PRODUCT ENVIRONMENTAL PROFILE

EWAT540B-XSC2

Registration Number: DAE0-00010-V01.01-EN	Drafting Rules « PCR-ed4-EN-2021 09 06 » Supplemented By PSR-0013-ed3.0-EN-2023-06-06
Verifier accreditation number: VH42	Information and reference documents: www.pep-ecopassport.org
Date of issue: 10-2024	Validity period: 5 years
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	EWAT-B-C (daikinapplied.eu)

PRODUCT IDENTIFICATION

Product family	EWAT-B_C
Reference Product	EWAT540B-XSC2
Place(s) of production	Italy
Place(s) of installation	France

PRODUCT INFORMATION

Technology	Air-to-Water Scroll Chiller		
Function	Package unit for comfort cooling for industrial applications.		
Unit	EWAT540B-XSC2		
$P_{cooling}$ (Pc)	539.39 kW		
$t_{cooling}$	600 h		
SEER	4.89		
Refrigerant	R32	**Reference service life (DVR)**	22 y
Homogenous Family	Scroll Chiller EWAT-B_C (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; outdoor air temperature 35°C.		

DECLARED UNIT

Declared unit	"To produce cooling thanks to an air to water chiller of 539.39 kW (cooling capacity) according to the appropriate use scenario and during the 22-year reference lifetime of the product".
Total weight	3891.5 kg
Unit weight	3876 kg
Packaging weight	15.5 kg

FUNCTIONAL UNIT

Functional unit	"To produce 1 kW of cooling according to the appropriate usage scenario defined in the EN 14825 standard and during the 22-year reference lifetime of the product."
FU weighting value	1 kW / 539.39 kW
Total weight	7.21 kg
Unit weight	7.18 kg
Packaging weight	0.03 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	62,64%	81,11%
	Copper	4,92%	
	Aluminium	7,52%	
	Iron	5,66%	
	Brass	0,32%	
	Brazing solder	0,04%	
Plastics	Insulation foam	0,43%	0,99%
	Packaging film	0,41%	
	Polyetilene	0,15%	
Others	Elec.motors	8,50%	17,90%
	Glass fiber	2,46%	
	Refrigerant	1,44%	
	Cables	2,12%	
	Refrigerant oil	2,02%	
	Electric components	0,91%	
	Transformer	0,37%	
	PCB	0,08%	

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 intracontenital 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%
** Metals are not present in the packaging of the products*			

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 $Efu = Qfu * DVR$.

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 0.44 kg R32 (297 kgCO2eq)	
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 CO2e / kWh
	Ctot (Total energy consumption of the reference product)	1.456.916 kWh
	Reference lifetime (RLT)	22 years

**Ecoinvent 3.8*

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 CO2e	1,58E+05	2,22E+04	2,32E+03	5,27E+01	1,28E+05	5,35E+03	-1,13E+04
Global Warming Potential fossil kg CO2e	1,58E+05	2,21E+04	2,32E+03	5,27E+01	1,28E+05	5,35E+03	-1,13E+04
Global Warming Potential biogenic kg CO2e	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 CO2e	1,59E+02	7,77E+01	9,71E-01	2,10E-02	7,87E+01	2,01E+00	-5,85E+00
Depletion potential of the stratospheric ozone layer kg CFC11e	6,79E-02	5,34E-02	5,00E-04	3,28E-06	1,39E-02	1,01E-04	-4,16E-02
Acidification potential, Accumulated Exceedance mol H+ eq.	1,11E+03	3,23E+02	6,82E+00	1,90E-01	7,68E+02	7,16E+00	-2,24E+02
Eutrophication aquatic freshwater kg Pe	6,14E+00	2,05E+00	1,97E-02	1,04E-03	3,98E+00	8,72E-02	-9,25E-01
Eutrophication aquatic marine kg N eq.	1,57E+02	2,67E+01	1,36E+00	3,26E-02	1,28E+02	1,37E+00	-1,43E+01
Eutrophication terrestrial mol N eq.	1,68E+03	3,14E+02	1,51E+01	3,39E-01	1,33E+03	1,53E+01	-1,80E+02
Formation potential of tropospheric ozone kg NMVOC eq.	4,91E+02	1,11E+02	5,68E+00	9,39E-02	3,70E+02	4,38E+00	-6,27E+01
Abiotic depletion potential (ADP-elements) for non fossil resources (+A2) kg Sbe	1,16E+01	6,60E+00	8,20E-03	1,18E-03	4,96E+00	8,50E-03	-4,52E+00
Abiotic depletion potential (ADP-fossil fuels) for fossil resources (+A2) MJ	1,77E+07	2,59E+05	3,36E+04	4,10E+03	1,74E+07	2,22E+04	-1,15E+05
Water use m3 deprived	2,25E+05	1,15E+04	1,48E+02	5,12E+01	2,13E+05	8,67E+02	-3,64E+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	9,84E-03	1,70E-03	1,84E-04	1,93E-06	7,80E-03	1,50E-04	-9,09E-04
Ionising radiation, human health kBq U-235eq	7,96E+05	2,18E+03	1,57E+02	1,87E+02	7,93E+05	4,23E+02	-6,29E+02
Eco-toxicity (freshwater) CTUe	8,20E+06	2,71E+06	3,08E+04	1,30E+03	5,35E+06	1,06E+05	-1,28E+06
Human toxicity, cancer effects CTUh	3,31E-03	3,09E-03	8,67E-07	3,77E-08	1,51E-04	7,25E-05	-6,71E-05
Human toxicity, non-cancer effects CTUh	8,27E-03	4,39E-03	2,79E-05	9,48E-07	3,81E-03	4,51E-05	-2,70E-03
Land use related impacts/ Soil quality dimensionless	9,67E+05	1,57E+05	2,35E+04	1,99E+02	7,78E+05	9,14E+03	-7,59E+04

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	1,46E+06	4,72E+04	3,99E+02	3,35E+02	1,41E+06	2,91E+03	-1,08E+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	1,46E+06	4,72E+04	3,99E+02	3,35E+02	1,41E+06	2,91E+03	-1,08E+04
Use of non renewable primary energy as energy MJ	1,77E+07	2,51E+05	3,36E+04	4,10E+03	1,74E+07	2,21E+04	-1,12E+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	1,77E+07	2,52E+05	3,36E+04	4,10E+03	1,74E+07	2,21E+04	-1,12E+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	5,13E+01	4,52E+01	1,45E-01	1,57E-03	5,59E+00	3,52E-01	-1,05E+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	5,44E+03	2,94E+02	4,00E+00	1,22E+00	5,12E+03	2,68E+01	-1,06E+02
Total use of primary energy during the life cycle MJ	1,91E+07	2,99E+05	3,40E+04	4,43E+03	1,88E+07	2,50E+04	-1,22E+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	1,79E+04	5,25E+03	4,86E+01	2,80E+00	1,14E+04	1,20E+03	-3,43E+03
Non hazardous waste disposed kg	2,91E+05	1,02E+05	7,75E+02	5,95E+01	1,84E+05	4,90E+03	-7,32E+04
Radioactive waste disposed kg	2,31E+02	8,68E-01	2,23E-01	5,41E-02	2,30E+02	1,32E-01	-2,50E-01
Components for re-use kg	4,86E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,86E+01	0,00E+00
Materials for recycling kg	2,80E+03	1,11E+02	0,00E+00	4,18E+00	0,00E+00	2,69E+03	0,00E+00
Materials for energy recovery kg	8,60E+01	4,65E+01	0,00E+00	6,67E+00	0,00E+00	3,28E+01	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 CO2e/FU	2,94E+02	4,12E+01	4,29E+00	9,77E-02	2,38E+02	9,92E+00	-2,09E+01
Global Warming Potential fossil kg CO2e/FU	2,93E+02	4,11E+01	4,29E+00	9,77E-02	2,38E+02	9,92E+00	-2,09E+01
Global Warming Potential biogenic kg CO2e/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 CO2e/FU	2,96E-01	1,44E-01	1,80E-03	3,89E-05	1,46E-01	3,73E-03	-1,08E-02
Depletion potential of the stratospheric ozone layer kg CFC11e/FU	1,26E-04	9,90E-05	9,27E-07	6,08E-09	2,58E-05	1,87E-07	-7,71E-05
Acidification potential, Accumulated Exceedance mol H+ eq./FU	2,05E+00	5,99E-01	1,26E-02	3,52E-04	1,42E+00	1,33E-02	-4,16E-01
Eutrophication aquatic freshwater kg Pe/FU	1,14E-02	3,80E-03	3,65E-05	1,93E-06	7,38E-03	1,62E-04	-1,71E-03
Eutrophication aquatic marine kg N eq./FU	2,91E-01	4,95E-02	2,52E-03	6,04E-05	2,36E-01	2,54E-03	-2,65E-02
Eutrophication terrestrial mol N eq./FU	3,11E+00	5,83E-01	2,81E-02	6,28E-04	2,47E+00	2,84E-02	-3,34E-01
Formation potential of tropospheric ozone kg NMVOC eq./FU	9,10E-01	2,06E-01	1,05E-02	1,74E-04	6,86E-01	8,12E-03	-1,16E-01
Abiotic depletion potential (ADP-elements) for non fossil resources (+A2) kg Sbe/FU	2,15E-02	1,22E-02	1,52E-05	2,19E-06	9,20E-03	1,58E-05	-8,38E-03
Abiotic depletion potential (ADP-fossil fuels) for fossil resources (+A2) MJ/FU	3,28E+04	4,80E+02	6,23E+01	7,60E+00	3,22E+04	4,11E+01	-2,13E+02
Water use m3 deprived/FU	4,18E+02	2,13E+01	2,75E-01	9,49E-02	3,95E+02	1,61E+00	-6,75E+00

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	1,82E-05	3,15E-06	3,41E-07	3,58E-09	1,45E-05	2,78E-07	-1,69E-06
Ionising radiation, human health kBq U-235eq/FU	1,48E+03	4,03E+00	2,91E-01	3,46E-01	1,47E+03	7,84E-01	-1,17E+00
Eco-toxicity (freshwater) CTUe/FU	1,52E+04	5,03E+03	5,71E+01	2,42E+00	9,92E+03	1,96E+02	-2,38E+03
Human toxicity, cancer effects CTUh/FU	6,14E-06	5,73E-06	1,61E-09	6,99E-11	2,80E-07	1,34E-07	-1,24E-07
Human toxicity, non-cancer effects CTUh/FU	1,53E-05	8,14E-06	5,17E-08	1,76E-09	7,06E-06	8,36E-08	-5,01E-06
Land use related impacts/ Soil quality dimensionless/FU	1,79E+03	2,91E+02	4,36E+01	3,68E-01	1,44E+03	1,69E+01	-1,41E+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	2,71E+03	8,74E+01	7,40E-01	6,22E-01	2,62E+03	5,40E+00	-2,01E+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	2,71E+03	8,74E+01	7,40E-01	6,22E-01	2,62E+03	5,40E+00	-2,01E+01
Use of non renewable primary energy as energy MJ/FU	3,28E+04	4,66E+02	6,23E+01	7,60E+00	3,22E+04	4,10E+01	-2,07E+02
Use of non renewable primary energy as raw materials MJ/FU	1,22E+00	1,22E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of non renewable primary energy MJ/FU	3,28E+04	4,67E+02	6,23E+01	7,60E+00	3,22E+04	4,10E+01	-2,07E+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	9,51E-02	8,38E-02	2,69E-04	2,91E-06	1,04E-02	6,53E-04	-1,95E-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	1,01E+01	5,46E-01	7,42E-03	2,26E-03	9,49E+00	4,96E-02	-1,96E-01
Total use of primary energy during the life cycle MJ/FU	3,55E+04	5,54E+02	6,30E+01	8,22E+00	3,48E+04	4,64E+01	-2,27E+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	3,32E+01	9,73E+00	9,01E-02	5,19E-03	2,12E+01	2,23E+00	-6,36E+00
Non hazardous waste disposed kg/FU	5,40E+02	1,88E+02	1,44E+00	1,10E-01	3,41E+02	9,08E+00	-1,36E+02
Radioactive waste disposed kg/FU	4,29E-01	1,61E-03	4,13E-04	1,00E-04	4,26E-01	2,45E-04	-4,63E-04
Components for re-use kg/FU	9,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,00E-02	0,00E+00
Materials for recycling kg/FU	5,19E+00	2,06E-01	0,00E+00	7,75E-03	0,00E+00	4,98E+00	0,00E+00
Materials for energy recovery kg/FU	1,59E-01	8,62E-02	0,00E+00	1,24E-02	0,00E+00	6,09E-02	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	EWAT250B-SSC2	EWAT270B-SSC2	EWAT310B-SSC1	EWAT350B-SSC1	EWAT320B-SSC2	EWAT380B-SSC2	EWAT430B-SSC2	EWAT480B-SSC2	EWAT570B-SSC2	EWAT620B-SSC2	EWAT670B-SSC2	EWAT730B-SSC2	EWAT790B-SSC2	EWAT860B-SSC2	EWAT960B-SSC2	EWAT250B-SRC2	EWAT270B-SRC2	EWAT310B-SRC1	EWAT350B-SRC1	EWAT320B-SRC2	EWAT380B-SRC2	EWAT430B-SRC2	EWAT480B-SRC2	EWAT570B-SRC2	EWAT620B-SRC2	EWAT670B-SRC2	EWAT730B-SRC2	EWAT790B-SRC2	EWAT860B-SRC2	EWAT960B-SRC2	EWAT180B-XSC2	EWAT210B-XSC2	EWAT230B-XSC2
Manufacturing stage	1,09	1,03	0,95	0,89	0,93	0,96	0,91	0,86	0,77	0,72	0,71	0,83	0,83	0,75	0,71	1,16	1,10	1,01	0,95	1,00	1,01	0,98	0,92	0,78	0,78	0,76	0,88	0,88	0,80	0,76	1,40	1,26	1,15
Distribution stage	1,09	1,03	0,95	0,89	0,93	0,96	0,91	0,86	0,77	0,72	0,71	0,83	0,83	0,75	0,71	1,16	1,10	1,01	0,95	1,00	1,01	0,98	0,92	0,78	0,78	0,76	0,88	0,88	0,80	0,76	1,40	1,26	1,15
Installation stage	0,31	0,33	0,38	0,43	0,39	0,55	0,62	0,69	0,94	1,03	1,10	1,36	1,47	1,77	1,99	0,30	0,33	0,37	0,41	0,38	0,54	0,60	0,67	0,91	1,00	1,07	1,33	1,42	1,73	1,93	0,22	0,26	0,29
Use stage	1,04	1,06	1,04	1,06	1,08	1,05	1,04	1,05	1,01	1,02	1,02	1,01	1,01	1,00	1,02	0,96	1,03	0,97	1,02	1,04	1,00	0,99	1,00	0,95	0,96	0,97	0,94	0,93	0,92	0,95	1,06	1,04	1,03
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	2,00	3,00	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	1,09	1,03	0,94	0,89	0,93	0,96	0,91	0,86	0,77	0,72	0,71	0,83	0,83	0,75	0,71	1,16	1,10	1,01	0,95	1,00	1,01	0,98	0,92	0,78	0,78	0,76	0,88	0,88	0,80	0,76	1,40	1,26	1,15
Extrapolation coefficient for declared unit	**EWAT250B-SSC2**	**EWAT270B-SSC2**	**EWAT310B-SSC1**	**EWAT350B-SSC1**	**EWAT320B-SSC2**	**EWAT380B-SSC2**	**EWAT430B-SSC2**	**EWAT480B-SSC2**	**EWAT570B-SSC2**	**EWAT620B-SSC2**	**EWAT670B-SSC2**	**EWAT730B-SSC2**	**EWAT790B-SSC2**	**EWAT860B-SSC2**	**EWAT960B-SSC2**	**EWAT250B-SRC2**	**EWAT270B-SRC2**	**EWAT310B-SRC1**	**EWAT350B-SRC1**	**EWAT320B-SRC2**	**EWAT380B-SRC2**	**EWAT430B-SRC2**	**EWAT480B-SRC2**	**EWAT570B-SRC2**	**EWAT620B-SRC2**	**EWAT670B-SRC2**	**EWAT730B-SRC2**	**EWAT790B-SRC2**	**EWAT860B-SRC2**	**EWAT960B-SRC2**	**EWAT180B-XSC2**	**EWAT210B-XSC2**	**EWAT230B-XSC2**
Manufacturing stage	0,50	0,51	0,54	0,57	0,55	0,68	0,72	0,76	0,81	0,84	0,88	1,12	1,21	1,19	1,27	0,52	0,53	0,56	0,59	0,57	0,70	0,75	0,79	0,81	0,88	0,92	1,16	1,26	1,24	1,32	0,47	0,48	0,50
Distribution stage	0,50	0,51	0,54	0,57	0,55	0,68	0,72	0,76	0,81	0,84	0,88	1,12	1,21	1,19	1,27	0,52	0,53	0,56	0,59	0,57	0,70	0,75	0,79	0,81	0,88	0,92	1,16	1,26	1,24	1,32	0,47	0,48	0,50
Installation stage	0,67	0,67	0,67	0,67	0,67	0,78	0,78	0,78	0,89	0,89	0,89	1,00	1,00	1,12	1,12	0,67	0,67	0,67	0,67	0,67	0,78	0,78	0,78	0,89	0,89	0,89	1,00	1,00	1,12	1,12	0,67	0,67	0,67
Use stage	0,48	0,53	0,59	0,68	0,64	0,74	0,82	0,93	1,06	1,18	1,27	1,38	1,48	1,59	1,81	0,43	0,50	0,54	0,63	0,59	0,69	0,77	0,86	0,98	1,08	1,17	1,24	1,33	1,43	1,65	0,35	0,40	0,44
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	0,50	0,51	0,54	0,57	0,55	0,68	0,72	0,76	0,80	0,84	0,88	1,13	1,21	1,19	1,27	0,52	0,53	0,56	0,59	0,57	0,70	0,75	0,79	0,80	0,88	0,92	1,16	1,26	1,24	1,32	0,47	0,48	0,50

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Extrapolation coefficient for functional unit	EWAT250B-XSC2	EWAT290B-XSC2	EWAT320B-XSC2	EWAT350B-XSC2	EWAT250B-XSC1	EWAT320B-XSC1	EWAT370B-XSC1	EWAT390B-XSC2	EWAT450B-XSC2	EWAT510B-XSC2	EWAT540B-XSC2	EWAT590B-XSC2	EWAT630B-XSC2	EWAT720B-XSC2	EWAT760B-XSC2	EWAT830B-XSC2	EWAT880B-XSC2	EWATC10B-XSC2	EWAT180B-XRC2	EWAT210B-XRC2	EWAT230B-XRC2	EWAT250B-XRC2	EWAT290B-XRC2	EWAT320B-XRC2	EWAT350B-XRC2	EWAT250B-XRC1	EWAT320B-XRC1	EWAT370B-XRC1	EWAT390B-XRC2	EWAT450B-XRC2	EWAT510B-XRC2	EWAT540B-XRC2	EWAT590B-XRC2
Manufacturing stage	1,08	1,17	1,20	1,18	1,08	1,02	0,93	0,96	0,93	0,81	1,00	0,94	0,90	0,82	0,79	0,90	0,87	0,84	1,51	1,37	1,26	1,19	1,26	1,30	1,30	1,17	1,09	1,01	1,04	1,00	0,88	1,11	1,01
Distribution stage	1,08	1,17	1,20	1,18	1,08	1,02	0,93	0,96	0,93	0,81	1,00	0,94	0,90	0,82	0,79	0,90	0,87	0,84	1,51	1,37	1,26	1,19	1,26	1,30	1,30	1,17	1,09	1,01	1,04	1,00	0,88	1,11	1,01
Installation stage	0,31	0,41	0,47	0,50	0,31	0,47	0,54	0,56	0,74	0,85	1,00	1,09	1,17	1,48	1,58	1,89	2,00	2,50	0,22	0,25	0,28	0,30	0,40	0,45	0,48	0,30	0,45	0,51	0,54	0,71	0,81	0,97	1,04
Use stage	1,03	1,02	1,02	1,02	1,06	1,02	1,03	1,04	1,03	1,02	1,00	1,00	1,00	0,99	0,99	0,99	0,99	1,00	0,96	0,96	0,94	0,98	0,95	0,93	0,95	0,98	0,94	0,95	0,98	0,95	0,96	0,93	0,93
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	1,08	1,16	1,20	1,18	1,08	1,02	0,93	0,96	0,93	0,81	1,00	0,94	0,90	0,82	0,79	0,90	0,88	0,84	1,51	1,36	1,25	1,18	1,25	1,30	1,30	1,17	1,09	1,01	1,04	1,00	0,88	1,11	1,01
Extrapolation coefficient for declared unit	**EWAT250B-XSC2**	**EWAT290B-XSC2**	**EWAT320B-XSC2**	**EWAT350B-XSC2**	**EWAT250B-XSC1**	**EWAT320B-XSC1**	**EWAT370B-XSC1**	**EWAT390B-XSC2**	**EWAT450B-XSC2**	**EWAT510B-XSC2**	**EWAT540B-XSC2**	**EWAT590B-XSC2**	**EWAT630B-XSC2**	**EWAT720B-XSC2**	**EWAT760B-XSC2**	**EWAT830B-XSC2**	**EWAT880B-XSC2**	**EWATC10B-XSC2**	**EWAT180B-XRC2**	**EWAT210B-XRC2**	**EWAT230B-XRC2**	**EWAT250B-XRC2**	**EWAT290B-XRC2**	**EWAT320B-XRC2**	**EWAT350B-XRC2**	**EWAT250B-XRC1**	**EWAT320B-XRC1**	**EWAT370B-XRC1**	**EWAT390B-XRC2**	**EWAT450B-XRC2**	**EWAT510B-XRC2**	**EWAT540B-XRC2**	**EWAT590B-XRC2**
Manufacturing stage	0,51	0,62	0,72	0,76	0,51	0,61	0,64	0,69	0,77	0,77	1,00	1,02	1,05	1,09	1,12	1,40	1,43	1,57	0,49	0,50	0,52	0,53	0,64	0,75	0,79	0,52	0,63	0,66	0,71	0,80	0,80	1,07	1,06
Distribution stage	0,51	0,62	0,72	0,76	0,51	0,61	0,64	0,69	0,77	0,77	1,00	1,02	1,05	1,09	1,12	1,40	1,43	1,57	0,49	0,50	0,52	0,53	0,64	0,75	0,79	0,52	0,63	0,66	0,71	0,80	0,80	1,07	1,06
Installation stage	0,67	0,78	0,78	0,78	0,67	0,78	0,78	0,78	0,89	0,89	1,00	1,00	1,00	1,12	1,12	1,22	1,22	1,33	0,67	0,67	0,67	0,67	0,78	0,78	0,78	0,67	0,78	0,78	0,78	0,89	0,89	1,00	1,00
Use stage	0,48	0,54	0,61	0,65	0,49	0,61	0,71	0,75	0,85	0,96	1,00	1,09	1,17	1,32	1,40	1,54	1,62	1,86	0,31	0,35	0,39	0,44	0,48	0,54	0,58	0,44	0,55	0,63	0,67	0,76	0,87	0,89	0,97
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	0,51	0,62	0,72	0,76	0,51	0,61	0,64	0,69	0,77	0,77	1,00	1,02	1,05	1,09	1,12	1,40	1,43	1,57	0,49	0,50	0,52	0,53	0,64	0,75	0,79	0,52	0,63	0,66	0,71	0,80	0,80	1,07	1,06

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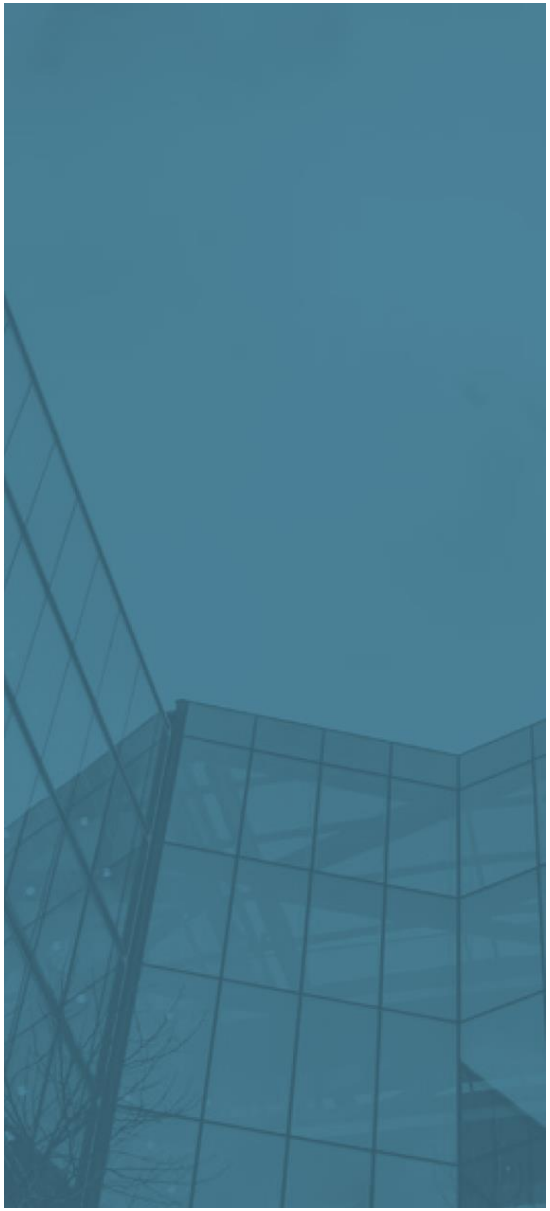
Extrapolation coefficient for functional unit	EWAT630B-XRC2	EWAT720B-XRC2	EWAT760B-XRC2	EWAT830B-XRC2	EWAT880B-XRC2	EWATC10B-XRC2
Manufacturing stage	0,97	0,89	0,86	0,99	0,94	0,90
Distribution stage	0,97	0,89	0,86	0,99	0,94	0,90
Installation stage	1,12	1,42	1,51	1,82	1,91	2,39
Use stage	0,93	0,92	0,93	0,92	0,92	0,93
Maintenance stage	1,00	1,00	1,00	1,00	1,00	1,00
EOL stage	0,97	0,89	0,86	0,99	0,94	0,91
Extrapolation coefficient for declared unit	**EWAT630B-XRC2**	**EWAT720B-XRC2**	**EWAT760B-XRC2**	**EWAT830B-XRC2**	**EWAT880B-XRC2**	**EWATC10B-XRC2**
Manufacturing stage	1,09	1,13	1,16	1,47	1,47	1,62
Distribution stage	1,09	1,13	1,16	1,47	1,47	1,62
Installation stage	1,00	1,12	1,12	1,22	1,22	1,33
Use stage	1,04	1,18	1,26	1,36	1,44	1,67
Maintenance stage	1,00	1,00	1,00	1,00	1,00	1,00
EOL stage	1,09	1,13	1,16	1,47	1,47	1,62



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.