EPD
INTERNATIONAL EPD SYSTEM

FAN COILS

PRODUCT GROUP CLASSIFICATION: UN CPC 43912

C-PCR-027 (TO PCR 2019:14)
VERSION 1.0.0

VALID UNTIL: 2028-12-19

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1 INTRODUCTION

1.1 GENERAL

This document constitutes complementary Product Category Rules (c-PCR) for developing Environmental Product Declarations (EPD) in the framework of the International EPD System: a programme for EPDs[1] according to ISO 14025, ISO 14040, ISO 14044, and product-specific standards, such as EN 15804, EN 15941 and ISO 21930 for construction products.[2] developed in the framework of the International EPD System: a programme for type III environmental declarations[3] according to ISO 14025:2006. EPDs are voluntary documents for a company or an industry association to present transparent, consistent, and verifiable information about the environmental performance of their products (goods or services).

The General Programme Instructions (GPI), publicly available on www.environdec.com, includes the rules for the overall administration and operation of the programme and the basic rules for developing EPDs registered in the programme. A PCR complements the GPI and the normative standards by providing specific rules and guidelines for developing an EPD for one or more specific product categories (see Figure 1), thereby enabling the generation of consistent EPDs within a product category.

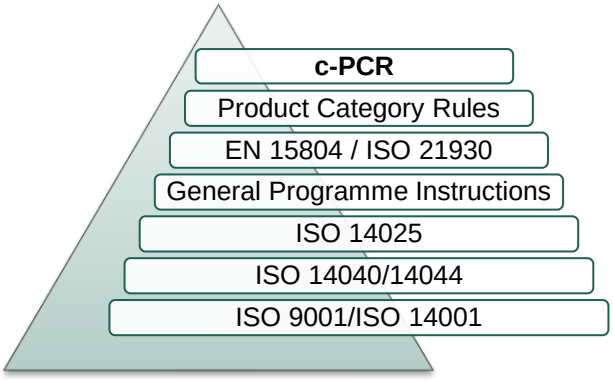

Figure 1 This c-PCR in relation to the hierarchy of standards and other documents.

The present c-PCR uses the following terminology:

- The term “shall” is used to indicate what is obligatory, i.e., a requirement.
- The term “should” is used to indicate a recommendation. Any deviation from a recommendation shall be justified in the EPD development process.
- The terms “may” or “can” are used to indicate an option that is permissible.

For definitions of other terms used in the document, see the GPI, normative standards, and PCR 2019:14 Construction products.

The latest version of the PCR is available on www.environdec.com.

Any references to this PCR shall include the PCR registration number, name, and version number.

Stakeholder feedback on PCRs is very much encouraged. Any comments on this PCR document may be sent directly to the PCR Moderator during its development or during the period of validity.

The programme operator maintains the copyright of the document to ensure that it is possible to publish, update when necessary, and available to all organisations to develop and register EPDs. Stakeholders participating in PCR development should be acknowledged in the final document and on the website.

1 Termed type III environmental declarations in ISO 14025.

2 When standards are referred to in this document, the version listed in Section 7 is intended unless otherwise stated.

3 Type III environmental declarations in the International EPD System are referred to as EPD, Environmental Product Declarations.

1.2 ROLE OF THIS DOCUMENT

This document provides complementary product category rules (c-PCR) to PCR 2019:14 Construction products, available on www.environdec.com. This document cannot be used by itself but shall be used together with PCR 2019:14 and EN 15804. The document can be used together with any valid version of PCR 2019:14, regardless of the version of PCR 2019:14 referred to in this document.

See Figure 2Figure 2 for an illustration on how PCR 2019:14 and this c-PCR relates to each other and the EPDs that may be based on them.

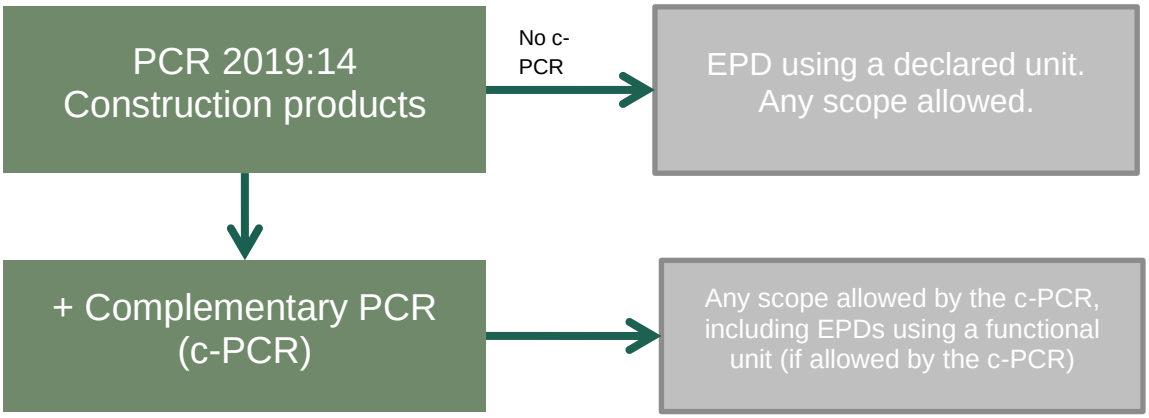

Figure 2 Overview of using PCR 2019:14 directly to develop an EPD or how to use it together with a c-PCR.

2 GENERAL INFORMATION

2.1 ADMINISTRATIVE INFORMATION

Name:	Fan coils
Registration number and version:	c-PCR-027, version 1.0.0
Programme:	EPD INTERNATIONAL EPD SYSTEM
Programme operator:	EPD International AB, Box 210 60, SE-100 31 Stockholm, Sweden Website: www.environdec.com E-mail: support@environdec.com
PCR Moderator:	Valeria Tacchino, Tetis Institute S.r.l., tacchino@tetisinstitute.it
PCR Committee:	▪ TETIS Institute Srl -Spin Off of the University of Genoa, www.tetisinstitute.it ▪ Sabiana S.p.A., www.sabiana.it
Date of publication and last revision:	2025-04-23 (version 1.0.0) A version history is available in Section 8.
Valid until:	2028-12-19
Schedule for renewal:	This document will be revised upon its expiration. In case a c-PCR is developed by a CEN Product TC, the standard will replace this c-PCR with a transition period of 90 days.
Standards conformance:	For compliance to standards and other documents, see PCR 2019:14.
PCR language(s):	This PCR was developed and is available in English. In case of translated versions, the English version takes precedence in case of any discrepancies.

2.2 SCOPE

2.2.1 PRODUCT CATEGORY DEFINITION AND DESCRIPTION

This document provides complementary Product Category Rules (c-PCR) for the assessment of the environmental performance of Hydronic Fan Coil Unit (FCU) with both air free delivery and air ducted with a maximum external static pressure due to duct resistance of 120 Pa, and the declaration of this performance by an EPD.

FCU is defined as a factory-made single assembly which provides one or more of the functions of forced circulation of air, heating, cooling, dehumidification and filtering of air, but which does not include the source of heating or cooling (BS EN 1397:2021).

This device includes at least a liquid-to-air heat exchanger and a fan, and may be designed for free or ducted intake air and/or for free or ducted delivery of supply air.

The product category corresponds to a subset of UN CPC subclass 43912 Air-conditioning machines and HS 2007 subclass 8415.83 Air-conditioning machines; containing a motor driven fan, other than window or wall types, not incorporating a refrigerating unit.

The UN CPC classification hierarchy is:

- Section 4 Metal products, machinery and equipment
  - Division 43 – General-purpose machinery
    - Group 439 – Other general-purpose machinery and parts thereof
      - Class 4391 – Gas generators; distilling plant; air-conditioning and refrigerating equipment; filtering machinery
        - Subclass 43912 – Air-conditioning machines

This subclass is defined through the following headings/subheadings of the HS 2007 (WCO Harmonized System Nomenclature):

- 8415.83: Air conditioning machines; containing a motor driven fan, other than window or wall types, not incorporating a refrigerating unit

This c-PCR is not applicable for products incorporating a refrigerating unit belonging to the following headings/subheadings of the HS 2007, for which PCR 2021:02 Air-conditioning machines shall be used (unless the EPD is to comply with EN 15804, as PCR 2019:14 shall then be used):

- 8415.10: Air conditioning machines; comprising a motor-driven fan and elements for changing the temperature and humidity, of a kind designed to be fixed to a window, wall, ceiling or floor, self-contained or "split-system"
- 8415.81: Air conditioning machines; containing a motor driven fan, other than window or wall types, incorporating a refrigerating unit and a valve for reversal of the cooling/heat cycle (reversible heat pumps)
- 8415.82: Air conditioning machines; containing a motor driven fan, other than window or wall types, incorporating a refrigerating unit

This c-PCR does not cover the following, related UN CPC codes:

- 43913 Refrigerating and freezing equipment and heat pumps, except household type equipment

Additional information on the UN CPC classification is available on https://unstats.un.org/unsd/classifications/Family/Detail/1074.

2.2.2 TYPE OF EPD AND INFORMATION MODULES INCLUDED

Following the requirements in Section 2.2.2 of PCR 2019:14, an EPD based on this c-PCR is a type c EPD (cradle to grave and module D). Section 4.2 below provides more information on each life-cycle stage concerning the product category in scope.

2.2.3 GEOGRAPHICAL SCOPE

This c-PCR may be used globally.

2.2.4 EPD VALIDITY

See PCR 2019:14.

3 PCR REVIEW AND BACKGROUND INFORMATION

This c-PCR was developed in accordance with the PCR development process described in the GPI of the International EPD System, including open consultation and review.

3.1 OPEN CONSULTATION

3.1.1 VERSION 2023-12-19

This c-PCR was available for open consultation from 2023-08-11 until 2023-10-10, during which any stakeholder is able to provide comments by contacting the PCR Moderator and/or the Secretariat.

Stakeholders were invited via e-mail or other means to take part in the open consultation and were encouraged to forward the invitation to other relevant stakeholders. No stakeholders provided comments during the open consultation and agreed to be listed as contributors in the c-PCR and at www.environdec.com.

3.2 PCR REVIEW

3.2.1 VERSION 2023-12-19

PCR review panel:	The Technical Committee of the International EPD System. A full list of members is available at www.environdec.com. The review panel may be contacted via info@environdec.com. Members of the Technical Committee were requested to state any potential conflict of interest with the PCR Committee, and if there were conflicts of interest they were excused from the review.
Chair of the PCR review:	Gorka Benito Alonso
Review dates:	2023-10-24 until 2023-10-27

3.3 EXISTING PCRS FOR THE PRODUCT CATEGORY

As part of the development of this c-PCR, existing PCRs/c-PCRs and other internationally standardised methods that could potentially act as c-PCRs were considered to avoid unnecessary overlaps in scope and to ensure harmonisation with established methods of relevance for the product category. The existence of such documents was checked among the following EPD programmes and international standardisation bodies:

- International EPD System. www.environdec.com.
- IBU – Institut Bauen und Umwelt e.V., https://epd-online.com/
- Epd-norge, https://www.epd-norge.no
- PEP ecopassport, http://www.pep-ecopassport.org/
- ASTM International, https://www.astm.org/products-services/certification/environmental-product-declarations/epd-pcr.html
- UL Environment, https://industries.ul.com/environment/transparency/product-category-rules-pcrs
- JEMAI CFP Program, https://www.cfp-japan.jp/english/
- JEMAI EcoLeaf, http://www.ecoleaf-jemai.jp/eng/pcr.html
- NSF International Center for Sustainability Standards EPD, https://www.nsf.org/standards-development/product-category-rules

Table 1 Existing PCRs/c-PCRs and other internationally standardized methods that were considered to avoid overlap in scope and to ensure harmonisation with established methods.

NAME OF PCR/c-PCR/STANDARD	PROGRAMME/ STANDARDISATION BODY	REGISTRATION NUMBER, VERSION NUMBER/DATE OF PUBLICATION	SCOPE
PCR 2021:02 Air-conditioning machines	International EPD System	PCR 2021:02 Version 1.0.1, published 2023-04-28	UN CPC 43912 Airconditioning machines (excluding HS 2007 subclass 8415.83)
NPCR 030 Part B for ventilation components	EPD-Norge (adopted by International EPD System)	NPCR 030 Part B for ventilation components. Approved 18.05.2021, valid until 18.05.2026.	Ventilation components
COMFORT TERMINAL UNITS (CTU)	PEP ecopassport®	PSR-0009-ed2.0-EN-2018 02 09	Comfort terminal units

3.4 REASONING FOR DEVELOPMENT OF C-PCR

This c-PCR was developed to provide requirements and guidelines additional to those in PCR 2019:14 and EN 15804, for developing EPDs for the product category. The c-PCR thereby enables different practitioners to generate consistent results when assessing the environmental impact of products of the same product category, and thereby it supports comparability of products within a product category.

The development of this PCR stems from the need to develop specific guidelines for fan coils, in particular to provide rules for modelling the energy consumption, to harmonize EPDs and create comparability.

Related, it's important that EPDs of fan coils comply with EN 15804, to be able to be used as input to EPDs of buildings and other whole-building assessments.

3.5 UNDERLYING STUDIES USED FOR C-PCR DEVELOPMENT

The methodological choices made during the development of this c-PCR (functional unit, system boundary, allocation methods, impact categories, data quality rules, etc.) were primarily based on the following underlying studies:

- Churcher D. (2014) Life Cycle Assessment - an assessment of a building services system (BG 59/2014). BSRIA. https://www.bsria.com/uk/product/KrqWeD/life_cycle_assessment_an_assessment_of_a_building_services_system_bg_592014_a15d25e1/
- Matjaz Prek (2004) Environmental impact and life cycle assessment of heating and air conditioning systems, a simplified case study, Energy and Buildings, Volume 36, Issue 10, 1021-1027.
- Tetis Institute Srl (2023) LCA report for Sabiana S.p.A. "Fan Coils unit SkyStar SK-ECM", Version 2.

4 GOAL AND SCOPE, LIFE CYCLE INVENTORY AND LIFE CYCLE IMPACT ASSESSMENT

This section provides specific rules, requirements and guidelines for developing an EPD for the product category as defined in Section 2.2.1.

4.1 FUNCTIONAL UNIT

EPDs based on this c-PCR shall use a functional unit (FU). All subsequent analyses then refer to that FU, as all inputs and outputs in the life cycle inventory (LCI) and consequently the life cycle impact assessment (LCIA) results are related to the FU.

The functional unit is 1 kWh of thermal energy exchanged with the air of the room in cooling and/or heating mode by a heating/cooling equipment using small scale HVAC as defined in CPC 43912 and HS 8415.83 and, specifically, using an Hydronic Fan Coil Unit (FCU) as defined into EN 1397.

The 1 kWh of thermal energy is provided to/subtracted from the air of the room at the standard rating conditions (Table 2) as defined in the standards EN 1397.

The functional unit shall be stated in the EPD. The environmental performance results shall be given per functional unit.

A description of the function of the product should be included in the EPD.

The assumed lifetime for the Hydronic FCU shall be 20 years.

Table 2 Standard rating conditions, according to EN 1397.

	Unit	Temperature conditions in cooling mode	Temperature conditions in heating mode - 4 pipe units	Temperature conditions in heating mode - 2 pipe units
Air dry bulb temperature	°C	27	20	20
Air wet bulb temperature	°C	19	15 max	15 max
Liquid inlet temperature	°C	7	65	45
Liquid outlet temperature	°C	12	55	40

4.1.1 THERMAL ENERGY CALCULATION

The total thermal energy provided to/subtracted from the air of the room along FCU lifetime shall be calculated by the following formula (based on Technical Certification Rules Of The Eurovent Certified Performance Mark – Fan Coil Unit – Rev 00 2021):

Total thermal energy (kWh) = Cooling energy + Heating energy

where:

Cooling energy = (5% P $(c)_{high}$ + 30% P $(c)_{med}$ + 65% P $(c)_{low}$) * $h_{cooling}$*Lifetime

Heating energy = (5% P $(h)_{high}$ + 25% P $(h)_{med}$ + 70% P $(h)_{low}$) * $h_{heating}$*Lifetime

- P $(c)_{high}$ / P $(c)_{med}$ / P $(c)_{low}$ = Total cooling capacity (kW) at high/medium/low speed in cooling mode at standard rating conditions, according to EN 1397
- P $(h)_{high}$ / P $(h)_{med}$ / P $(h)_{low}$ = Total heating capacity (kW) at high/medium/low speed in heating mode at standard rating conditions, according to EN 1397
- For Ducted FCU, medium speed shall be the standard fan speed as defined in EN 1397 (having 0Pa at inlet of the unit and 50 Pa at outlet of the unit), low/high speed shall be the other two speeds measured according to EN 1397
- *hcooling* and *hheating* are the yearly operational hours in cooling and heating mode, with *hcooling + hheating* = 2600 h. For a module B with global or european geographical scope, 1100 h in cooling and 1500 h in heating shall be

used. For calculation valid only for specific a region, a different distribution between cooling and heating hours can be used, provided that the total yearly operating hours are 2600 h.Such assumption shall be clearly declared and the module B scope cannot be global or european.

- Lifetime = 20 years

4.2 SYSTEM BOUNDARIES

EPDs that are developed based on this c-PCR shall cover product stage (A1-A3), construction process stage (A4-A5), use stage (B1-B7), end-of-life stage (C1-C4) as well as benefits and loads beyond the system boundary (D). The scope allowed by this c-PCR, and requirements for excluding information modules, are aligned with PCR 2019:14 and EN 15804.

The following subsections describe the covered information modules and the respective processes. For detailed information on each module, see EN 15804 (Section 6.3.5). Here only specific descriptions related to this c-PCR are provided.

Table 3 Life cycle stages and information modules, relevant for fan coil.

Life cycle stage	Information module		Comment
A1-A3 Product stage	A1	Raw materials and components supply	Included
	A2	Transport	Included
	A3	Manufacturing	Included
A4-A5 Construction process stage	A4	Transport	Included
	A5	Installation	Included
B1-B7 Use stage	B1	Use	Excluded; not applicable for fan coils
	B2	Maintenance	Included if relevant
	B3	Repair	Included if relevant
	B4	Replacement	Included if relevant
	B5	Refurbishment	Excluded; not applicable for fan coils
	B6	Operational energy use	Included
	B7	Operational water use	Excluded; not applicable for fan coils
C1-C4 End-of-life stage	C1	Deconstruction	Included if relevant
	C2	Transport	Included
	C3	Waste processing	Included
	C4	Waste disposal	Included
D Benefits and loads beyond the system boundary	D	Reuse, recovery, recycling, potential	Included

4.2.1 PRODUCT STAGE: MODULES A1-A3

See PCR 2019:14 and Section 6.3.5.2 of EN 15804.

- A1 Raw materials and components supply: Extraction and production of raw material for parts and components needed to produce the fan coil, including:
  - extraction and processing of raw materials,
  - recycling processes of secondary materials from other product life cycles,
  - production of input components,

- production of the packaging of raw materials/components and of the packaging of the finished product,
- relevant services, such as transport of raw materials and components along the upstream supply chain (between A1 processes) to a distribution point (e.g. a stockroom or warehouse).
- generation of electricity and production of fuels, steam and other energy carriers used in upstream processes

- A2 Transport: Transportation of raw material and components to manufacturing site (outsourced and in-house) from direct suppliers, i.e. from previous production or extraction process.

  Transport distances can be based on actual data or, if justified, on estimated data.
- A3 Manufacturing: Manufacturing and assembly of components for the production of the fan coil, including:
  - generation of electricity and production of fuels, steam and other energy carriers used during the manufacturing stage,
  - production of auxiliary materials consumed,
  - direct emissions to air, water or soils due to fuels combustion during the manufacturing stage, and
  - end-of-life treatment of manufacturing waste (including wastewater), even if carried out by third parties, including transportation,

The following shall not be included in the manufacturing stage:

- manufacturing of production equipment, buildings and other capital goods,
- building (or dismantling) of a production site, infrastructure, production and maintenance of manufacturing equipment, and personnel activities
- business travel of personnel,
- travel to and from work by personnel, and
- research and development activities.

4.2.2 CONSTRUCTION PROCESS STAGE: MODULES A4-A5

See PCR 2019:14 and Section 6.3.5.3 of EN 15804.

- A4 Transportation: Transportation of the product from the manufacturing site to the installation site.

The transport of the product to the customer shall be described in the EPD, where relevant, and be accounted for in this priority:

1. Actual transportation modes and distances to a specific customer or market, representing the geographical scope of the EPD.
2. A weighted average of transportation modes and distances, based on transportation to several customers or markets, representing the geographical scope of the EPD.
3. Calculated as a fixed long transport: a 1 000 km transport by lorry and a 10 000 km by ship.

- A5 Installation: Installation of the fan coil including:
  - the production and transport of auxiliary materials and energy and water used during the installation of the fan coil (if relevant); material, water and energy consumption should be based on the installation manual provided by the manufacturer; and
  - end-of-life treatment of waste generated from fan coil packaging, including transportation.

4.2.3 USE STAGE: MODULES B2-B6

See PCR 2019:14 and Section 6.3.5.4 of EN 15804.

- B2 Maintenance: Maintenance of parts including (if relevant):

- the production and transport of the parts and auxiliary materials, water and energy (e.g. washing and electric consumption for filter cleaning) used for fan coil unit maintenance activities, and
- the end-of-life processes of any waste generated in the maintenance activities (e.g from the parts and their packaging).

The expected maintenance should be based on the maintenance manual.

- B3 Repair: Repair of parts including (if relevant):
  - repair process of the repaired part of a component including production of the repaired part or ancillary materials,
  - the production of energy used for fan coil unit repair activities,
  - the transportation of the repaired part of component and ancillary materials, and
  - the-end-of-life processes of any waste from transportation and the repair process, including the part of the component and ancillary materials removed.

- B4 Replacement: Replacement of parts including (if relevant):
  - replacement activity, e.g. direct energy used for the replacement,
  - the production of any components (e.g filters if they require replacement) and of ancillary materials used in the replacement activity,
  - the transportation of any components and ancillary materials used, or waste generated, in the replacement activity, and
  - the end-of-life processes of any waste generated in the replacement activities, production or transportation.

In the case of fan coils equipped with a filter that needs to be replaced periodically, the following processes shall be included:

- the production of the materials constituting the new filter,
- transportation of the new filter, and
- the end-of-life processes of the replaced filter.

The transport of maintenance personnel, if the replacement is not carried out by the end user, shall not be included.

Annual frequency to be considered, based on type of filter and replacement/cleaning recommendation by the manufacturer.

- B6 Operational energy use: Expected energy consumption from the operation of the fan coil unit:
  - generation of electricity used during the use stage of fan coil unit (electrical energy shall be calculated according to Section 4.2.3.1),
  - generation of electricity necessary for the electricity consumption during the stand by phase. Stand by energy consumption shall be considered only if electronic parts that require stand by consumption are included, and
  - generation of electricity necessary for the electricity consumption of electrical components supplied with the fan coil unit (if present in the fan coil unit system). Examples of electronic systems are: UV lamps, condensation pumps, valve activators, electronic filters, etc.

4.2.3.1 Operational electrical energy use calculation

The total electrical energy consumption along the FCU lifetime shall be calculated by the following formula (based on Technical Certification Rules Of The Eurovent Certified Performance Mark – Fan Coil Unit – Rev 00 2021):

$$Total\ electricity\ use\ (kWh) = Electricity\ use\ for\ cooling + Electricity\ use\ for\ heating + Stand\text{-}by\ electricity\ use$$

where:

Electricity use for cooling = (5% Pe $(c)_{high}$ + 30% Pe $(c)_{med}$ + 65% Pe $(c)_{low}$) * $h_{cooling}$* Lifetime

Electricity use for heating = (5% Pe $(h)_{high}$ + 25% Pe $(h)_{med}$ + 70% Pe $(h)_{low}$) * $h_{heating}$* Lifetime

Stand-by electricity use = P_{stby} * h_{stby} * Lifetime

- Pe $(c)_{high}$ / Pe $(c)_{med}$ / Pe $(c)_{low}$ = Total electrical power input (kW) at high/medium/low speed in cooling mode according to EN 1397
- Pe $(h)_{high}$ / Pe $(h)_{med}$ / Pe $(h)_{low}$ = Total electrical power input (kW) at high/medium/low speed in heating mode according to EN 1397
- P_{stby} = Stand-by electrical power input (kW) of the unit in stand by mode
- For ducted FCU, medium speed shall be the standard fan speed as defined in EN 1397 (having 0Pa at inlet of the unit and 50Pa at outlet of the unit), low/high speed shall be the other two speeds measured according to EN 1397.
- hcooling and hheating are the yearly operational hours in cooling and heating mode, with $h_{cooling} + h_{heating} = 2600$ h. For Global or European geographical scope, 1100 h in cooling and 1500 h in heating shall be used. For a module B with global or european geographical scope, 1100 h in cooling and 1500 h in heating shall be used. For calculation valid only for specific a region, a different distribution between cooling and heating hours can be used, provided that the total yearly operating hours are 2600 h. Such assumption shall be clearly declared and the module B scope cannot be global or european.
- h_{stby} is the yearly operational hour in stand by mode = 6160 h (8760 h - 2600 h)
- Lifetime = 20 years

Stand-by electricity consumption shall be set to 0 if the FCU is not equipped with any component that has a stand-by power consumption (e.g. electric control).

4.2.4 END-OF-LIFE (EOL) STAGE: MODULES C1-C4

See PCR 2019:14 and Section 6.3.5.5 of EN 15804.

- C1 Deconstruction: including (if relevant):
  - dismantling or demolition of the product from the building,
  - initial on-site sorting of the materials, and
  - auxiliary materials and energy used during the deconstruction of the fan coil.
- C2 Transport: transportation of the deconstructed product from the building site to the waste treatment site.
- C3 Waste processing: e.g. collection of waste fractions from the deconstruction and waste processing (up to the end-of-waste state) of material flows intended for reuse, recycling and energy recovery according to a generic scenario defined by the company.
- C4 Waste disposal: including physical pre-treatment and management of the disposal site, according to a generic scenario defined by the company.

The EPD owner shall define its own end-of-life scenario, considering the specifics of the geographical region where the fan coil is installed (or intended to be installed). The end-of-life scenario shall be clearly documented and justified in the EPD, describing the final method of disposal, i.e. reuse, recycling, incineration and/or landfill.

Processes excluded are:

- Production, maintenance, and disposal of infrastructure (buildings, machinery and capital goods) at the sites where the product is disposed.

4.2.5 BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY: MODULE D

See PCR 2019:14 and Section 6.4.3.3 of EN 15804.

4.2.6 OTHER BOUNDARY SETTING

See PCR 2019:14 and EN 15804.

4.3 SYSTEM DIAGRAM

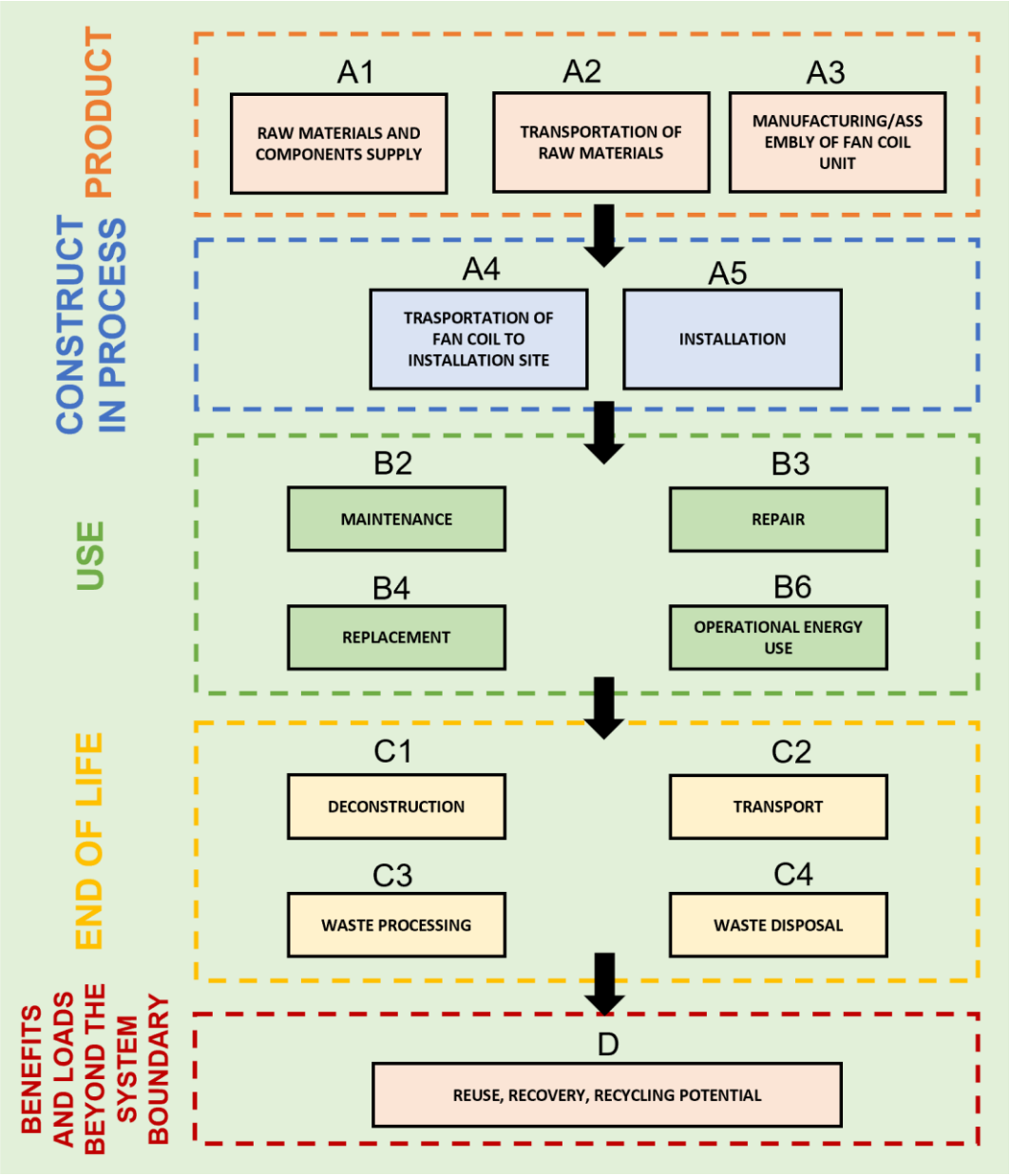

Figure 3 System diagram illustrating the processes that are included in the product system, divided into life-cycle stages and information modules.

4.4 CUT-OFF RULES

See PCR 2019:14 and EN 15804.

4.5 ALLOCATION RULES

See PCR 2019:14 and EN 15804.

4.6 DATA QUALITY REQUIREMENTS

See PCR 2019:14 and EN 15804.

4.6.1 DATA QUALITY REQUIREMENTS AND OTHER MODELLING GUIDANCE PER LIFE-CYCLE STAGE

See PCR 2019:14 and EN 15804.

4.7 ENVIRONMENTAL PERFORMANCE INDICATORS

See PCR 2019:14 and EN 15804.

4.8 INCLUDING MULTIPLE PRODUCTS IN THE SAME EPD

See PCR 2019:14.

5 CONTENT AND FORMAT OF EPD

See PCR 2019:14.

5.1 EPD LANGUAGE

See PCR 2019:14.

5.2 UNIT AND QUANTITIES

See PCR 2019:14.

5.3 USE OF IMAGES IN EPD

See PCR 2019:14.

5.4 EPD REPORTING FORMAT

See PCR 2019:14.

5.4.6 ADDITIONAL INFORMATION

The following additional information shall be reported in the EPD:

- Dimensions (mm)
- Weight (kg)
- Air flow (m^3/h) at same high/medium/low speed used for the operational electrical energy use calculation
- Only for ducted units: External Static Pressure Difference (Pa) as defined in EN 1397:2021 and measured according to EN 1397:2021 at same high/med/low speed used for the Operational Energy Use Calculation
- $P(c)_{high}$ / $P(c)_{med}$ / $P(c)_{low}$*: Total cooling capacity at high/medium/low speed at standard rating conditions*, according to EN 1397:2021, used for the operational electrical energy use calculation
- $Pe(c)_{high}$ / $Pe(c)_{med}$ / $Pe(c)_{low}$ *: Total electrical power input in cooling mode at high/medium/low speed*, according to EN 1397:2021, used for the operational electrical energy use calculation
- $P(h)_{high}$ / $P(h)_{med}$ / $P(h)_{low}$*: Total heating capacity at high/medium/low speed at standard rating conditions*, according to EN 1397:2021, used for the operational electrical energy use calculation
- $Pe(h)_{high}$ / $Pe(h)_{med}$ / $Pe(h)_{low}$*: Total electrical power input in heating mode at high/medium/low speed*, according to EN 1397:2021, used for the operational electrical energy use calculation
- P_{stby} = Stand-by electrical power input (kW) of the unit in stand by mode
- If the FCU is equipped with components having a stand by power consumption (e.g. electronic control), these components shall be declared
- For EPDs with a module B geographic scope other than European or Global, cooling and heating hours shall be declared.
- Information regarding the details of the module B scenarios.
- Total electricity use (kWh) during the B6 operational use stage (for the lifetime of 20 years).
- kg CO_2 eq./kWh (calculated using the GWP-GHG indicator) of the electricity used in module B6.

The following additional information should be reported in the EPD:

- Instruction on disassembling, reuse, recycling and disposal of each component of the fan coil unit.

- A statement stating whether the performances used for the thermal and electrical energy calculation are certified and, if so, with which certification programme (e.g., Eurovent). If the performances are not certified, the parameters used for the calculations should be reported in EPD.

6 LIST OF ABBREVIATIONS

In addition to abbreviations listed in PCR 2019:14, Section 6:

°C	Degrees Celsius
FCU	Fan Coil Unit
HVAC	Heating, Ventilation and Air Conditioning
kW	Kilowatt
kWh	Kilowatt hour
mm	Millimeters
m^3/h	Cubic meters hour
Pa	Pascal

7 REFERENCES

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8 VERSION HISTORY OF C-PCR

VERSION 2023-12-19

Original version of the c-PCR.

VERSION 2024-04-30

- Updated with prolonged validity to align the updated validity of PCR 2019:14 as of version 1.3.4.
- Updates in references.

VERSION 1.0.0, 2025-04-23

- Updated with prolonged validity, until five years from the original publication of the PCR.
- Changed from version date to version number.
- Other editorial changes and clarifications, e.g., related to the use of the c-PCR (see Section 1.2).
- Removed references to specific sections of PCR 2019:14, as the sections of PCR 2019:14 changed as of the publication of version 2.0.0 in 2025-04-07 and as this c-PCR is applicable together with any version of PCR 2019:14.

FAN COILS
PRODUCT GROUP CLASSIFICATION: UN CPC 43912