



Product application checklist

Please complete in BLOCK CAPITALS

Active Chilled Beams

Manufacturer/supplier name:

Applicant's name:

Telephone number:

Product information

Product name:

Model number:

Please complete each section of this form based on your product's characteristics. Incomplete or incorrect data could affect the processing of your product application.

Each product application should be made on a separate form unless a product's design characteristics are common to all the products. In this instance a single application can be made for multiple products.

1. Product testing and certification

No Yes

Where type testing has been applied to demonstrate product performance please ensure that the information supplied is sufficient to demonstrate the performance of all the products for which applications are being made.

1.1 Is product performance calculated using an independently certified product selection model, verified through testing a sample of products in accordance with BS EN 15116:2008 "Ventilation in buildings. Chilled beams. Testing and rating of active chilled beams"?

1.2 Have the test reports used to validate the product selection model been submitted, together with a certificate from an accredited third-party verification body?

1.3 Where test reports do not follow the format specified in Section 6 of BS EN 15116:2008, do they contain equivalent content demonstrating compliance with the standard?

Where an independently certified product selection model is not available, product performance may instead be demonstrated through testing in accordance with BS EN 15116:2008, supported by representative testing in line with Section 1.5.1 of the ETL Criteria.

1.4 How was the product(s) performance tested? (Please select one)

- a) Tested in the manufacturer's in-house laboratory, in accordance with a registered Quality Management System and a representative sample of the test data has been cross-checked and verified by an independent body (i.e. 'self-tested and verified or cross-checked by an independent body')
- b) Tested in a laboratory either in house or on-site, witnessed by an independent body (i.e. 'witnessed testing')
- c) Tested by an independent laboratory (i.e. 'independent testing')
- d) Representative testing

Please refer to the [ETL Testing Framework](#) for details of the requirements that must be satisfied for each of these product testing options.

1.5 Where product testing has been done in accordance with a registered Quality Management System, what is its registration number?

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1.	Product testing and certification (continued)	No	Yes
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1.6 Where a representative sample of the test data has been cross-checked and verified by an independent body:

a) What is the name of the independent laboratory?

b) What is the laboratory's registration number (where accredited)?

1.7 Where product testing has been witnessed by an independent body, what was the name of the witness?
(Please include contact details)

1.8 Where products have been tested by an independent laboratory:

a) What is the name of independent laboratory?

b) What is the laboratory's registration number (where accredited)?

1.9 If representative testing has been used, what are the 'representative models'?

ETL Product ID number

Product name and model number

The representative models must be selected by dividing the range of products into groups of models with similar design characteristics, and testing a model in each group. The performance of each model of beam in the representative group shall be predicted using a validated mathematical model. As a minimum, at least one representative model of beam must be tested in each range of products.

2.	Product type	No	Yes
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2.1 What category of product are you applying for? *(Please select one)*

2.1.1 Linear Active Beam

- a) Nominal active beam width ≤ 300mm, 1 Way throw
- b) Nominal active beam width ≤ 300mm, 2 Way throw
- c) Nominal active beam width > 300mm and ≤ 600mm, 1 Way throw
- d) Nominal active beam width > 300mm and ≤ 600mm, 2 Way throw

2.1.2 Modular Active Beam

- e) Nominal active beam size (width x length) 600mm x 600mm, 4 Way throw
- f) Nominal active beam size (width x length) 600mm x 1200mm, 4 Way throw

2.1.3 Bulkhead Active Chilled Beam

- g) Bulk head unit up to 1500mm (active length)

3. Product features	No	Yes
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3.1 Does the product comply with the following ETL requirements?

- a) Designed to introduce primary ventilation air into the treated space through the beam.
- b) Designed to operate above the dew point. Any condensate tray fitted should be included as a precautionary measure only, and should have no facility to connect to drainage.
- c) Does not include any electrical heating elements.
- d) Does not include an integral fan.

3.2 Where the product is a multi-service chilled beam with integrated lighting, does the lighting component meet the relevant ETL criteria for high-efficiency lighting units, LED lighting units, or lighting controls, as applicable?

- a)
- b)
- c)
- d)
- e)
- f)

4.	Product Performance	No	Yes
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- 4.1 Does the product demonstrate a Specific Waterside Cooling Capacity that is greater than or equal to the values specified in Table 1 (Linear Active Chilled Beams), Table 2 (Modular Active Chilled Beams), or Table 3 (Bulkhead Active Chilled Beams), as applicable, when operating within the conditions defined in the relevant table?

Table 1 Linear Active Chilled Beam Performance Requirements

Nominal Active Beam Width	≤ 300mm		> 300mm and ≤ 600mm	
	1 Way	2 Way	1 Way	2 Way
Air Throw				
Primary air flow rate per active length (q_p/L)	≤ 15.0 l/s/m	≤ 15.0 l/s/m	≤ 15.0 l/s/m	≤ 15.0 l/s/m
Air side pressure drop	≤ 100 Pa	≤ 100 Pa	≤ 100 Pa	≤ 100 Pa
Cooling water flow dT (inlet~outlet)	≥ 2 K	≥ 2 K	≥ 2 K	≥ 2 K
Temperature difference between reference air temperature and water inlet temperature	≥ 8 K	≥ 8 K	≥ 8 K	≥ 8 K
Water side pressure drop	≤ 25 kPa	≤ 25 kPa	≤ 25 kPa	≤ 25 kPa
Specific waterside cooling capacity	≥ 15.0 W/mK	≥ 25.0 W/mK	≥ 20.0 W/mK	≥ 45.0 W/mK

Table 2 Modular Active Chilled Beam Performance Requirements

Nominal Active Beam Size (Active width x Active length)	600mm x 600mm	600mm x 1200mm
	Air Throw	4 Way
Primary air flow rate (q_p)	≤ 15.0 l/s	≤ 15.0 l/s
Air side pressure drop	≤ 100 Pa	≤ 100 Pa
Cooling water flow dT (inlet~outlet)	≥ 2 K	≥ 2 K
Temperature difference between reference air temperature and water inlet temperature	≥ 8 K	≥ 8 K
Water side pressure drop	≤ 25 kPa	≤ 25 kPa
Specific waterside cooling capacity	≥ 45.0 W/K	≥ 40.0 W/K

Table 3 Bulkhead Active Chilled Beam Performance Requirements

Nominal Active Beam Size (Active Length)	Bulkhead unit up to 1500mm
Primary air flow rate per active length (q_p/L)	≤ 15.0 l/s/m
Air side pressure drop	≤ 100 Pa
Cooling water flow dT (inlet~outlet)	≥ 2 K
Temperature difference between reference air temperature and water inlet temperature	≥ 8 K
Water side pressure drop	≤ 25 kPa
Specific waterside cooling capacity	≥ 40.0 W/mK

Definitions:

- Specific waterside cooling capacity is the performance metric defined in section 1.4.1 of the ETL Criteria
- The active width and active length of a product are the nominal dimensions of the active cooling element, excluding any architectural components that do not affect product cooling performance
- “≤” means “less than or equal to”, “≥” means “greater than or equal to”
- All other terms are as defined in BS EN 15116:2008

For the avoidance of doubt test data should be presented to one decimal place. As an example, a Specific Waterside Cooling Capacity of 14.9 Watts/mK for a 1 Way throw linear active chilled beam with Nominal Active Width of ≤ 300 mm would be deemed to not meet the performance requirements.

5. Summary of documents to be included

No

Yes

Please send ONE copy of each of the following documents:

If the relevant information in support of the questions above is contained within a larger document, please indicate the location of the relevant information. Note that all documentation submitted must directly refer to the model numbers for which you are making this application. Documentation should be added to your [online application](#).

- a) A technical sales brochure or leaflet for the product clearly summarising:
- i) The key features of the product (ideally including photographs of the product's exterior).
 - ii) The product's operation (i.e. in-built functionality) and intended applications (i.e. usage).
 - iii) Any product selection options (including optional extras, alternative configurations etc.).

This documentation should contain sufficient detail to enable the assessor to confirm that the proposed entry on the energy Technology Product List (ETPL) is correct, and uniquely represents a single product of fixed design (as defined by the rules of the ETL). If the model names contain any 'wildcards' in respect of cosmetic variations please check with the ETL Team (info@etl.energysecurity.gov.uk) that this is permitted before submitting your application.

- b) A technical specification for the product, including:
- i) Details of the model numbers covered (including individual features of each model).
 - ii) The product's design ratings (electrical, mechanical, thermal, flow rates, energy use etc.).
 - iii) A description of how to install the product including connection/wiring diagrams. Where the product must be assembled, configured and/or commissioned on site before use, please include instructions.

This documentation should contain sufficient detail to enable the assessor to confirm that each product entry on the ETPL has the design features specified in the eligibility criteria for that category of product. Please indicate on the checklist where information on specific design features is located in the documentation.

- c) Evidence that the product meets the performance criteria, including:
- i) Test reports used to validate the independently certified product selection model in accordance with BS EN 15116:2008.
 - ii) A certificate from a body that has been accredited for third party verification of active chilled beam performance.
 - iii) Test reports with a different format to that specified by Section 6 of BS EN 15116:2008 are acceptable as long as they contain the equivalent content.

Where an independently certified product selection model is not available, product performance may instead be demonstrated through testing in accordance with BS EN 15116:2008, supported by representative testing in line with Section 1.5.1 of the ETL Criteria

- iv) Test reports showing product performance at the standard rating/test conditions.
- v) Details of the test procedures/standards used to determine product performance.
- vi) A declaration certifying the accuracy of the test reports and confirming that:
 - The test facilities complied with the minimum specifications outlined in the test standard, and the required test conditions, where applied during testing.
 - All measurement equipment used in testing was calibrated by an accredited laboratory, or its calibration is otherwise traceable back to national standards.
 - Appropriate quality assurance procedures have been used to verify or cross-check the accuracy and repeatability of the test procedures and test results.

Please note that summary test reports will only be accepted, where the accuracy of the test reports has been certified by a recognised independent body, or where one detailed test report has been submitted per product range.

Please refer to the [ETL Testing Framework](#) for further guidance on the submission of test results, and minimum information requirements.

- d) Evidence that a quality assurance system/procedures is/are in place to:
- i) Control the specification, design, manufacturing and testing of the products.
- e) Signed application checklist.

Please note that all product documentation provided must be written in, or translated into, English.

6. Declaration

I confirm that the information given above is correct to the best of my knowledge and that I have read and agree to the terms and conditions governing the management of the Energy Technology List. A copy of the terms and conditions can be found [here](#).

Signature: Date:

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