



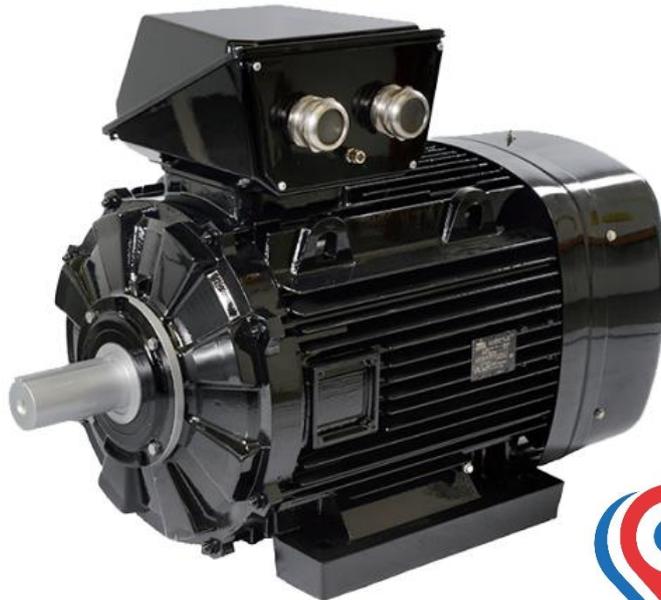
PEP
eco
PASS
PORT®

PEP

Product **E**nvironmental **P**rofile

DYNEO⁺

**Synchronous Reluctance
Permanent Magnet Motors**



**MADE IN
FRANCE**

Nidec
ACIM

LERROY-SOMER™

INFORMATION AND REFERENCES

Registration no.: NMLS-00001-V01.01-FR	Drafting rules: « PCR-ed4-FR-2021_09_06 »
Auditor authorization no.: VH52	Information and references: www.pep-ecopassport.org
Date of issue: 2025-04	Validity: 5 years
Independent verification of the declaration and data, according to ISO 14025:2010 Internal <input type="checkbox"/> External <input checked="" type="checkbox"/>	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)	
PEP are compliant with standards XP C08-100-1:2016 or NF E38-500:2022 Elements of the PEP cannot be compared with elements from another program	
This document complies with ISO 14025:2010 « Environmental labels and declarations – Type III environmental declarations »	

NIDEC CORPORATION ENVIRONMENTAL POLICY

Aware of its social responsibilities and the major issue that ongoing environmental protection represents for humanity, Nidec strives to minimize the environmental burden of its activities for a sustainable development.



1. To reduce environmental burden and prevent global warming, Nidec emphasizes “environmental respect”, “energy efficiency improvement”, and “waste reduction/recycling”.
2. To maintain and continuously improve our environmental performance in accordance with the Nidec Environmental Policy, we aim to identify environmental aspects of our products and operations and implement appropriate pollution prevention practices.
3. Ensure compliance with applicable environmental regulations and other agreed requirements.
4. Set specific environmental objectives and periodically review the effectiveness and suitability of the environmental management system.
5. Identify all tasks necessary to achieve the environmental management system objectives and provide them in the form of documented manuals, rules, and procedures. Furthermore, the environmental policy is communicated to all company personnel and accompanied by appropriate training programs for the implementation team.

COMMITMENT OF MOTEURS LEROY-SOMER

As an industrial company and as a designer and supplier of products and solutions, we are committed to reducing the impact of our activities and products on the environment.



Our approach is particularly based on the ISO 14001 standard framework, and we commit to:

1. Optimize the use of energy and natural resources
2. Maximize waste recovery and recycling
3. Limit the risk of accidental pollution
4. Consider the product life cycle during development projects

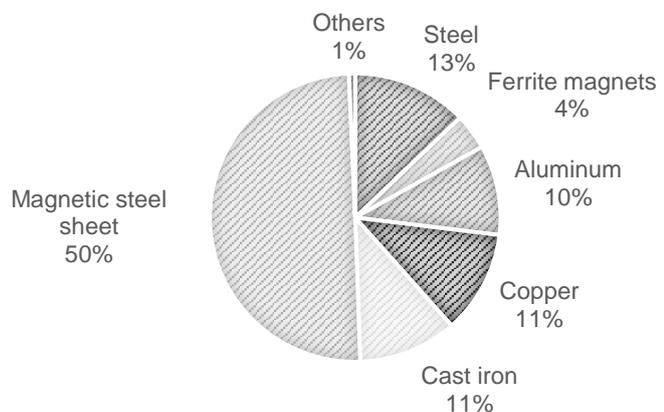


PRODUCT DESCRIPTION

Product function:	DYNEO+ is a three-phase electric motor that converts electrical energy into mechanical energy. Its primary function is to drive equipment by supplying mechanical power on the output shaft, expressed in watts (W) as a function of torque and speed. Main applications include pumps, fans, and compressors. This synchronous reluctance motor, assisted by permanent magnets, is always powered by an electronic variable speed drive.
Functional unit:	To provide 1 kW of mechanical power over a reference service life of 25 years.
Declared unit:	DYNEO+ Motor LSHRM315MR 200kW 1500 rpm 400V
Scope of the PEP document:	<p>In accordance with the PEP framework, which requires product homogeneity (function, composition, origin, and manufacturing process), this document applies to the following products:</p> <p>DYNEO+, Interchangeable series, aluminum housing, designated by LSHRM, 1500 or 3000 rpm, from 11 to 200 kW (IEC construction and power series).</p> <div style="text-align: center;">  <p>Dyneo</p> </div> <p><i>The environmental impacts of a product are calculated by multiplying the indicators of the functional unit by the rated mechanical power and the extrapolation coefficient for the considered motor (see pages 5 to 7).</i></p>
Reference product:	LSHRM315MR 200kW 1500tr/min 400V
Rated mechanical power, P_u:	200 kW
Efficiency (supplied by a variable speed drive), η:	97.5 %
Electrical input power, P_{abs}:	205,130 kW (= P_u / η)
Total product mass (including packaging):	868 kg

CONSTITUENT MATERIALS (EXCLUDING PACKAGING)

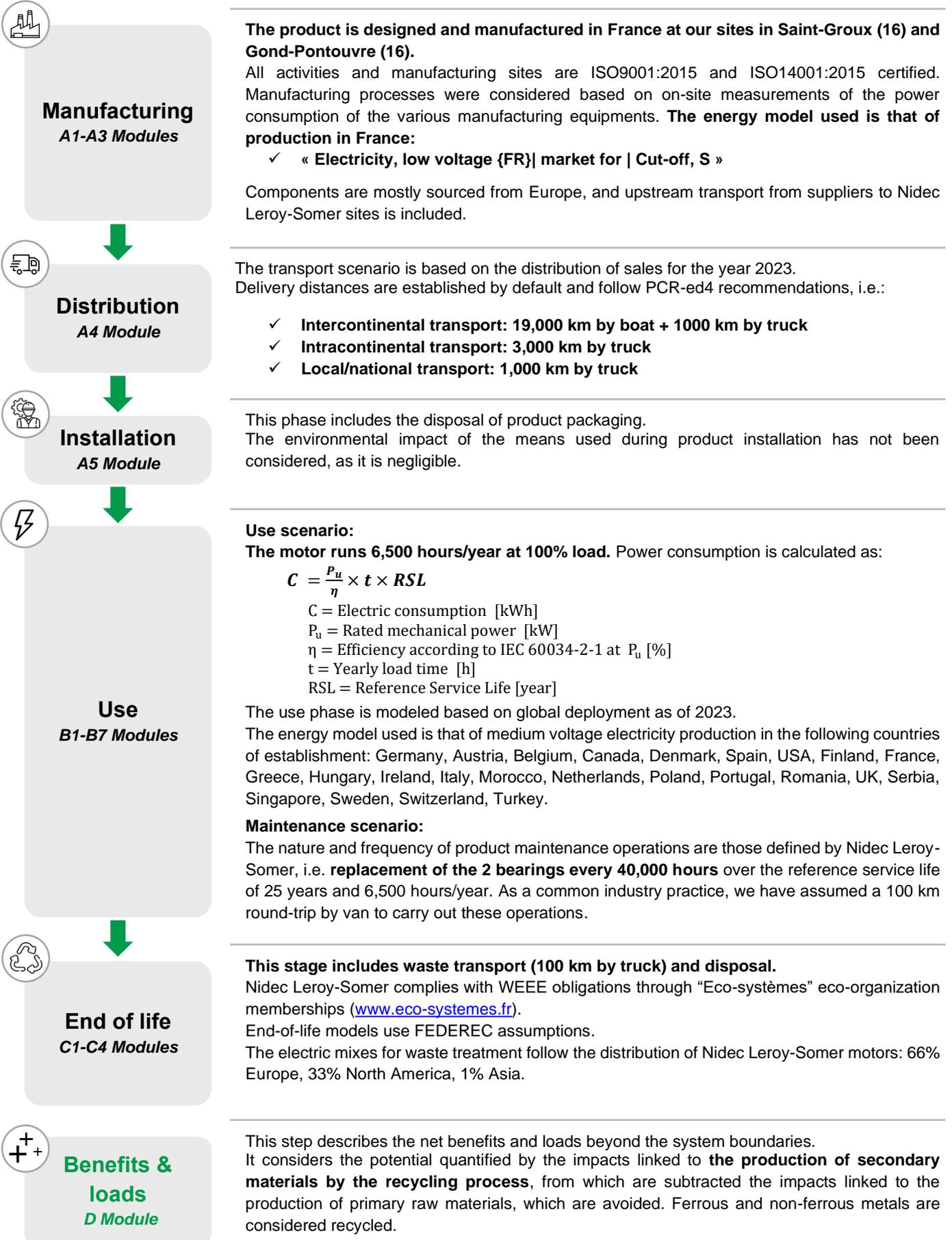
Metals	99.30%
Steel	12.82
Aluminum alloy	10.08
Ferrite magnets	4.03
Copper	11.54
Cast iron	10.97
Magnetic steel sheet	49.86
Plastics	0.24%
Other materials	0.46%
Resin	0.22
Others	0.24



Other materials present in the product represent a rate < 0.1%.

LIFE CYCLE ANALYSIS

As per Annex B of PCR-ed4, and in compliance with EN 15804:2012 + A2:2019 (Annex C application):



ENVIRONMENTAL IMPACT ASSESSMENT

The Life Cycle Assessment (LCA) for this PEP was conducted according to the PCR-ed4-FR-2021_09_14 of the PEPecopassport® program. Results were generated using the software SimaPro 9.4 and the “ecoinvent 3.9” database. The characterization method is EF3.0, and the calculation methodology is PEF 3.1.

The PEP was developed considering the supply of 1 kW of mechanical energy. Environmental impacts were calculated at the scale of the declared product over its reference service life. **Thus, the impacts to be considered when modeling the motor over its reference lifetime are the impacts of the functional unit multiplied by the supplied power and by the extrapolation coefficient (Cf. p7).**

IMPACT INDICATORS BY KW CORRESPONDING TO FUNCTIONAL UNIT (1/2)

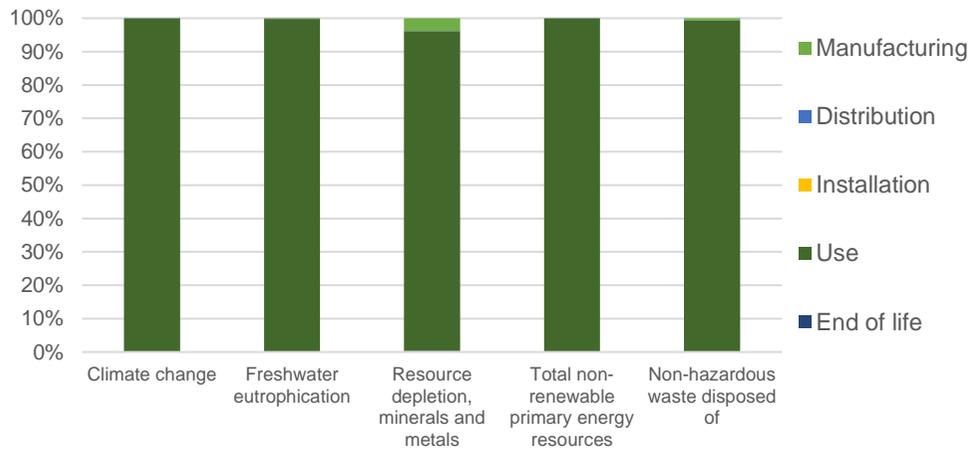
Impact Category	Life Cycle Phase		Manufacturing	Distribution	Installation	Use and Maintenance							End of Life		
	Unit	Total	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1-C4	D Module	
PCR ed4 Environmental Impact Indicators	Climate Change - Total	kg CO2 eq	5,36E+04	7,20E+01	1,49E+00	1,56E-03	0,00E+00	3,11E+00	0,00E+00	0,00E+00	0,00E+00	5,35E+04	0,00E+00	3,77E+00	-1,03E+01
	Climate Change - Fossils fuels	kg CO2 eq	1,62E+02	4,44E-01	4,18E-04	8,36E-05	0,00E+00	2,96E-02	0,00E+00	0,00E+00	0,00E+00	1,61E+02	0,00E+00	3,07E-03	-1,09E-02
	Climate Change - Biogenics	kg CO2 eq	5,33E+04	7,14E+01	1,49E+00	1,47E-03	0,00E+00	3,08E+00	0,00E+00	0,00E+00	0,00E+00	5,33E+04	0,00E+00	3,76E+00	-1,02E+01
	Climate change - Land use	kg CO2 eq	1,22E+02	1,06E-01	8,04E-04	1,32E-07	0,00E+00	3,25E-03	0,00E+00	0,00E+00	0,00E+00	1,21E+02	0,00E+00	1,53E-03	-1,46E-02
	Ozone depletion	kg CFC11 eq	6,65E-04	7,79E-07	3,17E-08	2,63E-11	0,00E+00	4,65E-08	0,00E+00	0,00E+00	0,00E+00	6,64E-04	0,00E+00	9,51E-08	-1,51E-07
	Acidification (AP)	mol H+ eq	2,25E+02	5,19E-01	1,12E-02	6,95E-06	0,00E+00	2,35E-02	0,00E+00	0,00E+00	0,00E+00	2,25E+02	0,00E+00	3,77E-02	-1,26E-01
	Freshwater eutrophication	kg P eq	4,26E+01	6,31E-02	9,88E-05	2,96E-08	0,00E+00	1,76E-03	0,00E+00	0,00E+00	0,00E+00	4,25E+01	0,00E+00	3,14E-03	-1,25E-02
	Marine aquatic eutrophication	kg N eq	4,16E+01	6,34E-02	2,86E-03	3,57E-06	0,00E+00	3,35E-03	0,00E+00	0,00E+00	0,00E+00	4,15E+01	0,00E+00	3,14E-03	-1,39E-02
	Terrestrial eutrophication	mol N eq	3,57E+02	6,33E-01	3,10E-02	3,57E-05	0,00E+00	3,51E-02	0,00E+00	0,00E+00	0,00E+00	3,56E+02	0,00E+00	3,47E-02	-1,63E-01
	Photochemical ozone formation	kg NMVOC eq	1,25E+02	2,44E-01	1,10E-02	1,54E-05	0,00E+00	1,31E-02	0,00E+00	0,00E+00	0,00E+00	1,25E+02	0,00E+00	1,89E-02	-5,64E-02
	Resource depletion , minerals and metals	kg Sb eq	1,21E-01	4,69E-03	3,66E-06	8,44E-10	0,00E+00	1,63E-04	0,00E+00	0,00E+00	0,00E+00	1,16E-01	0,00E+00	3,84E-04	-9,45E-04
	Resource depletion, fossils	MJ	1,47E+06	8,38E+02	2,18E+01	1,74E-02	0,00E+00	3,98E+01	0,00E+00	0,00E+00	0,00E+00	1,47E+06	0,00E+00	4,71E+01	-1,04E+02
	Water requirement	m3 depriv.	1,31E+04	2,49E+01	9,56E-02	1,98E-05	0,00E+00	6,32E-01	0,00E+00	0,00E+00	0,00E+00	1,30E+04	0,00E+00	7,45E-01	-2,39E+00
PCR ed4 Inventory flows Indicators	Renewable primary energy, out RM	MJ, net CV	2,15E+05	9,72E+02	2,93E-01	1,01E-04	0,00E+00	8,00E+00	0,00E+00	0,00E+00	0,00E+00	2,14E+05	0,00E+00	2,66E+00	-1,29E+01
	Renewable primary energy, in RM	MJ, net CV	1,68E-01	1,68E-01	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
	Total renewable primary energy	MJ, net CV	2,15E+05	9,72E+02	2,93E-01	1,01E-04	0,00E+00	8,00E+00	0,00E+00	0,00E+00	0,00E+00	2,14E+05	0,00E+00	2,66E+00	-1,29E+01
	Non-renewable primary energy, out RM	MJ, net CV	1,47E+06	8,38E+02	2,18E+01	1,74E-02	0,00E+00	3,98E+01	0,00E+00	0,00E+00	0,00E+00	1,47E+06	0,00E+00	4,71E+01	-1,04E+02
	Non-renewable primary energy, in RM	MJ, net CV	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	0,00E+00	0,00E+00
	Total non-renewable primary energy	MJ, net CV	1,47E+06	8,37E+02	2,18E+01	1,74E-02	0,00E+00	3,98E+01	0,00E+00	0,00E+00	0,00E+00	1,47E+06	0,00E+00	4,70E+01	-1,03E+02
	Use of secondary material	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	0,00E+00	0,00E+00
	Use of renewable secondary fuel	MJ, net CV	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	0,00E+00	0,00E+00
	Use of non-renewable secondary fuels	MJ, net CV	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	0,00E+00	0,00E+00
	Net use of fresh water	m3	-4,99E+03	-3,51E-01	-6,17E-03	-6,86E-07	0,00E+00	-1,54E-01	0,00E+00	0,00E+00	0,00E+00	-4,99E+03	0,00E+00	-5,61E-02	9,21E-03
	Hazardous waste disposed of	kg	1,02E+03	6,39E+00	2,12E-02	1,64E-05	0,00E+00	2,33E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+03	0,00E+00	1,30E-01	-2,98E+00
	Non-hazardous waste disposed of	kg	1,81E+04	1,27E+02	1,78E+00	2,79E-04	0,00E+00	5,36E+00	0,00E+00	0,00E+00	0,00E+00	1,79E+04	0,00E+00	1,45E+01	-3,22E+01
	Radioactive waste disposed of	kg	1,24E+01	3,03E-03	5,99E-06	1,85E-09	0,00E+00	9,15E-05	0,00E+00	0,00E+00	0,00E+00	1,24E+01	0,00E+00	4,66E-05	-7,31E-05
	Components for reuse	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	0,00E+00	0,00E+00
	Materials for recycling	kg	4,17E+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	4,17E+00	0,00E+00
	Materials for energy recovery	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	0,00E+00	0,00E+00
	Exported Energy	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	0,00E+00	0,00E+00
Total use of primary energy	MJ, net CV	1,69E+06	1,81E+03	2,21E+01	1,75E-02	0,00E+00	4,78E+01	0,00E+00	0,00E+00	0,00E+00	1,69E+06	0,00E+00	4,96E+01	-1,16E+02	

IMPACT INDICATORS BY KW CORRESPONDING TO FUNCTIONAL UNIT (2/2)

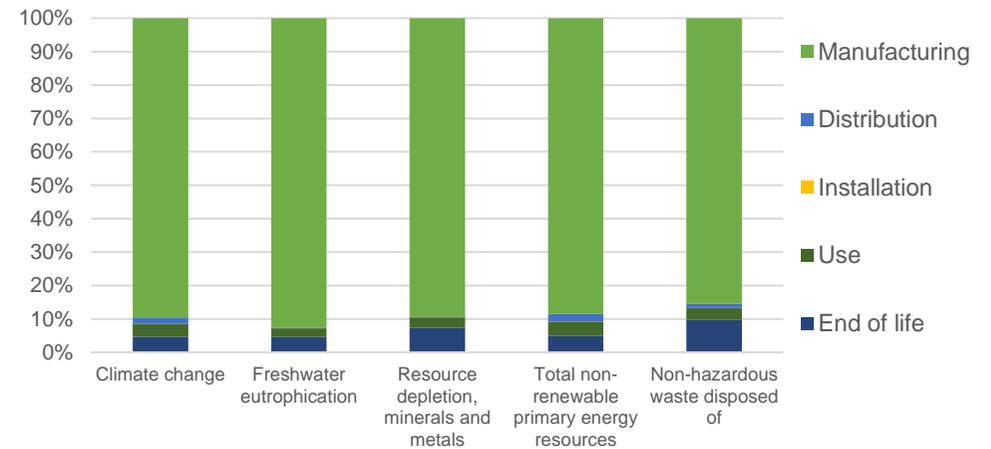
Impact Category		Life Cycle Phase		Manufacturing	Distribution	Installation	Use and Maintenance							End of Life	
		Unit	Total	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1-C4	D Module
PCR ed3 Environmental Impact Indicators	Climate change	kg CO2 eq	5.29E+04	7.08E+01	1.47E+00	1.44E-03	0,00E+00	3,04E+00	0,00E+00	0,00E+00	0,00E+00	5,29E+04	0,00E+00	3.69E+00	-1,01E+01
	Soil and water acidification	kg SO2 eq	1.90E+02	4.45E-01	8.91E-03	4.87E-06	0,00E+00	1,99E-02	0,00E+00	0,00E+00	0,00E+00	1,90E+02	0,00E+00	3.29E-02	-1,07E-01
	Eutrophication	kg PO4 eq	1.47E+02	2.19E-01	1.33E-03	1.69E-06	0,00E+00	7,16E-03	0,00E+00	0,00E+00	0,00E+00	1,46E+02	0,00E+00	1.09E-02	-4,39E-02
	Formation of photochemical ozone	kg C2H4 eq	2.36E+01	6.01E-02	1.79E-03	3.02E-06	0,00E+00	2,72E-03	0,00E+00	0,00E+00	0,00E+00	2,36E+01	0,00E+00	5.45E-03	-1,22E-02
	Ozone depletion	kg CFC-11 eq	5.71E-04	7.73E-07	2.60E-08	2.10E-11	0,00E+00	4,53E-08	0,00E+00	0,00E+00	0,00E+00	5,70E-04	0,00E+00	1.30E-07	-1,81E-07
	Resource depletion, minerals, metals	MJ	1.47E+06	8.38E+02	2.18E+01	1.74E-02	0,00E+00	3,98E+01	0,00E+00	0,00E+00	0,00E+00	1,47E+06	0,00E+00	4.71E+01	-1,04E+02
	Resource depletion, fossils	MJ	1.21E-01	3,66E-06	8,44E-10	0,00E+00	0,00E+00	1,63E-04	0,00E+00	0,00E+00	0,00E+00	1,16E-01	0,00E+00	3.84E-04	-9,45E-04
PCR ed4 Optional Environmental Impact Indicators	Fine particles emissions	disease inc.	1.02E-03	6.34E-06	1.28E-07	1.77E-10	0,00E+00	2.29E-07	0,00E+00	0,00E+00	0,00E+00	1,02E-03	0,00E+00	2.11E-07	-9,28E-07
	Ionizing radiation, human health	kBq U235 eq	4.67E+04	1.04E+01	2.49E-02	8.33E-06	0,00E+00	3.60E-01	0,00E+00	0,00E+00	0,00E+00	4,66E+04	0,00E+00	1.83E-01	-2,82E-01
	Ecotoxicity (fresh water)	CTUe	8.86E+04	4.29E+02	1.14E+01	8.18E-03	0,00E+00	2.19E+01	0,00E+00	0,00E+00	0,00E+00	8,81E+04	0,00E+00	2.28E+01	-8,82E+01
	Human toxicity, carcinogenic effects	CTUh	1.56E-05	1.77E-07	6.59E-10	2.18E-13	0,00E+00	1.79E-08	0,00E+00	0,00E+00	0,00E+00	1,53E-05	0,00E+00	2.58E-08	-4,95E-08
	Human toxicity, non-carcinogenic effects	CTUh	4.23E-04	4.49E-06	1.41E-08	5.61E-12	0,00E+00	1.67E-07	0,00E+00	0,00E+00	0,00E+00	4,18E-04	0,00E+00	4.81E-07	-9,98E-07
	Impacts related to land use/soil quality	-	2.17E+05	6.45E+03	1.90E+01	1.93E-03	0,00E+00	1.95E+01	0,00E+00	0,00E+00	0,00E+00	2,11E+05	0,00E+00	1.90E+01	-4,87E+01
Biogenic carbon content of the product		Kg of C	0,00E+00												
Biogenic carbon content of the associated packaging		Kg of C	1,90E-02												

CONTRIBUTION OF IMPACTS BY STAGE

The use phase (B1-B6) is the most impactful phase for the indicators considered, accounting for over 95% of total impacts.



Excluding "Energy requirements during use" (B6), the manufacturing stage (A1-A3) appears to be the second largest contributor to impacts.



EXTRAPOLATION COEFFICIENTS

To determine the environmental impact of a specific product, the applicable extrapolation coefficients are as follows:

Speed (rpm)	Power (kW)	Mass (kg)	Efficiency (%)	Consumption on RSL (kWh)	A1-A5	B2	B6	C1-C4
					kA	kB2	kB6	kC
1500	11	82	94,4	1,89E+06	1,79	1,79	1,03	1,79
	15	82	94,4	2,58E+06	1,32	1,32	1,03	1,32
	18,5	120	94,5	3,18E+06	1,56	1,56	1,03	1,56
	22	135	94,7	3,78E+06	1,48	1,48	1,03	1,48
	30	169	94,7	5,15E+06	1,36	1,36	1,03	1,36
	37	186	94,7	6,35E+06	1,21	1,21	1,03	1,21
	45	295	95,9	7,63E+06	1,58	1,58	1,02	1,58
	55	332	96,2	9,29E+06	1,45	1,45	1,01	1,45
	75	410	96,5	1,26E+07	1,32	1,32	1,01	1,32
	90	441	96,6	1,51E+07	1,18	1,18	1,01	1,18
	110	506	96,7	1,85E+07	1,11	1,11	1,01	1,11
	132	681	97,2	2,21E+07	1,24	1,24	1,01	1,24
	160	726	97,3	2,67E+07	1,09	1,09	1	1,09
	200	831	97,5	3,33E+07	1	1	1	1
3000	11	58	94,4	1,89E+06	1,26	1,26	1,03	1,26
	15	66	95,1	2,56E+06	1,06	1,06	1,03	1,06
	18,5	66	95,1	3,16E+06	0,86	0,86	1,03	0,86
	22	106	95,4	3,75E+06	1,16	1,16	1,02	1,16
	30	112	94,9	5,14E+06	0,9	0,9	1,03	0,9
	37	126	95,9	6,27E+06	0,82	0,82	1,02	0,82
	45	152	96,2	7,60E+06	0,81	0,81	1,01	0,81
	55	273	95,6	9,35E+06	1,19	1,19	1,02	1,19
	75	275	95,9	1,27E+07	0,88	0,88	1,02	0,88
	90	305	96,2	1,52E+07	0,82	0,82	1,01	0,82
	110	367	96,5	1,85E+07	0,8	0,8	1,01	0,8
	132	396	96,8	2,22E+07	0,72	0,72	1,01	0,72
	160	455	97,1	2,68E+07	0,68	0,68	1,01	0,68
200	487	97,1	3,35E+07	0,59	0,59	1,01	0,59	

The extrapolation coefficients are calculated as follows:

Manufacturing, Distribution, Installation, A1 - A5

$$kA = \frac{MASS_{considered\ product}}{MASS_{reference\ product}} \times \frac{POWER_{reference\ product}}{POWER_{considered\ product}}$$

Maintenance, B2

$$kB2 = \frac{MASS_{considered\ product}}{MASS_{reference\ product}} \times \frac{POWER_{reference\ product}}{POWER_{considered\ product}}$$

Use, B6

$$kB6 = \frac{POWER_{considered\ product}}{POWER_{reference\ product}} \times \frac{CONSUMPTION_{reference\ product}}{CONSUMPTION_{considered\ product}}$$

End of life, C1 - C4

$$kC = \frac{MASS_{considered\ product}}{MASS_{reference\ product}} \times \frac{POWER_{reference\ product}}{POWER_{considered\ product}}$$

IMPACT INDICATORS BY EQUIPMENT, CORRESPONDING TO THE DECLARED PRODUCT (1/2)

		Life Cycle Phase		Manufacturing	Distribution	Installation	Use and Maintenance						End of Life		
Impact Category		Unit	Total	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1-C4	D Module
PCR ed4 Environmental Impact Indicators	Climate Change - Total	kg CO2 eq	1.07E+07	1.44E+04	2.98E+02	5.50E+00	0.00E+00	7.09E+02	0.00E+00	0.00E+00	0.00E+00	1.07E+07	0.00E+00	8.68E+02	-2.05E+03
	Climate Change - Fossils fuels	kg CO2 eq	3.24E+04	8.88E+01	8.35E-02	3.34E+00	0.00E+00	5.94E+00	0.00E+00	0.00E+00	0.00E+00	3.23E+04	0.00E+00	7.46E-01	-2.19E+00
	Climate Change - Biogenics	kg CO2 eq	1.07E+07	1.43E+04	2.98E+02	2.16E+00	0.00E+00	7.02E+02	0.00E+00	0.00E+00	0.00E+00	1.07E+07	0.00E+00	8.67E+02	-2.05E+03
	Climate change - Land use	kg CO2 eq	2.43E+04	2.12E+01	1.61E-01	3.08E-04	0.00E+00	6.65E-01	0.00E+00	0.00E+00	0.00E+00	2.43E+04	0.00E+00	3.94E-01	-2.93E+00
	Ozone depletion	kg CFC11 eq	1.33E-01	1.56E-04	6.35E-06	3.49E-08	0.00E+00	1.17E-05	0.00E+00	0.00E+00	0.00E+00	1.33E-01	0.00E+00	2.08E-05	-3.02E-05
	Acidification (AP)	mol H+ eq	4.51E+04	1.04E+02	2.23E+00	1.01E-02	0.00E+00	4.90E+00	0.00E+00	0.00E+00	0.00E+00	4.50E+04	0.00E+00	7.57E+00	-2.52E+01
	Freshwater eutrophication	kg P eq	8.52E+03	1.26E+01	1.98E-02	1.62E-04	0.00E+00	3.97E-01	0.00E+00	0.00E+00	0.00E+00	8.51E+03	0.00E+00	6.04E-01	-2.50E+00
	Marine aquatic eutrophication	kg N eq	8.31E+03	1.27E+01	5.72E-01	1.51E-02	0.00E+00	7.16E-01	0.00E+00	0.00E+00	0.00E+00	8.30E+03	0.00E+00	6.99E-01	-2.78E+00
	Terrestrial eutrophication	mol N eq	7.14E+04	1.27E+02	6.19E+00	4.97E-02	0.00E+00	7.46E+00	0.00E+00	0.00E+00	0.00E+00	7.13E+04	0.00E+00	7.64E+00	-3.27E+01
	Photochemical ozone formation	kg NMVOC eq	2.50E+04	4.89E+01	2.20E+00	2.17E-02	0.00E+00	2.97E+00	0.00E+00	0.00E+00	0.00E+00	2.49E+04	0.00E+00	4.13E+00	-1.13E+01
	Resource depletion , minerals and metals	kg Sb eq	2.42E+01	9.45E-01	7.32E-04	1.51E-06	0.00E+00	3.26E-02	0.00E+00	0.00E+00	0.00E+00	2.32E+01	0.00E+00	7.66E-02	-1.89E-01
	Resource depletion, fossils	MJ	2.95E+08	1.68E+05	4.36E+03	2.35E+01	0.00E+00	9.01E+03	0.00E+00	0.00E+00	0.00E+00	2.94E+08	0.00E+00	1.07E+04	-2.07E+04
	Water requirement	m3 depriv.	2.61E+06	4.99E+03	1.91E+01	3.87E-02	0.00E+00	1.31E+02	0.00E+00	0.00E+00	0.00E+00	2.61E+06	0.00E+00	1.76E+02	-4.78E+02
	PCR ed4 Inventory flows Indicators	Renewable primary energy, out RM	MJ, net CV	4.29E+07	1.94E+05	5.87E+01	2.27E-01	0.00E+00	1.62E+03	0.00E+00	0.00E+00	0.00E+00	4.27E+07	0.00E+00	5.36E+02
Renewable primary energy, in RM		MJ, net CV	3.35E+01	3.35E+01	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
Total renewable primary energy		MJ, net CV	4.29E+07	1.94E+05	5.87E+01	2.27E-01	0.00E+00	1.62E+03	0.00E+00	0.00E+00	0.00E+00	4.27E+07	0.00E+00	5.36E+02	-2.59E+03
Non-renewable primary energy, out RM		MJ, net CV	2.95E+08	1.68E+05	4.36E+03	2.35E+01	0.00E+00	9.01E+03	0.00E+00	0.00E+00	0.00E+00	2.94E+08	0.00E+00	1.07E+04	-2.07E+04
Non-renewable primary energy, in RM		MJ, net CV	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	0.00E+00	0.00E+00
Total non-renewable primary energy		MJ, net CV	2.95E+08	1.67E+05	4.36E+03	2.35E+01	0.00E+00	9.00E+03	0.00E+00	0.00E+00	0.00E+00	2.94E+08	0.00E+00	1.06E+04	-2.07E+04
Use of secondary material		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	0.00E+00	0.00E+00
Use of renewable secondary fuel		MJ, net CV	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	0.00E+00	0.00E+00
Use of non-renewable secondary fuels		MJ, net CV	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	0.00E+00	0.00E+00
Net use of fresh water		m3	-9.98E+05	-7.03E+01	-1.23E+00	-7.33E-03	0.00E+00	-3.13E+01	0.00E+00	0.00E+00	0.00E+00	-9.97E+05	0.00E+00	-1.01E+01	1.84E+00
Hazardous waste disposed of		kg	2.04E+05	1.28E+03	4.25E+00	8.64E-02	0.00E+00	4.66E+02	0.00E+00	0.00E+00	0.00E+00	2.02E+05	0.00E+00	3.55E+01	-5.95E+02
Non-hazardous waste disposed of		kg	3.62E+06	2.56E+04	3.56E+02	6.27E+00	0.00E+00	1.16E+03	0.00E+00	0.00E+00	0.00E+00	3.59E+06	0.00E+00	2.99E+03	-6.44E+03
Radioactive waste disposed of		kg	2.47E+03	6.06E-01	1.20E-03	4.17E-06	0.00E+00	1.87E-02	0.00E+00	0.00E+00	0.00E+00	2.47E+03	0.00E+00	8.84E-03	-1.46E-02
Components for reuse		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	0.00E+00	0.00E+00
Materials for recycling		kg	9.25E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.19E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.33E+02	0.00E+00
Materials for energy recovery		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	0.00E+00	0.00E+00
Exported Energy		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	0.00E+00	0.00E+00
Total use of primary energy		MJ, net CV	3.38E+08	3.62E+05	4.42E+03	2.38E+01	0.00E+00	1.06E+04	0.00E+00	0.00E+00	0.00E+00	3.37E+08	0.00E+00	1.12E+04	-2.33E+04

IMPACT INDICATORS BY EQUIPMENT, CORRESPONDING TO THE DECLARED PRODUCT (2/2)

Impact category		Life cycle phase		Manufacturing	Distribution	Installation	Use and Maintenance							End of life	
		Unit	Total	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1-C4	D Module
PCR ed3 environmental impact indicators	Climate change	kg CO2 eq	1.06E+07	1.42E+04	2.94E+02	2.09E+00	0.00E+00	6.92E+02	0.00E+00	0.00E+00	0.00E+00	1.06E+07	0.00E+00	8.51E+02	-2.02E+03
	Soil and water acidification	kg SO2 eq	3.81E+04	8.95E+01	1.78E+00	7.19E-03	0.00E+00	4.14E+00	0.00E+00	0.00E+00	0.00E+00	3.79E+04	0.00E+00	6.57E+00	-2.15E+01
	Eutrophication	kg PO4 eq	2.93E+04	4.39E+01	2.66E-01	1.75E-02	0.00E+00	1.58E+00	0.00E+00	0.00E+00	0.00E+00	2.93E+04	0.00E+00	2.13E+00	-8.78E+00
	Formation of photochemical ozone	kg C2H4 eq	4.73E+03	1.21E+01	3.58E-01	4.57E-03	0.00E+00	6.56E-01	0.00E+00	0.00E+00	0.00E+00	4.71E+03	0.00E+00	1.17E+00	-2.45E+00
	Ozone depletion	kg CFC-11 eq	1.14E-01	1.55E-04	5.19E-06	2.82E-08	0.00E+00	1.25E-05	0.00E+00	0.00E+00	0.00E+00	1.14E-01	0.00E+00	2.75E-05	-3.63E-05
	Resource depletion, minerals, metals	MJ	2.95E+08	1.68E+05	4.36E+03	2.35E+01	0.00E+00	9.01E+03	0.00E+00	0.00E+00	0.00E+00	2.94E+08	0.00E+00	1.07E+04	-2.07E+04
	Resource depletion, fossils	MJ	2.42E+01	9.45E-01	7.32E-04	1.51E-06	0.00E+00	3.26E-02	0.00E+00	0.00E+00	0.00E+00	2.32E+01	0.00E+00	7.66E-02	-1.89E-01
PCR ed4 Optional environmental impact indicators	Fine particles emissions	disease inc.	2.05E-01	1.27E-03	2.57E-05	2.34E-07	0.00E+00	4.97E-05	0.00E+00	0.00E+00	0.00E+00	2.03E-01	0.00E+00	5.51E-05	-1.86E-04
	Ionizing radiation, human health	kBq U235 eq	9.33E+06	2.08E+03	4.97E+00	1.80E-02	0.00E+00	7.37E+01	0.00E+00	0.00E+00	0.00E+00	9.33E+06	0.00E+00	3.49E+01	-5.64E+01
	Ecotoxicity (fresh water)	CTUe	1.77E+07	8.61E+04	2.28E+03	2.51E+01	0.00E+00	4.53E+03	0.00E+00	0.00E+00	0.00E+00	1.76E+07	0.00E+00	6.47E+03	-1.76E+04
	Human toxicity, carcinogenic effects	CTUh	3.11E-03	3.55E-05	1.32E-07	6.52E-10	0.00E+00	4.15E-06	0.00E+00	0.00E+00	0.00E+00	3.07E-03	0.00E+00	5.19E-06	-9.90E-06
	Human toxicity, non-carcinogenic effects	CTUh	8.46E-02	9.05E-04	2.83E-06	2.49E-08	0.00E+00	3.36E-05	0.00E+00	0.00E+00	0.00E+00	8.35E-02	0.00E+00	9.33E-05	-2.00E-04
Impacts related to land use/soil quality		Pt	4.34E+07	1.29E+06	3.79E+03	5.98E+00	0.00E+00	4.09E+03	0.00E+00	0.00E+00	0.00E+00	4.21E+07	0.00E+00	5.05E+03	-9.75E+03
Biogenic carbon content of the product		Kg of C	0,00E+00												
Biogenic carbon content of the associated packaging		Kg of C	3,80E+00												

GLOSSARY

Life Cycle Assessment (LCA):

A method to evaluate the environmental impacts associated with all stages of a product's life (manufacture, installation, use, and end-of-life).

Environmental Aspect:

Element of an organization's activities, products or services that may interact with the environment. [ISO 14050]

Typical Lifetime (DVT):

Theoretical product lifetime for the functional unit. Typical life is a theoretical life used for calculation purposes. It can in no way be equated with the minimum, average or actual product life.

Homogeneous Environmental Family:

A group of products with identical functional units (identical use, standard, technology) whose impacts are identical or can be extrapolated from a reference product by applying a defined calculation rule.

Environmental Impact:

Any change to the environment, whether adverse or beneficial, wholly, or partially resulting from an organization's activities, products, or services. [ISO 14050]

PCR (Product Category Rules):

Rules and guidelines for developing Type III environmental declarations for one or multiple product categories . [ISO 14025]

PEP (Product Environmental Profile):

Declaration of a product's environmental aspects drawn up in accordance with the PEPecopassport® program based on ISO 14025, ISO 14040, and ISO 14044.

Reference product:

Product or product system modeled in the LCA and representative of a homogeneous environmental family.

PSR (Product Specific Rules):

Set of specific rules, requirements, and guidelines for the development of Type III environmental declarations for a product category.

Functional unit:

A quantified performance of a product system used as a reference in LCA. [ISO 14040]

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