

# Accelerated Capital Allowances Eligibility Criteria

Category: Refrigeration and Cooling

## Technology: Condensers

Condensers are defined as equipment that is designed to cool and condense high-pressure refrigerant vapour by means of a heat exchanger.

**Condenser equipment is considered to include the following:**

### Evaporative Condensers

Evaporative Condensers are specifically designed to cool and condense high-pressure refrigerant vapour by means of a heat exchanger that has a continuously wetted external surface across which air is blown by a fan.

### Air-Cooled Condensers

Air-cooled Condensers are specifically designed to cool and condense high-pressure refrigerant vapour by means of a heat exchanger across which air is blown by a fan.

## Eligibility criteria

To be included on the ACA Specified List, the specific Condenser equipment must meet *all* the relevant requirements set out below.

**Note:** *Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.*

## General eligibility criteria

(applicable to all Condenser equipment)

No.	Condition
1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
2	Products must incorporate: <ul style="list-style-type: none"> <li>• A heat exchanger that is designed to cool and condense refrigerant vapour</li> <li>• A fan that blows air over the heat exchanger</li> </ul>

**Evaporative Condensers – specific eligibility criteria**

(to be met in addition to the general eligibility criteria)

No.	Condition
3	Products must incorporate a mechanism that continually wets the external surface of the heat exchanger, and that includes a water pump and a water storage tank
4	Equipment must be manufactured so as to comply fully with all applicable requirements of the 'National Guidelines for the Control of Legionellosis in Ireland 2009' (or later edition)

**Air-Cooled Condensers – specific eligibility criteria**

(to be met in addition to the general eligibility criteria)

No.	Condition
5	Meet the performance criteria measured by the Energy Efficiency Ratio (EER) of the <u>unit</u> at 100% (full) load capacity, as indicated in Table 1

**Table 1: Minimum Energy Efficiency Ratio (EER) performance values**

Type	EER
Air-Cooled Condenser	≥110

**Where:** 
$$\text{EER} = \frac{\text{Net heat rejection capacity kW (@}\Delta T \text{ 15K)}}{\text{Absorbed electrical power kW}}$$

----- *End of ACA eligibility criteria* -----

*Please see next section for guidance on:*

- 1. Technical details required in product submission**
- 2. Supporting documentation required**

## Guidance on product details and supporting documentation

**NOTE: The following information is not part of the official criteria document published within the relevant Statutory Instrument. It has been added here for guidance purposes only in order to help you to provide (a) product details and (b) the required supporting documentation.**

*All information contained in this guidance document is subject to change without notice.*

### Technical information required in product submission

The following are the specific technical values required as part of the product submission for this technology:

#### Condensers product type

As part of the product submission, you must first select which type of Condenser your product is. Only one type can be chosen per product. The product must be one of the following types.

- Evaporative Condenser
- Air Cooled Condenser

#### Energy Efficiency Ratio (EER)

The EER for the product is required as a value for the product submission. It must be entered as number only without units. There should be no spaces or full stops after the number submitted. The figure must comply with the criteria requirements for minimum EER values.

$$\text{Where: EER} = \frac{\text{Net heat rejection capacity kW (@}\Delta T \text{ 15K)}}{\text{Absorbed electrical power kW}}$$

### Supporting documentation required

Described below is the list of documents that are accepted as proof of compliance for the specific Refrigeration and Cooling Condensers Equipment condition.

**Note: This information will only be requested AFTER you submit your product's basic details online**

#### Important Notes to Product Providers

**Please ensure that you read the "Important Notes for Product Providers" section at the end of this document prior to submitting documentation.**

**General conditions**

(applicable to all Condensers equipment)

<b>No.</b>	<b>Condition</b>	<b>Supporting Documentation Requirement</b>
<b>1</b>	All equipment and/or components must be CE-marked as required by the specific EU directive(s).	<p>Official and published manufacturer's technical data sheet or brochure that demonstrates CE marking compliance</p> <p><b>OR</b></p> <p>A copy of an official signed declaration on headed paper that confirms CE marking compliance</p> <p><i>Official declarations should explicitly state the product for which CE marking is being confirmed (i.e. do not provide a letter simply stating general compliance with the relevant ACA condition).</i></p> <p><i>Where a document is used to demonstrate conformance for a number of products or range of products, it should clearly specify each individual product covered by that document.</i></p>
<b>2</b>	<p>Products must incorporate:</p> <ul style="list-style-type: none"> <li>• A heat exchanger that is designed to cool and condense refrigerant vapour</li> <li>• A fan that blows air over the heat exchanger</li> </ul>	Official and published manufacturer's technical data sheet, or brochure, that demonstrates compliance with the requirements of the condition

**Evaporative Condensers – specific eligibility criteria**

(to be met in addition to the general eligibility criteria)

No.	Condition	Supporting Documentation Requirement
3	Products must incorporate a mechanism that continually wets the external surface of the heat exchanger, and that includes a water pump and a water storage tank	Official and published manufacturer's technical data sheet, or brochure, that demonstrates compliance with the requirements of the condition
4	Equipment must be manufactured so as to comply fully with all applicable requirements of the 'National Guidelines for the Control of Legionellosis in Ireland 2009' (or later edition)	Official and published manufacturer's technical data sheet, or brochure, that demonstrates compliance with the requirements of the condition

**Air-Cooled Condensers – specific eligibility criteria**

(to be met in addition to the general eligibility criteria)

No.	Condition	Supporting Documentation Requirement
4	Meet the performance criteria measured by the Energy Efficiency Ratio (EER) of the <u>unit</u> at 100% (full) load capacity, as indicated in Table 1	<p>Accredited certification that the equipment EER values have been obtained by testing according to the named standard and that the product EER meets the requirements of Table 1.</p> <p><b>OR</b></p> <p>Evidence of official testing by manufacturer or independent test lab carried out according to the principles outlined in the named standard and demonstrating that the product EER meets the requirements of Table 1. Test reports should be of the format described in the 'Important notes for product providers' section of this document.</p> <p>Accepted Standard: IS EN 327</p> <p>Note that fan power must be given as absorbed electrical power, not nominal motor power</p>

## Important notes for product providers

### **General**

There should be a clear link between the product submitted and all supporting documentation. This will typically take the form of a *product code* or *product name* that can be cross-referenced between the submitted product and the relevant supporting documentation.

If product codes/names have been changed since publication of the supporting documentation, then you must provide official evidence of this with the supporting documentation supplied.

If there is any deviation from these requirements, the supporting documentation will not be considered adequate for the purposes of demonstrating compliance with the criteria conditions. This will in turn delay the submission and/or result in the product not being considered eligible.

Where the ACA criteria or help documentation makes reference to compliance with appropriate rather than specific standards, the onus is on the product provider to ensure that the supporting documentation supplied references recognised standards that apply to the submitted product, i.e. the product must be covered under the scope of a recognised standard.

If it is subsequently found that any product submitted does not meet the performance or specification criteria, it will cease to be considered eligible for the ACA.

**Note:** When supplying the supporting documentation through the online process, you must ensure, when demonstrating compliance with the relevant condition, that the correct page number(s) of the document is referenced. When referencing more than one page number, add an explanatory note.

### **Test report**

A test report must include an outline of the complete test, including:

- √ Introduction
- √ Details on test conditions
- √ The specific model details of the product tested
- √ The steps taken in the test
- √ The results
- √ Graphical representations
- √ Conclusion

All documents should be on headed paper and the document should be officially signed off. **All documentation must be in English**, or include adequate translation.

### **Certification**

Where certificates are provided, all tests must be carried out by an organisation that is accredited by a national accreditation body, recognised via the European Cooperation for Accreditation (preferred) or the International Accreditation Forum. **All documentation must be in English**, or include adequate translation.

## ***Scientific equivalence***

Some ACA criteria conditions allow for scientifically equivalent tests and/or standards to be used.

If a product has not been designed, manufactured or tested to the specific standard named, then documentation relating to an equivalent internationally recognised standard may be used, where the phrase '*or scientific equivalent*' is included in the ACA condition or help documentation.

In such applications, the onus is on the product submitter to demonstrate satisfactory equivalence of the standards. Submissions which reference such supporting documentation may take longer to process. If the product provider does not provide satisfactory evidence of equivalence, then the product will not be considered eligible for the ACA. **All documentation must be in English**, or include adequate translation.

**Note:** Where specific standards are cited in a condition or in the ACA help documentation, then documentation demonstrating that the relevant products have been designed, manufactured or tested to these specific standards is preferred. Scientific equivalence is considered the exception rather than the norm.

## ***Representative testing***

Where test information is required for a range of technically similar products (e.g. configurations of one base product), then – in exceptional instances – a form of representative testing may be used once *agreed in advance* with SEAI.

Such testing is where only representative products are tested from a technically similar group or range of products. Representative testing may form an acceptable basis for supporting documentation if:

- A clear correlation can be demonstrated between the tested product and a technically similar non-tested product
- and*
- Such a correlation clearly demonstrates the compliance of the non-tested product

**Note:** Where representative testing is used for a group or range of products, if the tested or representative product is removed from the list of eligible products then all related products are also removed.