



Energy Technology List

Product application checklist

Please complete in BLOCK CAPITALS

Air-cooled Condensing Units

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 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 conform to the requirements of the The Pressure Equipment (Safety) Regulation 2016 in respect of its design, manufacture and testing procedures?

1.2 What test procedure was used to determine product performance?

- a) Method A to determine COP: Calculations confirmed by testing at two test conditions close to the relevant UK BS EN 13771-2:2017 standard rating point.
- b) Method B to determine COP: BS EN 13771-2: 2017 Compressor and condensing units for refrigeration. Performance testing and test methods. Part 2: Condensing units.
- c) Method C to determine SEPR: BS EN 13771-2: 2017 Compressor and condensing units for refrigeration. Performance testing and test methods. Part 2: Condensing units. The test conditions to be used, and the SEPR calculation method, should be those described in BE EN 13215: 2016 "Condensing units for refrigeration - rating conditions, tolerances and presentation of manufacturer's performance data".

Please ensure that the test report includes all of the information and test data requested in the eligibility criteria before submitting it.

1.3 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 (i.e. 'self-tested') and self-certified
- 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 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. Product testing and certification (continued)	No	Yes
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1.4 Where product testing has been done in accordance with a registered Quality Management System, what is its registration number?

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

1.6 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)?

1.7 Is the application for: *(Please select one)*

a) A single unique product – in this case go to 2.1.

b) A range of products, which are variants of the same basic design.

c) One or more additional models to a range of products already on the ETL.

Products will only be considered to be variants of the same basic design, if they:

- Use the same refrigerant as the representative model.
- Have the same compressor type (i.e. manufacturer, method of compression (e.g. reciprocating or scroll) and type of enclosure (e.g. hermetic or semi-hermetic)) as the representative model.
- Have the same sub cooling arrangement as the representative model.
- Fit within the same product category (e.g. are high temperature units).

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

ETL Product ID number

Product name and model number

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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 model must be tested in each range of products. The model should be in the lowest quartile of predicted performance of that range. The Ecodesign technical data is required for the other products in the range (where no further test reports are provided for those products) and details should be given of the validated calculation model.

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

- a) High temperature units
- b) Medium temperature units
- c) Low temperature units

3. Product features	No	Yes
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3.1 Which refrigerant or refrigerants is the product designed to operate with?

3.2 Is the product a factory assembled unit?

3.3 Does the product incorporate:

- a) Air-cooled refrigerant condenser
- b) One or more electrically driven refrigeration compressors
- c) A control system that controls the product's compressor(s) and cooling fan(s)
- d) A liquid receiver
- e) A sub-cooler or sub-cooling section

4. Product performance	No	Yes
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4.1 What is the refrigerating capacity of the product(s) in kW?

4.2 Does the product meet the relevant performance threshold set out in Table 1 below?

Table 1 Performance thresholds for air-cooled condensing units at the UK rating points

Temperature Category	Evaporating temperature (Dew Point)	Rated coding capacity, P_A (kW)	Performance indicator	Threshold
High temperature units	+5°C	N/A	COP	≥ 3.4
Medium temperature units	-10°C	$0 < P_A \leq 5$	COP	≥ 2.0
		$5 < P_A \leq 20$	SEPR	≥ 3.3
		$20 < P_A \leq 50$	SEPR	≥ 3.3
		$P_A > 50$	COP	≥ 2.0
Low temperature units	-35°C	$0 < P_A \leq 2$	COP	≥ 1.1
		$2 < P_A \leq 8$	SEPR	≥ 1.7
		$8 < P_A \leq 20$	SEPR	≥ 1.8
		$P_A > 20$	COP	≥ 1.1

' \leq ' means 'less than or equal to', ' \geq ' means 'greater than or equal to'

Where:

- COP = refrigerating capacity / power absorbed.
- Seasonal Energy Performance Ratio = reference annual cooling demand divided by the annual electricity consumption of the product.
- Refrigerating capacity absorbed and reference annual cooling demand are as defined in pr EN 13215:2016 "Condensing units for refrigeration – Rating conditions, tolerances and presentation of manufacturer's performance data".
- Any condenser sub-cooling factored into the refrigerating capacity shall be clearly declared, noting that when a liquid receiver is incorporated into the product with no subsequent sub-cooler, the liquid temperature at the unit outlet should be used to determine capacity.

For the avoidance of doubt, COP test data should be presented to 1 decimal place and SEPR test data should be provided to 2 decimal places. As an example, a product in the high temperature category with a COP of 3.3 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 at https://etl.beis.gov.uk/engetl/fox/live/ETL_LOGIN/login

- 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.).
 - iv) Published performance data in accordance with pr EN 13215, 2016.

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 ETL Questions 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 products meet the performance criteria, including:
- i) Test reports showing product performance at the standard rating/test conditions.
 - ii) Details of the test procedures/standards used to determine product performance.
 - iii) 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.
 - iv) Where representative testing has been used, please include details of selection method used, and evidence that the products covered by the representative model(s) are variants of the same basic design.

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 (or in the case of representative testing one detailed test report) have been submitted per product range .

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.

- d) A Declaration of Conformity with UK/EU Directives on product safety, including:
- i) The Pressure Equipment (Safety) Regulations 2016.
- e) Evidence that a quality assurance system/procedures is/are in place to:
- i) Control the specification, design, manufacturing and testing of the products.
 - ii) Ensure consistency of performance between individual production items of the same product.
- f) 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 at www.gov.uk/guidance/energy-technology-list.

Signature: Date:

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