

Product Environmental Profile

SpaceLogic VP229E PIBCV Valve, 2-Way DN32





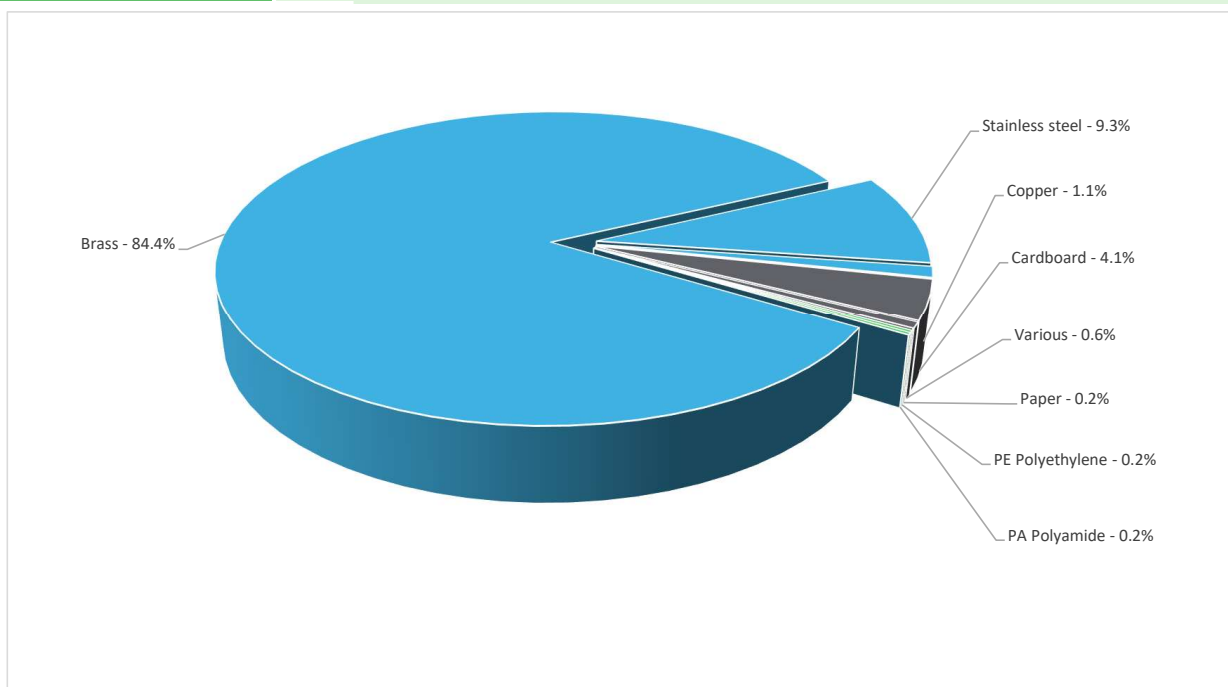
General information

Reference product	SpaceLogic VP229E PIBCV Valve, 2-Way DN32 - VP229E-32BQS
Description of the product	The SpaceLogic VP229E is an automatic balancing and control valve that provide flow limitation with full control authority over hydronic regulation. It provides stable flow regulation regardless of pressure fluctuations in the system and is adjustable flow limitation set point. Applications are temperature control of chillers, airhandling units, heat exchanges and terminal units such as fan coils, induction units and radiant panels. Reduced Energy Consumption, Improved Comfort, Reduced Pumping Costs, Reduced Installation Costs, Easy and quick Commissioning, and Improved Reliability. Standard Flow.
Description of the range	Single product
Functional unit	For one SpaceLogic VP229E Valve, to automatically balance, regulate, and control the design water flow rate under varying pressure conditions in a hydronic HVAC system, for a reference service life of 20 years.
Specifications are:	Valve connection size: G 1-1/2A Operating fluid temperature: -10-120 °C Close-off pressure: 232 psi/1600 kPa Seat leakage: Port A: Class IV (0.01 %) Pressure class: PN16 Function: Normally open/Stem up End connection: External Thread, ISO228/1



Constituent materials

Reference product mass	2460 g including the product, its packaging, additional elements and accessories
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Metals	94.8%
Others	4.8%
Plastics	0.4%



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:	97%	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).
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Environmental impacts

Reference service life time	20 years		
Product category	No PSR, PEP-PCR-ed4-2021 09 06 applied		
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 installation requires no energy. The disposal of packaging materials is also accounted during the installation phase, including transport to disposal. The material constituents of the packaging are Cardboard (96.3%) and Paper (3.7%).		
Use scenario	SpaceLogic VP229E PIBCV Valve is a machined assembly without any electronic and electrical components. There is no energy consumption in Use phase, for 20 years.		
Time representativeness	The collected data are representative of the year 2024		
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	
	Slovenia, Europe	Europe, Asia Pacific, North America and Australia.	
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity mix; Production mix; low voltage; 2022; Slovenia, SI	No energy used	No energy consumed
Interpretation	For all the impact indicators but the GWPlu, the raw material and manufacturing stage(A1-A3) is the greatest contributor due to the manufacturing of mechanical parts, especially: Copper and Steel alloys. For GWPlu, the End-of-Life stage(C1-C4) is the main contributor(54.58%), due to the final treatment process, especially: pretreatment, recycling and shredding the metal alloys(Copper and Steel). For NHWD(Non hazard Waste Disposed), the Raw material and Manufacturing stage is the greatest contributor(76.88%), due to the manufacturing of mechanical parts, especially: Brass and copper alloy machined body.		

Detailed results of the optional indicators mentioned in PCR ed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.se.com/contact>

Mandatory Indicators		SpaceLogic VP229E PIBCV Valve, 2-Way DN32 - VP229E-32BQS						
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	3.54E+01	3.13E+01	4.70E-01	2.71E-01	0.00E+00	3.32E+00	-5.48E+00
Contribution to climate change-fossil	kg CO2 eq	3.51E+01	3.12E+01	4.70E-01	1.22E-01	0.00E+00	3.30E+00	-5.20E+00
Contribution to climate change-biogenic	kg CO2 eq	2.22E-01	5.59E-02	0*	1.48E-01	0.00E+00	1.74E-02	-2.84E-01
Contribution to climate change-land use and land use change	kg CO2 eq	6.15E-06	2.08E-06	7.09E-07	6.56E-09	0.00E+00	3.36E-06	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	1.69E-06	1.57E-06	5.70E-09	1.68E-09	0.00E+00	1.07E-07	-1.46E-06
Contribution to acidification	mol H+ eq	3.80E-01	3.64E-01	7.58E-04	3.59E-04	0.00E+00	1.51E-02	-3.40E-01
Contribution to eutrophication, freshwater	kg P eq	4.46E-05	2.49E-05	1.77E-06	2.56E-06	0.00E+00	1.53E-05	-8.98E-06
Contribution to eutrophication, marine	kg N eq	3.55E-02	3.34E-02	1.42E-04	1.50E-04	0.00E+00	1.76E-03	-5.64E-03
Contribution to eutrophication, terrestrial	mol N eq	3.92E-01	3.68E-01	1.56E-03	1.08E-03	0.00E+00	2.15E-02	-6.57E-02
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.22E-01	1.16E-01	4.97E-04	2.48E-04	0.00E+00	6.21E-03	-4.00E-02
Contribution to resource use, minerals and metals	kg Sb eq	3.45E-03	3.45E-03	0*	0*	0.00E+00	1.12E-06	-3.55E-03
Contribution to resource use, fossils	MJ	5.45E+02	4.66E+02	8.39E+00	1.22E+00	0.00E+00	6.94E+01	-9.73E+01
Contribution to water use	m3 eq	1.74E+01	1.68E+01	1.69E-02	9.90E-03	0.00E+00	5.72E-01	-1.68E+01

Inventory flows Indicators			SpaceLogic VP229E PIBCV Valve, 2-Way DN32 - VP229E-32BQS					
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	2.87E+01	2.42E+01	2.63E-02	1.60E-01	0.00E+00	4.36E+00	-8.44E+00
Contribution to renewable primary energy used as raw material	MJ	2.11E+00	2.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.54E+00
Contribution to total renewable primary energy	MJ	3.08E+01	2.63E+01	2.63E-02	1.60E-01	0.00E+00	4.36E+00	-9.97E+00
Contribution to non renewable primary energy used as energy	MJ	5.44E+02	4.65E+02	8.39E+00	1.22E+00	0.00E+00	6.94E+01	-9.73E+01
Contribution to non renewable primary energy used as raw material	MJ	1.10E+00	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Contribution to total non renewable primary energy	MJ	5.45E+02	4.66E+02	8.39E+00	1.22E+00	0.00E+00	6.94E+01	-9.73E+01
Contribution to use of secondary material	kg	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 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	4.10E-01	3.92E-01	3.94E-04	7.60E-04	0.00E+00	1.71E-02	-3.90E-01
Contribution to hazardous waste disposed	kg	2.24E+02	2.24E+02	0*	0*	0.00E+00	5.45E-02	-2.75E+02
Contribution to non hazardous waste disposed	kg	9.83E+00	7.66E+00	4.35E-02	4.32E-02	0.00E+00	2.09E+00	-1.12E+00
Contribution to radioactive waste disposed	kg	1.25E-03	9.85E-04	3.45E-05	7.96E-06	0.00E+00	2.23E-04	-7.15E-04
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	2.70E+00	3.34E-01	0.00E+00	8.53E-02	0.00E+00	2.28E+00	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	3.03E-02	3.18E-03	0.00E+00	4.54E-03	0.00E+00	2.26E-02	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 2.95E-02

* 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		SpaceLogic VP229E PIBCV Valve, 2-Way DN32 - VP229E-32BQS							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to climate change-fossil	kg CO2 eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to climate change-biogenic	kg CO2 eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	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	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to acidification	mol H+ eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to eutrophication, freshwater	kg P eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to eutrophication marine	kg N eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to eutrophication, terrestrial	mol N eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to photochemical ozone formation - human health	kg COVNM eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to resource use, minerals and metals	kg Sb eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to resource use, fossils	MJ	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to water use	m3 eq	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0

Inventory flows Indicators		SpaceLogic VP229E PIBCV Valve, 2-Way DN32 - VP229E-32BQS							
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	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	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	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	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	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	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	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to hazardous waste disposed	kg	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to non hazardous waste disposed	kg	0.00E+00	0	0.00E+00	0	0	0	0.00E+00	0
Contribution to radioactive waste disposed	kg	0.00E+00	0	0.00E+00	0	0	0	0.00E+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

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 :	ENVPEP2608013_V1	Drafting rules	PEP-PCR-ed4-2021 09 06
Date of issue	08-2026	Supplemented by	No PSR
		Information and reference documents	www.pep-ecopassport.org
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14021 : 2016			
Internal		External	
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)			
PEPs are compliant with XP C08-100-1:2016 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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