

Room air conditioners: already A+++ models expected

Coming soon: new EU energy label, new measurement standard

The new EU energy label for air conditioners (ACs) will be adopted soon. It will introduce the super-A-classes A+ to A+++ on top of class A. At the same time a new measurement standard containing part load conditions has been elaborated. Efficiency of most ACs will be expressed as seasonal energy efficiency ratios (cooling function: SEER, heating function: SCOP), which account better for the efficiency gains by variable speed ACs than the full load measurement and the non-seasonal efficiency ratios (EER / COP) of the old standard.



Split room air conditioner:
Outdoor and indoor unit

Topten: test of a Chinese high efficiency AC

Topten had an efficient Chinese AC tested according to both the current and the future European as well as the Chinese measurement standards. The efficiency results according to the current European standard rank the tested model near the European's BAT, but not above it. The results according to the future European standard showed that the model would be classified A+++ for both the cooling (SEER= 8.6) and the heating function (SCOP = 5.6) under the new label to be adopted.

Very high SEER and SCOP values – A+++ models expected from the beginning

The main results of the test allow the following conclusions:

1. The BAT on the European AC market seems to be as efficient as the Chinese BAT.
2. The resulting values according to the old and the new European standard differ strongly, especially the cooling function efficiency indexes: the resulting SEER was 3.6 higher than the EER (cooling), the SCOP was 0.6 higher than the COP value (heating).
3. As 6 models on the EU-market are even more efficient than our test model, several models can be expected to already reach the A+++ classes of the future energy label.

Topten is welcoming the new label – it will improve today's situation, where a majority of the ACs is in class A. Topten however regrets that in the current energy label proposal

- class limits are not more ambitious (A+ classes already populated – no incentive remains for manufacturers to develop even better models)
- the label privileges single and double ducts with a separate scale instead of making their low efficiency visible to consumers.

As the market share of high efficiency ACs is still low in Europe, an effective energy label helping to promote them would be key.

More information

- Efficient room air conditioners in Europe: www.topten.eu
- Topten policy recommendations for room air conditioners: <http://www.topten.eu/english/recommendations/policy-recommendations-room-air-conditioners.html>
- EC Ecodesign and energy labelling Working Documents from April 2011 and NGO position papers: <http://env-ngo.eup-network.de/>
- Anette.Michel@topten.eu