CONSTRUCTION INDUSTRY COUNCIL

CIC GREEN PRODUCT CERTIFICATION

Assessment Standard

Technical Requirements

Fan Coil Unit

(Version 2)

Fan Coil Unit

Summary of Assessment Criteria

CORE CRITERIA

Criteria	Requirements	Verification	Points		Index
			Basic	+Bonus	
Product Information	Provide following information with delivered products or made accessible to public: • Country of origin • Basic product specifications • Installation method • Instructions for consumer product disposal • Operation & Maintenance Manual	Documentation including, but not limited to, product catalogue, technical datasheet and webpages	**5**	-	4.1.1
ENVIRONMENT					
Human Toxicity and Ecosystem Impact	Noise Level: Products shall not exceed the maximum sound pressure levels as stated in Table 2.	Documentation including, but not limited to, product catalogue and test report(s).	**15**	-	4.4.3.2
PERFORMANCE					
Efficiency Metrics	Fan Efficiency: The fan must operate at least 15 percentage points below peak efficiency per AMCA 205-12. It should be a double inlet, double width, forward curved centrifugal, or tangential flow type, with neoprene rubber anti-vibration mountings. 5 Bonus Points are awarded for products using brushless DC motors.	Documentation including, but not limited to, product catalogue and test report(s).	**15**	+5	4.5.1.1
System Performance and Reliability	Sweat Test and Condensate Disposal Test: • No water shall drip, run, or blow off from the fan coil units under the test conditions of sweat test and condensate disposal test in Table 3. • No external resistance shall be added at the air inlet and outlet. • After reaching the specified temperature conditions, the units shall be operated continuously for a period of 4 hours.	Documentation including, but not limited to, product catalogue, test report(s) or written declaration.	**10**	-	4.5.2.1
	Casing Performance: The casing performance must meet the requirements for casing stiffening, insulation, corner design, access and space, and anti-rust treatment as specified in section 4.5.2.2.	Documentation including, but not limited to, product label, product catalogue, and written declaration.	**5**	-	4.5.2.2
		Subtotal:	**50**	+5	

NON-CORE CRITERIA

Criteria	Requirements	Verification	Points +Bonus	Index
CARBON				
CFP Quantification	Provide a 3rd party endorsed life cycle assessment report with the carbon footprint of products (CFP), covering at least A1 to A3 OR a product level Environmental Product Declaration (EPD).	CFP quantification report **OR** Environmental Product Declaration (EPD)	+10	4.2.1
RESOURCE				
Circularity	Recyclability: Developed a recycling plan for the product and declared options for reuse, recycling, recovery, and disposal.	Documentation on recycling plan	+5	4.3.1.1
	Packaging Requirement: The packaging materials shall not contain halogenated plastics; *OR* Shall be comprised of 100% recycled materials, readily recyclable materials, or decomposable materials; *OR* Shall not be impregnated, labelled, coated, or otherwise treated in a manner which would prevent or significantly limit recycling.	Documentation on packaging materials used	+5	4.3.1.2
	Design for Disassembly: • The blowers and motors shall be demountable from enclosure for cleaning, repair, replacement, or maintenance purpose; and • Fan impeller scroll casing shall be removable for fan blades cleaning.	Documentation including, but not limited to, product label, product catalogue, and written declaration.	+5	4.3.1.3
Waste Management	Waste Management Plan: Implement effective waste management plan detailing the policies, procedures, and/or a waste management program covering manufacturing operations.	Waste management plan	+5	4.3.2.1
Water Management	Option A: Water Consumption Reporting: Report both potable and non-potable water usage in the production process of the past year.	Water consumption report	+5/ +10	4.3.3.1
	Water Recycling Program: Develop and implement a water recycling program during the manufacturing process.	Documentation on water recycling		4.3.3.2
	Option B: Water Management System:	ISO 14046 Certificate issued by accredited certification body		4.3.3.3

Criteria	Requirements	Verification	Points +Bonus	Index
	Process valid certificate under ISO 14046: Water Footprint Assessment.			
Energy Management	Option A: Energy Management Plan: Implement effective energy management policies and procedures and/or an energy management programme.	Energy management plan	+5/ +10	4.3.4.1
	Option B: Energy Management System: Possess valid certificate under ISO 50001: Energy management systems.	ISO 50001 Certificate issued by accredited certification body		4.3.4.2
ENVIRONMENT				
Environmental Management	Environmental Management System: Manufacturer shall possess valid certification of ISO 14001: Environmental management systems or EU Eco-Management and Audit Scheme (EMAS).	ISO 14001 or EMAS Certificate issued by accredited certification body	+5	4.4.1.1
Regional Product	Regional Manufactured Equipment: The manufacturing location should be located within an 800km radius of HKSAR by road transportation; within a 1,600km radius by rail transportation; or within a 4,000km radius by sea transportation.	Location map with distance between manufacturer and HKSAR	+5	4.4.2.1
Human Toxicity and Ecosystem Impact	Hazardous Substances: No paint is used in the products, *OR* Limit the concentration of Lead, Cadmium, Chromium (VI), Mercury, or their compounds in paint below 0.01% by weight; Limit the VOC content in paint below 250g/L.	Laboratory test report(s) or self-declaration letter	+5	4.4.3.1
INNOSMART				
Innovations & Additions	Incorporating various smart technologies and solutions, to improve efficiency, reduce energy consumption, evaluation of the performance and optimize performance.	Narrative with supporting documents	+5	4.6.1
		Subtotal:	+70	

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1. INTRODUCTION

1.1 PURPOSE

The CIC Green Product Certification (the "Scheme") is a green product labelling scheme, owned by the Construction Industry Council (CIC) and implemented by the Hong Kong Green Building Council (HKGBC). The primary goal of the scheme is to support Hong Kong's transition to a low-carbon economy by encouraging the adoption of environmentally friendly construction practices.

With the Green Product Certification, various stakeholders, including consumers, building professionals, construction practitioners, and policymakers, can easily and unequivocally identify environmentally preferable construction materials and building products. This certification serves as a reliable indicator of a product's sustainability, helping to drive market demand for greener options.

To ensure the credibility and effectiveness of the certification, the CIC and the HKGBC has jointly developed this Technical Assessment Standards (the "Standard"), which sets out the assessment criteria and their benchmarks to govern the application and award of a grade under the Scheme. The comprehensive assessment evaluates the overall sustainability of construction materials and building products across multiple dimensions. These dimensions include environmental impact, resource efficiency, technical performance, and the use of smart manufacturing technologies.

The Standard is divided into two main parts:

- General Requirements (Refer to General Requirements provided in separate document). This part introduces Scheme's framework, outlines the application procedure, and details the grades.
- Technical Requirements (This document refers). This part defines the principles, requirements, and guides for quantifying and reporting the products' carbon footprint (CFP), along with other sustainability assessment criteria and scoring standards.

This Standard neither modifies nor supersedes laws and regulations. Compliance with this Standard is not a substitute for, and does not assure, compliance with any applicable laws or regulations. Compliance with all applicable laws and regulations is a prerequisite for the manufacturing and marketing of the product.

The Scheme is owned by the Construction Industry Council (CIC), 38/F, COS Centre, 56 Tsun Yip Street, Kwun Tong, Kowloon, Hong Kong; and operated by Hong Kong Green Building Council (HKGBC), 1/F, Jockey Club Environmental Building, 77 Tat Chee Avenue, Kowloon Tong, Hong Kong, Phone: +852 3994 8888, Email: cicgpc@hkgbc.org.hk.

1.2 BACKGROUND

Fan coil units (FCU) can serve several functions: 1) introduce outdoor air into a space, 2) circulate and filter air within individual space, and 3) provide heating, cooling, or both to the space. FCU are typically sized to heat and cool a small zone with specific load requirements such as an open space, a partitioned room, or multiple rooms within similar smaller loads that together add up to the total load the FCU is designed to handle. The medium used in FCU can be chilled water, hot water, refrigerant, electric resistance, or steam.

Fan coil unit can place a significant burden on the environment. With increasing environmental claims of fan coil unit in the market, a more comprehensive and systematic approach to assess the environmental impacts of the fan coil unit shall be developed. The aim of this Standard is to help designers and end-users choose greener products by conserving resources, reducing the amount of waste disposal in landfills, and reducing the impact to human health throughout the life cycle of fan coil unit. The development of the assessment criteria in this Standard has made references to worldwide relevant eco-labelling schemes and some existing life cycle assessment (LCA) studies.

2. SCOPE

The scope of this Standard is applicable different types of FCUs, including 2-pipe, 4-pipe, etc.

Note:

ONE application is only eligible for **ONE** product series. All the related products have to be listed on the submitted documents. Each application should specify the product code / serial number.

3. DEFINITIONS

Applicant:	Organisations which apply for the label under the CIC Green Product Certification of the Construction Industry Council
ASTM:	American Society for Testing and Materials
AMCA:	Air Movement and Control Association International
Biological Cycle:	The cycle by which materials or parts are released to, and ideally reprocessed in, the environment via composting, biodegradation, nutrient extraction, or other biological metabolic pathways
BLDC	Brushless DC electric motor
BS:	British Standards
BAS:	Building Automation System
CIC:	Construction Industry Council
CNAS:	China National Accreditation Service for Conformity Assessment
FEG:	Fan Efficiency Grades
GB:	Chinese National Standards
HKAS:	Hong Kong Accreditation Service
HKGBC:	Hong Kong Green Building Council
HOKLAS:	The Hong Kong Laboratory Accreditation Scheme
ISO:	International Organisation for Standardisation
MSDS:	Material Safety Data Sheet. To qualify as suitable, MSDS and information therein must not be more than 5-years old
Technical Cycle:	The cycle by which a product's materials or parts are reprocessed for a new product use cycle via recycling, repair, refurbishment, remanufacturing, or reuse
VOC:	Volatile organic compounds. VOCs are organic chemical compounds that have high enough vapour pressures under normal conditions to significantly vaporize and enter the atmosphere. VOCs are major contributors or precursors to the formation of ozone and smog.

4. EVALUATION CRITERIA

A product to be assessed shall meet all the minimum requirements of the "Core Criteria" in order to be awarded a "Green" (i.e. a "pass" grade) grade under the Scheme. Bonus points may be awarded if the product meets the "Non-core Criteria" and a "Bronze", "Silver", "Gold", or "Platinum" grade will be awarded according to the total points accumulated, as shown in Table 1.

Table 1: Benchmarks for grading

Points achieved	Grade to be awarded
90 or above	Platinum
80 – 89	Gold
70 – 79	Silver
60 – 69	Bronze
50 – 59	Green
Below 50	No grade

All submissions and documentations shall be endorsed by the Chief Executive Officer or other authorised persons of the Applicant to demonstrate conformance to the assessment criteria. All certification, laboratory reports, and documentation must be valid during the assessment process and labelling period. The date of issue of all laboratory reports and documentation shall be within 5 years from the first application submission date.

If the certification expires during the labelling period or upon renewal, the applicant is required to provide an updated and valid certification. Failure to resubmit the required certification will result in the revocation of CIC Green Product Certificate without compensation.

The chemical tests should be conducted by either a third party or the manufacturer, providing that they have obtained ISO 17025 certification or relevant national accreditations, such as HOKLAS or CNAS.

4.1 BASIC INFORMATION

4.1.1 Product Information – Core Criteria

The Applicant is required to achieve 5 Basic Points under this section.

Requirements

5 Basic Points for providing following information with delivered products or made accessible to public:

- Country of origin
- Basic product specifications
- Installation method
- Instructions for consumer product disposal
- Operation & Maintenance Manual

Verification

Documentation showing the product information and instructions including, but not limited to, product catalogue, technical datasheet, webpages, and/or any other information freely accessible by customers.

4.2 CARBON

4.2.1 CFP Quantification – Non-core Criteria

The Applicant can achieve maximum 10 Bonus Points under this section.

Requirements

10 Bonus Points for providing life cycle assessment report for quantifying and reporting the carbon footprint of products (CFP), covering at least A1 (raw material supply), A2 (transport), and A3 (manufacturing process). This can be achieved by either of the following:

Conduct CFP study report in accordance with ISO 14067:2018, GB/T 24067-2024, CIBSE TM 65 or equivalent.

OR

10 Bonus Points for providing the product's CFP value from a product level EPD issued in accordance with ISO 14067:2018, ISO 21930:2017, GB/T 24067-2024, GB/T 24025-2009 or BS EN 15804:2012.

Verification

CFP quantification report or Environmental Product Declaration endorsed by a third-party fulfilling the above requirements.

4.3 RESOURCE

4.3.1 Circularity

The Applicant can achieve maximum 15 Bonus Points under this section.

4.3.1.1 Recyclability – Non-core Criteria

Requirements

5 Bonus Points for demonstrating that the manufacturer has developed a recycling plan for the product and declared options for reuse, recycling, recovery, and disposal. The plan shall include the following and be made available to public:

- Designate all homogeneous materials in the product as being intended for technical and/or biological cycles and define the intended cycling pathway(s) for each material; and
- Identify potential partners for product reuse, recycling, and recovery in accordance with the intended cycling pathway(s); and
- For products and materials intended for municipal recycling, the product and/or material must be compatible for municipal cycling systems (e.g., painted plastics and plastic laminated paper are not currently compatible for municipal recycling); and
- Instructions for how to cycle the product shall be made publicly available.

Verification

Documentation of recycling plan, including, but not limited to product catalogue, MSDS, and written declaration.

4.3.1.2 Packaging Requirement – Non-core Criteria

Requirements

5 Bonus Points for minimizing the wastage from all primary packaging materials. The packaging materials shall achieve either of the following:

The packaging materials shall not contain halogenated plastics

OR

The packaging materials shall be comprised of 100% recycled materials, readily recyclable materials, or decomposable materials

OR

The packaging shall not be impregnated, labelled, coated, or otherwise treated in a manner which would prevent or significantly limit recycling.

The packaging requirements are relevant to all primary packaging materials, i.e. those being used to envelop the product and hold it. The primary packaging materials are

usually in direct contact with the contents and shall be in the minimal amount of distribution and/or use as they may eventually be disposed by the consumers.

Verification

Documentation describing the packaging materials used as well as their chemical composition (if any and where applicable), treatment process, and recyclability.

4.3.1.3 Design for Disassembly – Non-core Criteria

Requirements

5 Bonus Points for FCUs incorporated design for disassembly features, specifically meeting the following requirements:

- The blowers and motors shall be demountable from enclosure for cleaning, repair, replacement or maintenance purpose; and
- Fan impeller scroll casing shall be removable for fan blades cleaning.

Verification

Documentation including, but not limited to, product label, product catalogue, and written declaration.

4.3.2 Waste Management

The Applicant can achieve maximum 5 Bonus Points under this section.

4.3.2.1 Waste Management Plan – Non-core Criteria

Requirements

5 Bonus Points for implementing an effective waste management plan detailing the policies, procedures, and/or a waste management program covering manufacturing operations. The waste management plan should include, but should not be limited to, the following information:

- Initiatives taken to reduce waste generation and improve recovery/recycling of waste; and
- Initiatives implemented for recovery of post-consumer and/or pre-consumer waste that can be re-introduced into the manufacturing process; and
- Other environmental benefits or constraints associated with waste minimisation objectives and processes.

Verification

Documentation of waste management plan detailing the above, supported by organizational policy or other equivalent documents.

4.3.3 Water Management

The Applicant can achieve maximum 10 Bonus Points under this section.

The Applicants can select one of the options below and comply with any or all the requirements under that option to achieve the associated points.

Option A:

4.3.3.1 Water Consumption Reporting – Non-core Criteria

Requirements

5 Bonus Points for reporting both potable and non-potable water usage in the production process of the past year.

Verification

Water consumption report, supported by water usage data acquired from water meter, water sub-meter, water bill, or other equivalent documents.

4.3.3.2 Water Recycling Program – Non-core Criteria

Requirements

5 Bonus Points for developing and implementing water recycling program during the manufacturing process.

Verification

Documentation demonstrating the implementation of water recycling program, supported by drawings, water usage data acquired from water sub-meter, or other equivalent documents.

Option B:

4.3.3.3 Water Management System – Non-core Criteria

Requirements

10 Bonus Points for possessing valid certificate under ISO 14046: Environmental management – Water footprint – Principles, requirements and guidelines.

ISO 14046 is a framework for assessing the water footprint of products, processes, and organizations. It provides principles, requirements, and guidelines for conducting and reporting water footprint assessments. It helps organizations evaluate and improve their water management practices.

Verification

A valid ISO 14046 certificate issued by accredited certification body.

4.3.4 Energy Management

The Applicant can achieve maximum 10 Bonus Points under this section.

The Applicants can select one of the options below and comply with any or all the requirements under that option to achieve the associated points.

Option A:

4.3.4.1 Energy Management Plan – Non-core Criteria

Requirements

5 Bonus Points for implementing effective energy management policies and procedures and/or an energy management programme including, but not limited to, the following items:

- Energy efficiency initiatives: Manufacturer should undertake specific initiatives to reduce energy use and improve energy efficiency throughout their operations. This could include upgrading to more efficient equipment, optimizing production processes, or implementing energy-saving technologies; and
- Supplier requirements: Manufacturers should extend their energy management efforts to their supply chain by establishing requirements or initiatives for suppliers and contract manufacturers to improve their energy performance where possible.

Verification

Documentation of energy management plan detailing the above, supported by organizational policy or other equivalent documents.

Option B:

4.3.4.2 Energy Management System – Non-core Criteria

Requirements

10 Bonus Points for possessing valid certificate under ISO 50001: Energy management systems — Requirements with guidance for use.

ISO 50001 provides a framework for organizations to establish, implement, maintain, and improve an Energy Management System. The goal is to help organizations improve their energy performance, increase energy efficiency, and reduce energy costs and greenhouse gas emissions. By achieving ISO 50001 certification, manufacturers can demonstrate their commitment to energy efficiency and sustainability.

Verification

A valid ISO 50001 certificate issued by accredited certification body.

4.4 ENVIRONMENT

4.4.1 Environmental Management

The Applicant can achieve maximum 5 Bonus Points under this section.

4.4.1.1 Environmental Management System – Non-core Criteria

Requirements

5 Bonus Points for possessing valid certificate under ISO 14001: Environmental management systems — Requirements with guidance for use or EU Eco-Management and Audit Scheme (EMAS).

The target of the environmental management system shall be set to reduce the environmental impacts during the manufacturing process which include but are not limited to the reduction of hazardous substance emissions, energy consumption, CO_2 emissions, secondary environmental load, waste management, water management, etc.

ISO 14001 is the international standard which provides an outline of how to meet the environmental policy and objectives for the business of the applicant.

Eco-Management and Audit Scheme (EMAS) is an environmental management tool which enables organisations to assess, manage, and continuously improve their environmental performance.

Verification

A valid ISO 14001 or EMAS certificate issued by accredited certification body.

4.4.2 Regional Product

The Applicant can achieve maximum 5 Bonus Points under this section.

4.4.2.1 Regional Manufactured Equipment – Non-core Criteria

Requirements

5 Bonus Points for products that are manufactured within 800km radius of HKSAR by road transportation; within a 1,600km radius by rail transportation; or within a 4,000km radius by sea transportation. The distance is measured by the direct distance, not by actual travel distance.

Verification

Documents demonstrating the location of the manufacturer and a map showing the distance between the manufacturer and HKSAR.

4.4.3 Human Toxicity and Ecosystem Impact

The Applicant can achieve maximum 20 Points under this section.

The Applicant is required to achieve 15 Basic Points under this section. Additionally, the Applicant can achieve maximum 5 Bonus Points under this section.

4.4.3.1 Hazardous Substances – Non-core Criteria

Requirements

5 Bonus Points shall be awarded if:

No paint is used on the products

OR

Both requirements are fulfilled as listed below for the paint used on the products:

- Limit the concentration of Lead, Cadmium, Chromium (VI), Mercury, or their compounds in paint below 0.01% by weight.
- Limit the VOC content in paint below 250g/L.

Products shall be tested based on the requirement as stated in IEC 62321-4:2013, IEC 62321-5:2013, IEC 62321-7-2:2017 (or the latest version). Other related testing methods are also acceptable with justification provided by the Applicant.

Verification

Laboratory test report(s) or self-declaration letter. The test report(s) shall be compiled according to IEC 62321 or other equivalent standards.

4.4.3.2 Noise Level – Core Criteria

Requirements

15 Basic Points for products not exceeding the noise levels as stated in GB/T 19232-2019 (or latest version); other related testing methods are also acceptable with justification provided by the Applicant.

Table 2: Maximum Sound Pressure Level dB(A)

Air flow capacity (m^3/hr)	Sound Pressure Level dB(A)			
	0Pa or 12Pa*	30Pa	50Pa	120Pa
340	37	40	42	44
510	39	42	44	46
680	41	44	46	48
850	43	46	47	49
1020	45	47	49	51
1190	46	48	50	53
1360	46	48	50	53
1700	48	50	52	54
2040	50	52	54	56
2380	52	54	56	58
2720	53	55	57	59
3060	54	56	58	60
3400	55	57	59	61

GB/T 19232-2019 specifies the classification of fan coil units (hereinafter referred to as units) as well as the basic specifications and parameters, requirements, test methods and inspection rules of FCU products.

*Units with discharge air grille, external static pressure shall be at 0Pa; Units without discharge air grille, external static pressure shall be at 12Pa.

Verification

Documentation including, but not limited to, product catalogue and test report(s).

4.5 PERFORMANCE

4.5.1 Efficiency Metrics

The Applicant can achieve maximum 20 Points under this section.

The Applicant is required to achieve 15 Basic Points under this section. Additionally, the Applicant can achieve maximum 5 Bonus Points under this section.

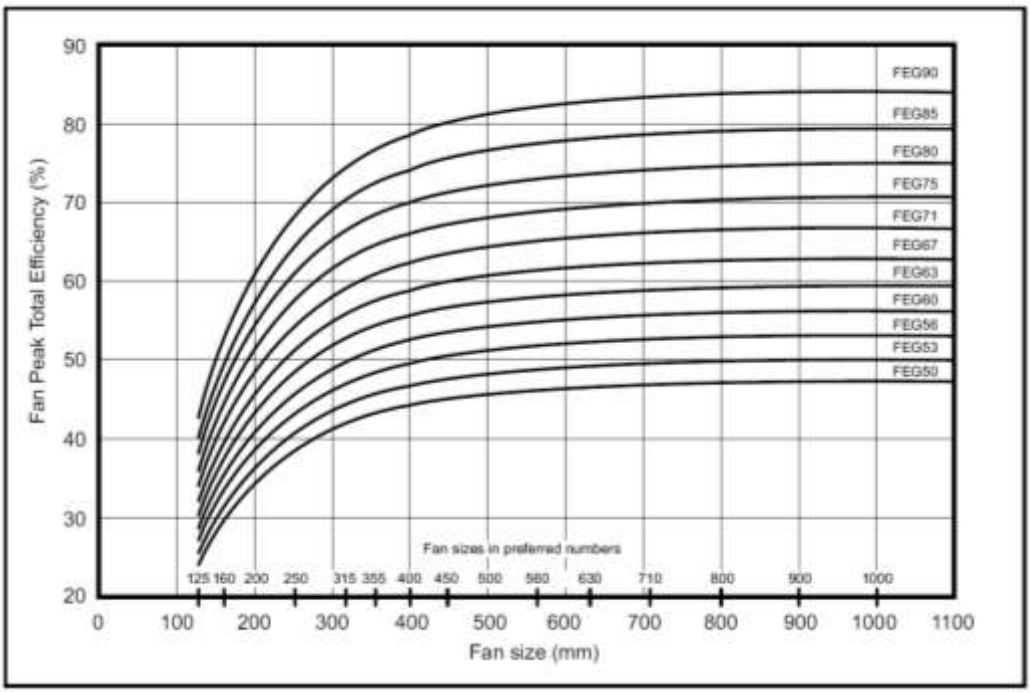
4.5.1.1 Fan Efficiency – Core Criteria

15 Basic Points are awarded for meeting the following requirements:

- The fan operating efficiency at all intended operating points shall not be less than 15 percentage point below the fan peak total efficiency as required in AMCA 205-12 (Figure 1).
- Fans shall be double inlet, double width, forward curved centrifugal, or tangential flow type.
- Fan and motor assemblies shall be completed with neoprene rubber anti-vibration mountings.

Additionally, 5 Bonus Points are awarded for products using Brushless DC motors (BLDC).

Figure 1: Fan Efficiency Grades (FEG) for Fans without Drives (SI)



Notes:

1. Fan size is the impeller diameter in mm.
2. The fan peak efficiency shall be calculated from the fan total pressure.

3. If this method is used for a direct driven fan, the fan efficiency is the impeller efficiency.
4. The FEG label for a given fan size is assigned when the fan peak efficiency is equal or lower than the efficiency at the grade upper limit and higher than efficiency at the grade upper limit of the next lower grade for the fan size.
5. For any fan sizes larger than 1016 mm, the values of the grade upper limits are the same as for a size of 1016 mm.
6. No labels are considered for the fans with the fan peak total efficiency below FEG50.
7. The values of efficiencies are calculated for fan sizes in the preferred R40 Series.
8. Not all fan sizes in preferred numbers shown.

AMCA 205-12 defines the energy efficiency classification for fans.

Verification

Documentation including, but not limited to, product catalogue and test report(s).

4.5.2 System Performance and Reliability

The Applicant is required to achieve 15 Basic Points under this section.

4.5.2.1 Sweat Test and Condensate Disposal Test – Core Criteria

Requirements

10 Basic Points are awarded for meeting the listed requirements:

- No water shall drip, run, or blow off from the fan coil units under the following test conditions of sweat test and condensate disposal test:

Table 3: Test conditions of sweat test and condensate disposal test

Setting	Sweat test	Condensate disposal test
Air inlet temperature Dry bulb	27°C	27°C
Wet bulb	24°C	24°C
Water inlet temperature	6°C	6°C
Fan speed settings	Minimum	Maximum

- No external resistance shall be added at the air inlet and outlet.
- After reaching the specified temperature conditions, the units shall be operated continuously for a period of 4 hours.

Verification

Documentation including, but not limited to, product catalogue, test report(s) or written declaration. The test report(s) shall be compiled according to GB/T 19232-2019 or other equivalent standards.

4.5.2.2 Casing Performance – Core Criteria

Requirements

5 Basic Points are awarded for meeting the following requirements:

- Casings shall be suitably stiffened with thickness not less than 1.00mm to minimise the drumming and vibration; and
- Casings shall be lined with insulation materials for both thermal and acoustic insulation; and
- All corners shall be rounded off without sharp edges; and
- Casings shall include space for pipework connection, valves, and access to all components in fan coil units; and
- All components shall undergo anti-rust treatment.

Verification

Documentation including but not limited to product label, product catalogue, and written declaration.

4.6 INNOSMART

4.6.1 Innovations & Additions – Non-core Criteria

Requirements

5 Bonus Points are awarded for achieving significant, measurable environmental performance using new practices, technology, and strategy not addressed in this Standard.

OR

Incorporating various smart technologies to improve efficiency, reduce energy consumption, and optimise performance.

Examples include the following:

- Event-Driven Optimal Control
- Predictive Maintenance using AI/ML
- Demand-Controlled Ventilation (DCV)
- Integrated Optimization with Building Automation System (BAS)

Verification

Report with a maximum length of 1,000 words, outline the objectives, solution, and evaluation of the performance achieved by the proposed Smart and Innovative Technologies; and

Include attachments that provide evidence of implementation, along with relevant technical specifications that support the claims made in the report.

5. SCORING

The points for meeting each criterion stated in this Standard are summarized below.

Table 4: Points to be awarded under the assessment criteria of this Standard

Label	Evaluation Criteria		Points		Related BEAM Plus Credits
			Basic	+Bonus	
	Product Information [CORE]		5	-	
Carbon	CFP Quantification		-	+10	
Resource	Circularity	Recyclability	-	+5	
		Packaging Requirement	-	+5	
		Design for Disassembly	-	+5	
	Waste Management	Waste Management Plan	-	+5	
	Water Management	Water Consumption Reporting	-	+5/+10	
		Water Recycling Program			
		Water Management System			
	Energy Management	Energy Management Plan	-	+5/+10	
		Energy Management System			
Environment	Environmental Management	Environmental Management System	-	+5	
	Regional Product	Regional Manufactured Equipment	-	+5	MW 8
	Human Toxicity and Ecosystem Impact	Hazardous Substances	-	+5	
		Noise Level [CORE]	15	-	
Performance	Efficiency Metrics	Fan Efficiency [CORE]	15	+5	EU 2 / EU 3
	System Performance and Reliability	Sweat Test and Condensate Disposal Test [CORE]	10	-	
		Casing Performance [CORE]	5	-	
InnoSmart	Innovations & Additions		-	+5	IA
		Total:	**50**	**+75**	

Related BEAM Plus Credits refer to these relevant credits under BEAM Plus New Buildings Version 2.0, as listed below:

- MW 8: Regional Materials
- MW 9: Use of Green Products
- EU 2: Reduction of CO_2 Emissions
- EU 3: Peak Electricity Demand Reduction
- Innovations and Additions