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Unit Electricity

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**MANDATE TO CEN/CENELEC FOR THE ELABORATION AND ADOPTION
OF STANDARDS FOR THE MEASUREMENT METHOD FOR THE
DETERMINATION OF THE EFFICIENCY OF INDIVIDUAL AIR
CONDITIONERS**

I. Justification

The present mandate is within the actions undertaken under the SAVE¹ and PACE² programmes for the promotion of energy efficiency in the Union; both the programmes foresee initiatives to improve the energy efficiency of energy using equipment. Individual air conditioning in domestic and commercial sectors is responsible for large electricity consumption and it is one of the priority area of action of the SAVE and PACE programmes. Within these programmes, it also relates to Council Directive 92/75/EEC³ which lays down the legal basis for a compulsory system of energy labelling and information provision for certain energy using household appliances, in particular air-conditioning appliances.

The first results of a comprehensive study carried out for the Commission, and previous international literature, indicate that substantial energy savings can be achieved with the use of more energy efficient equipment for room air conditioning.

In order to develop Union actions to enhance energy efficiency of individual room air conditioners, it is necessary to have a uniform measurement standard of the energy efficiency of these appliances. Existing European and International standards provide a basis for obtaining this information, but common standard(s) are required to ensure that all appliances covered by this mandate are measured on a comparable basis. This will require that existing standards are revised so as to ensure that they provide measurement methods for energy efficiency, which are representative, reproducible, and which allows methods of checking whether sample appliances conform with declared values.

¹ OJ N° L 307 of 8.11.1991, p. 34 - Specific Actions for Vigorous Energy Efficiency, Council Decision of 29.10.1991 (91/565/EEC)

² OJ N° L 157 of 9.6.1989, p. 32, Council Decision of 5.6.1989 (89/364/EEC) - the acronym is from the name in French : Programme d'action communautaire visant à améliorer l'efficacité de l'utilisation de l'électricité.

³ OJ N° L 297, 13.10.1992,p.16

II. Description of mandated work

1. Description

The Commission hereby requests CEN/CENELEC to elaborate, adopt, or adapt existing European and international measurement standards for individual air conditioners, so laying down the methods of measuring their consumption of electric power and their efficiency. This standardization work shall take into account international and European standards in this field (in particular the EN 814 and 255 series).

The measurement methods should :

- cover all existing types of individual air conditioners (including those which are not for the time being covered by the EN 814 and 255 series, namely continuously variable speed units and multi-split units);
- allow for testing at full and partial loads;
- allow for testing in a number of different climatic conditions;
- consider reversible function (heating mode);
- develop adequate measurement methods for single-duct units.

2. Characteristics to be dealt with in the standards

The standards should define the principal characteristics referred to above to be measured:

- total cooling capacity;
- power input in cooling mode;
- energy efficient ratio;
- sound power;
- total heating capacity (for reversible units);
- power input in heating mode (for reversible units);
- coefficient of performance (for reversible units).

These characteristics should be measured at full load under two or more climatic conditions. Part load tests (one - probably at 50 % - or more) should also be included.

For all the characteristics thus defined, tolerances permitted to declared values shall be fixed.

3. Individual room air conditioners to be covered

The mandate covers all existing types of individual room air conditioners up to 12 KW total cooling power existing on the European market :

- mobile units;
- single packaged units;
- split packaged units;
- single-duct units;
- continuously (commonly called 'inverter technology', non covered by EN 814) or discontinuously variable speed units;

- units having two or more indoor sections connected to a single outdoor unit (commonly called 'multiple split system', non covered by EN 814).

III. Execution of request

1. The European Standards (EN) taking into account the principal characteristics referred to above, will be adopted by 31 December 2000.
2. Three linguistic versions (DE, EN, FR) of the each standard will be available at adoption, together with the correct titles in the other Community languages.
3. Acceptance by CEN/CENELEC of this mandate will initiate the standstill period referred to in Article 7 of the Council Directive 83/189/EEC of 28 March 1983⁴, lastly amended by Directive 94/10/EEC⁵.
4. CEN and CENELEC will ensure a close collaboration between them in order to maintain a coherent set of European standards.
5. CEN/CENELEC may choose to adopt the European standards on the basis of the International bodies' standardization activities, via the parallel vote procedure. However, if CEN/CENELEC notes that the target date, referred to above, will not be met, they will undertake to do the necessary in order to prepare European standards, after consulting with IEC and ISO, at their own level.

⁴ OJ N° L 109 of 26.4.1983

⁵ OJ N° L 100 of 19.4.1994