



## Product application checklist

Please complete in BLOCK CAPITALS

### Refrigeration Compressors

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 Has the product's performance been tested in accordance with: *(Please select one)*

- a) BS EN12900:2013 "Refrigerant compressors. Rating conditions, tolerances and presentation of manufacturer's performance data"
- b) BS EN13771-1:2016 "Compressor and condensing units for refrigeration. Performance testing and test methods. Part 1: Refrigerant compressors"
- c) ANSI/ASHRAE Standard 23-2005 "Methods of Testing for Rating Positive Displacement Refrigerant Compressors and Condensing Units"

##### 1.2 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 model/s used.

Please refer to the [ETL 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 done in accordance with a registered Quality Management System, what is its registration number?**

<b>1. Product testing and certification (continued)</b>	<b>No</b>	<b>Yes</b>
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**1.4 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)?

**1.5 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 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 in the group must be predicted using a validated mathematical model. As a minimum, at least two models must be tested in each range of products.*

<b>2. 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 one)?**

- a) High temperature with HFC or HC refrigerant.
- b) Medium temperature with HFC or HC refrigerant.
- c) Low temperature with HFC or HC refrigerant.
- d) Medium temperature transcritical/subcritical with R744 refrigerant.
- e) Low temperature transcritical/subcritical with R744 refrigerant.
- f) Low temperature subcritical cascade with R744 refrigerant.

**2.2 If option a), b), or c) selected in Q2.1, please state the refrigerant type.**

**2.3 Does the product incorporate a positive displacement type, hermetic or semi-hermetic compressor (with an integral electric motor)?**

2. Product type and features		No	Yes
2.4	<p>Is the product a low temperature transcritical/subcritical compressor or economiser package with R744 refrigerant?</p> <p>If no, proceed to section 3.</p>		
2.5	Does the product include an appropriately matched gas intercooler that is capable of reducing the intermediate gas temperature to the level required for second stage compression?		

3. Product performance		No	Yes
3.1	Does the product have a COP that exceeds the relevant threshold set out in Table 1 at the UK rating conditions shown in the Criteria List?		

**Table 1** Performance thresholds for refrigeration compressors

Product category	COP threshold
High temperature with HFC or HC refrigerant	> 3.20
Medium temperature with HFC or HC refrigerant	> 3.52
Low temperature with HFC or HC refrigerant	> 1.45
Medium temperature transcritical/subcritical with R744 refrigerant	> 4.70
Low temperature transcritical/subcritical with R744 refrigerant	> 1.80
Low temperature Subcritical with R744	> 3.70

'>' means 'greater than'

*COP is the ratio of the refrigerating capacity to the power absorbed.*

#### 4. 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.).
  - iv) Published performance data in accordance with EN12900, 20085.

*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](mailto: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 products 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 the test reports have not been prepared by an independent body, evidence that the accuracy of product performance data has been independently verified or cross-checked by an independent body (where the in-house laboratory does not hold UKAS/ILAC accreditation).

*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.
  - ii) Ensure consistency of performance between individual production items of the same product.
- e) Signed application checklist.

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

## 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 [here](#).

Signature: ..... Date: .....

### For more information:

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