

Cellar Cooling Equipment

Date added to ETL 2003 (Revised 2009).

1. Definition of Technology

Cellar cooling equipment covers products that are specifically designed to maintain, by means of a refrigeration system, an indoor environment at a condition suitable for the storage of chilled beverages below 12°C.

2. Technology Description

Cellar cooling equipment is permanently installed and uses the standard refrigeration cycle of evaporation, compression and condensation to cool a cellar or other storage space.

Cellar cooling equipment is available in a range of different designs and efficiencies. The ECA Scheme aims to encourage the purchase of higher efficiency products.

The ECA scheme covers three categories of cellar cooling equipment:

- **Packaged units** where all components mounted on one base for "through the wall" installation.
- **Split systems** with the equipment supplied in two parts (evaporator and condensing unit) to be connected on installation.
- **Remote systems** with equipment supplied in three parts (evaporator, compressor/receiver, and condenser) to be connected on installation.

Investments in cellar cooling equipment can only qualify for Enhanced Capital Allowances if the specific product is named on the Energy Technology Product List. To be eligible for inclusion on the Energy Technology Product List, products must meet minimum eligibility criteria as set out below.

3. Eligibility Criteria

To be eligible, products must:

- Have a cooling capacity of between 2 kW and 12 kW at the standard rating conditions for ambient air temperature of 32°C and a cellar air temperature of 10°C.
- **Either** be a single packaged unit, **or** consist of two or three factory-built sub-assemblies that are designed to be connected together during installation.
- Conform with the requirements of EU Pressure Equipment Directive PED 97/23/EC.

Performance Criteria

Products must have a coefficient of performance (COP) equal to or greater than the figures shown in Table 1 below.

Table 1 Performance thresholds for cellar cooling equipment

Cooling capacity	COP
Less than 8 kW	≥ 2.90
8 kW and over	≥ 3.20

" \geq " means "greater than or equal to"

For the avoidance of doubt test data should be presented to 2 decimal places. As an example, a COP of 2.89 for a unit with a cooling capacity of less than 8 kW would be deemed to be a fail.

Required test procedures

Testing must be carried out in accordance with:

- BSI Publicly Available Specification PAS 57:2003 "Cellar cooling equipment - Procedure for determining performance and calculating energy efficiency".

Test reports must be submitted and contain a statement of achieved performance at the required rating points and the information specified in section 8 of PAS 57:2003.

If the test report has not been prepared by an independent body, then evidence must be provided that a representative sample of product test data has been independently verified or cross-checked.

Representative Testing

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 all variants:

- 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 all split systems).

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 two models must be tested in each range of products and in each laboratory used for product testing.

It should be noted that:

- If a manufacturer voluntarily removes the representative model from the Energy Technology Product List (ETPL) then other products linked with that representative model may or may not be permitted to remain on the ETPL.
- If any product submitted under these representative model rules is later found not to meet the performance criteria when independently tested, then all products based on the same representative model will be removed from the ETPL.

4. Scope of Claim

Expenditure on the provision of plant and machinery can include not only the actual costs of buying the equipment, but other direct costs such as the transport of the equipment to site, and some of the direct costs of installation. Clarity on the eligibility of direct costs is available from [HMRC](#).