

Product Environmental Profile

**Lexium P, Delta Robots - Standart, Flat
SH, ILM Motors - rotational, non rotational**





General information

Representative product

Lexium P, Delta Robot - VRKP4L0FNO00000

Description of the product

Delta 3 robot, P4, 3-5 axis, 15 kg permissible load, 0-1200 mm, non rotational, Standard

Description of the range

Lexium P are Delta robots with 3 or 4-axis, for pick & place solutions.

This range consists of Lexium P, Delta Robots with SH or ILM motors, rotational or non rotational, Standard or Flat

The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.

Functional unit

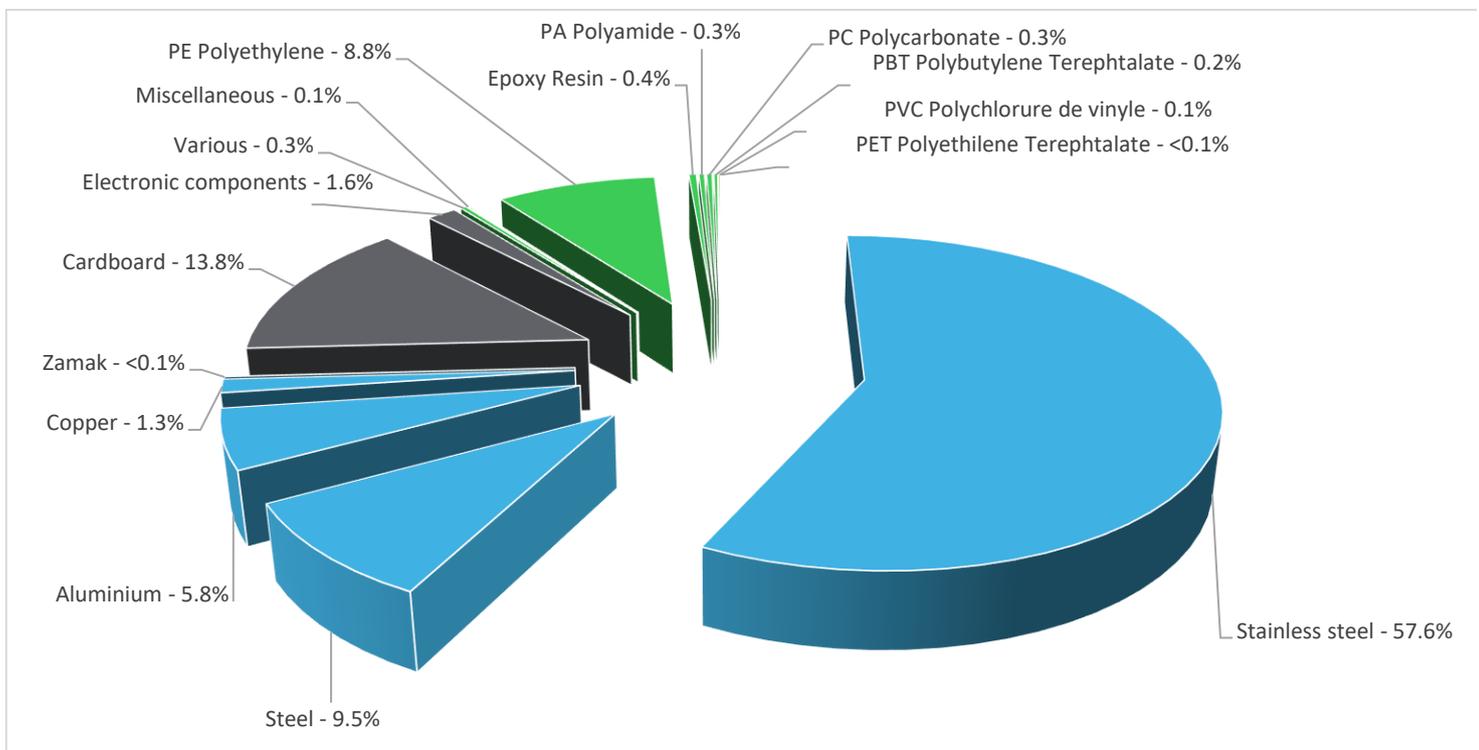
To form a system with 3 or 4-axis for ``pick and place`` applications 85% of the time for 10 years



Constituent materials

Reference product mass

137 kg including the product, its packaging and additional elements and accessories



| | |
|----------|-------|
| Plastics | 10.1% |
| Metals | 74.2% |
| Others | 15.8% |



Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 8 June 2011) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive

As the products of the range are designed in accordance with the RoHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website

<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>



Additional environmental information

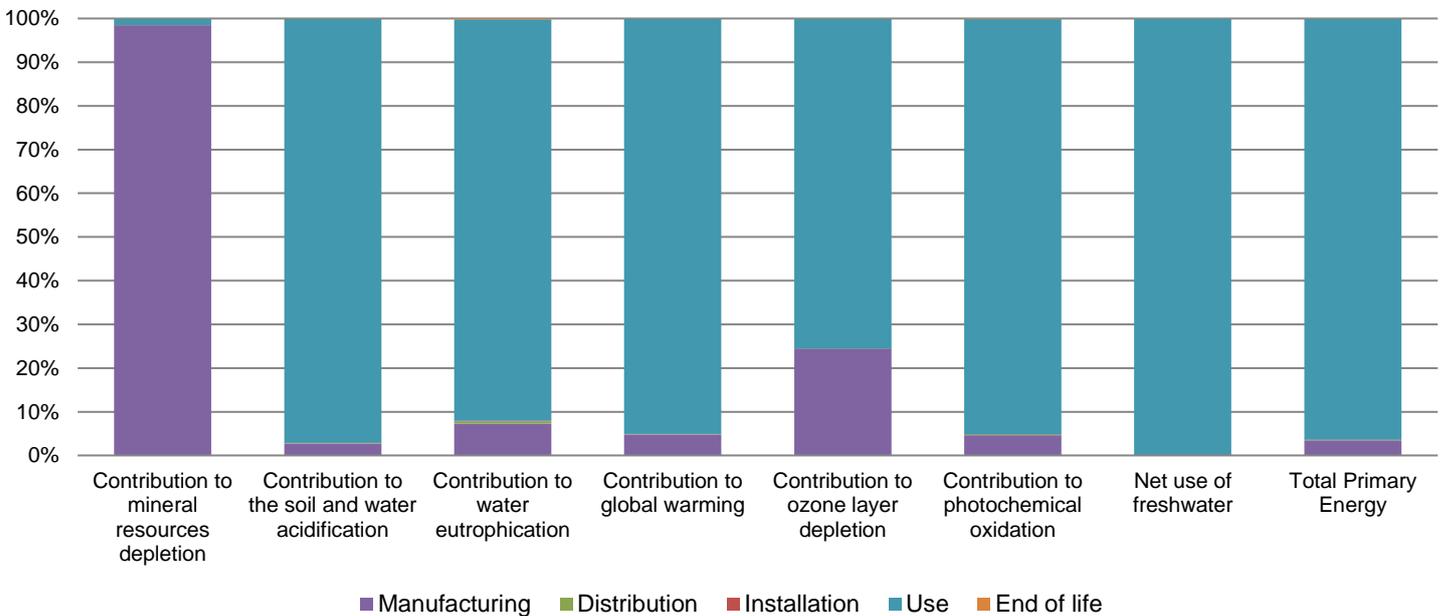
The Lexium P, Delta Robot presents the following relevant environmental aspects

| | |
|----------------------|---|
| Manufacturing | Manufactured at a Schneider Electric production site ISO14001 certified |
| Distribution | Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 31988.3 g, consisting of cardboard (61%), HDPE (20%), polyethylene film (0.04%) and polycarbonate (0.04%) Product distribution optimised by setting up local distribution centres |
| Installation | does not require any specific installation |
| Use | The product does not require special maintenance operations. |
| End of life | End of life optimized to decrease the amount of waste and allow recovery of the product components and materials This product contains electronicard (411g), electrolytic capacitors (19.20g) and hybrid cable (870g) that should be separated from the stream of waste so as to optimize end-of-life treatment. The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page Recyclability potential: 77% Based on "ECO'DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME). |

Environmental impacts

| | | | | |
|----------------------------------|--|--------------|--|--|
| Reference life time | 10 years | | | |
| Installation elements | No special components needed | | | |
| Use scenario | The product is in active mode 80% of the time with a power use of 400W and in stand-by mode 5% of the time with a power use of 45W, for 10 years | | | |
| Geographical representativeness | Europe | | | |
| Technological representativeness | Delta 3 robot, P4, 3-5 axis, 15 kg permissible load, 0-1200 mm, non rotational, Standard | | | |
| Energy model used | Manufacturing | Installation | Use | End of life |
| | Energy model used: Germany | | Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27 | Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27 |
| | | | | Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27 |

| Compulsory indicators | | Lexium P, Delta Robot - VRKP4L0FNO00000 | | | | | |
|--|-------------------------------------|---|---------------|--------------|--------------|----------|-------------|
| Impact indicators | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Contribution to mineral resources depletion | kg Sb eq | 7.98E-02 | 7.86E-02 | 0* | 0* | 1.20E-03 | 0* |
| Contribution to the soil and water acidification | kg SO ₂ eq | 5.94E+01 | 1.63E+00 | 8.07E-02 | 9.25E-03 | 5.77E+01 | 3.27E-02 |
| Contribution to water eutrophication | kg PO ₄ ³⁻ eq | 3.79E+00 | 2.76E-01 | 1.86E-02 | 5.86E-03 | 3.48E+00 | 8.01E-03 |
| Contribution to global warming | kg CO ₂ eq | 1.46E+04 | 6.92E+02 | 1.77E+01 | 2.30E+00 | 1.38E+04 | 1.24E+01 |
| Contribution to ozone layer depletion | kg CFC11 eq | 1.19E-03 | 2.92E-04 | 0* | 0* | 9.01E-04 | 7.71E-07 |
| Contribution to photochemical oxidation | kg C ₂ H ₄ eq | 3.34E+00 | 1.55E-01 | 5.76E-03 | 7.02E-04 | 3.17E+00 | 3.51E-03 |
| Resources use | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Net use of freshwater | m3 | 5.02E+04 | 8.36E+00 | 0* | 0* | 5.01E+04 | 0* |
| Total Primary Energy | MJ | 2.87E+05 | 1.00E+04 | 2.50E+02 | 0* | 2.76E+05 | 1.66E+02 |



| Optional indicators | | Lexium P, Delta Robot - VRKP4L0FNO00000 | | | | | |
|---|------|---|---------------|--------------|--------------|----------|-------------|
| Impact indicators | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Contribution to fossil resources depletion | MJ | 1.64E+05 | 6.43E+03 | 2.48E+02 | 2.66E+01 | 1.57E+05 | 1.32E+02 |
| Contribution to air pollution | m³ | 7.29E+05 | 1.31E+05 | 7.52E+02 | 1.75E+02 | 5.95E+05 | 1.16E+03 |
| Contribution to water pollution | m³ | 6.18E+05 | 4.12E+04 | 2.91E+03 | 3.10E+02 | 5.71E+05 | 2.80E+03 |
| Resources use | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Use of secondary material | kg | 9.93E+00 | 9.93E+00 | 0* | 0* | 0* | 0* |
| Total use of renewable primary energy resources | MJ | 3.56E+04 | 5.12E+02 | 0* | 0* | 3.51E+04 | 0* |
| Total use of non-renewable primary energy resources | MJ | 2.51E+05 | 9.51E+03 | 2.50E+02 | 2.76E+01 | 2.41E+05 | 1.66E+02 |
| Use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 3.53E+04 | 1.25E+02 | 0* | 0* | 3.51E+04 | 0* |
| Use of renewable primary energy resources used as raw material | MJ | 3.87E+02 | 3.87E+02 | 0* | 0* | 0* | 0* |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 2.50E+05 | 8.84E+03 | 2.50E+02 | 2.76E+01 | 2.41E+05 | 1.66E+02 |
| Use of non renewable primary energy resources used as raw material | MJ | 6.72E+02 | 6.72E+02 | 0* | 0* | 0* | 0* |
| Use of non renewable secondary fuels | MJ | 0.00E+00 | 0* | 0* | 0* | 0* | 0* |
| Use of renewable secondary fuels | MJ | 0.00E+00 | 0* | 0* | 0* | 0* | 0* |
| Waste categories | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Hazardous waste disposed | kg | 4.92E+03 | 4.77E+03 | 0* | 0* | 7.21E+00 | 1.38E+02 |
| Non hazardous waste disposed | kg | 5.19E+04 | 3.00E+02 | 0* | 1.00E+01 | 5.16E+04 | 0* |
| Radioactive waste disposed | kg | 3.46E+01 | 1.78E-01 | 0* | 0* | 3.44E+01 | 0* |
| Other environmental information | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Materials for recycling | kg | 1.18E+02 | 1.12E+01 | 0* | 2.30E+01 | 0* | 8.38E+01 |
| Components for reuse | kg | 0.00E+00 | 0* | 0* | 0* | 0* | 0* |
| Materials for energy recovery | kg | 2.75E-01 | 0* | 0* | 0* | 0* | 2.75E-01 |
| Exported Energy | MJ | 6.16E-02 | 5.79E-03 | 0* | 5.58E-02 | 0* | 0* |

* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.6.0.1, database version 2016-11 in compliance with ISO14044.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

| | | | |
|---|------------------|-------------------------------------|--|
| Registration number | ENVPEP1602014_V2 | Drafting rules | PCR-ed3-EN-2015 04 02 |
| Date of issue | 11/2020 | | |
| Validity period | 5 years | Information and reference documents | www.pep-ecopassport.org |
| Independent verification of the declaration and data | | | |
| Internal | X | External | |
| The elements of the present PEP cannot be compared with elements from another program. | | | |
| Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) » | | | |

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