

PRODUCT ENVIRONMENTAL PROFILE

EWYT400B-XS

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Drafting Rules « PCR-ed4-EN-2021 09 06 »
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www.pep-ecopassport.org

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Independent verification of the declaration and data in compliance with ISO 14025: 2010

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 or EN 50693:2019

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

Document complies with ISO 14025: 2006 «Environmental labels and declarations.
Type III Environmental declarations»



GENERAL INFORMATION

MANUFACTURER INFORMATION

Manufacturer	Daikin Applied Europe SpA
Address	Via Piani di Santa Maria, 72 00072 Ariccia (Rome) Italy
Contact details	epddae@daikinapplied.eu
Website	EWYT-B- (daikinapplied.eu)

PRODUCT IDENTIFICATION

Product family	EWYT-B
Reference Product	EWYT400XS-B2
Place(s) of production	Italy
Place(s) of installation	France

PRODUCT INFORMATION

Technology	Air-to-Water Scroll Heat Pump		
Function	Reversible unit for comfort heating and cooling for industrial applications.		
Unit	EWYT400XS-B2		
P_{heating} (P_h)	317.01 kW	P_{cooling} (P_c)	370.4 kW
t_{heating}	2066 h	t_{cooling}	600 h
SEER	3.82	SEER	4.54
Capacity, P_{rev}	$P_{rev}(kW) = \frac{(t_{heating} * P_h + t_{cooling} * P_c)}{(t_{heating} + t_{cooling})}$		329.03 kW
Refrigerant	R32	Reference service life (DVR)	22 y
Homogenous Family	Scroll Heat Pumps EWYT-B (see extrapolation table page 15)		
Additional info	The use stage is modelled according to the performance data declared for the Ecodesign Directive 2009/125/EU. The performances are based on the following conditions: cooling water temperature 12/7°C; heating water temperature 30/35°C.		

DECLARED UNIT

Declared unit	“To produce heating or cooling thanks to an air to water reversible heat pump of 317 kW (heat capacity) according to the appropriate use scenario and during the 22-year reference lifetime of the product”.
Total weight	3628.5 kg
Unit weight	3613 kg
Packaging weight	15.5 kg

FUNCTIONAL UNIT

Functional unit	To produce 1 kW of heating or cooling according to the appropriate usage scenario defined in the EN 148252 standard and during the 22-year reference lifetime of the product.”
FU weighting value	1 kW / 329.03 kW
Total weight	11.02 kg
Unit weight	10.9 kg
Packaging weight	0.05 kg

The reference flow consider:

- a thermodynamic generator with electric compression with a specific reference lifetime;
- its packaging.

CONSTITUENT MATERIALS

Table 1 Raw Material Composition

PEP Material categories	Materials	Weight %	%
Metals	Steel	57.10	86.08%
	Copper	15.49	
	Aluminium	8.16	
	Iron	5.28	
	Brazing solder	0.05	
Plastics	Insulation foam	0.61	1.05%
	Packaging film	0.43	
Others	Elec.motors	6.45	12.87%
	Refrigerant	1.98	
	Cables	1.68	
	Refrigerant oil	1.48	
	Electric components	0.77	
	Transformer	0.39	
	PCB	0.06	
	Rubber	0.06	

LIFE-CYCLE ASSESSMENT

LIFE-CYCLE ASSESSMENT INFORMATION

Reference year FY 23 (April 23 – March 24)

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C 0

Biogenic carbon content in packaging, kg C 0

SYSTEM BOUNDARY

This PEP covers the cradle to grave scope with following modules: A1 (Raw material supply), A2 (Transport) and A3 (Manufacturing), A4 (Transport), A5 (Assembly) as well as C1 (Deconstruction), C2 (Transport at end-of-life), C3 (Waste processing) and C4 (Disposal). In addition, module D - benefits and loads beyond the system boundary is included.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	D	D
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography, by two-letter ISO country code or regions.																		
EU	EU	EU	EU	EU	-	-	-	-	-	-	-	EU	EU	EU	EU	EU		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR.

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the EN 15804:2012+A2:2019 and the applied PCR. The study does not exclude any hazardous materials or substances.

The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. The energy consumptions during the installation stage are included but the concrete slab mass is excluded due to the typical installation of the product (light commercial use).

There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

PRODUCT LIFE-CYCLE

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission, most of the data are modelled using the European energy mix.

The reference product consists of one unit of the series EWYT-B. The unit is manufactured in Italy in the manufacturing site located in Ariccia (RM). Transportation of components to the manufacturing site is accounted based on actual distance and mode of transport. The manufacturing energy considered is based on the electricity mix certified (by GSE) for the manufacturing site by the energy supplier company: green hydroelectric power from Norway country.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation of the product in its packaging from the manufacturer's last logistics platform (A4) to the distributor and from the distributor to the installation place (A5), as defined by PCR-ed4-EN-2021 09 06, covers fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

The distribution stage has been analysed in accordance with the section 2.5.3. on transport scenarios of the PCR (PEP-PCR-ed4-EN-2021 09 06) in force.

The reference product is manufactured and distributed as a make-to-stock (MTS) product in Europe. For this reason, no specific data on transport from the manufacturing site to the installation site are available: the default data for intracontinental transport is taken into consideration.

- Intracontinental transport: 3,500 km by lorry.

The packaging scenarios for the installation stage are modelled according to requirements of PEP Ecopassport PSR-0013-ed3.0-EN-2023-06-06 - clause 3.5.3.2. Waste generated during the installation phase.

By sector-based agreement, the transport stage for this waste shall be taken into account, assuming that it is trucked over a distance of 100 km.

The energy consumptions for the installation stage include the handling and lifting activities and the commissioning running test, the energy mixed used is "market for electricity, low voltage – France".

Table 2. Packaging EOL Scenario France scope

EoL of the packaging mass	Paper-Cardboard	Wood	Plastic
Recycling rate	91%	7%	27%
Incineration with energy production	5%	31%	43%
Incineration without energy production	0%	0%	0%
Burial rate	4%	62%	30%
<i>* Metals are not present in the packaging of the products</i>			

PRODUCT USE AND MAINTENANCE (B1-B7)

The use stage scenario is calculated based on the methodology given in PSR-0013-ed3.0-EN-2023-06-06. The reference service time (DVR) is 22 years and the evaluation of the total consumption energy during the use phase is also taken into account. The equipment will be installed in a commercial building.

The water consumptions during the manufacturing stage are evaluated according to the clause 3.5.4.5.- Consideration of water consumption and liquid waste (module B7). The product in scope is an Air-to-Water unit, the circulation of pre-treated water in a closed loop is necessary during the use stage. The quantity of water consumed throughout the equipment life cycle is equivalent to the volume of the equipment's water circuit.

The impacts of refrigerant leakage, equipment maintenance and refrigerant refilling have been considered according to PSR-0013-ed3.0-EN-2023-06-06 using the formula $E_{fu} = Q_{fu} * DVR$.

Air, soil, and water impacts during the use phase have not been studied.

Table 3: Use Stage Details

Use of the Product (B1)	Emission of refrigerant during the use phase 0.88 kg R32 (594 kgCO ₂ eq)	
Maintenance (B2)	Number of refills	1
	Transport	1 person (80kg) + Equipment (15kg) in truck, 100km, every 2 years
	No parts require mandatory replacement.	
Energy used by the reference product	Type of energy	French energy mix 0.0876 kg CO ₂ e / kWh
	C _{tot} (Total energy consumption of the reference product)	4703781 kWh
	Reference lifetime (RLT)	22 years

PRODUCT END OF LIFE (C1-C4, D)

The End of Life (EOL) is the stage accounted for at the end of life of the product and of the refrigerant. The EOL of the product is modelled using PCR-ed4-EN-2021 09 06. The EOL scenario of the refrigerant is modelled based on the methodology described in PSR-0013-ed3.0-EN-2023-06-06.

Out of the refrigerant recovered, 10% is incinerated without energy recovery and 90% is regenerated for reuse.

The reference energy mix for EoL is the European mix.

ENVIRONMENTAL IMPACTS PER DECLARED UNIT

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

	TOTAL (ex mod.D)	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B1-B7)	EoL (C1-C4)	Benefits & Loads (D)
Global Warming Potential total kg CO ₂ e	4,44E+05	2,28E+04	2,16E+03	4,53E+01	4,13E+05	6,02E+03	-1,17E+04
Global Warming Potential fossil kg CO ₂ e	4,44E+05	2,27E+04	2,16E+03	4,53E+01	4,13E+05	6,02E+03	-1,17E+04
Global Warming Potential biogenic kg CO ₂ e	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Global Warming Potential, LULUC kg CO ₂ e	3,38E+02	8,21E+01	9,05E-01	1,65E-02	2,53E+02	1,90E+00	-7,16E+00
Depletion potential of the stratospheric ozone layer kg CFC11e	1,13E-01	6,82E-02	4,66E-04	2,50E-06	4,41E-02	9,64E-05	-5,36E-02
Acidification potential, Accumulated Exceedance mol H ⁺ eq.	3,10E+03	6,19E+02	6,36E+00	1,45E-01	2,47E+03	6,77E+00	-3,14E+02
Eutrophication aquatic freshwater kg Pe	1,56E+01	2,71E+00	1,83E-02	8,08E-04	1,28E+01	8,22E-02	-1,15E+00
Eutrophication aquatic marine kg N eq.	4,46E+02	3,43E+01	1,27E+00	2,52E-02	4,10E+02	1,28E+00	-1,69E+01
Eutrophication terrestrial mol N eq.	4,76E+03	4,45E+02	1,41E+01	2,62E-01	4,28E+03	1,44E+01	-2,20E+02
Formation potential of tropospheric ozone kg NMVOC eq.	1,34E+03	1,48E+02	5,30E+00	7,25E-02	1,19E+03	4,13E+00	-7,42E+01
Abiotic depletion potential (ADP-elements) for non fossil resources (+A2) kg Sbe	3,09E+01	1,48E+01	7,65E-03	8,91E-04	1,60E+01	8,17E-03	-7,00E+00
Abiotic depletion potential (ADP-fossil fuels) for fossil resources (+A2) MJ	5,63E+07	2,59E+05	3,13E+04	3,09E+03	5,60E+07	2,10E+04	-1,20E+05
Water use m ³ deprived	7,01E+05	1,32E+04	1,38E+02	3,88E+01	6,87E+05	8,18E+02	-4,40E+03

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

	TOTAL (ex mod.D)	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B1-B7)	EoL (C1-C4)	Benefits & Loads (D)
Particulate matter emissions incidence	2,75E-02	2,10E-03	1,72E-04	1,48E-06	2,50E-02	1,42E-04	-1,04E-03
Ionising radiation, human health kBq U-235eq	2,56E+06	2,38E+03	1,47E+02	1,41E+02	2,56E+06	4,01E+02	-6,89E+02
Eco-toxicity (freshwater) CTUe	2,22E+07	4,72E+06	2,87E+04	9,92E+02	1,73E+07	1,44E+05	-1,85E+06
Human toxicity, cancer effects CTUh	3,33E-03	2,78E-03	8,09E-07	2,89E-08	4,84E-04	6,86E-05	-8,13E-05
Human toxicity, non-cancer effects CTUh	2,13E-02	8,90E-03	2,60E-05	7,27E-07	1,23E-02	4,13E-05	-4,08E-03
Land use related impacts/ Soil quality dimensionless	2,78E+06	2,46E+05	2,19E+04	1,54E+02	2,50E+06	8,69E+03	-1,03E+05

USE OF NATURAL RESOURCES

	TOTAL (ex mod.D)	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B1-B7)	EoL (C1-C4)	Benefits & Loads (D)
Use of renewable primary energy resources as energy MJ	4,62E+06	5,55E+04	3,72E+02	2,53E+02	4,56E+06	2,75E+03	-1,29E+04
Use of renewable primary energy resources as raw materials MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renewable primary energy MJ	4,62E+06	5,55E+04	3,72E+02	2,53E+02	4,56E+06	2,75E+03	-1,29E+04
Use of non renewable primary energy as energy MJ	5,63E+07	2,53E+05	3,13E+04	3,09E+03	5,60E+07	2,10E+04	-1,16E+05
Use of non renewable primary energy as raw materials MJ	6,58E+02	6,58E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of non renewable primary energy MJ	5,63E+07	2,54E+05	3,13E+04	3,09E+03	5,60E+07	2,10E+04	-1,16E+05
Use of secondary materials kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels MJ	5,87E+01	4,03E+01	1,35E-01	1,25E-03	1,80E+01	3,31E-01	-1,21E+00
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
Use of net fresh water m3	1,69E+04	3,77E+02	3,73E+00	9,25E-01	1,65E+04	2,54E+01	-1,37E+02
Total use of primary energy during the life cycle MJ	6,08E+07	3,09E+05	3,17E+04	3,34E+03	6,06E+07	2,37E+04	-1,29E+05

WASTE & OUTPUT FLOWS

	TOTAL (ex mod.D)	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B1-B7)	EoL (C1-C4)	Benefits & Loads (D)
Hazardous waste disposed kg	4,40E+04	5,94E+03	4,53E+01	2,14E+00	3,68E+04	1,14E+03	-3,51E+03
Non hazardous waste disposed kg	7,95E+05	1,97E+05	7,23E+02	4,88E+01	5,93E+05	4,62E+03	-1,02E+05
Radioactive waste disposed kg	7,43E+02	9,28E-01	2,08E-01	4,08E-02	7,42E+02	1,25E-01	-2,71E-01
Components for re-use kg	1,65E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,65E+02	0,00E+00
Materials for recycling kg	2,67E+03	1,02E+02	0,00E+00	4,18E+00	0,00E+00	2,56E+03	0,00E+00
Materials for energy recovery kg	3,71E+02	4,28E+01	0,00E+00	6,67E+00	0,00E+00	3,22E+02	0,00E+00
Exported Energy MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS PER FUNCTIONAL UNIT

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

	TOTAL (ex mod.D)	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B1-B7)	EoL (C1-C4)	Benefits & Loads (D)
Global Warming Potential total kg CO ₂ e/FU	1,35E+03	6,93E+01	6,56E+00	1,38E-01	1,26E+03	1,83E+01	-3,57E+01
Global Warming Potential fossil kg CO ₂ e/FU	1,35E+03	6,91E+01	6,56E+00	1,38E-01	1,25E+03	1,83E+01	-3,57E+01
Global Warming Potential biogenic kg CO ₂ e/FU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Global Warming Potential, LULUC kg CO ₂ e/FU	1,03E+00	2,50E-01	2,75E-03	5,00E-05	7,70E-01	5,78E-03	-2,18E-02
Depletion potential of the stratospheric ozone layer kg CFC11e/FU	3,43E-04	2,07E-04	1,42E-06	7,61E-09	1,34E-04	2,93E-07	-1,63E-04
Acidification potential, Accumulated Exceedance mol H+ eq./FU	9,44E+00	1,88E+00	1,93E-02	4,41E-04	7,52E+00	2,06E-02	-9,54E-01
Eutrophication aquatic freshwater kg Pe/FU	4,76E-02	8,24E-03	5,57E-05	2,45E-06	3,90E-02	2,50E-04	-3,49E-03
Eutrophication aquatic marine kg N eq./FU	1,36E+00	1,04E-01	3,86E-03	7,67E-05	1,24E+00	3,90E-03	-5,14E-02
Eutrophication terrestrial mol N eq./FU	1,45E+01	1,35E+00	4,29E-02	7,97E-04	1,30E+01	4,39E-02	-6,69E-01
Formation potential of tropospheric ozone kg NMVOC eq./FU	4,08E+00	4,50E-01	1,61E-02	2,20E-04	3,60E+00	1,25E-02	-2,26E-01
Abiotic depletion potential (ADP-elements) for non fossil resources (+A2) kg Sbe/FU	9,38E-02	4,51E-02	2,32E-05	2,71E-06	4,86E-02	2,48E-05	-2,13E-02
Abiotic depletion potential (ADP-fossil fuels) for fossil resources (+A2) MJ/FU	1,71E+05	7,86E+02	9,52E+01	9,39E+00	1,70E+05	0,00E+00	-3,63E+02
Water use m3 deprived/FU	2,13E+03	4,00E+01	4,21E-01	1,18E-01	2,09E+03	2,49E+00	-1,34E+01

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

	TOTAL (ex mod.D)	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B1-B7)	EoL (C1-C4)	Benefits & Loads (D)
Particulate matter emissions incidence/FU	8,34E-05	6,40E-06	5,23E-07	4,50E-09	7,61E-05	4,32E-07	-3,15E-06
Ionising radiation, human health kBq U-235eq/FU	7,79E+03	7,24E+00	4,45E-01	4,27E-01	7,79E+03	1,22E+00	-2,09E+00
Eco-toxicity (freshwater) CTUe/FU	6,73E+04	1,44E+04	8,72E+01	3,02E+00	5,25E+04	4,37E+02	-5,64E+03
Human toxicity, cancer effects CTUh/FU	1,01E-05	8,44E-06	2,46E-09	8,79E-11	1,47E-06	2,09E-07	-2,47E-07
Human toxicity, non-cancer effects CTUh/FU	6,46E-05	2,71E-05	7,92E-08	2,21E-09	3,74E-05	1,26E-07	-1,24E-05
Land use related impacts/ Soil quality dimensionless/FU	8,44E+03	7,49E+02	6,67E+01	4,67E-01	7,60E+03	2,64E+01	-3,13E+02

USE OF NATURAL RESOURCES

	TOTAL (ex mod.D)	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B1-B7)	EoL (C1-C4)	Benefits & Loads (D)
Use of renewable primary energy resources as energy MJ/FU	1,40E+04	1,69E+02	1,13E+00	7,70E-01	1,39E+04	8,36E+00	-3,93E+01
Use of renewable primary energy resources as raw materials MJ/FU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renewable primary energy MJ/FU	1,40E+04	1,69E+02	1,13E+00	7,70E-01	1,39E+04	8,36E+00	-3,93E+01
Use of non renewable primary energy as energy MJ/FU	1,71E+05	7,69E+02	9,52E+01	9,39E+00	1,70E+05	6,37E+01	-3,53E+02
Use of non renewable primary energy as raw materials MJ/FU	2,00E+00	2,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,34E+01
Total use of non renewable primary energy MJ/FU	1,71E+05	7,71E+02	9,52E+01	9,39E+00	1,70E+05	6,37E+01	-3,67E+02
Use of secondary materials kg/FU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of renewable secondary fuels MJ/FU	1,78E-01	1,22E-01	4,12E-04	3,80E-06	5,46E-02	1,01E-03	-3,67E-03
Use of non renewable secondary fuels MJ/FU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water m3/FU	5,14E+01	1,15E+00	1,13E-02	2,81E-03	5,02E+01	7,71E-02	-4,16E-01
Total use of primary energy during the life cycle MJ/FU	1,85E+05	9,39E+02	9,63E+01	1,02E+01	1,84E+05	7,21E+01	-3,92E+02

WASTE & OUTPUT FLOWS

	TOTAL (ex mod.D)	Manufacturing (A1-A3)	Distribution (A4)	Installation (A5)	Use (B1-B7)	EoL (C1-C4)	Benefits & Loads (D)
Hazardous waste disposed kg/FU	1,34E+02	1,80E+01	1,38E-01	6,50E-03	1,12E+02	3,45E+00	-1,07E+01
Non hazardous waste disposed kg/FU	2,42E+03	5,98E+02	2,20E+00	1,48E-01	1,80E+03	1,40E+01	-3,09E+02
Radioactive waste disposed kg/FU	2,26E+00	2,82E-03	6,33E-04	1,24E-04	2,26E+00	3,81E-04	-8,25E-04
Components for re-use kg/FU	5,01E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,01E-01	0,00E+00
Materials for recycling kg/FU	8,11E+00	3,09E-01	0,00E+00	1,27E-02	0,00E+00	7,79E+00	0,00E+00
Materials for energy recovery kg/FU	1,13E+00	1,30E-01	0,00E+00	2,03E-02	0,00E+00	9,78E-01	0,00E+00
Exported Energy MJ/FU	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

HOMOGENEOUS ENVIRONMENTAL FAMILIES

All extrapolation coefficients are calculated according to the declared Ecodesign performance data and the unit weight indicated in the dimensional drawings.

Extrapolation coefficient for functional unit	EWYT085B-SSA1	EWYT105B-SSA1	EWYT135B-SSA1	EWYT175B-SSA1	EWYT215B-SSA1	EWYT205B-SSA2	EWYT235B-SSA2	EWYT255B-SSA2	EWYT085B-XSA1	EWYT115B-XSA1	EWYT135B-XSA1	EWYT175B-XSA1	EWYT215B-XSA1	EWYT215B-XSA2	EWYT235B-XSA2	EWYT265B-XSA2	EWYT300B-SSA2	EWYT340B-SSA2	EWYT390B-SSA2	EWYT430B-SSA2	EWYT490B-SSA2	EWYT540B-SSA2	EWYT590B-SSA2	EWYT630B-SSA2	EWYT310B-XSA2	EWYT350B-XSA2	EWYT400B-XSA2	EWYT440B-XSA2	EWYT500B-XSA2	EWYT560B-XSA2	EWYT600B-XSA2	EWYT630B-XSA2	EWYT650B-XSA2
Manufacturing stage	1,04	0,99	0,81	0,80	0,78	0,84	0,73	0,70	1,21	0,94	0,84	0,93	0,77	1,08	0,82	0,77	0,94	0,93	0,94	0,86	0,80	0,76	0,24	0,76	1,35	1,03	1,00	0,98	0,93	0,89	0,89	0,87	0,84
Distribution stage	1,04	0,99	0,81	0,80	0,78	0,84	0,73	0,70	1,21	0,94	0,84	0,93	0,77	1,08	0,82	0,77	0,94	0,93	0,94	0,86	0,80	0,76	0,24	0,76	1,35	1,03	1,00	0,98	0,93	0,89	0,89	0,87	0,84
Installation stage	0,11	0,14	0,31	0,40	0,57	0,56	0,65	0,70	0,11	0,26	0,31	0,47	0,61	0,66	0,80	0,86	0,58	0,67	0,86	0,94	1,07	1,19	4,74	1,55	0,68	0,78	1,00	1,11	1,39	1,54	1,82	1,92	1,98
Use stage	1,15	1,12	1,14	1,13	1,14	1,13	1,14	1,16	1,04	1,03	1,04	1,04	1,05	1,03	1,00	1,03	1,16	1,15	1,14	1,15	1,12	1,13	1,03	1,12	0,98	0,98	1,00	0,99	0,99	0,99	1,00	1,00	1,07
Maintenance stage	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
EOL stage	1,04	0,99	0,80	0,79	0,77	0,83	0,73	0,69	1,20	0,93	0,83	0,92	0,77	1,07	0,82	0,77	0,94	0,93	0,94	0,86	0,80	0,76	0,24	0,76	1,35	1,03	1,00	0,98	0,93	0,89	0,89	0,87	0,84
Extrapolation coefficient for declared unit	EWYT085B-SSA1	EWYT105B-SSA1	EWYT135B-SSA1	EWYT175B-SSA1	EWYT215B-SSA1	EWYT205B-SSA2	EWYT235B-SSA2	EWYT255B-SSA2	EWYT085B-XSA1	EWYT115B-XSA1	EWYT135B-XSA1	EWYT175B-XSA1	EWYT215B-XSA1	EWYT215B-XSA2	EWYT235B-XSA2	EWYT265B-XSA2	EWYT300B-SSA2	EWYT340B-SSA2	EWYT390B-SSA2	EWYT430B-SSA2	EWYT490B-SSA2	EWYT540B-SSA2	EWYT590B-SSA2	EWYT630B-SSA2	EWYT310B-XSA2	EWYT350B-XSA2	EWYT400B-XSA2	EWYT440B-XSA2	EWYT500B-XSA2	EWYT560B-XSA2	EWYT600B-XSA2	EWYT630B-XSA2	EWYT650B-XSA2
Manufacturing stage	0,21	0,26	0,26	0,34	0,41	0,44	0,43	0,44	0,26	0,26	0,28	0,41	0,42	0,58	0,49	0,50	0,70	0,79	0,91	0,92	0,96	1,02	1,13	1,18	1,03	0,90	1,00	1,09	1,16	1,23	1,33	1,37	1,37
Distribution stage	0,21	0,26	0,26	0,34	0,41	0,44	0,43	0,44	0,26	0,26	0,28	0,41	0,42	0,58	0,49	0,50	0,70	0,79	0,91	0,92	0,96	1,02	1,13	1,18	1,03	0,90	1,00	1,09	1,16	1,23	1,33	1,37	1,37
Installation stage	0,53	0,53	0,94	0,94	1,08	1,08	1,11	1,11	0,53	0,94	0,94	1,08	1,11	1,22	1,33	1,33	0,78	0,78	0,89	0,89	0,89	0,89	1,00	1,00	0,89	0,89	1,00	1,00	1,11	1,11	1,22	1,22	1,22
Use stage	0,23	0,30	0,37	0,48	0,60	0,59	0,67	0,73	0,22	0,28	0,35	0,46	0,58	0,56	0,60	0,67	0,86	0,99	1,10	1,22	1,35	1,51	4,86	1,73	0,75	0,86	1,00	1,10	1,24	1,38	1,49	1,58	1,74
Maintenance stage	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
EOL stage	0,21	0,26	0,26	0,33	0,41	0,44	0,42	0,43	0,26	0,26	0,28	0,41	0,42	0,58	0,49	0,50	0,70	0,79	0,91	0,92	0,96	1,02	1,13	1,18	1,03	0,90	1,00	1,09	1,16	1,23	1,33	1,37	1,37

HOMOGENEOUS ENVIRONMENTAL FAMILIES

Extrapolation coefficient for functional unit	EWYT085B-SLA1	EWYT105B-SLA1	EWYT135B-SLA1	EWYT175B-SLA1	EWYT215B-SLA1	EWYT205B-SLA2	EWYT235B-SLA2	EWYT255B-SLA2	EWYT085B-XLA1	EWYT115B-XLA1	EWYT135B-XLA1	EWYT175B-XLA1	EWYT215B-XLA1	EWYT235B-XLA2	EWYT265B-XLA2	EWYT300B-SLA2	EWYT340B-SLA2	EWYT390B-SLA2	EWYT430B-SLA2	EWYT490B-SLA2	EWYT540B-SLA2	EWYT590B-SLA2	EWYT630B-SLA2	EWYT310B-XLA2	EWYT350B-XLA2	EWYT400B-XLA2	EWYT440B-XLA2	EWYT500B-XLA2	EWYT560B-XLA2	EWYT600B-XLA2	EWYT630B-XLA2	EWYT650B-XLA2	
Manufacturing stage	1,04	0,99	0,81	0,80	0,83	0,79	0,73	0,70	1,21	0,94	0,84	0,87	0,77	1,08	0,82	0,77	0,98	0,96	0,97	0,89	0,83	0,79	0,25	0,79	1,15	1,06	1,03	1,01	0,96	0,91	0,93	0,89	0,87
Distribution stage	1,04	0,99	0,81	0,80	0,83	0,79	0,73	0,70	1,21	0,94	0,84	0,87	0,77	1,08	0,82	0,77	0,98	0,96	0,97	0,89	0,83	0,79	0,25	0,79	1,15	1,06	1,03	1,01	0,96	0,91	0,93	0,89	0,87
Installation stage	0,11	0,14	0,31	0,40	0,57	0,56	0,65	0,70	0,11	0,26	0,31	0,47	0,61	0,66	0,80	0,86	0,58	0,67	0,86	0,94	1,07	1,19	4,74	1,55	0,68	0,78	1,00	1,11	1,39	1,54	1,82	1,92	1,98
Use stage	1,15	1,12	1,14	1,13	1,14	1,13	1,14	1,16	1,04	1,03	1,04	1,04	1,05	1,03	1,00	1,03	1,16	1,15	1,14	1,15	1,12	1,13	1,03	1,12	0,98	0,98	1,00	0,99	0,99	0,99	1,00	1,00	1,07
Maintenance stage	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	
EOL stage	1,04	0,99	0,80	0,79	0,82	0,78	0,73	0,69	1,20	0,93	0,83	0,86	0,77	1,07	0,82	0,77	0,98	0,96	0,97	0,89	0,83	0,79	0,25	0,79	1,15	1,06	1,03	1,01	0,96	0,91	0,93	0,89	0,87
Extrapolation coefficient for declared unit	EWYT085B-SLA1	EWYT105B-SLA1	EWYT135B-SLA1	EWYT175B-SLA1	EWYT215B-SLA1	EWYT205B-SLA2	EWYT235B-SLA2	EWYT255B-SLA2	EWYT085B-XLA1	EWYT115B-XLA1	EWYT135B-XLA1	EWYT175B-XLA1	EWYT215B-XLA1	EWYT235B-XLA2	EWYT265B-XLA2	EWYT300B-SLA2	EWYT340B-SLA2	EWYT390B-SLA2	EWYT430B-SLA2	EWYT490B-SLA2	EWYT540B-SLA2	EWYT590B-SLA2	EWYT630B-SLA2	EWYT310B-XLA2	EWYT350B-XLA2	EWYT400B-XLA2	EWYT440B-XLA2	EWYT500B-XLA2	EWYT560B-XLA2	EWYT600B-XLA2	EWYT630B-XLA2	EWYT650B-XLA2	
Manufacturing stage	0,21	0,26	0,26	0,34	0,44	0,41	0,43	0,44	0,26	0,26	0,28	0,38	0,42	0,58	0,49	0,50	0,73	0,82	0,94	0,95	1,00	1,06	1,17	1,22	0,88	0,93	1,03	1,12	1,20	1,27	1,38	1,41	1,41
Distribution stage	0,21	0,26	0,26	0,34	0,44	0,41	0,43	0,44	0,26	0,26	0,28	0,38	0,42	0,58	0,49	0,50	0,73	0,82	0,94	0,95	1,00	1,06	1,17	1,22	0,88	0,93	1,03	1,12	1,20	1,27	1,38	1,41	1,41
Installation stage	0,53	0,53	0,94	0,94	1,08	1,08	1,11	1,11	0,53	0,94	0,94	1,08	1,11	1,22	1,33	1,33	0,78	0,78	0,89	0,89	0,89	0,89	1,00	1,00	0,89	0,89	1,00	1,00	1,11	1,11	1,22	1,22	1,22
Use stage	0,23	0,30	0,37	0,48	0,60	0,59	0,67	0,73	0,22	0,28	0,35	0,46	0,58	0,56	0,60	0,67	0,86	0,99	1,10	1,22	1,35	1,51	4,86	1,73	0,75	0,86	1,00	1,10	1,24	1,38	1,49	1,58	1,74
Maintenance stage	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	
EOL stage	0,21	0,26	0,26	0,33	0,44	0,41	0,42	0,43	0,26	0,26	0,28	0,38	0,42	0,58	0,49	0,50	0,73	0,82	0,94	0,95	1,00	1,06	1,17	1,22	0,88	0,93	1,03	1,12	1,20	1,27	1,38	1,41	1,41

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Extrapolation coefficient for functional unit	EWYT085B-SRA1	EWYT105B-SRA1	EWYT135B-SRA1	EWYT175B-SRA1	EWYT215B-SRA1	EWYT205B-SRA2	EWYT235B-SRA2	EWYT255B-SRA2	EWYT085B-XRA1	EWYT115B-XRA1	EWYT135B-XRA1	EWYT175B-XRA1	EWYT215B-XRA1	EWYT235B-XRA2	EWYT265B-XRA2	EWYT300B-SRA2	EWYT340B-SRA2	EWYT390B-SRA2	EWYT430B-SRA2	EWYT490B-SRA2	EWYT540B-SRA2	EWYT590B-SRA2	EWYT630B-SRA2	EWYT310B-XRA2	EWYT350B-XRA2	EWYT400B-XRA2	EWYT440B-XRA2	EWYT500B-XRA2	EWYT560B-XRA2	EWYT600B-XRA2	EWYT630B-XRA2	EWYT650B-XRA2	
Manufacturing stage	1,06	1,01	0,82	0,81	0,84	0,80	0,74	0,70	0,43	0,37	0,35	0,87	0,78	1,09	0,83	0,78	0,99	0,98	0,98	0,90	0,85	0,81	0,81	0,80	1,17	1,08	1,04	1,02	0,97	0,93	0,94	0,90	0,89
Distribution stage	1,06	1,01	0,82	0,81	0,84	0,80	0,74	0,70	0,43	0,37	0,35	0,87	0,78	1,09	0,83	0,78	0,99	0,98	0,98	0,90	0,85	0,81	0,81	0,80	1,17	1,08	1,04	1,02	0,97	0,93	0,94	0,90	0,89
Installation stage	0,11	0,14	0,30	0,39	0,56	0,55	0,64	0,69	0,32	0,65	0,75	0,47	0,61	0,65	0,79	0,86	0,57	0,65	0,84	0,93	1,05	1,16	1,43	1,52	0,67	0,76	0,99	1,09	1,37	1,52	1,79	1,90	1,93
Use stage	1,15	1,13	1,14	1,12	1,13	1,12	1,16	1,16	1,07	1,05	1,07	1,00	1,04	1,03	1,00	1,02	1,11	1,08	1,09	1,07	1,04	1,05	1,04	1,04	0,94	0,95	0,96	0,96	0,95	0,94	0,95	0,96	0,98
Maintenance stage	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	
EOL stage	1,05	1,00	0,81	0,80	0,83	0,80	0,74	0,70	0,42	0,37	0,34	0,87	0,77	1,08	0,82	0,77	0,99	0,98	0,98	0,90	0,85	0,81	0,81	0,80	1,17	1,08	1,04	1,02	0,97	0,93	0,94	0,91	0,89
Extrapolation coefficient for declared unit	EWYT085B-SRA1	EWYT105B-SRA1	EWYT135B-SRA1	EWYT175B-SRA1	EWYT215B-SRA1	EWYT205B-SRA2	EWYT235B-SRA2	EWYT255B-SRA2	EWYT085B-XRA1	EWYT115B-XRA1	EWYT135B-XRA1	EWYT175B-XRA1	EWYT215B-XRA1	EWYT235B-XRA2	EWYT265B-XRA2	EWYT300B-SRA2	EWYT340B-SRA2	EWYT390B-SRA2	EWYT430B-SRA2	EWYT490B-SRA2	EWYT540B-SRA2	EWYT590B-SRA2	EWYT630B-SRA2	EWYT310B-XRA2	EWYT350B-XRA2	EWYT400B-XRA2	EWYT440B-XRA2	EWYT500B-XRA2	EWYT560B-XRA2	EWYT600B-XRA2	EWYT630B-XRA2	EWYT650B-XRA2	
Manufacturing stage	0,21	0,26	0,26	0,34	0,44	0,41	0,43	0,44	0,26	0,26	0,28	0,38	0,42	0,58	0,49	0,50	0,73	0,82	0,94	0,95	1,00	1,06	1,17	1,22	0,88	0,93	1,03	1,12	1,20	1,27	1,38	1,41	1,41
Distribution stage	0,21	0,26	0,26	0,34	0,44	0,41	0,43	0,44	0,26	0,26	0,28	0,38	0,42	0,58	0,49	0,50	0,73	0,82	0,94	0,95	1,00	1,06	1,17	1,22	0,88	0,93	1,03	1,12	1,20	1,27	1,38	1,41	1,41
Installation stage	0,53	0,53	0,94	0,94	1,08	1,08	1,11	1,11	0,53	0,94	0,94	1,08	1,11	1,22	1,33	1,33	0,78	0,78	0,89	0,89	0,89	0,89	1,00	1,00	0,89	0,89	1,00	1,00	1,11	1,11	1,22	1,22	1,22
Use stage	0,23	0,30	0,37	0,47	0,59	0,58	0,67	0,72	0,65	0,73	0,86	0,44	0,56	0,55	0,60	0,66	0,81	0,91	1,04	1,13	1,23	1,37	1,49	1,57	0,71	0,82	0,95	1,04	1,17	1,29	1,40	1,49	1,55
Maintenance stage	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
EOL stage	0,21	0,26	0,26	0,33	0,44	0,41	0,42	0,43	0,26	0,26	0,28	0,38	0,42	0,58	0,49	0,50	0,73	0,82	0,94	0,95	1,00	1,06	1,17	1,22	0,88	0,93	1,03	1,12	1,20	1,27	1,38	1,41	1,41

ABOUT THE MANUFACTURER

PEP AUTHOR AND CONTRIBUTORS

Manufacturer	Daikin Applied Europe SpA
PEP author	Daikin Applied Europe SpA
PEP verifier	TUV SUD (VH42)
PEP program operator	PEP ECOPASSPORT®
Background data	This PEP is based on Ecoinvent 3.8 and One Click LCA databases.
LCA software	The LCA and PEP have been created using One Click LCA. The environmental impacts were calculated according to Environmental Footprint 3.0 method.