

Product Environmental Profile

ALTUS 60 RTS & OREA 60 RTS Motors



- Reference product -



> Reference product

ALTUS 60 RTS 120/12 Ref **5005457G**

> 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 120 Nm, on a length of 2 meters, corresponding to 6 winding turns per half-cycle, with a tube diameter of 60 mm.

> Reference covered

ALTUS 60 RTS 55/17 5005453G ALTUS 60 RTS 55/17 5070645A ALTUS 60 RTS 70/17 5005454G ALTUS 60 RTS 85/17 5005455G ALTUS 60 RTS 100/12 5005455G ALTUS 60 RTS 120/12 5005457G ORION 40/17 PA 200473C VEGA 60/12 PA 200474C SIRIUS 80/12 PA 200475C OREA 60 RTS 55/17 50054811 OREA 60 RTS 70/17 50054821 OREA 60 RTS 85/17 50054831 OREA 60 RTS 100/12 50054841 OREA 60 RTS 120/12 50054851

Materials and substances

Metals Other Plastics Polyamide 6.6 194 4.2 Steel 2710 58.3 Glass fiber 140 3 POM 75.6 1.6 Zamak 417 9.1 **Barium** oxide 32.3 0.7 26.7 78 Lubricant 30 06 Polystyrene 0.6 Copper 360 Titanium dioxide Polypropylene 15.5 0.3 Iron 9.3 0.2 14.6 0.3 0.2 ABS Nickel 0.2 Alkyd Paint 0.3 8.5 8.2 12.7 Tin 0.1 Other 0.5 Silicon rubber 6.8 0.1 6.1 23.7 Other 5.2 0.2 Zinc 5.5 0.1 Total 253 5.4 Total 332 7.2 Other 0.3 13.1 Total 3529.2 76.1 Packaging Corrugated 443 9.5 cardboard Paper 87.2 1.8 Total 530 11.3 Total mass of reference flow: 4654.67g Estimated recyclable content: 27.6%

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.

> CHEMICAL SUBSTANCES

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



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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 400W in active mode during 0.367% of the time and a power of 0.3627W in standby mode during 99.633% of the time.

- > 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



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- 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 SO2 eq. | 6.17E-01 | 8.53E-02 | 3.95E-02 | 1.82E-04 | 4.91E-01 | 1.27E-03 |
| Abiotic depletion (elements. ultimate reserves) | kg antimony eq. | 2.18E-03 | 2.17E-03 | 5.04E-08 | 1.85E-09 | 1.02E-05 | 1.36E-08 |
| Abiotic depletion (fossil fuels) | MJ | 1.60E+03 | 2.42E+02 | 1.77E+01 | 4.99E-01 | 1.34E+03 | 3.47E+00 |
| Air pollution | m³ | 1.01E+04 | 4.76E+03 | 1.91E+02 | 5.49E+00 | 5.07E+03 | 2.25E+01 |
| Eutrophication | kg PO4 eq. | 4.75E-02 | 1.07E-02 | 3.89E-03 | 1.29E-03 | 2.97E-02 | 1.95E-03 |
| Global Warming | kg CO2 eq. | 1.44E+02 | 2.38E+01 | 1.39E+00 | 7.15E-01 | 1.18E+02 | 7.71E-01 |
| Ozone layer depletion | kg CFC-11 eq. | 8.55E-06 | 8.72E-07 | 2.39E-09 | 1.91E-09 | 7.67E-06 | 4.00E-09 |
| Photochemical oxidation | kg ethylene eq. | 3.68E-02 | 7.63E-03 | 1.96E-03 | 1.72E-04 | 2.70E-02 | 9.38E-05 |
| Water pollution | m³ | 7.34E+03 | 2.18E+03 | 2.07E+02 | 3.77E+01 | 4.86E+03 | 5.23E+01 |
| Total Primary Energy | MJ | 3.01E+03 | 6.35E+02 | 1.78E+01 | 5.49E-01 | 2.35E+03 | 3.66E+00 |
| Total use of renewable primary energy resources | MJ | 3.10E+02 | 1.08E+01 | 2.27E-02 | 4.15E-03 | 2.99E+02 | 3.01E-02 |
| Total use of non-renewable pri- mary energy resources | MJ | 2.70E+03 | 6.24E+02 | 1.78E+01 | 5.44E-01 | 2.05E+03 | 3.63E+00 |
| Use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 3.09E+02 | 9.50E+00 | 2.27E-02 | 4.15E-03 | 2.99E+02 | 3.01E-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 renewa- ble primary energy used as raw material | MJ | 2.69E+03 | 6.13E+02 | 1.78E+01 | 5.44E-01 | 2.05E+03 | 3.63E+00 |
| Use of non renewable primary energy resources used as raw material | MJ | 1.19E+01 | 1.19E+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 | 1.57E+00 | 1.57E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Net use of freshwater | m³ | 4.32E+02 | 5.27E+00 | 1.08E-04 | 4.50E-05 | 4.27E+02 | 2.86E-04 |
| Hazardous waste disposed | kg | 5.50E+01 | 5.46E+01 | 0.00E+00 | 5.24E-04 | 6.14E-02 | 3.17E-01 |
| Non hazardous waste disposed | kg | 4.66E+02 | 2.20E+01 | 4.29E-02 | 5.71E-01 | 4.39E+02 | 4.06E+00 |
| Radioactive waste disposed | kg | 2.98E-01 | 4.28E-03 | 2.98E-05 | 5.61E-06 | 2.93E-01 | 3.64E-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 | 2.23E-08 | 2.23E-08 | 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 |



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for rolling shutter

> 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. If some of the phase are not in the table, it means that the ratio is 1.

| Name | Use phase |
|------------------|-----------|
| ALTUS RTS 120/12 | 1.00 |
| ALTUS RTS 55/17 | 0.61 |
| ALTUS 70/17 | 0.70 |
| ALTUS 85/17 | 0.77 |
| ALTUS 30/45 | 0.41 |
| ALTUS 100/12 | 0.90 |
| OREA 120/12 | 1.01 |
| OREA 100/12 | 0.91 |
| OREA 85/17 | 0.78 |
| OREA 70/17 | 0.70 |
| OREA 55/17 | 0.62 |

| Registration number : SOMF-00069-V01.01-EN | Drafting Rules: PCR-ed3-EN-2015 04 02 Supplemented by PSR-0006-ed1 1-ER-2015 10 16 | | | | | |
|--|---|--|--|--|--|--|
| Accreditation number: VH18 | Programme information: www.pep-ecopassport.org | | | | | |
| e of issue: 12-2021 Validity period: 5 years | | | | | | |
| Independent verification of the declaration and data, in compliance with ISO 14025 : 2010 Internal 🗖 External 🖾 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 element | eco | | | | | |
| Document in compliance with ISO 14025: 2010 "Environmental labe | PASS | | | | | |
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