

Product Environmental Profile

ATV320 4kW 400V 3ph with vario IP65

Altivar Machine ATV320





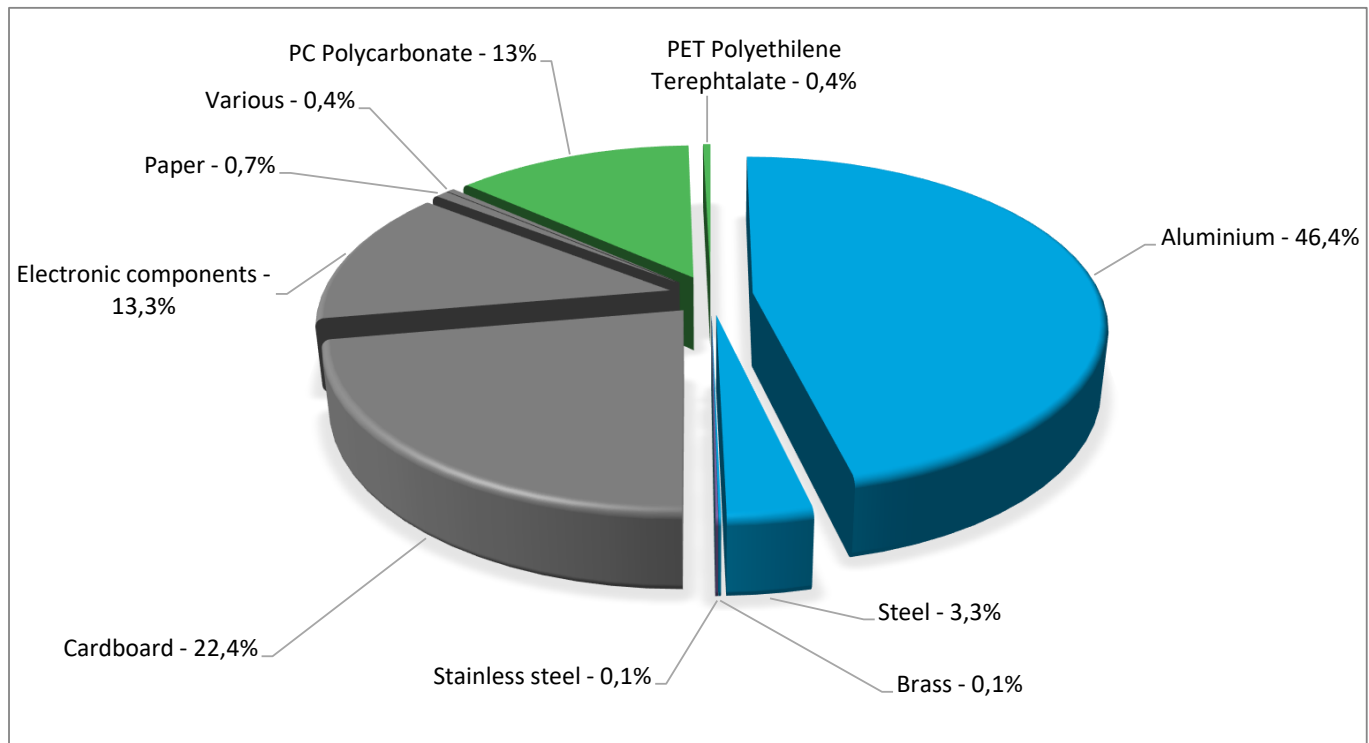
General information

Representative product	ATV320 4kW 400V 3ph with vario IP65 - ATV320U40N4WS
Description of the product	The Altivar Machine ATV320 IP55 drive is a variable speed for three-phase asynchronous and synchronous motors. It can control the speed and torque of an electric motor for general application
Description of the range	<p>range name: Altivar Machine ATV320</p> <p>The technical criteria of the range is as follows:</p> <ul style="list-style-type: none"> - IP66 drive without Vario and IP65 drive with Vario -Product specific application: Complex machines -Synchronous motors -Asynchronous motors -Voltage: 380...500 V -Range power kW: 4...5.5 kW at 380...500 V, 3 phases (based on load duty) -Range phase ATV320 - 2.2kW - 4kW 3PH 200V COMPACT CONTROL <p>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.</p>
Functional unit	<p>To control the speed and torque of synchronous or asynchronous electric motor for general application during 10 years and a 46% use rate, in accordance with the relevant standards.</p> <p>IP degree of protection: IP65 conforming to EN/IEC 61800-5-1</p> <p>rated supply voltage:380...500 V</p> <p>motor power kW:4 kW for heavy duty</p> <p>motor power hp:5 hp for heavy duty</p> <p>line current:10.6 A at 500 V for heavy duty and 13.7 A at 380 V for heavy duty</p>



Constituent materials

Reference product mass 10700 g including the product, its packaging and additional elements and accessories



Plastics	13.3%
Metals	49.9%
Others	36.8%



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 EU 2015/863) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers – PBDE, Bis(2-ethylhexyl) phthalate -DEHP, Butyl benzyl phthalate -BBP, Dibutyl phthalate – DBP, Diisobutyl phthalate - DIBP) as mentioned in the 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 ATV320 4kW 400V 3ph with vario IP65 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 2500 g, consisting of cardboard (97.24%), Paper (2.76%)
Installation	Products in this range do not require any installation operations.
Use	The product does not require special maintenance operations.
End of life	<p>End of life optimized to decrease the amount of waste and allow recovery of the product components and materials</p> <p>This product contains Electronic card (510.36g)(it contains Communication PCBA 103.65g, Power PCBA 406.71g), Electronia capacitor(233.30g) Cable (744.84g) Dismantling parts 6621.74g (PC 1299.62g, heatsink 5036.90g, steel parts 285.22g) that should be separated from the stream of waste so as to optimize end-of-life treatment.</p> <p>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</p> <p>http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</p> <p>Recyclability potential: 79% 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).</p>



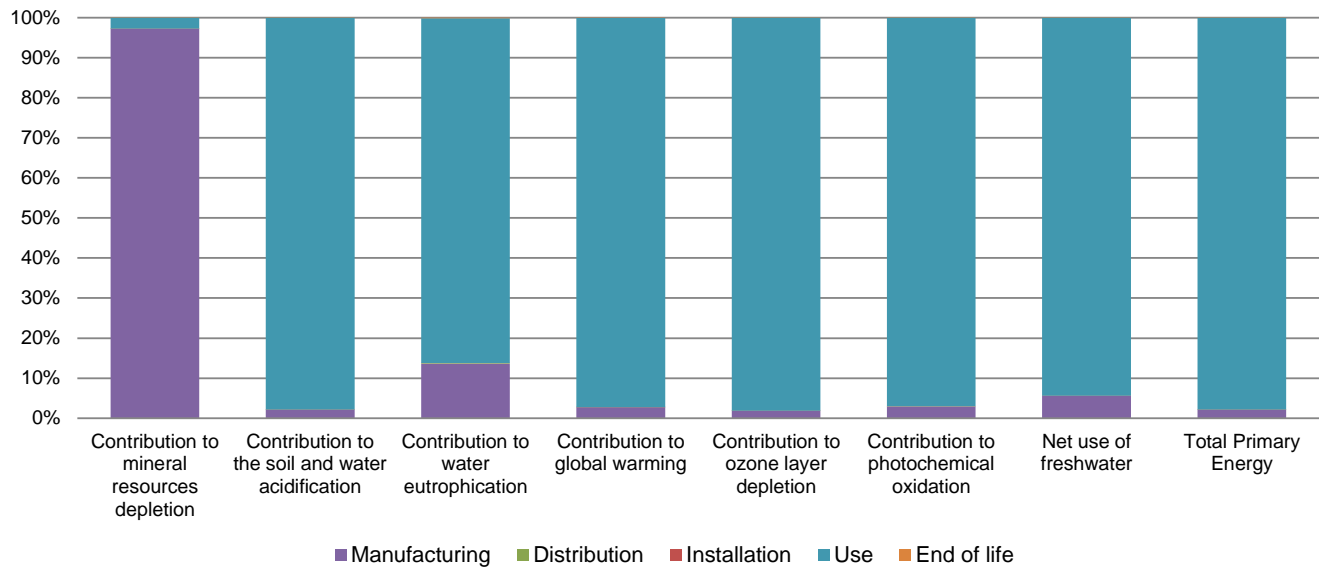
Environmental impacts

Reference life time	10 years			
Product category	Other equipments - Active product			
Installation elements	No special components needed			
Use scenario	The product is in active mode 46% of the time with a power use of 111.8W and in stand-by mode 54% of the time with a power use of 0.0W, for 10 years.			
Geographical representativeness	Worldwide			
Technological representativeness	The Altivar Machine ATV320 IP55 drive is a variable speed for three-phase asynchronous and synchronous motors. It can control the speed and torque of an electric motor for general application			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: Indonesia	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators ATV320 4kW 400V 3ph with vario IP65 - ATV320U40N4WS

Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	4.49E-03	4.37E-03	0*	0*	1.21E-04	0*
Contribution to the soil and water acidification	kg SO ₂ eq	2.06E+01	4.46E-01	6.30E-03	0*	2.01E+01	3.06E-03
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	8.76E-01	1.19E-01	1.45E-03	1.37E-04	7.54E-01	9.52E-04
Contribution to global warming	kg CO ₂ eq	2.74E+03	7.49E+01	1.38E+00	0*	2.66E+03	2.26E+00
Contribution to ozone layer depletion	kg CFC11 eq	6.59E-04	1.24E-05	0*	0*	6.46E-04	1.12E-07
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	9.80E-01	2.85E-02	4.50E-04	0*	9.51E-01	3.17E-04

Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	7.35E+00	4.13E-01	0*	0*	6.94E+00	1.94E-03
Total Primary Energy	MJ	5.51E+04	1.19E+03	1.95E+01	0*	5.39E+04	1.62E+01



Optional indicators	ATV320 4kW 400V 3ph with vario IP65 - ATV320U40N4WS						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	2.82E+04	7.48E+02	1.94E+01	0*	2.74E+04	1.22E+01
Contribution to air pollution	m ³	1.22E+05	8.10E+03	5.87E+01	0*	1.14E+05	1.09E+02
Contribution to water pollution	m ³	1.22E+05	8.85E+03	2.27E+02	2.05E+01	1.12E+05	9.25E+02
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	5.09E+00	5.09E+00	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3.90E+03	4.36E+01	0*	0*	3.86E+03	0*
Total use of non-renewable primary energy resources	MJ	5.12E+04	1.15E+03	1.95E+01	0*	5.00E+04	1.62E+01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3.89E+03	3.51E+01	0*	0*	3.86E+03	0*
Use of renewable primary energy resources used as raw material	MJ	8.47E+00	8.47E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	5.11E+04	1.08E+03	1.95E+01	0*	5.00E+04	1.62E+01
Use of non renewable primary energy resources used as raw material	MJ	7.37E+01	7.37E+01	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	2.71E+01	1.54E+01	0*	0*	0*	1.17E+01
Non hazardous waste disposed	kg	1.01E+04	1.14E+02	0*	0*	9.95E+03	0*
Radioactive waste disposed	kg	8.18E+00	7.29E-02	0*	0*	8.11E+00	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	9.93E+00	8.52E-01	0*	2.49E+00	0*	6.59E+00
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2.43E-01	0*	0*	0*	0*	2.43E-01
Exported Energy	MJ	7.84E-03	6.74E-04	0*	7.16E-03	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.8.1, 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.

According to the EMIE result, using phase has the greatest impact on the majority of environmental indicators :
Depending on the impact analysis, the environmental indicators (without RMD) of other products in this family may be proportional extrapolated by energy consumption values

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	ENVPEP1908004_V1-EN	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	05/2020	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Validity period	5 years	Information and reference documents	www.pep-ecopassport.org
Independent verification of the declaration and data			
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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