



Reference product



> Reference product

SIRIUS 80/12 PA

Ref **200475C**

> Functional unit

To ensure the closing and opening action by performing 14 000 operating cycles, and a reference service life of 15 years, with a torque of 80 Nm, on a length of 2 meters, corresponding to 6 winding turns per half-cycle, with a tube diameter of 60 mm.

> Reference covered

ORION 40/17 PA 200473C
VEGA 60/12 PA 200474C
SIRIUS 80/12 PA 200475C
ORION 40/17 200425C
ORION S 55/17 200426C
VEGA 60/12 200415C
ANTARES 70/17 200427C
SIRIUS 80/12 200416C

JUPITER 85/17 200423C
TITAN 100/12 200417C
TAURUS 120/12 200413C
660R6 60/14 200490C
680R6 80/14 200491C
6100R6 100/14 200492C
TAURUS 120/12 5070640A
VEGA 60/12 5070641A
SIRIUS 80/12 5070642A



Materials and substances

All useful measures have been adopted to ensure that the materials used in the composition of the product do not contain any substances banned by the legislation in force at the time of marketing.

Plastics			Metals			Other		
	g	%		g	%		g	%
Polyamide 6.6	165	3.6	Steel	2680	57.5	Glass fiber	179	3.9
POM	74.7	1.6	Zamak	417	8.9	Barium oxide	32.3	0.7
Polystyrene	26.7	0.6	Copper	360	7.8	Lubricant	30	0.7
Thermoset	22.7	0.5	Alloy	22.0	0.5	Titanium dioxide	14.5	0.3
PC	15.9	0.4	Nickel	8.2	0.2	Alkyd Paint	12.7	0.3
Polypropylene	15.5	0.3	Tin	6.1	0.1	Other	1.7	< 0.1
Silicon rubber	6.8	0.2	Zinc	5.6	0.1	Total	270.2	6.0
polybutylene terephthalate	6.8	0.1	Other	4.9	0.1			
Other	0.1	< 0.1	Total	3504	75.2	Packaging		
Total	334	7.4				Corrugated cardboard	443	9.5
						Paper	86.7	1.9
						Total	530	11.4

Total mass of reference flow: 4668g

Estimated recyclable content: 27.3%

> CHEMICAL SUBSTANCES

The product covered by this PEP comply with REACH regulation and RoHS directive 2011/65/EU, 2015/863 and 2017/2102



Manufacturing

The devices covered in this PEP are manufactured in a production that has adopted an environmental management approach.

> Energy mix

Polish mix



Distribution

> Packaging is continuously improved by reducing the amount and using a maximum of recycled materials.

> The unit pack has been modeled here. It is made up of :

- 100% recycled fiber paper instructions
- cardboard with a minimum of 50% recycled fibers



Installation

> Installation elements

There is no element included in this phase.

> Installation processes

There is no installation process.

> Energy model

Not applicable



Use

For the considered scenario, the product has a power of 290W in active mode during 0.367% of the time. All the reference use mechanical cage system, therefore there is no standby consumption.

- > Energy model of the use phase: European Mix
- > Consumables and maintenance: Not applicable



End of life

> Typical transport conditions

Considering the complexity of the electric and electronic recycling channel and our lack of knowledge about the end of life processes implemented all around the world, we considered:

- 1000 km of transport
- A waste pretreatment of electrical and electronic equipment, including dismantling and material separation.
- A waste incineration of electrical and electronic equipment

Environmental impacts

Evaluation of the environmental impact covers the following life cycle stages: manufacturing, distribution, installation, use and end of life.
All calculations are done with EIME software version EIME© v5.9.1 and CODDE 2020-12

	Unit	Sum	Manufacturing	Distribution	Installation	Use	End of life
Acidification potential of soil and water	(kg SO ₂ eq.)	4.10E-01	8.34E-02	3.91E-02	1.82E-04	2.86E-01	1.25E-03
Abiotic depletion (elements, ultimate reserves)	(kg antimony eq.)	9.14E-04	9.08E-04	5.00E-08	1.85E-09	5.95E-06	1.36E-08
Abiotic depletion (fossil fuels)	(MJ)	1.04E+03	2.36E+02	1.75E+01	4.99E-01	7.78E+02	3.44E+00
Air pollution	(m ³)	7.96E+03	4.79E+03	1.89E+02	5.49E+00	2.95E+03	2.20E+01
Eutrophication	(kg PO ₄ --- eq.)	3.54E-02	1.11E-02	3.86E-03	1.29E-03	1.73E-02	1.92E-03
Global Warming	(kg CO ₂ eq.)	9.43E+01	2.30E+01	1.38E+00	7.15E-01	6.85E+01	6.70E-01
Ozone layer depletion	(kg CFC-11 eq.)	5.54E-06	1.07E-06	2.37E-09	1.91E-09	4.46E-06	3.80E-09
Photochemical oxidation	(kg ethylene eq.)	2.58E-02	7.84E-03	1.94E-03	1.72E-04	1.57E-02	9.28E-05
Water pollution	(m ³)	5.12E+03	2.00E+03	2.05E+02	3.77E+01	2.83E+03	4.95E+01
Total Primary Energy	MJ	2.03E+03	6.36E+02	1.76E+01	5.49E-01	1.37E+03	4.95E+01
Total use of renewable primary energy resources	MJ	1.84E+02	9.85E+00	2.25E-02	4.15E-03	1.74E+02	3.05E-02
Total use of non-renewable primary energy resources	MJ	1.84E+03	6.27E+02	1.76E+01	5.44E-01	1.19E+03	3.59E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.83E+02	8.52E+00	2.25E-02	4.15E-03	1.74E+02	3.05E-02
Use of renewable primary energy resources used as raw material	MJ	1.33E+00	1.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.83E+03	6.15E+02	1.76E+01	5.44E-01	1.19E+03	3.59E+00
Use of non renewable primary energy resources used as raw material	MJ	1.16E+01	1.16E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of secondary material	kg	1.56E+00	1.56E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of freshwater	m ³	2.54E+02	5.27E+00	1.07E-04	4.50E-05	2.48E+02	2.50E-04
Hazardous waste disposed	kg	4.47E+01	4.45E+01	0.00E+00	5.24E-04	3.57E-02	2.51E-01
Non hazardous waste disposed	kg	2.82E+02	2.18E+01	4.25E-02	5.71E-01	2.55E+02	4.05E+00
Radioactive waste disposed	kg	1.75E-01	4.29E-03	2.95E-05	5.61E-06	1.71E-01	3.67E-05
Components for reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+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
Exported Energy	MJ	5.54E-02	5.73E-03	0.00E+00	4.97E-02	0.00E+00	0.00E+00

Product Environmental Profile

LT60 PA & LT60 RA Motors



> Extrapolation rule

For each stage of lifecycle, the environmental impacts of the product concerned are calculated by multiplying the impacts of the reference product by the extrapolation coefficient.

	Manufacturing	Distribution	Installation	Use	End of life
ORION 40/17 PA	1	1	1	0.59	1
VEGA 60/12 PA	1	1	1	0.83	1
SIRIUS 80/12 PA	1	1	1	1	1
680R6 80/14 RA	1.02	1.03	1.00	1.04	1.39
660R6 60/14 RA	1.02	1.03	1.00	0.81	1.39
TITAN 100/12 RA	1.02	1.03	1.00	1.21	1.39
JUPITER 85/17 RA	1.02	1.03	1.00	0.99	1.39
SIRIUS 80/12 RA	1.02	1.03	1.00	1.00	1.39
ANTARES 70/17 RA	1.02	1.03	1.00	0.87	1.39
VEGA 60/12 RA	1.02	1.03	1.00	0.83	1.39
ORION S 55/17 RA	1.02	1.03	1.00	0.72	1.39
ORION 40/17 RA	1.02	1.03	1.00	0.59	1.39
6100R6 100/14 RA	1.02	1.03	1.00	1.19	1.39
TAURUS 120/12 RA	1.02	1.03	1.00	1.38	1.39

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Accreditation number: VH18	Programme information: www.pep-ecopassport.org
Date of issue: 12-2021	Validity period: 5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010 Internal <input type="checkbox"/> External <input checked="" type="checkbox"/> Bureau Veritas LCIE	
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)	
PEP are compliant with XP C08-100-1: 2016 The elements of the present PEP cannot be compared with elements from another programme.	
Document in compliance with ISO 14025: 2010 "Environmental labels and declarations. Type III environmental declarations	
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