

## Product application checklist

Please complete in BLOCK CAPITALS

### HVAC: Evaporative Air Coolers

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
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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 Does the product have an appropriate Conformity Assessment mark?**

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

- a) Tested in a laboratory either in house or on-site, witnessed by an independent body (i.e. 'witnessed testing')
- b) Tested by an independent laboratory (i.e. 'independent testing')
- c) Representative model/s used

*Please refer to Section 2 of ETL Guidance Note 5 "ETL Testing Programme: Energy Technology List (ETL) Product Testing Framework" for details of the requirements that must be satisfied for each of these product testing options.*

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

.....

**1.4 Where products have been tested by an independent laboratory:**

- a) What is the name of the independent laboratory?

.....

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

.....

<b>1.</b>	<b>Product testing and certification (continued)</b>	<b>No</b>	<b>Yes</b>
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**1.5 If representative testing has been used, what are the “representative models”?**

**ETL Product ID number**

**Product name and model number**


*Representative testing may be used where applications are being made for a range of two or more products that are variants of the same basic design. Test data may be submitted for a representative selection of models provided that it can be demonstrated that all variants utilise the same core technology and the same key components as the tested model.*

*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 the lowest quartile of predicted performance in each group. The performance of each model in the group must be predicted using a validated mathematical model. As a minimum, at least one models must be tested in each range of products.*

<b>2.</b>	<b>Product type and features</b>	<b>No</b>	<b>Yes</b>
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**2.1 What category of product are you applying for? (tick only one)**

- a) Direct evaporative air cooler
- b) Indirect evaporative air cooler

**2.2 Does the product:**

- a) Incorporate one or more electrically powered fans?
- b) Incorporate an electrically powered pump to circulate water to a water-saturated medium through which an air stream passes or to spray nozzles in an air stream?
- c) Minimise scale build up with optimised water bleed rate?
- d) Maintain conditions compliant with ACoPI8 legionella code of practice and guidance?
- e) Not use air to cool a water stream?

**2.3 For direct evaporative air coolers, does the product meet the following criteria:**

- a) The product cools an air stream by moving air through a water-saturated medium which is cooled by evaporation. Moisture must be added to the air stream until it is close to the point of saturation (i.e. the wet bulb depression is close to zero).
- b) The product dry bulb temperature should reduce while the wet bulb temperature remains constant.

**2.4 For indirect evaporative air coolers, does the product meet the following criteria:**

- a) The product incorporates a secondary air stream that is cooled by means of evaporation of water.
- b) The product incorporates a secondary air stream that passes through a heat exchanger in order to provide further cooling to a primary air stream.
- c) The product incorporates a primary air stream with no change in absolute moisture content.

<b>3.</b>	<b>Indirect evaporative air coolers product performance</b>	<b>No</b>	<b>Yes</b>
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**3.1 Has the product been tested in accordance with the test procedure and conditions laid out in ANSI/ASHRAE standard 143-2015: Method of Test for Rating Indirect Evaporative Coolers?**

**3.2 Were the EER and cooling effectiveness of the product calculated when operated at an inlet psychrometric condition of 35°C dry bulb temperature, and a 24°C wet bulb temperature?**

3. Indirect evaporative air coolers product performance (continued)	No	Yes
<p><b>3.3 Were the following external resistance (system static pressure) applied when calculating the EER and cooling effectiveness:</b></p> <p>a) Units up to <math>4\text{m}^3/\text{s} = 80\text{ PA}</math> resistance</p> <p>b) Units greater than <math>4\text{m}^3/\text{s} = 120\text{ PA}</math> resistance</p>		
<p><b>3.4 Is the Energy Efficiency Ratio (EER) performance of the product greater than or equal to 7.0?</b></p> <p><i>Where EER is the ratio of cooling capacity (kW) to electrical input (kW)</i></p>		
<p><b>3.5 Is the cooling effectiveness performance of the product greater than or equal to 95.0%?</b></p> <p><i>Where cooling effectiveness is the primary air dry-bulb temperature reduction divided by the primary air entering dry-bulb temperature less the entering secondary air wet-bulb temperature</i></p>		
<p><b>3.6 For information purposes only, provide the amount of water consumed by the unit (<math>\text{m}^3/\text{h}</math>)</b></p> <hr/>		

4. Summary of documents to be included	No	Yes
<p><b>Please send ONE copy of each of the following documents:</b></p> <p><b>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 at <a href="https://etl.beis.gov.uk/engetl/fox/live/ETL_LOGIN/login">https://etl.beis.gov.uk/engetl/fox/live/ETL_LOGIN/login</a></b></p> <p>a. A technical sales brochure or leaflet for the product clearly summarising:</p> <ol style="list-style-type: none"> <li>The key features of the product (ideally including photographs of the product's exterior).</li> <li>The product's operation (i.e. in-built functionality) and intended applications (i.e. usage).</li> <li>Any product selection options (including optional extras, alternative configurations etc.).</li> </ol> <p><i>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 Scheme). If the model names contain any 'wildcards' in respect of cosmetic variations please check with ETL Questions that this is permitted before submitting your application.</i></p> <p>b. A technical specification for the product, including:</p> <ol style="list-style-type: none"> <li>Details of the model numbers covered (including individual features of each model).</li> <li>The product's design ratings (electrical, mechanical, thermal, flow rates, energy use etc.).</li> <li>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.</li> </ol> <p><i>This documentation should contain sufficient detail to enable the assessor to confirm that each product entry on the Energy Technology Product List (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.</i></p> <p>c. Evidence that the product meets the performance criteria, including:</p> <ol style="list-style-type: none"> <li>Test reports showing product performance at the standard rating/test conditions.</li> <li>Details of the test procedures/standards used to determine product performance.</li> <li>A declaration certifying the accuracy of the test reports and confirming that: <ul style="list-style-type: none"> <li>The test facilities used comply with the minimum specifications outlined in the test standard, and the required test conditions where applied during testing.</li> <li>All measurement equipment used in testing was calibrated by an accredited laboratory, or its calibration is otherwise traceable back to national standards.</li> <li>Appropriate quality assurance procedures have been used to verify or cross-check the accuracy and repeatability of the test procedures and test results.</li> </ul> </li> </ol> <p><i>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 two detailed test reports have been submitted per product range.</i></p> <p><i>Please refer to ETL Guidance Note 5 "ETL Testing Programme: Energy Technology List (ETL) Product Testing Framework" for further guidance on the submission of test results, and minimum information requirements.</i></p>		

4. Summary of documents to be included (continued)	No	Yes
<p>d. A Declaration of Conformity with Directives on product safety, including:</p> <p style="padding-left: 20px;">i) An appropriate Conformity Assessment mark.</p> <p>e. Evidence that a quality assurance system/procedures is/are in place to:</p> <p style="padding-left: 20px;">i) Control the specification, design, manufacturing and testing of the products.</p> <p>f. Signed application checklist.</p> <p><i>Please note that all product documentation provided must be written in, or translated into, English.</i></p>		

## 5. 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 at <https://www.gov.uk/guidance/energy-technology-list>

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### For more information:

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