical power is calculated as torque per speed in gearmotors for angular movements.

TECHNICAL INFORMATION	U.M.	Spider 800	Spider 800 + Wifi	Spider 1200 + Wifi
Nominal Force	N	400	400	600
Nominal velocity	m/s	0,2	0,2	0,2
Electric power assimilated in the motion phase	W	145	147	192
Electric power assimilated in the stand-by phase	W	1	2	2

TECHNICAL INFORMATION	U.M.	Spider 800	Spider 800 + Wifi	Spider 1200 + Wifi
Time for performing one operating cycle	s	30,0	30,0	37,5
Number of cycles per day*	N	8	8	50
Reference service life	Y	10	10	10

*The complete opening and closing of an application.

The presence of the different materials in the average product is reported below; :

MATERIALS	PERCENTAGE
Metals	74,7%
Plastic	19,8%
Circuit boards	2,9%
Cables and connectors	2,2%
Other	0,4%

The products do not contain any of the substances of very high concern (SVHC) regulated by the Regulation (EC) No 1907/2006 (REACH) or the Regulation (EC) No 1272/2008 of European parliament.

Nice Green Products, with specific technological innovations or materials that permit **energy efficency of the buildings** and a **low impact on the environment.**

Methodology

Inventory analysis was conducted using specific data from Nice S.p.A., relating to the year 2025 and to the production site "Nice 3". The data refer to the consumption of raw materials and electricity, the production of the gearmotor and the waste connected to it.

Selected generic data from international databases were used (in particular SimaPro 9.6.0.1 and Ecoinvent 3.10) regarding the production processes of raw materials and auxiliary materials used for the gearmotor production, generation and distribution of electricity, means of transport and waste treatment processes related to the production that takes place in the Nice plant. In the reference year, Nice used 100% renewable energy in its facilities.

Data on ground transportation distances were calculated using the Google Maps online calculator and those by sea using the Searates online tool.

The calculation method adopted for the LCA study reported in this EPD is described in the document "GPI for an International EPD® System" version 3.0, while the characterization factors, used to convert the data deriving from the inventory analysis of the life cycle in impact categories, are described in the reported at www.environdec.com.

LCA information

Functional Unit

Following the indications of the PCR 2019:11 version 1.0.3, the functional unit for the life cycle is represented by a drive capable of assure a rated output equal to 10 W for the movement of an object.

The complete use phase has been calculated during the service life of 10 years, as defined in the Product Category Rules (PCR) 2019:11.

System borders

The present study is defined "from-cradle-to-grave", therefore the life cycle of the product for automation under study is subdivided into Upstream, Core and Downstream phases. The EPD only refers to the gear motor and no other components that can be necessary for the movement of an automation (transmitters, sensors, tracks or other accessories).

Upstream phase includes the production of all the materials (raw and auxiliary) that enter the production process, as detailed below:

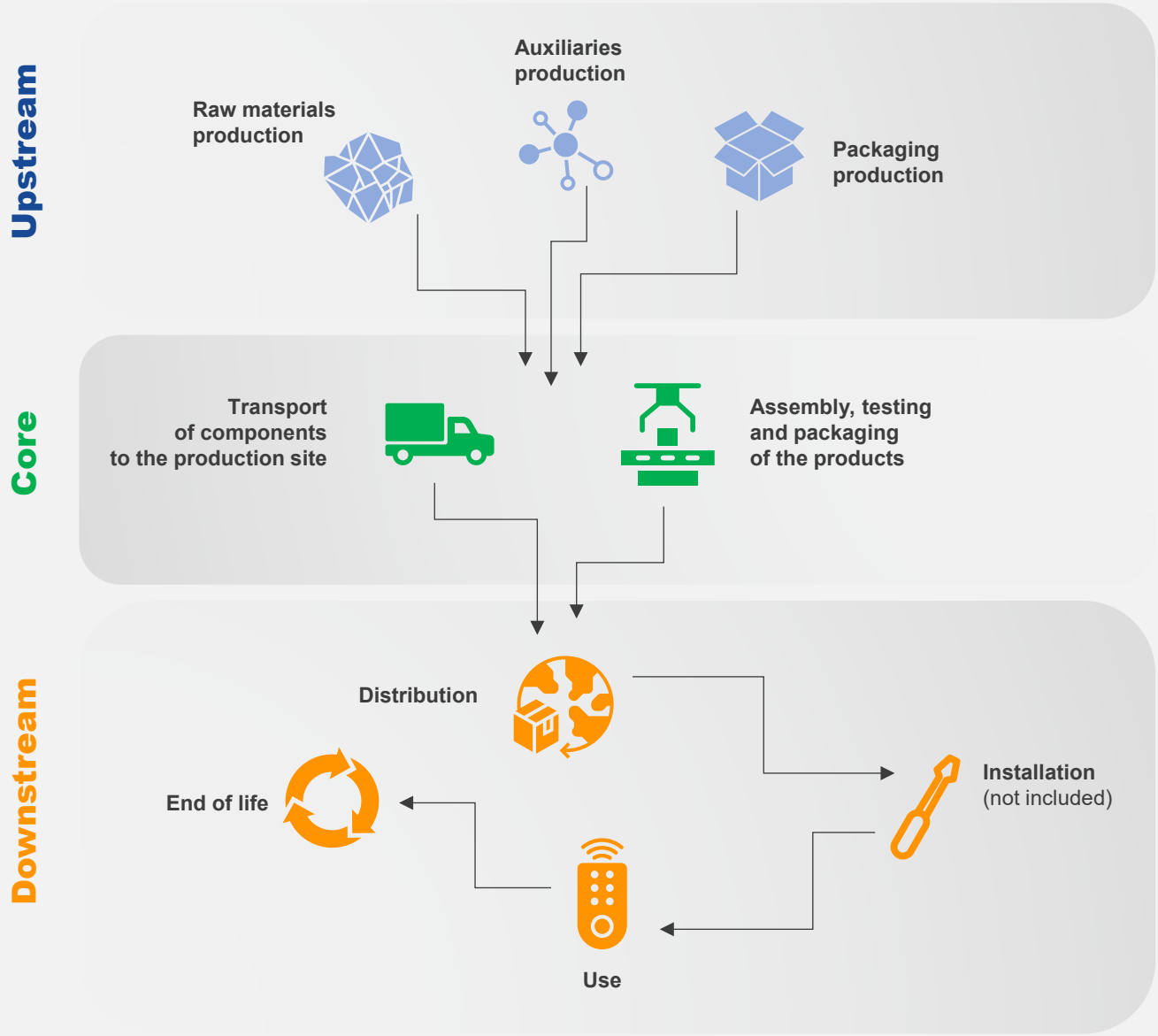
- operations of extraction, transport and treatment of resources;
- the production of raw materials (components) that make up the product, including their packaging;
- the production of auxiliary for the assembly, printing and lubrication materials;
- packaging production;
- the production of electricity and fuels used at the companies that produce the materials described in the previous points.

Core phase includes the following processes, which are associated with transport and processing that combine to create the finished product:

- transport of materials from the place of production to the manufacturing site. The specific transport of every component has been calculated; for the suppliers of Nice's suppliers, an estimated distance of 100 km has been applied.
- consumption of electricity for product assembly;
- storage and packaging;
- treatment of waste produced during manufacture;

Finally, the Downstream phase includes the following processes, which take place outside the plant and involve the finished product:

- transport from production site to the final retailer, estimated from the products that will be substituted on the market;
- use of the product (throughout its reference service life);
- Substitution of pieces during the RSL (production and end-of-life of substituted items);
- end-of-life of the product after use;
- end-of-life of packaging after use.



Data quality and cut-off

In accordance with the cut-off rule, flows less than 1% of the total inventory were excluded, i.e.:

- construction of company plants and processing machinery (with a life of more than three years);
- staff travel and home-work transfers;
- research and development activities;
- the materials necessary for cleaning the machinery;
- product installation and its maintenance.

Energy consumption calculation:

Based on the technical information regarding the product, energy consumption in the use phase has been calculated as follow:

$$\text{Consumption } [kWh/y] = \left[\left(\frac{P_m}{1000} \times t_m\right) + \left(\frac{P_s}{1000} \times t_s\right)\right] \times 24 \times 365$$

Where:

Pm = electric power assimilated in the motion phase [W]

tm = motion ratio [%]

Ps = electric power assimilated in the stand-by phase [W]

ts = stand-by ratio [%]

Motion ratio is a measure of the period the gear motor spends applying force/torque to move an object, i. e. an automation system. It has been calculated as

$$t_m = \frac{T \times C}{3600 \times 24}$$

Where:

T = time for performing one operating cycle [seconds]

C = number of cycles per day [number]

For this product, the calculation has been integrated with assumptions from the gear motor's designers, resulting in a motion ratio equal to 0.28% for SPIDER 800 and SPIDER 800wifi and 2.17% for SPIDER 1200.

Stand-by ratio has been therefore calculated as:

$$t_s = 1 - t_m$$

The presented formula refers to the electricity that the product consumes in one year (kWh/y); the complete use phase has been therefore calculated for the service life of 10 years (PCR 2019:11).

EPD validity

This EPD is valid globally and has a validity of 5 years starting from the approval date.

Environmental performance

In order to reach the results reported below, the most recent databases on the production of materials, the production cycles in the metallurgical and chemical sector, transports and energy systems were used (Sphera and Ecoinvent).

The impact categories are:

- Global warming potential (GWP)
- Acidification potential (AP)
- Eutrophication potential (EP) freshwater, marine and terrestrial
- Photochemical oxidant formation potential (POFP)
- Abiotic depletion potential – Elements
- Abiotic depletion potential – Fossil resources
- Water scarcity potential
- Use of resources

SPIDER 800 PRODUCT RESULT

Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Global warming potential (GWP)	Fossil	kg CO_2 eq.	5,85E+00	6,89E-02	1,12E+00	6,89E+00	1,39E+01
	Biogenic	kg CO_2 eq.	3,20E-02	1,40E-03	2,16E-04	1,07E-02	4,43E-02
	Land use and land transformation	kg CO_2 eq.	9,34E-03	3,82E-06	9,34E-05	2,78E-02	3,73E-02
	TOTAL	**kg CO_2 eq.**	5,89E+00	7,03E-02	1,12E+00	6,93E+00	1,40E+01
Acidification potential (AP)		mol H+ eq.	8,42E-02	1,17E-03	1,29E-03	4,63E-02	1,33E-01
Eutrophication potential (EP) - freshwater		kg P eq.	7,99E-03	1,74E-06	2,86E-05	7,08E-03	1,51E-02
Eutrophication potential (EP) - marine		kg N eq.	8,30E-03	3,06E-04	4,64E-04	6,68E-03	1,58E-02
Eutrophication potential (EP) - terrestrial		mol N eq.	9,40E-02	3,41E-03	4,56E-03	5,92E-02	1,61E-01
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	2,97E-02	9,57E-04	1,28E-03	1,97E-02	5,16E-02
Ozone depletion (ODP)		kg CFC-11 eq.	1,34E-07	1,20E-09	1,83E-09	7,43E-08	2,11E-07
Abiotic depletion potential – Elements*		kg Sb eq.	1,31E-03	1,17E-09	1,66E-08	9,85E-05	1,41E-03
Abiotic depletion potential – Fossil resourses*		MJ	8,36E+01	8,63E-01	1,92E+00	8,77E+01	1,74E+02
Water scarcity potential*		m^3 eq.	1,36E+00	1,13E-02	2,04E-02	1,69E+00	3,08E+00

*The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.
NOTE: No significant aircraft GHG emissions have been detected in life cycle of the gear motor.

Use of resources – SPIDER 800

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Primary energy resources Renewable	Use as energy carrier	MJ	9,69E+00	5,37E-02	1,28E-01	2,00E+01	2,98E+01
	Used as raw materials	MJ	6,98E-02	-4,22E-04	-6,93E-02	0,00E+00	6,83E-05
	TOTAL	MJ	9,76E+00	5,33E-02	5,88E-02	2,00E+01	2,98E+01
Primary energy resources Non-renewable	Use as energy carrier	MJ	8,29E+01	1,25E+00	1,93E+00	8,77E+01	1,74E+02
	Used as raw materials	MJ	4,00E-01	-3,85E-01	-1,50E-02	0,00E+00	-2,78E-17
	TOTAL	MJ	8,33E+01	8,63E-01	1,92E+00	8,77E+01	1,74E+02
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh		m^3	5,29E-07	3,32E-09	7,68E-09	1,87E-07	7,27E-07

SPIDER 800 Wifi PRODUCT RESULT

Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Global warming potential (GWP)	Fossil	kg CO_2 eq.	5,88E+00	6,59E-02	1,37E+00	6,86E+00	1,42E+01
	Biogenic	kg CO_2 eq.	3,20E-02	1,40E-03	3,66E-04	6,73E-03	4,05E-02
	Land use and land transformation	kg CO_2 eq.	9,48E-03	3,78E-06	1,05E-04	1,38E-02	2,34E-02
	TOTAL	**kg CO_2 eq.**	5,93E+00	6,73E-02	1,37E+00	6,88E+00	1,42E+01
Acidification potential (AP)		mol H+ eq.	8,44E-02	1,18E-03	4,96E-03	2,63E-02	1,17E-01
Eutrophication potential (EP) - freshwater		kg P eq.	8,03E-03	1,73E-06	3,78E-05	2,12E-03	1,02E-02
Eutrophication potential (EP) - marine		kg N eq.	8,34E-03	3,04E-04	1,46E-03	5,58E-03	1,57E-02
Eutrophication potential (EP) - terrestrial		mol N eq.	9,44E-02	3,40E-03	1,56E-02	5,90E-02	1,72E-01
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	2,98E-02	9,48E-04	4,36E-03	1,82E-02	5,33E-02
Ozone depletion (ODP)		kg CFC-11 eq.	1,35E-07	1,13E-09	5,22E-09	1,34E-07	2,76E-07
Abiotic depletion potential – Elements*		kg Sb eq.	1,32E-03	1,08E-09	2,97E-08	7,11E-05	1,39E-03
Abiotic depletion potential – Fossil resourses*		MJ	8,40E+01	8,22E-01	5,14E+00	1,59E+02	2,49E+02
Water scarcity potential*		m^3 eq.	1,37E+00	1,13E-02	2,34E-02	1,17E+00	2,57E+00

*The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.
NOTE: No significant aircraft GHG emissions have been detected in life cycle of the gear motor.

Use of resources – SPIDER 800 Wifi

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Primary energy resources Renewable	Use as energy carrier	MJ	9,73E+00	5,36E-02	1,35E-01	3,37E+01	4,36E+01
	Used as raw materials	MJ	7,00E-02	-4,23E-04	-6,94E-02	0,00E+00	1,85E-04
	TOTAL	MJ	9,80E+00	5,32E-02	6,52E-02	3,37E+01	4,36E+01
Primary energy resources Non-renewable	Use as energy carrier	MJ	8,33E+01	1,21E+00	5,16E+00	1,59E+02	2,49E+02
	Used as raw materials	MJ	4,04E-01	-3,85E-01	-1,88E-02	0,00E+00	1,04E-17
	TOTAL	MJ	8,37E+01	8,22E-01	5,14E+00	1,59E+02	2,49E+02
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh		m^3	5,30E-07	3,09E-09	1,87E-08	1,92E-07	7,44E-07

SPIDER 1200 PRODUCT RESULT

Potential environmental impact

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Global warming potential (GWP)	Fossil	kg CO_2 eq.	6,74E+00	9,14E-02	1,33E+00	2,01E+01	2,83E+01
	Biogenic	kg CO_2 eq.	3,13E-02	1,17E-03	2,87E-04	1,82E-02	5,09E-02
	Land use and land transformation	kg CO_2 eq.	1,12E-02	4,22E-06	1,08E-04	4,96E-02	6,09E-02
	TOTAL	**kg CO_2 eq.**	6,78E+00	9,25E-02	1,33E+00	2,02E+01	2,84E+01
Acidification potential (AP)		mol H+ eq.	1,30E-01	1,84E-03	2,43E-03	9,59E-02	2,30E-01
Eutrophication potential (EP) - freshwater		kg P eq.	9,82E-03	1,67E-06	3,55E-05	1,19E-02	2,17E-02
Eutrophication potential (EP) - marine		kg N eq.	1,03E-02	4,74E-04	7,96E-04	1,76E-02	2,92E-02
Eutrophication potential (EP) - terrestrial		mol N eq.	1,20E-01	5,27E-03	8,16E-03	1,69E-01	3,03E-01
Photochemical oxidant formation potential (POFP)		kg NMVOC eq.	3,87E-02	1,45E-03	2,31E-03	5,23E-02	9,48E-02
Ozone depletion (ODP)		kg CFC-11 eq.	1,65E-07	1,55E-09	3,21E-09	3,11E-07	4,81E-07
Abiotic depletion potential – Elements*		kg Sb eq.	1,70E-03	1,38E-09	2,39E-08	6,83E-05	1,77E-03
Abiotic depletion potential – Fossil resourses*		MJ	9,40E+01	1,14E+00	3,29E+00	4,17E+02	5,15E+02
Water scarcity potential*		m^3 eq.	2,05E+00	9,57E-03	2,37E-02	6,90E+00	8,98E+00

*The results of this environmental impact indicator shall be used with care as the uncertainties of the results are high and as there is limited experience with the indicator.
NOTE: No significant aircraft GHG emissions have been detected in life cycle of the gear motor.

Use of resources – SPIDER 1200

PARAMETER		UNIT	Upstream	Core	Downstream		TOTAL
					Distribution + end-of-life	Use phase	
Primary energy resources Renewable	Use as energy carrier	MJ	1,12E+01	4,56E-02	1,48E-01	8,11E+01	9,25E+01
	Used as raw materials	MJ	8,09E-02	-3,44E-04	-8,04E-02	2,28E-01	0,00E+00
	TOTAL	MJ	1,13E+01	4,52E-02	6,73E-02	8,13E+01	9,27E+01
Primary energy resources Non-renewable	Use as energy carrier	MJ	9,32E+01	1,47E+00	3,30E+00	4,17E+02	5,15E+02
	Used as raw materials	MJ	3,34E-01	-3,21E-01	-1,27E-02	5,05E-04	0,00E+00
	TOTAL	MJ	9,35E+01	1,14E+00	3,29E+00	4,17E+02	5,15E+02
Secondary material		kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-renewable secondary fuels		MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Net use of fresh		m^3	6,73E-07	3,89E-09	1,28E-08	4,88E-07	1,18E-06

Additional Information

The gear motor presented in the EPD responds to the CE marking

Differences versus previous version

2024-02-08 Version 1: First publication.

2024-06-26 Version 2: recycled content updated based on new data collected; primary energy indicators have been re-calculated with an optimized method; SimaPro software updated; minor editorial changes.

2025-07-25 Version 3: update of SimaPro software to version 10.2.0.2 and update of the Ecoinvent database to version 3.11; new product added (Spider 800wifi). The BOMs of the products, the use and distribution phases have been reviewed. The primary data from Nice plant have been updated to the year 2024.

Programme information

Programme

The International EPD® System

EPD International AB
Box 210 60
SE-100 31 Stockholm
Sweden

www.environdec.com
info@environdec.com

Product category rules (PCR): 2019:11: AC and DC Gear Motors for Automation Systems, v. 1.0.3

UN CPC 46111 AND 46112

PCR review was conducted by:
The Technical Committee of the International EPD® System. A full list of members available on www.environdec.com. The review panel may be contacted via info@environdec.com.
Chair of the PCR review: Gorka Benito Alonso

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

☒ EPD Process verification

☐ EPD verification

Third party verifier:
DNV Business Assurance Italy Srl

Procedure for follow-up of data during EPD validity involves third party verifier:

☒ No

☐ Yes

References:

- General Programme Instructions of the International EPD® System. Version 5.0.1.
- General Programme Instructions of the International EPD® System. Version 3.01 (for PCR reference).
- PCR 2019:11. Version 1.0.3 - "AC and DC gear motors for automation systems"
- Ambiente Italia S.r.l., Valutazione del ciclo di vita dei prodotti Nice per l'automazione - motori, v. 02 April 2025
- ISO 14040:2006 Environmental management – Life cycle assessment - Principles and Framework
- ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and Guidelines
- Eurostat, http://ec.europa.eu/eurostat/data/database, aggiornamento dati 2020
- Rapporto rifiuti ISPRA 2023, aggiornamento dati 2022
- PCR Guidance-Texts for Building Related Products and Services; Part B: Requirements on the EPD for Automatic doors, automatic gates, and revolving door systems; Version 1.6
- 07/30/14; Institut Bauen and Umwelt e.V.
- Barkmeyer, M., Kaluza, A., Pastewski, N., Thiede, S., & Herrmann, C., 2017. Assessment of end-of-life strategies for automation technology components. Procedia CIRP, 61, 34-39.
- Olivetti, E., Duan, H., & Kirchain, R., 2013. Exploration of carbon footprint of electrical products: guidance document for product attribute to impact algorithm methodology. A publication of the Materials Systems Laboratory, Massachusetts Institute of Technology, Cambridge.

Nice S.p.A.
Marta Gemin
m.gmin@niceforyou.com

Ambiente Italia s.r.l.
Simona Canzanelli
simona.canzanelli@ambienteitalia.it

For more information:
www.niceforyou.com
www.environdec.com