Product Environmental Profile

Variable speed drive, Altivar Process ATV900, ATV930, 160kW, 380 to 480V, with braking unit, IP20

Altivar Process ATV900

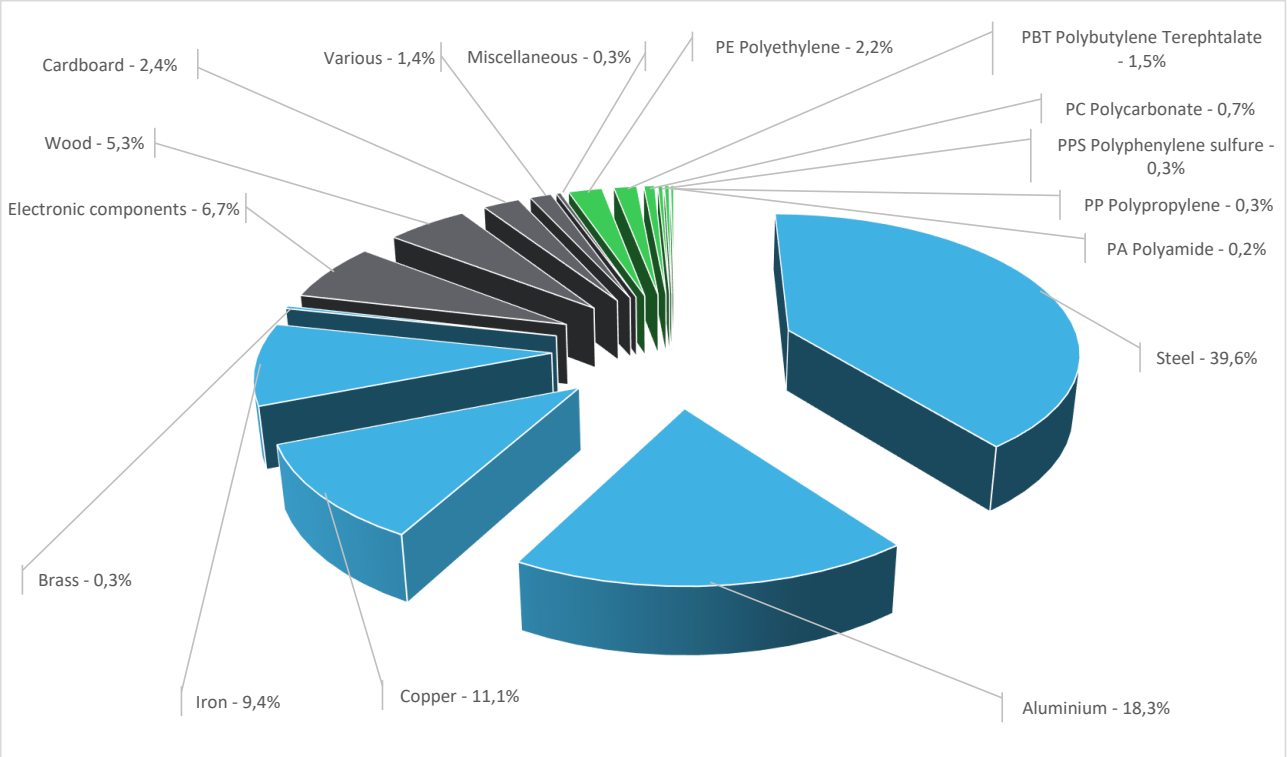


General information

Reference product	Variable speed drive, Altivar Process ATV900, ATV930, 160kW, 380 to 480V, with braking unit, IP20 - ATV930C16N4
Description of the product	The main function of the Altivar Process product range is the speed control and variation of a synchronous, asynchronous or reluctance electric motor for fluid management and industrial applications.
Description of the range	The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology.This range consists of products Altivar Process ATV900 designed for industrial processes in the following market segments: oil and gas, mining, minerals and metals, food and beverage water and wastewater.The rating is from 110 to 160 kW (150 to 250 HP).
Functional unit	To adapt the speed and torque of synchronous, asynchronous or reluctance motor to the machine's operating point. Calculation of the environmental impacts is based on 10 years of product service lifetime. The usage profile taken into account is 20% uptime in full phase, 30% uptime in medium high phase, 40% uptime in medium low phase and 10% uptime in low phase of the 5000h operating time and 1000h of standby according to the CEMEP guide: General purpose Machine.

Constituent materials

Reference product mass	122,5 kg including the product, its packaging, additional elements and accessories



	Plastics	5,2%
	Metals	78,7%
	Others	16,1%

Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website
https://www.se.com

Additional environmental information

End Of Life	Recyclability potential:	**84%**	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability).

Environmental impacts

Reference service life time	10 years
Product category	Other equipments - Active product
Life cycle of the product	The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study
Electricity consumption	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption
Installation elements	The product does not require any special installation operations
Use scenario	The product is in full phase 20% of the time with a power use of 2830W, in medium phase 30% of the time with a power use 1553W, in low phase 40% of the time with a power use 1063W, in "standby" phase (equating it with standstill phase) 10% of the time with a power use 1155W of the 5000h operating time for 10 years and 1000h of standby according to the "Electric Motor, VSD and PDS use phase GHG Emissions - CEMEP guideline: Duty profile for general Purpose Machinery_V1". Drive efficiency according to IEC/EN 61800-9-2 (supersedes EN 50598-2).
Time representativeness	The collected data are representative of the year 2026
Technological representativeness	The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are similar and representative of the actual type of technologies used to make the product.

Geographical representativeness	**Final assembly site**	**Use phase**		**End-of-life**
	China SWD Wuxi	Europe		Europe
Energy model used	**[A1 - A3]**	**[A5]**	**[B6]**	**[C1 - C4]**
	Electricity mix; Production mix; low voltage; 2022; China, CN	No energy used	Electricity mix; Production mix; low voltage; 2022; Europe, EU-27	Global, European and French datasets are used.

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.se.com/contact

Mandatory Indicators		**Variable speed drive, Altivar Process ATV900, ATV930, 160kW, 380 to 480V, with braking unit, IP20 - ATV930C16N4**						
Impact indicators	**Unit**	**Total (without Module D)**	**[A1 - A3] - Manufacturing**	**[A4] - Distribution**	**[A5] - Installation**	**[B1 - B7] - Use**	**[C1 - C4] - End of life**	**[D] - Benefits and loads**
Contribution to climate change	kg CO2 eq	4,97E+04	9,53E+02	2,25E+01	2,43E+01	4,85E+04	1,74E+02	-4,72E+02
Contribution to climate change-fossil	kg CO2 eq	4,86E+04	9,60E+02	2,25E+01	9,87E+00	4,75E+04	1,73E+02	-4,66E+02
Contribution to climate change-biogenic	kg CO2 eq	1,08E+03	-6,68E+00	0*	1,45E+01	1,07E+03	8,46E-01	-5,94E+00
Contribution to climate change-land use and land use change	kg CO2 eq	1,62E-03	1,43E-03	3,40E-05	7,72E-07	0,00E+00	1,50E-04	-5,66E-04
Contribution to ozone depletion	kg CFC-11 eq	3,12E-04	9,74E-05	2,72E-07	1,07E-07	2,08E-04	5,84E-06	-6,93E-05
Contribution to acidification	mol H+ eq	2,64E+02	9,46E+00	3,55E-02	0*	2,54E+02	6,56E-01	-4,91E+00
Contribution to eutrophication, freshwater	kg P eq	1,24E-01	6,69E-03	8,39E-05	1,11E-04	1,16E-01	7,49E-04	-1,50E-03
Contribution to eutrophication, marine	kg N eq	3,07E+01	8,31E-01	6,43E-03	7,09E-03	2,97E+01	7,96E-02	-2,85E-01
Contribution to eutrophication, terrestrial	mol N eq	4,87E+02	9,19E+00	7,06E-02	6,54E-02	4,77E+02	9,25E-01	-3,18E+00
Contribution to photochemical ozone formation - human health	kg COVNM eq	9,76E+01	3,04E+00	2,28E-02	1,60E-02	9,43E+01	2,79E-01	-1,18E+00
Contribution to resource use, minerals and metals	kg Sb eq	1,36E-01	1,20E-01	0*	0*	1,57E-02	4,62E-05	-6,18E-02
Contribution to resource use, fossils	MJ	1,19E+06	2,70E+04	3,99E+02	0*	1,16E+06	2,87E+03	-7,93E+03
Contribution to water use	m3 eq	4,40E+03	6,97E+02	8,09E-01	4,72E-01	3,68E+03	2,38E+01	-2,19E+02

Inventory flows Indicators		Variable speed drive, Altivar Process ATV900, ATV930, 160kW, 380 to 480V, with braking unit, IP20 - ATV930C16N4						
Inventory flows	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to renewable primary energy used as energy	MJ	2,74E+05	8,66E+02	0*	3,74E+01	2,73E+05	1,25E+02	-2,69E+02
Contribution to renewable primary energy used as raw material	MJ	2,52E+02	2,52E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-8,14E+01
Contribution to total renewable primary energy	MJ	2,74E+05	1,12E+03	0*	3,74E+01	2,73E+05	1,25E+02	-3,51E+02
Contribution to non renewable primary energy used as energy	MJ	1,19E+06	2,66E+04	3,99E+02	0*	1,16E+06	2,87E+03	-7,84E+03
Contribution to non renewable primary energy used as raw material	MJ	3,82E+02	3,82E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-8,64E+01
Contribution to total non renewable primary energy	MJ	1,19E+06	2,70E+04	3,99E+02	0*	1,16E+06	2,87E+03	-7,93E+03
Contribution to use of secondary material	kg	2,94E+00	2,94E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to 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	0,00E+00
Contribution to net use of fresh water	m³	1,03E+02	1,63E+01	1,88E-02	2,59E-02	8,60E+01	7,07E-01	-5,11E+00
Contribution to hazardous waste disposed	kg	4,67E+03	3,32E+03	0*	1,47E+00	1,34E+03	1,47E+01	-4,87E+03
Contribution to non hazardous waste disposed	kg	8,25E+03	8,36E+02	2,08E+00	4,65E+00	7,32E+03	9,38E+01	-6,39E+02
Contribution to radioactive waste disposed	kg	2,34E+00	6,01E-01	1,65E-03	4,40E-04	1,72E+00	9,86E-03	-4,71E-01
Contribution to components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to materials for recycling	kg	1,14E+02	1,35E+01	0,00E+00	5,13E+00	0,00E+00	9,55E+01	0,00E+00
Contribution to materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to exported energy	MJ	3,22E+00	7,30E-01	0,00E+00	2,28E+00	0,00E+00	2,15E-01	0,00E+00

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

Contribution to biogenic carbon content of the product	kg of C	0,00E+00
Contribution to biogenic carbon content of the associated packaging	kg of C	3,42E+00

** The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)*

Mandatory Indicators		Variable speed drive, Altivar Process ATV900, ATV930, 160kW, 380 to 480V, with braking unit, IP20 - ATV930C16N4							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	4,85E+04	0	0,00E+00	0	0	0	4,85E+04	0
Contribution to climate change-fossil	kg CO2 eq	4,75E+04	0	0,00E+00	0	0	0	4,75E+04	0
Contribution to climate change-biogenic	kg CO2 eq	1,07E+03	0	0,00E+00	0	0	0	1,07E+03	0
Contribution to climate change-land use and land use change	kg CO2 eq	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to ozone depletion	kg CFC-11 eq	2,08E-04	0	0,00E+00	0	0	0	2,08E-04	0
Contribution to acidification	mol H+ eq	2,54E+02	0	0,00E+00	0	0	0	2,54E+02	0
Contribution to eutrophication, freshwater	kg P eq	1,16E-01	0	0,00E+00	0	0	0	1,16E-01	0
Contribution to eutrophication marine	kg N eq	2,97E+01	0	0,00E+00	0	0	0	2,97E+01	0
Contribution to eutrophication, terrestrial	mol N eq	4,77E+02	0	0,00E+00	0	0	0	4,77E+02	0
Contribution to photochemical ozone formation - human health	kg COVNM eq	9,43E+01	0	0,00E+00	0	0	0	9,43E+01	0
Contribution to resource use, minerals and metals	kg Sb eq	1,57E-02	0	0,00E+00	0	0	0	1,57E-02	0
Contribution to resource use, fossils	MJ	1,16E+06	0	0,00E+00	0	0	0	1,16E+06	0
Contribution to water use	m3 eq	3,68E+03	0	0,00E+00	0	0	0	3,68E+03	0

Inventory flows Indicators		Variable speed drive, Altivar Process ATV900, ATV930, 160kW, 380 to 480V, with braking unit, IP20 - ATV930C16N4							
Inventory flows	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2,73E+05	0	0,00E+00	0	0	0	2,73E+05	0
Contribution to use of renewable primary energy resources used as raw material	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to total use of renewable primary energy resources	MJ	2,73E+05	0	0,00E+00	0	0	0	2,73E+05	0
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,16E+06	0	0,00E+00	0	0	0	1,16E+06	0
Contribution to use of non renewable primary energy resources used as raw material	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to total use of non-renewable primary energy resources	MJ	1,16E+06	0	0,00E+00	0	0	0	1,16E+06	0
Contribution to use of secondary material	kg	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to use of renewable secondary fuels	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to use of non renewable secondary fuels	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to net use of freshwater	m³	8,60E+01	0	0,00E+00	0	0	0	8,60E+01	0
Contribution to hazardous waste disposed	kg	1,34E+03	0	0,00E+00	0	0	0	1,34E+03	0
Contribution to non hazardous waste disposed	kg	7,32E+03	0	0,00E+00	0	0	0	7,32E+03	0
Contribution to radioactive waste disposed	kg	1,72E+00	0	0,00E+00	0	0	0	1,72E+00	0
Contribution to components for reuse	kg	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to materials for recycling	kg	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to materials for energy recovery	kg	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to exported energy	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0

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

Life cycle assessment performed with EIME version v6.2.5-6, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

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.

To extrapolate the impact to another product from the range, apply the following extrapolation rules to each indicator per life cycle stage:
MANUFACTURING(i) = Mass of (product+packaging) in grams / Mass of (reference product+reference packaging) in grams
DISTRIBUTION (i) = Mass of (product+packaging) in grams / Mass of (reference product+reference packaging) in grams
INSTALLATION (i) = Mass of (packaging) in grams / Mass of (reference packaging) in grams
USE (i) = Electricity consumption in kWh / Electricity consumption of the reference product in kWh
END OF LIFE (i))= Mass of (product) in grams / Mass of (reference product) in grams
TOTAL (i) = Σ Life Cycle Stages (i)
By multiplying these coefficients with the impacts of the reference product, you will obtain the impacts of the concerned extrapolated product.
Please find all the informations regarding the products on https://www.se.com
Electricity consumption for linked products can be provided upon request.

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		Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14021 : 2016

Internal X External

The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)

PEPs are compliant with NF C08-100-1:2022 and EN 50693:2019 or NF E38-500 :2022

The components of the present PEP may not be compared with components from any other program.

Document complies with ISO 14021:2016 "Environmental labels and declarations. Type II environmental declarations"

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