

Owner: Fischer International A/S  
No.: MD-23013-EN  
Issued: 14-04-2023  
Valid to: 14-04-2028

3<sup>rd</sup> PARTY VERIFIED

**EPD**

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804



**Owner of declaration**  
 Fischer International A/S  
 Holmstrupgårdvej 4  
 8220 Brabrand  
 VAT: 20033290

*Fischer*  
**blendex**  
**KViNT blendex**  
 Fönsterdesign **blendex**

**Issued:**  
 14-04-2023

**Valid to:**  
 14-04-2028

**Programme**  
 EPD Danmark  
[www.epddanmark.dk](http://www.epddanmark.dk)



- Industry EPD
- Product EPD

**Declared product(s)**

The EPD covers all products below sold under the brand names Fischer, Blendex, Kvint Blendex and Fönsterdesign Blendex. The declared products are listed below. Results are found for the realistic worst case size of these products.

- Rollerblind plus System 38 mm tube
- Rollerblind plus System 50 mm tube
- Rollerblind plus System motor, 50 mm tube
- Rollerblind plus System 65 mm headbox, 38 mm tube
- Rollerblind plus System 85-95 mm headbox, 50 mm tube
- Rollerblind plus System motor, headbox 85 mm, 50 mm tube
- Rollerblind plus System motor, headbox 95 mm, 50 mm tube

Number of declared datasets: 7

**Production site**

Fischer International's production site in Lithuania  
 Address: Siūlų g. 1, Kaunas 45202, Lithuania

**Products use**

Rollerblinds are flexible interior solar shading curtain solutions for buildings. The main purpose of Rollerblind Systems is to keep the bright solar waves away from the inside of the building, hereby contributing to an improved indoor climate and a reduced energy consumption for cooling in the building.

**Declared/ functional unit**

1 m<sup>2</sup> of rollerblind

**Year of data**

2020

**Basis of calculation**

This EPD is developed in accordance with the European standard EN 15804+A2.

**Comparability**

EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

**Validity**

This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

**Use**

The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

**EPD type**

- Cradle-to-gate with modules C1-C4 and D
- Cradle-to-gate with options, modules C1-C4 and D
- Cradle-to-grave and module D
- Cradle-to-gate
- Cradle-to-gate with options

CEN standard EN 15804 serves as the core PCR
Independent verification of the declaration and data, according to EN ISO 14025
<input type="checkbox"/> internal <input checked="" type="checkbox"/> external
Third party verifier:  Ninkie Bendtsen

Martha Katrine Sørensen  
 EPD Danmark

Life cycle stages and modules (MND = module not declared)																
Product			Construction process		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
<b>X</b>	<b>X</b>	<b>X</b>	MND	MND	MND	MND	MND	MND	MND	MND	MND	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>

# Product information

## Product description

The main product components are shown in the table below.

Material	38 tube	50 tube	Motor, 50 tube	65 headbox, 38 tube	85-95 headbox, 50 tube	Motor, 85 headbox, 50 tube	Motor, 95 headbox, 50 tube
Aluminium	31.6%	27.7%	5.5%	74.1%	65.5%	30.5%	35.8%
Electric motor	0.0%	0.0%	13.6%	0.0%	0.0%	12.9%	16.5%
Polyamide	1.9%	1.9%	0.6%	1.7%	1.7%	0.6%	0.8%
Polypropylene	0.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
Rubber	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Polyester	62.4%	68.1%	42.3%	22.5%	31.6%	24.6%	18.4%
Steel	3.8%	2.2%	38.0%	1.7%	1.1%	31.3%	28.5%

The packaging composition is listed in the table below.

Name	38 tube	50 tube	Motor, 50 tube	65 headbox, 38 tube	85-95 headbox, 50 tube	Motor, 85 headbox, 50 tube	Motor, 95 headbox, 50 tube
Corrug. Box	37.7%	41.3%	37.8%	40.3%	40.4%	38.0%	41.2%
Tape	0.3%	0.2%	0.3%	0.2%	0.2%	0.3%	0.2%
End cardb.	2.7%	1.8%	2.7%	2.1%	2.0%	2.6%	1.9%
Foam	1.7%	1.8%	1.7%	1.8%	1.8%	1.7%	1.8%
Pallet	17.2%	11.7%	17.2%	13.2%	13.2%	16.7%	11.9%
Board	40.4%	43.2%	40.4%	42.4%	42.4%	40.6%	43.1%

## Representativity

This declaration, including data collection and the modelled foreground system including results, represents the production of Rollerblind Systems on the production site located in Kaunas, Lithuania. Product specific data are based on average values collected in the year 2020. Background data are based on the GaBi LCA software and are less than 10 years old. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old.

The product composition is based on a realistic worst case scenario for each of the rollerblinds. The sizes are listed below and then scaled to the declared unit of 1 m<sup>2</sup>.

- Rollerblind plain System (W: 1515, L: 2120 mm), 38 mm tube
- Rollerblind plus System (W: 1442, L: 2250 mm), 38 mm tube
- Rollerblind plus System (W: 2451, L: 3651 mm), 50 mm tube
- Rollerblind plus System (W: 2395, L: 3650 mm), motor, 50 mm tube

- Rollerblind plus System (W: 1450, L: 700 mm), 65 mm headbox, 38 mm tube
- Rollerblind plus System (W: 2090, L: 3150 mm), 85-95 mm headbox, 50 mm tube
- Rollerblind plus System (W: 2100, L: 2050 mm), motor, headbox 85 mm, 50 mm tube
- Rollerblind plus System (W: 1504, L: 3150 mm), motor, headbox 95 mm, 50 mm tube

The declared products only cover the specified product with the specific dimensions.

## Hazardous substances

The Rollerblind Systems do not contain substances listed in the "Candidate List of Substances of Very High Concern for authorisation"

(<http://echa.europa.eu/candidate-list-table>)

## Essential characteristics

There is no harmonized EN norm covering the screens as a product, but the Rollerblind Systems live up to the following directives for CE marking:

- 2006/42/EF Machinery directive
- 2014/35/EU Low Voltage Directive
- 2014/30/EU EMC Directive

Further technical information can be obtained by contacting the manufacturer or on the manufacturer's website:

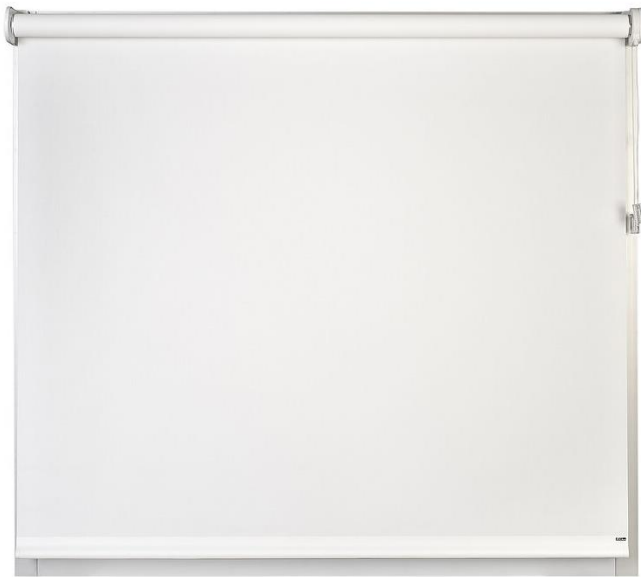
<https://fischer-international.dk/products/screens/>

#### Reference Service Life (RSL)

The lifetime of the rail and system installation is 25 years. The lifetime of the electric motor and the screen fabric is 15 years.

#### Pictures of products

The pictures below show how products are available with and without a D shaped headbox. The headboxes can be in various sizes, as well as the aluminium tube where the fabric is rolled up on. Furthermore, the Rollerblind can be available with a motor. This specification is found in the product name. The photos below show the plain Rollerblind system and the Rollerblind System with a headbox.



Picture of rollerblind system without a headbox



Picture of headbox system for rollerblind system

# LCA background

## Declared unit

The LCI and LCIA results in this EPD relates to 1 m<sup>2</sup> of Rollerblind system

Name	38 tube	50 tube	Motor, 50 tube	65 headbox, 38 tube	85-95 headbox, 50 tube	Motor, 85 headbox, 50 tube	Motor 95 headbox, 50 tube
Declared unit, m <sup>2</sup>	1	1	1	1	1	1	1
Mass per declared unit, kg/m <sup>2</sup>	1.06	1.08	1.73	3.77	1.53	3.70	2.62
Conversion to kg	0.94	0.92	0.58	0.26	0.66	0.27	0.38

## Functional unit

The functional unit is not defined as the use stages B1-B7 are not declared

## Reference service life (RSL)

The reference service life (RSL) is approx. 15 years on Rollerblind and electric motor and 25 years on remaining product.

## Guarantee of Origin – certificates

No guarantees of origin or certificated are used for green electricity or energy production.

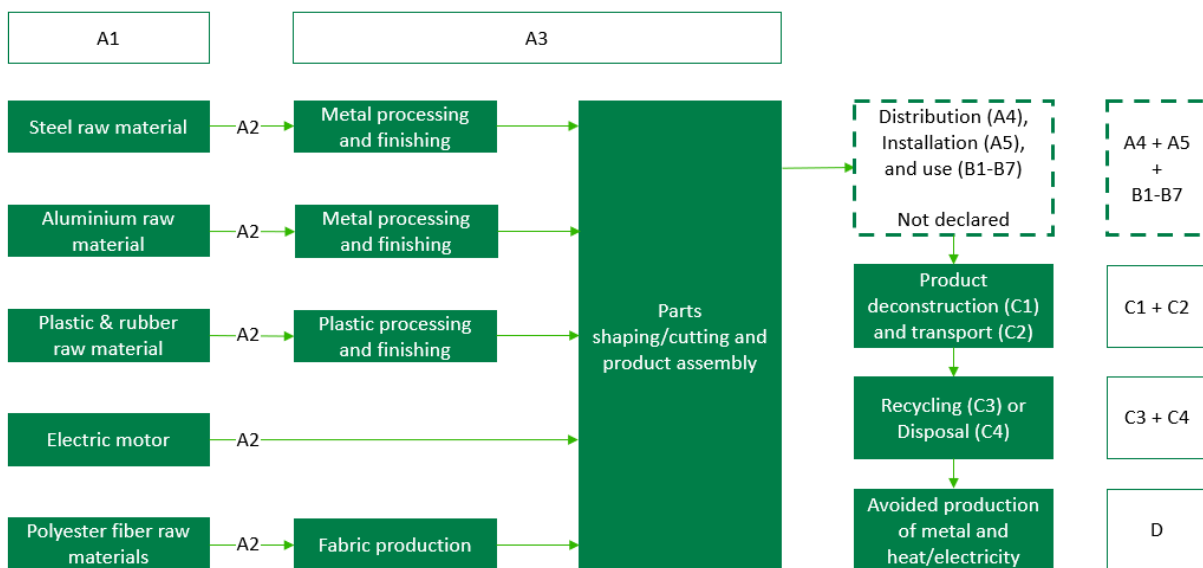
For modelling energy production, the country specific residual mix is used, in accordance with the recommendations from EPD Denmark.

## PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804+A2 version 2019.

## Flow diagram

The process diagram below represents the life cycle of a Screen System product from Fischer.



## System boundary

This EPD is based on a cradle-to-grave LCA with modules C1-C4 and D, in which 100 weight-% has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

The declared units with specific lengths for the extended realistic worst-case sizes are listed below.

- Rollerblind plus System (W: 1442, L: 2250 mm), 38 mm tube
- Rollerblind plus System (W: 2451, L: 3651 mm), 50 mm tube
- Rollerblind plus System (W: 2395, L: 3650 mm), motor, 50 mm tube
- Rollerblind plus System (W: 1450, L: 700 mm), 65 mm headbox, 38 mm tube
- Rollerblind plus System (W: 2090, L: 3150 mm), 85-95 mm headbox, 50 mm tube
- Rollerblind plus System (W: 2100, L: 2050 mm), motor, headbox 85 mm, 50 mm tube
- Rollerblind plus System (W: 1504, L: 3150 mm), motor, headbox 95 mm, 50 mm tube

### Product stage (A1-A3) includes:

- A1 – Extraction and processing of raw materials
- A2 – Transport to the production site
- A3 – Manufacturing processes

The steel parts, as well as plastic/rubber parts, are manufactured by suppliers. Aluminium extruded side-rails are received in long shapes and cut into final length. Other aluminium parts are manufactured entirely at suppliers.

Electric motor is received from suppliers as a complete unit.

The rollerblind fabric in polyester is received on large reels from suppliers. The fabric is cut into the final shape.

### Construction process stage (A4-A5) includes:

Transport to and installation on the construction site is not included.

### Use stage (B1-B7) includes:

Use phase is not included.

### End of Life (C1-C4) includes:

The rollerblinds are assumed disposed of in Northern Europe. The rollerblinds are assumed dismantled using hand tools (C1) and transported to local recycling (C2).

The fabric in polyester is landfill with no gaseous emissions related to it (C4).

The remaining product is dismantled in an industrial shredder assuming average recovery of materials (C3).

### Re-use, recovery, and recycling potential (D) includes:

The recycled metals are credited an avoided production of primary steel and aluminium.

# LCA results

## 38 mm tube

### 38 mm tube

ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	7,86E+00	0,00E+00	6,31E-03	2,99E-02	4,67E-02	-2,75E+00
GWP-fossil	[kg CO <sub>2</sub> eq.]	7,74E+00	0,00E+00	6,26E-03	2,98E-02	4,72E-02	-2,75E+00
GWP-bio	[kg CO <sub>2</sub> eq.]	1,11E-01	0,00E+00	1,84E-05	6,24E-05	-5,47E-04	-1,26E-04
GWP-luluc	[kg CO <sub>2</sub> eq.]	3,82E-03	0,00E+00	5,77E-05	2,73E-06	3,84E-05	-3,87E-04
ODP	[kg CFC 11 eq.]	4,34E-11	0,00E+00	8,11E-16	3,01E-13	7,72E-14	-3,44E-12
AP	[mol H <sup>+</sup> eq.]	1,70E-02	0,00E+00	9,56E-06	4,50E-05	1,39E-04	-9,62E-03
EP-fw	[kg P eq.]	3,27E-05	0,00E+00	2,28E-08	7,61E-08	8,76E-06	-2,27E-06
EP-mar	[kg N eq.]	3,82E-03	0,00E+00	3,42E-06	1,24E-05	3,18E-05	-1,80E-03
EP-ter	[mol N eq.]	4,07E-02	0,00E+00	4,04E-05	1,31E-04	3,49E-04	-1,96E-02
POCP	[kg NMVOC eq.]	1,39E-02	0,00E+00	8,30E-06	3,41E-05	1,01E-04	-5,38E-03
ADP-mm <sup>1</sup>	[kg Sb eq.]	1,77E-06	0,00E+00	4,10E-10	1,73E-09	1,22E-09	-1,16E-07
ADP-fos <sup>1</sup>	[MJ]	1,39E+02	0,00E+00	8,50E-02	6,04E-01	6,83E-01	-3,78E+01
WDP <sup>1</sup>	[m <sup>3</sup> ]	4,80E-01	0,00E+00	7,53E-05	3,02E-03	-6,11E-04	-1,81E-01
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

### 38 mm tube

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	2,56E-07	0,00E+00	8,59E-11	4,02E-10	1,35E-09	-1,01E-07
IRP2	[kBq U235 eq.]	1,24E+00	0,00E+00	2,38E-05	1,41E-02	1,20E-03	-5,96E-01
ETP-fw1	[CTUe]	5,69E+01	0,00E+00	6,03E-02	1,87E-01	6,49E-01	-1,33E+01
HTP-c1	[CTUh]	4,95E-09	0,00E+00	1,23E-12	4,07E-12	3,01E-11	-1,17E-09
HTP-nc1	[CTUh]	4,25E-07	0,00E+00	6,58E-11	1,83E-10	2,51E-09	-2,58E-08
SQP1	-	8,09E+01	0,00E+00	3,54E-02	1,01E-01	5,98E-02	-2,39E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)						
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						
	<sup>2</sup> 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.						



**38 mm tube**

RESSOURCE CONSUMPTION PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	3,57E+01	0,00E+00	6,17E-03	1,19E-01	6,20E-02	-1,20E+01
PERM	[MJ]	5,01E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	4,07E+01	0,00E+00	6,17E-03	1,19E-01	6,20E-02	-1,20E+01
PENRE	[MJ]	1,24E+02	0,00E+00	8,53E-02	6,04E-01	6,84E-01	-3,79E+01
PENRM	[MJ]	1,56E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,39E+02	0,00E+00	8,53E-02	6,04E-01	6,84E-01	-3,79E+01
SM	[kg]	3,06E-01	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	5,45E-02	0,00E+00	6,76E-06	1,61E-04	7,67E-06	-2,44E-02
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water						

**38 mm tube**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	1,35E-07	0,00E+00	2,64E-13	2,51E-11	5,73E-11	-1,35E-09
NHWD	[kg]	8,57E-01	0,00E+00	1,30E-05	2,47E-03	6,79E-01	-5,92E-01
RWD	[kg]	6,78E-03	0,00E+00	1,59E-07	9,27E-05	8,09E-06	-2,73E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	4,35E-02	0,00E+00	0,00E+00	3,75E-01	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	9,08E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	1,06E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy						

**38 mm tube**

BIOGENIC CARBON CONTENT PER PRODUKT PER M <sup>2</sup>		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	0,00E+00
Biogenic carbon content in accompanying packaging	kg C	1,70E-01



## 50 mm tube

### 50 mm tube

ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	7,83E+00	0,00E+00	6,88E-03	2,61E-02	5,21E-02	-2,45E+00
GWP-fossil	[kg CO <sub>2</sub> eq.]	7,78E+00	0,00E+00	6,83E-03	2,61E-02	5,27E-02	-2,45E+00
GWP-bio	[kg CO <sub>2</sub> eq.]	5,04E-02	0,00E+00	2,01E-05	5,55E-05	-6,08E-04	-1,46E-04
GWP-luluc	[kg CO <sub>2</sub> eq.]	3,19E-03	0,00E+00	6,29E-05	2,39E-06	4,26E-05	-3,41E-04
ODP	[kg CFC 11 eq.]	4,32E-11	0,00E+00	8,85E-16	2,63E-13	8,61E-14	-3,14E-12
AP	[mol H <sup>+</sup> eq.]	1,58E-02	0,00E+00	1,04E-05	3,94E-05	1,54E-04	-8,61E-03
EP-fw	[kg PO <sub>4</sub> eq.]	3,14E-05	0,00E+00	2,48E-08	6,76E-08	9,79E-06	-2,04E-06
EP-mar	[kg N eq.]	3,52E-03	0,00E+00	3,73E-06	1,09E-05	3,54E-05	-1,61E-03
EP-ter	[mol N eq.]	3,76E-02	0,00E+00	4,41E-05	1,15E-04	3,89E-04	-1,76E-02
POCP	[kg NMVOC eq.]	1,35E-02	0,00E+00	9,04E-06	2,99E-05	1,12E-04	-4,80E-03
ADP-mm <sup>1</sup>	[kg Sb eq.]	1,65E-06	0,00E+00	4,47E-10	1,52E-09	1,36E-09	-1,04E-07
ADP-fos <sup>1</sup>	[MJ]	1,42E+02	0,00E+00	9,27E-02	5,28E-01	7,63E-01	-3,39E+01
WDP <sup>1</sup>	[m <sup>3</sup> ]	4,86E-01	0,00E+00	8,21E-05	2,65E-03	-6,91E-04	-1,62E-01
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPF = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

### 50 mm tube

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	2,10E-07	0,00E+00	9,33E-11	3,51E-10	1,50E-09	-9,06E-08
IRP2	[kBq U235 eq.]	1,17E+00	0,00E+00	2,59E-05	1,23E-02	1,33E-03	-5,36E-01
ETP-fw1	[CTUe]	6,00E+01	0,00E+00	6,58E-02	1,63E-01	7,25E-01	-1,19E+01
HTP-c1	[CTUh]	5,41E-09	0,00E+00	1,35E-12	3,58E-12	3,35E-11	-1,02E-09
HTP-nc1	[CTUh]	4,84E-07	0,00E+00	7,18E-11	1,61E-10	2,80E-09	-2,31E-08
SQP1	-	4,02E+01	0,00E+00	3,87E-02	8,90E-02	6,66E-02	-2,16E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)						
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						
	<sup>2</sup> 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.						

**50 mm tube**

RESSOURCE CONSUMPTION PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	3,20E+01	0,00E+00	6,73E-03	1,05E-01	6,91E-02	-1,08E+01
PERM	[MJ]	2,55E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,46E+01	0,00E+00	6,73E-03	1,05E-01	6,91E-02	-1,08E+01
PENRE	[MJ]	1,25E+02	0,00E+00	9,30E-02	5,28E-01	7,63E-01	-3,39E+01
PENRM	[MJ]	1,71E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,42E+02	0,00E+00	9,30E-02	5,28E-01	7,63E-01	-3,39E+01
SM	[kg]	1,60E-01	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	5,19E-02	0,00E+00	7,38E-06	1,41E-04	8,33E-06	-2,19E-02
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water						

**50 mm tube**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	8,44E-08	0,00E+00	2,88E-13	2,17E-11	6,40E-11	-1,21E-09
NHWD	[kg]	7,86E-01	0,00E+00	1,42E-05	2,21E-03	7,53E-01	-5,32E-01
RWD	[kg]	6,52E-03	0,00E+00	1,74E-07	8,10E-05	9,03E-06	-2,46E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	3,92E-02	0,00E+00	0,00E+00	3,26E-01	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,26E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	1,47E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy						

**50 mm tube**

BIOGENIC CARBON CONTENT PER PRODUKT PER M <sup>2</sup>		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	0
Biogenic carbon content in accompanying packaging	kg C	0,08

**Motor, 50 mm tube**

**Motor, 50 mm tube**

ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	8,81E+00	0,00E+00	9,55E-03	5,34E-02	5,33E-02	-2,40E+00
GWP-fossil	[kg CO <sub>2</sub> eq.]	8,74E+00	0,00E+00	9,49E-03	5,33E-02	5,39E-02	-2,40E+00
GWP-bio	[kg CO <sub>2</sub> eq.]	5,86E-02	0,00E+00	2,79E-05	4,85E-05	-6,32E-04	2,64E-03
GWP-luluc	[kg CO <sub>2</sub> eq.]	3,97E-03	0,00E+00	8,73E-05	4,88E-06	4,47E-05	-9,25E-04
ODP	[kg CFC 11 eq.]	2,86E-11	0,00E+00	1,23E-15	5,28E-13	8,85E-14	1,74E-12
AP	[mol H <sup>+</sup> eq.]	1,84E-02	0,00E+00	1,45E-05	8,11E-05	1,60E-04	-8,05E-03
EP-fw	[kg PO <sub>4</sub> eq.]	3,09E-05	0,00E+00	3,45E-08	7,42E-08	9,92E-06	-1,22E-06
EP-mar	[kg N eq.]	3,99E-03	0,00E+00	5,20E-06	2,27E-05	3,68E-05	-1,46E-03
EP-ter	[mol N eq.]	4,24E-02	0,00E+00	6,14E-05	2,40E-04	4,04E-04	-1,58E-02
POCP	[kg NMVOC eq.]	1,54E-02	0,00E+00	1,26E-05	6,27E-05	1,17E-04	-4,62E-03
ADP-mm <sup>1</sup>	[kg Sb eq.]	1,23E-04	0,00E+00	6,21E-10	2,72E-09	1,40E-09	-6,49E-05
ADP-fos <sup>1</sup>	[MJ]	1,43E+02	0,00E+00	1,29E-01	1,15E+00	7,79E-01	-2,52E+01
WDP <sup>1</sup>	[m <sup>3</sup> ]	1,02E+00	0,00E+00	1,14E-04	4,72E-03	-6,47E-04	-1,44E-01
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

**Motor, 50 mm tube**

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	2,08E-07	0,00E+00	1,31E-10	7,31E-10	1,56E-09	-9,21E-08
IRP2	[kBq U235 eq.]	7,22E-01	0,00E+00	3,60E-05	2,69E-02	1,36E-03	-2,30E-01
ETP-fw1	[CTUe]	5,80E+01	0,00E+00	9,14E-02	3,35E-01	7,38E-01	-7,81E+00
HTP-c1	[CTUh]	6,74E-09	0,00E+00	1,87E-12	6,37E-12	3,45E-11	-2,35E-09
HTP-nc1	[CTUh]	5,13E-07	0,00E+00	9,96E-11	3,15E-10	2,89E-09	-1,93E-08
SQP1	-	4,17E+01	0,00E+00	5,37E-02	1,64E-01	6,90E-02	-1,13E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)						
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						
	<sup>2</sup> 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.						

**Motor, 50 mm tube**

RESSOURCE CONSUMPTION PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	2,33E+01	0,00E+00	9,35E-03	1,74E-01	7,10E-02	-3,78E+00
PERM	[MJ]	1,87E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	2,52E+01	0,00E+00	9,35E-03	1,74E-01	7,10E-02	-3,78E+00
PENRE	[MJ]	1,27E+02	0,00E+00	1,29E-01	1,15E+00	7,80E-01	-2,53E+01
PENRM	[MJ]	1,67E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,43E+02	0,00E+00	1,29E-01	1,15E+00	7,80E-01	-2,53E+01
SM	[kg]	2,07E-01	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	4,86E-02	0,00E+00	1,02E-05	2,74E-04	1,01E-05	-1,18E-02
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water						

**Motor, 50 mm tube**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	5,83E-08	0,00E+00	4,00E-13	6,20E-11	6,50E-11	-5,96E-10
NHWD	[kg]	5,40E-01	0,00E+00	1,97E-05	1,33E-03	7,95E-01	-2,13E-01
RWD	[kg]	4,21E-03	0,00E+00	2,42E-07	1,78E-04	9,22E-06	-9,61E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	9,44E-02	0,00E+00	0,00E+00	9,34E-01	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,25E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	1,46E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy						

**Motor, 50 mm tube**

BIOGENIC CARBON CONTENT PER PER PRODUKT PER M <sup>2</sup>		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	0
Biogenic carbon content in accompanying packaging	kg C	0,06

**65 mm headbox, 38 mm tube**
**65 mm headbox, 38 mm tube**

ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	3,13E+01	0,00E+00	1,22E-02	1,89E-01	6,17E-02	-2,23E+01
GWP-fossil	[kg CO <sub>2</sub> eq.]	3,09E+01	0,00E+00	1,21E-02	1,89E-01	6,24E-02	-2,23E+01
GWP-bio	[kg CO <sub>2</sub> eq.]	3,52E-01	0,00E+00	3,56E-05	2,26E-04	-7,61E-04	-1,81E-03
GWP-luluc	[kg CO <sub>2</sub> eq.]	1,45E-02	0,00E+00	1,11E-04	1,73E-05	5,48E-05	-3,06E-03
ODP	[kg CFC 11 eq.]	2,22E-10	0,00E+00	1,57E-15	1,88E-12	1,04E-13	-2,89E-11
AP	[mol H <sup>+</sup> eq.]	9,32E-02	0,00E+00	1,91E-05	2,87E-04	1,91E-04	-7,88E-02
EP-fw	[kg PO <sub>4</sub> eq.]	1,32E-04	0,00E+00	4,40E-08	3,17E-07	1,13E-05	-1,34E-05
EP-mar	[kg N eq.]	1,80E-02	0,00E+00	6,76E-06	8,02E-05	4,41E-05	-1,47E-02
EP-ter	[mol N eq.]	1,87E-01	0,00E+00	7,98E-05	8,47E-04	4,85E-04	-1,60E-01
POCP	[kg NMVOC eq.]	5,54E-02	0,00E+00	1,65E-05	2,21E-04	1,40E-04	-4,35E-02
ADP-mm <sup>1</sup>	[kg Sb eq.]	7,85E-06	0,00E+00	7,93E-10	9,97E-09	1,64E-09	-9,56E-07
ADP-fos <sup>1</sup>	[MJ]	4,97E+02	0,00E+00	1,64E-01	4,01E+00	9,01E-01	-3,05E+02
WDP <sup>1</sup>	[m <sup>3</sup> ]	4,83E+00	0,00E+00	1,45E-04	1,73E-02	-5,88E-04	-1,35E+00
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

**65 mm headbox, 38 mm tube**

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	1,48E-06	0,00E+00	1,77E-10	2,58E-09	1,89E-09	-8,26E-07
IRP2	[kBq U235 eq.]	7,33E+00	0,00E+00	4,60E-05	9,39E-02	1,57E-03	-4,97E+00
ETP-fw1	[CTUe]	2,70E+02	0,00E+00	1,17E-01	1,19E+00	8,46E-01	-1,09E+02
HTP-c1	[CTUh]	1,25E-08	0,00E+00	2,39E-12	2,34E-11	4,06E-11	-9,11E-09
HTP-nc1	[CTUh]	7,97E-07	0,00E+00	1,27E-10	1,13E-09	3,44E-09	-2,12E-07
SQP1	-	2,82E+02	0,00E+00	6,85E-02	5,98E-01	8,26E-02	-2,01E+01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)						
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						
	<sup>2</sup> 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.						

**65 mm headbox, 38 mm tube**

RESSOURCE CONSUMPTION PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	1,87E+02	0,00E+00	1,19E-02	6,50E-01	8,34E-02	-1,01E+02
PERM	[MJ]	2,02E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	2,07E+02	0,00E+00	1,19E-02	6,50E-01	8,34E-02	-1,01E+02
PENRE	[MJ]	4,77E+02	0,00E+00	1,65E-01	4,01E+00	9,02E-01	-3,05E+02
PENRM	[MJ]	2,11E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,98E+02	0,00E+00	1,65E-01	4,01E+00	9,02E-01	-3,05E+02
SM	[kg]	1,24E+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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	2,83E-01	0,00E+00	1,31E-05	9,84E-04	1,59E-05	-1,99E-01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water						

**65 mm headbox, 38 mm tube**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	6,15E-07	0,00E+00	5,11E-13	2,05E-10	7,41E-11	-1,12E-08
NHWD	[kg]	6,23E+00	0,00E+00	2,51E-05	7,39E-03	9,91E-01	-4,93E+00
RWD	[kg]	3,81E-02	0,00E+00	3,08E-07	6,21E-04	1,07E-05	-2,28E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,43E-01	0,00E+00	0,00E+00	2,76E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,13E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	1,31E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy						

**65 mm headbox, 38 mm tube**

BIOGENIC CARBON CONTENT PER PER PRODUKT PER M <sup>2</sup>		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	0
Biogenic carbon content in accompanying packaging	kg C	0,67

### 85-95 mm headbox, 50 mm tube

#### 85-95 mm headbox, 50 mm tube

ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	1,22E+01	0,00E+00	5,89E-03	6,85E-02	3,47E-02	-7,99E+00
GWP-fossil	[kg CO <sub>2</sub> eq.]	1,21E+01	0,00E+00	5,85E-03	6,84E-02	3,51E-02	-7,99E+00
GWP-bio	[kg CO <sub>2</sub> eq.]	8,04E-02	0,00E+00	1,72E-05	8,83E-05	-4,18E-04	-6,68E-04
GWP-luluc	[kg CO <sub>2</sub> eq.]	5,25E-03	0,00E+00	5,38E-05	6,27E-06	2,98E-05	-1,09E-03
ODP	[kg CFC 11 eq.]	8,77E-11	0,00E+00	7,57E-16	6,82E-13	5,79E-14	-1,04E-11
AP	[mol H <sup>+</sup> eq.]	3,54E-02	0,00E+00	9,12E-06	1,04E-04	1,05E-04	-2,82E-02
EP-fw	[kg PO <sub>4</sub> eq.]	4,88E-05	0,00E+00	2,12E-08	1,21E-07	6,41E-06	-4,95E-06
EP-mar	[kg N eq.]	6,67E-03	0,00E+00	3,24E-06	2,90E-05	2,43E-05	-5,26E-03
EP-ter	[mol N eq.]	6,92E-02	0,00E+00	3,83E-05	3,06E-04	2,67E-04	-5,73E-02
POCP	[kg NMVOC eq.]	2,11E-02	0,00E+00	7,88E-06	7,98E-05	7,69E-05	-1,56E-02
ADP-mm <sup>1</sup>	[kg Sb eq.]	2,90E-06	0,00E+00	3,83E-10	3,65E-09	9,15E-10	-3,42E-07
ADP-fos <sup>1</sup>	[MJ]	1,99E+02	0,00E+00	7,93E-02	1,45E+00	5,07E-01	-1,09E+02
WDP <sup>1</sup>	[m <sup>3</sup> ]	1,99E+00	0,00E+00	7,02E-05	6,34E-03	-3,85E-04	-4,86E-01
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

#### 85-95 mm headbox, 50 mm tube

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	5,26E-07	0,00E+00	8,36E-11	9,33E-10	1,03E-09	-2,96E-07
IRP2	[kBq U235 eq.]	2,83E+00	0,00E+00	2,22E-05	3,38E-02	8,84E-04	-1,78E+00
ETP-fw1	[CTUe]	1,13E+02	0,00E+00	5,64E-02	4,30E-01	4,79E-01	-3,89E+01
HTP-c1	[CTUh]	5,44E-09	0,00E+00	1,15E-12	8,56E-12	2,26E-11	-3,25E-09
HTP-nc1	[CTUh]	3,79E-07	0,00E+00	6,14E-11	4,09E-10	1,90E-09	-7,59E-08
SQP1	-	5,53E+01	0,00E+00	3,31E-02	2,18E-01	4,55E-02	-7,21E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)						
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						
	<sup>2</sup> 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.						



**85-95 mm headbox, 50 mm tube**

RESSOURCE CONSUMPTION PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	6,87E+01	0,00E+00	5,76E-03	2,39E-01	4,65E-02	-3,60E+01
PERM	[MJ]	3,12E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	7,18E+01	0,00E+00	5,76E-03	2,39E-01	4,65E-02	-3,60E+01
PENRE	[MJ]	1,87E+02	0,00E+00	7,96E-02	1,45E+00	5,07E-01	-1,09E+02
PENRM	[MJ]	1,16E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,99E+02	0,00E+00	7,96E-02	1,45E+00	5,07E-01	-1,09E+02
SM	[kg]	1,93E-01	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	1,07E-01	0,00E+00	6,31E-06	3,58E-04	7,49E-06	-7,15E-02
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water						

**85-95 mm headbox, 50 mm tube**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	1,39E-07	0,00E+00	2,47E-13	7,25E-11	4,21E-11	-4,02E-09
NHWD	[kg]	2,40E+00	0,00E+00	1,21E-05	2,98E-03	5,33E-01	-1,77E+00
RWD	[kg]	1,48E-02	0,00E+00	1,49E-07	2,24E-04	6,00E-06	-8,17E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,27E-01	0,00E+00	0,00E+00	9,86E-01	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	3,55E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	4,14E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy						

**85-95 mm headbox, 50 mm tube**

BIOGENIC CARBON CONTENT PER PRODUKT PER M <sup>2</sup>		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	0
Biogenic carbon content in accompanying packaging	kg C	0,1

**Motor, 85 mm headbox, 50 mm tube**
**Motor, 85 mm headbox, 50 mm tube**

ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	2,26E+01	0,00E+00	1,58E-02	1,53E-01	6,82E-02	-1,20E+01
GWP-fossil	[kg CO <sub>2</sub> eq.]	2,24E+01	0,00E+00	1,57E-02	1,53E-01	6,90E-02	-1,20E+01
GWP-bio	[kg CO <sub>2</sub> eq.]	1,61E-01	0,00E+00	4,60E-05	1,23E-04	-8,34E-04	4,17E-03
GWP-luluc	[kg CO <sub>2</sub> eq.]	1,05E-02	0,00E+00	1,44E-04	1,40E-05	5,99E-05	-2,78E-03
ODP	[kg CFC 11 eq.]	1,14E-10	0,00E+00	2,03E-15	1,51E-12	1,14E-13	-6,85E-12
AP	[mol H <sup>+</sup> eq.]	6,13E-02	0,00E+00	2,43E-05	2,33E-04	2,09E-04	-4,20E-02
EP-fw	[kg PO <sub>4</sub> eq.]	8,30E-05	0,00E+00	5,69E-08	1,97E-07	1,25E-05	-6,09E-06
EP-mar	[kg N eq.]	1,17E-02	0,00E+00	8,65E-06	6,54E-05	4,84E-05	-7,71E-03
EP-ter	[mol N eq.]	1,22E-01	0,00E+00	1,02E-04	6,90E-04	5,32E-04	-8,38E-02
POCP	[kg NMVOC eq.]	3,90E-02	0,00E+00	2,10E-05	1,80E-04	1,53E-04	-2,33E-02
ADP-mm <sup>1</sup>	[kg Sb eq.]	2,50E-04	0,00E+00	1,03E-09	7,70E-09	1,81E-09	-1,32E-04
ADP-fos <sup>1</sup>	[MJ]	3,44E+02	0,00E+00	2,13E-01	3,31E+00	9,97E-01	-1,50E+02
WDP <sup>1</sup>	[m <sup>3</sup> ]	4,11E+00	0,00E+00	1,88E-04	1,34E-02	-6,91E-04	-7,15E-01
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

**Motor, 85 mm headbox, 50 mm tube**

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	8,15E-07	0,00E+00	2,22E-10	2,10E-09	2,07E-09	-4,53E-07
IRP2	[kBq U235 eq.]	3,61E+00	0,00E+00	5,95E-05	7,75E-02	1,73E-03	-2,13E+00
ETP-fw1	[CTUe]	1,85E+02	0,00E+00	1,51E-01	9,62E-01	9,38E-01	-5,16E+01
HTP-c1	[CTUh]	1,26E-08	0,00E+00	3,09E-12	1,81E-11	4,48E-11	-7,37E-09
HTP-nc1	[CTUh]	8,14E-07	0,00E+00	1,65E-10	8,99E-10	3,79E-09	-1,08E-07
SQP1	-	9,20E+01	0,00E+00	8,86E-02	4,68E-01	9,06E-02	-9,23E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)						
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						
	<sup>2</sup> 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.						

**Motor, 85 mm headbox, 50 mm tube**

RESSOURCE CONSUMPTION PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	9,35E+01	0,00E+00	1,54E-02	4,89E-01	9,20E-02	-4,17E+01
PERM	[MJ]	3,87E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	9,73E+01	0,00E+00	1,54E-02	4,89E-01	9,20E-02	-4,17E+01
PENRE	[MJ]	3,31E+02	0,00E+00	2,13E-01	3,31E+00	9,98E-01	-1,50E+02
PENRM	[MJ]	1,38E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,44E+02	0,00E+00	2,13E-01	3,31E+00	9,98E-01	-1,50E+02
SM	[kg]	4,01E-01	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	1,66E-01	0,00E+00	1,69E-05	7,82E-04	1,65E-05	-8,99E-02
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water						

**Motor, 85 mm headbox, 50 mm tube**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	1,77E-07	0,00E+00	6,61E-13	1,82E-10	8,23E-11	-4,97E-09
NHWD	[kg]	3,24E+00	0,00E+00	3,25E-05	3,04E-03	1,08E+00	-2,08E+00
RWD	[kg]	1,92E-02	0,00E+00	3,99E-07	5,15E-04	1,18E-05	-9,63E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	2,94E-01	0,00E+00	0,00E+00	2,62E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,76E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	2,05E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy						

**Motor, 85 mm headbox, 50 mm tube**

BIOGENIC CARBON CONTENT PER PRODUKT PER M <sup>2</sup>		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	0
Biogenic carbon content in accompanying packaging	kg C	0,13

### Motor, 95 mm headbox, 50 mm tube

#### Motor, 95 mm headbox, 50 mm tube

ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	1,59E+01	0,00E+00	1,07E-02	1,16E-01	3,74E-02	-9,78E+00
GWP-fossil	[kg CO <sub>2</sub> eq.]	1,58E+01	0,00E+00	1,06E-02	1,16E-01	3,78E-02	-9,78E+00
GWP-bio	[kg CO <sub>2</sub> eq.]	1,31E-01	0,00E+00	3,12E-05	1,00E-04	-4,67E-04	2,97E-03
GWP-luluc	[kg CO <sub>2</sub> eq.]	7,37E-03	0,00E+00	9,78E-05	1,06E-05	3,38E-05	-2,24E-03
ODP	[kg CFC 11 eq.]	8,52E-11	0,00E+00	1,38E-15	1,15E-12	6,31E-14	-6,65E-12
AP	[mol H <sup>+</sup> eq.]	4,79E-02	0,00E+00	1,65E-05	1,76E-04	1,17E-04	-3,47E-02
EP-fw	[kg PO <sub>4</sub> eq.]	6,04E-05	0,00E+00	3,86E-08	1,57E-07	6,77E-06	-5,16E-06
EP-mar	[kg N eq.]	8,85E-03	0,00E+00	5,88E-06	4,95E-05	2,70E-05	-6,30E-03
EP-ter	[mol N eq.]	9,14E-02	0,00E+00	6,94E-05	5,22E-04	2,97E-04	-6,85E-02
POCP	[kg NMVOC eq.]	2,82E-02	0,00E+00	1,43E-05	1,36E-04	8,54E-05	-1,90E-02
ADP-mm <sup>1</sup>	[kg Sb eq.]	2,22E-04	0,00E+00	6,96E-10	5,88E-09	1,00E-09	-1,20E-04
ADP-fos <sup>1</sup>	[MJ]	2,37E+02	0,00E+00	1,44E-01	2,50E+00	5,46E-01	-1,23E+02
WDP <sup>1</sup>	[m <sup>3</sup> ]	3,16E+00	0,00E+00	1,28E-04	1,02E-02	-3,23E-04	-6,03E-01
Caption	GWP-total = Global Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

### Motor, 95 mm headbox, 50 mm tube

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	6,55E-07	0,00E+00	1,51E-10	1,59E-09	1,16E-09	-3,71E-07
IRP2	[kBq U235 eq.]	2,84E+00	0,00E+00	4,04E-05	5,85E-02	9,47E-04	-1,79E+00
ETP-fw1	[CTUe]	1,33E+02	0,00E+00	1,02E-01	7,29E-01	5,11E-01	-4,29E+01
HTP-c1	[CTUh]	8,12E-09	0,00E+00	2,10E-12	1,38E-11	2,47E-11	-5,72E-09
HTP-nc1	[CTUh]	4,54E-07	0,00E+00	1,12E-10	6,83E-10	2,11E-09	-8,89E-08
SQP1	-	8,12E+01	0,00E+00	6,01E-02	3,56E-01	5,05E-02	-8,06E+00
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)						
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						
	<sup>2</sup> 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.						

**Motor, 95 mm headbox, 50 mm tube**

RESSOURCE CONSUMPTION PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	7,33E+01	0,00E+00	1,05E-02	3,75E-01	5,08E-02	-3,52E+01
PERM	[MJ]	4,73E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	7,80E+01	0,00E+00	1,05E-02	3,75E-01	5,08E-02	-3,52E+01
PENRE	[MJ]	2,29E+02	0,00E+00	1,45E-01	2,50E+00	5,46E-01	-1,24E+02
PENRM	[MJ]	8,22E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,37E+02	0,00E+00	1,45E-01	2,50E+00	5,46E-01	-1,24E+02
SM	[kg]	4,00E-01	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	1,26E-01	0,00E+00	1,15E-05	5,94E-04	1,05E-05	-7,51E-02
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water						

**Motor, 95 mm headbox, 50 mm tube**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUKT PER M <sup>2</sup>							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	1,76E-07	0,00E+00	4,48E-13	1,36E-10	4,47E-11	-4,15E-09
NHWD	[kg]	2,64E+00	0,00E+00	2,20E-05	2,65E-03	6,14E-01	-1,73E+00
RWD	[kg]	1,49E-02	0,00E+00	2,71E-07	3,88E-04	6,45E-06	-8,09E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	2,12E-01	0,00E+00	0,00E+00	2,00E+00	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	3,54E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	4,13E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy						

**Motor, 95 mm headbox, 50 mm tube**

BIOGENIC CARBON CONTENT PER PRODUKT PER M <sup>2</sup>		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	0
Biogenic carbon content in accompanying packaging	kg C	0,16

# Additional information

## LCA interpretation

The results show that the production of primary aluminium and polyester fabric are the dominating processes in most of the environmental impact categories. Here the aluminium contribute between 25% and 84% to the total impacts. The production of primary aluminium makes up at least 36% of the total Climate Change impacts. The production of the polyester fabric contributes between 31% and 94% to the total impacts and at least 46% of the total Climate Change impacts.

The datasets used to model the processes that contribute the most to the overall impacts are all considered to be "good/very good" in regard to their representativity. The overall uncertainty of the results is thus considered to be low.

## Technical information on scenarios

### Reference service life

RSL information	Unit
Reference service Life	25 Years on frames, 15 years on electric motor and screen fabric
Declared product properties	Technical specifications and guidance can be obtained from direct contact to Fischer at +45 7015 4055 or <a href="mailto:fischer@fischer-international.dk">fischer@fischer-international.dk</a>
Design application parameters	
Assumed quality of work	
Outdoor environment	
Indoor environment	
Usage conditions	
Maintenance	

### End of life (C1-C4)

Scenario information	38 tube	50 tube	Motor, 50 tube	65 headbox, 38 tube	85-95 headbox, 50 tube	Motor, 85 headbox, 50 tube	Motor, 95 headbox, 50 tube	Unit
Collected separately	1,21	1,28	1,84	1,84	2,22	3,24	3,70	kg
Collected with mixed waste	0	0	0	0	0	0	0	kg
For reuse	0	0	0	0	0	0	0	kg
For recycling	0,51	0,53	1,31	1,34	1,73	2,80	3,11	kg
For energy recovery	0	0	0	0	0	0	0	kg
For final disposal	0,70	0,75	0,53	0,49	0,49	0,44	0,59	kg
Assumptions for scenario development	Assumed dismantled using hand tools							

### Re-use, recovery and recycling potential (D)

Avoided production	38 tube	50 tube	Motor, 50 tube	65 headbox, 38 tube	85-95 headbox, 50 tube	Motor, 85 headbox, 50 tube	Motor, 95 headbox, 50 tube	Unit
Plastic	0,02	0,03	0,01	0,02	0,04	0,02	0,02	kg
Steel	0,05	0,03	0,95	0,03	0,02	1,34	1,36	kg
Aluminium	0,41	0,44	0,18	1,22	1,57	1,14	1,41	kg
Copper	0,00	0,00	0,04	0,00	0,00	0,05	0,06	kg

The avoided production is only calculated on the virgin fraction of the type of input material in A1.

### Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.1.

### Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.2.

## References

<b>Publisher</b>	 www.epddanmark.dk
<b>Programme operator</b>	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
<b>LCA-practitioner</b>	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup <a href="http://www.teknologisk.dk">www.teknologisk.dk</a>
<b>LCA software / background data</b>	Thinkstep GaBi 10.6 Database version 2021.2 <a href="http://www.gabi-software.com">www.gabi-software.com</a>
<b>3<sup>rd</sup> party verifier</b>	Ninkie Bendtsen NIRAS A/S Sortemosevej 19 DK-3450 Allerød <a href="http://www.niras.dk">www.niras.dk</a>

### General programme instructions

Version 2.0

[www.epddanmark.dk](http://www.epddanmark.dk)

#### EN 15804

DS/EN 15804 + A2:2019 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

#### EN 15942

DS/EN 15942:2011 – " Sustainability of construction works – Environmental product declarations – Communication format business-to-business"

#### ISO 14025

DS/EN ISO 14025:2010 – " Environmental labels and declarations – Type III environmental declarations – Principles and procedures"

#### ISO 14040

DS/EN ISO 14040:2008 – " Environmental management – Life cycle assessment – Principles and framework"

#### ISO 14044

DS/EN ISO 14044:2008 – " Environmental management – Life cycle assessment – Requirements and guidelines"