

# Product Environmental Profile

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





## General information

### Representative product

Lexium P, Delta Robot - VRKP4S0RNC00000

### Description of the product

Delta 3 robot, P4, 3-4 axis, 15 kg permissible load, 0-1200 mm, rotational, Compact

### 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, Compact

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

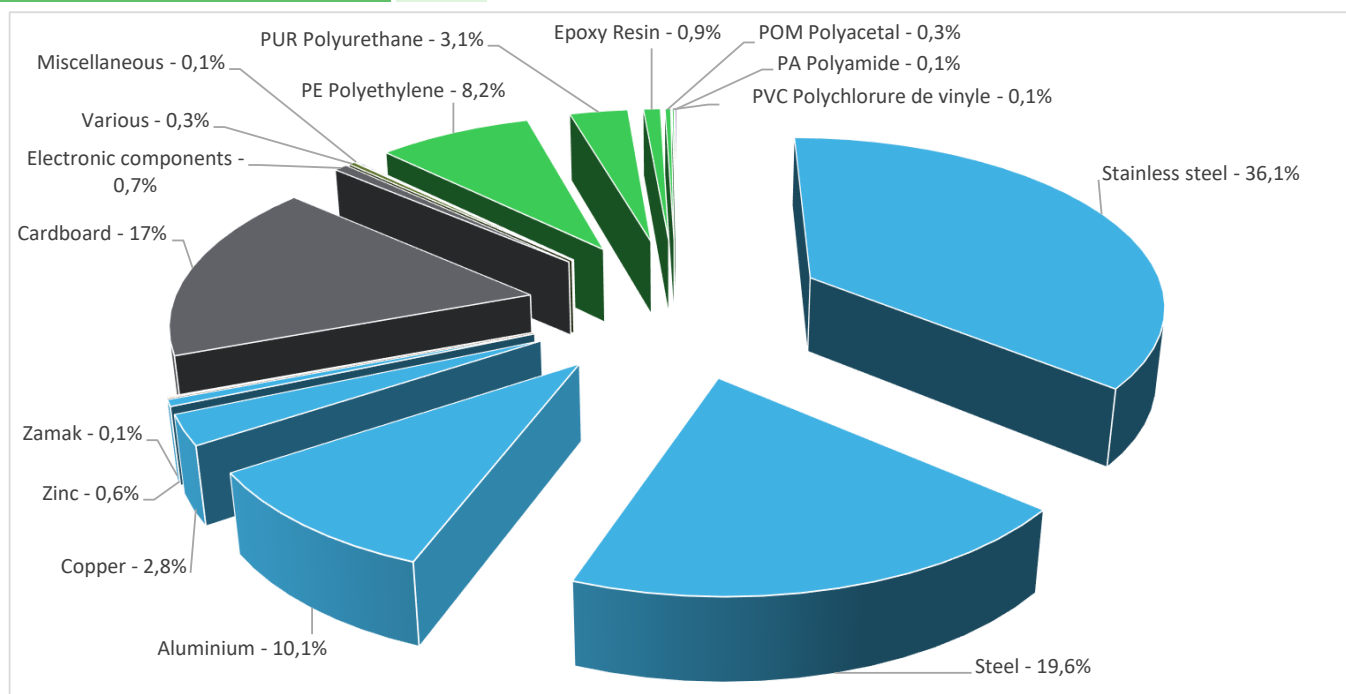
To form a system with 3 or 4-axis for "pick and place" applications 85% of the time for 10 years



## Constituent materials

### Reference product mass

78000 g including the product, its packaging and additional elements and accessories



Plastics	12,7%
Metals	69,3%
Others	18,1%



## 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

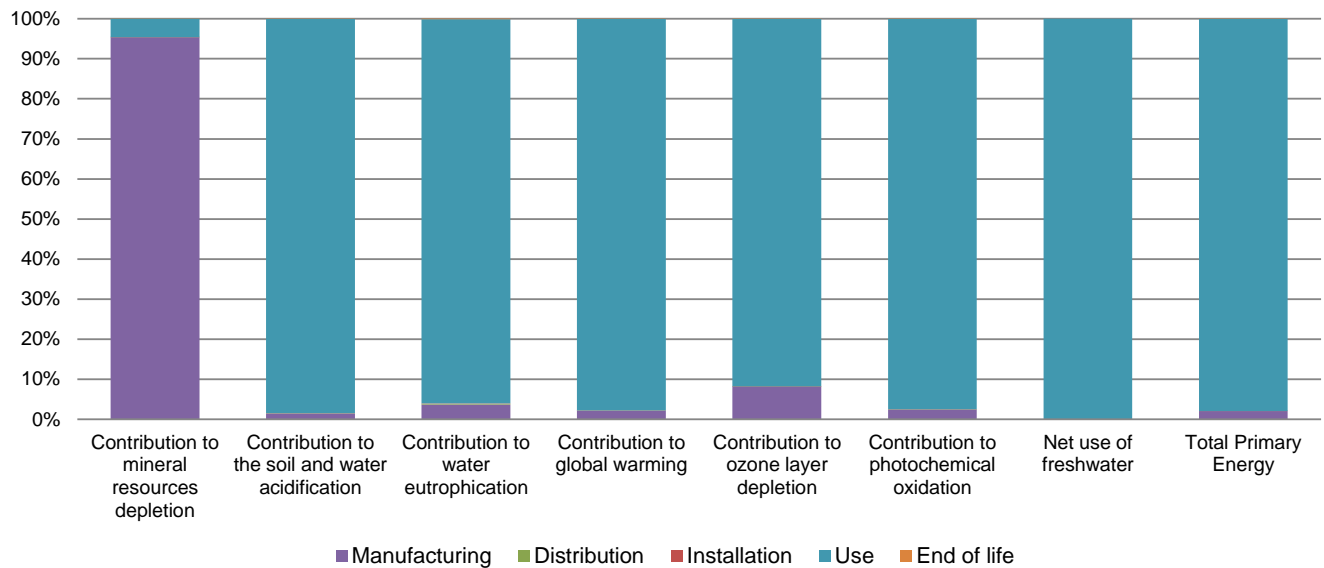
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 22218,2 g, consisting of cardboard (60%), HDPE (29%), Polyurethane flexible foam (10%), LDPE (< 0,1%) and polycarbonate (< 0,1%) Product distribution optimised by setting up local distribution centres
<b>Installation</b>	Does not require any specific installation
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials  This product contains the housing of the robot (stainless steel) shall be dismantled 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  <a href="http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page">http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</a>  Recyclability potential: <b>77%</b> 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

<b>Reference life time</b>	10 years			
<b>Installation elements</b>	No special components needed			
<b>Use scenario</b>	The product is in active mode 80% of the time with a power use of 450W and in stand-by mode 5% of the time with a power use of 50W, for 10 years			
<b>Geographical representativeness</b>	Europe			
<b>Technological representativeness</b>	Delta 3 robot, P4, 3-4 axis, 15 kg permissible load, 0-1200 mm, rotational, Compact			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	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 - VRKP4S0RNC00000					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2,95E-02	2,82E-02	0*	0*	1,35E-03	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	6,59E+01	9,67E-01	4,60E-02	0*	6,49E+01	1,65E-02
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	4,09E+00	1,49E-01	1,06E-02	4,13E-03	3,92E+00	3,88E-03
Contribution to global warming	kg CO <sub>2</sub> eq	1,59E+04	3,41E+02	1,01E+01	1,60E+00	1,56E+04	5,34E+00
Contribution to ozone layer depletion	kg CFC11 eq	1,10E-03	9,06E-05	0*	0*	1,01E-03	3,58E-07
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	3,66E+00	8,88E-02	3,28E-03	4,90E-04	3,57E+00	1,77E-03
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m <sup>3</sup>	5,64E+04	9,15E+00	0*	0*	5,64E+04	0*
Total Primary Energy	MJ	3,17E+05	6,44E+03	1,42E+02	0*	3,11E+05	8,27E+01



Optional indicators		Lexium P, Delta Robot - VRKP4S0RNC00000					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1,80E+05	3,28E+03	1,41E+02	1,85E+01	1,77E+05	6,64E+01
Contribution to air pollution	m³	7,38E+05	6,74E+04	4,28E+02	1,23E+02	6,70E+05	5,85E+02
Contribution to water pollution	m³	6,67E+05	2,22E+04	1,66E+03	2,16E+02	6,42E+05	6,25E+02
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,08E+01	1,08E+01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3,99E+04	3,65E+02	0*	0*	3,95E+04	0*
Total use of non-renewable primary energy resources	MJ	2,78E+05	6,07E+03	1,42E+02	0*	2,71E+05	8,26E+01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3,96E+04	9,85E+01	0*	0*	3,95E+04	0*
Use of renewable primary energy resources used as raw material	MJ	2,66E+02	2,66E+02	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2,77E+05	5,68E+03	1,42E+02	0*	2,71E+05	8,26E+01
Use of non renewable primary energy resources used as raw material	MJ	3,92E+02	3,92E+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	1,96E+03	1,88E+03	0*	0*	8,11E+00	7,02E+01
Non hazardous waste disposed	kg	5,82E+04	2,16E+02	0*	7,11E+00	5,80E+04	0*
Radioactive waste disposed	kg	3,89E+01	1,44E-01	0*	0*	3,87E+01	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	6,58E+01	6,23E+00	0*	1,59E+01	0*	4,37E+01
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	6,87E-03	0*	0*	0*	0*	6,87E-03
Exported Energy	MJ	4,24E-02	3,99E-03	0*	3,84E-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	ENVPEP1503015_V2	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	12/2020		
Validity period	5 years	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
<i>Independent verification of the declaration and data</i>			
Internal	X	External	
<i>The elements of the present PEP cannot be compared with elements from another program.</i>			
<i>Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »</i>			

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