



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY

Directorate C - Directorate C - Renewables, Research and Innovation, Energy Efficiency
C.3 - Energy efficiency

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**MANDATE TO CEN, CENELEC AND ETSI FOR STANDARDISATION IN THE FIELD OF FANS
DRIVEN BY MOTORS WITH AN ELECTRIC INPUT POWER BETWEEN 125 W AND 500 kW**

1. BACKGROUND

1.1. Legal Basis of the mandate

This mandate relates to Directive 2009/125/EC of the European Parliament and of the Council and to measures implementing this Directive for which a Harmonised Standard should be developed to cover essential requirements.

1.2. The aim of the Mandate

The Regulatory Committee established by Directive 2009/125/EC endorsed on 11 June 2010 a Draft Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for fans driven by motors with an electric input power between 125 W and 500 kW. The draft Regulation requires that the measurement procedures for establishing the energy consumption and other parameters of fans shall be reliable, accurate and reproducible, and take into account the generally recognised state of the art, in order to ensure comparable measurements and fair competition, and to facilitate market surveillance activities.

The aim of this mandate is to create a harmonised standard which covers this requirement in the first phase and system efficiency metrics in a second phase.

2. DESCRIPTION OF THE MANDATED WORK

The Commission requests CEN, CENELEC and ETSI to elaborate reliable, accurate and reproducible measurement methods in the form of a European standard, which take into account the generally recognised state of the art, and/or adopt or adapt existing European and International standards for fans. The European standard(s) produced shall lay down procedures and methods of measuring the energy efficiency and associated characteristics of fans, as specified in ISO 12759:2010 Fans – efficiency classification for fans, EN ISO 5801:2008 Industrial fans - Performance testing using standardized airways, and EN ISO 13349:2010 Fans – vocabulary and definitions of categories. The European standard(s) has also to include the necessary definitions of the appliance and the parameters to be measured.

The standardisation work requested must be performed in collaboration with other relevant standardisation processes, such as on motors, variable speed drives or pumps, in particular in collaboration with CLC TC 22 X WG6, in particular as to the second phase on system efficiency.

The standardisation tasks covered by this mandate are as follows.

Procedures and methods for measuring the energy efficiency, for the power range of 125 W – 500 kW, and associated characteristics of electric mains operated fans, including fans with inbuilt motors:

- to ensure that the prospective harmonised standard(s) provides, where appropriate, revised and/or new definitions for at least the fan types and main characteristics, and the parameters to be included in the ‘Draft Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for fans’;
- to ensure that the prospective harmonised standard(s) provide(s) procedures and methods to measure at least the energy efficiency, establish energy efficiency classes for fans, if appropriate, as specified in ISO 12759:2010, fans – efficiency classification for fans which references EN ISO 5801:2008, and EN ISO 13349:2010, fans – vocabulary and definitions of categories, and also including fans with inbuilt motors;
- to ensure that the prospective harmonised standard(s) includes a procedure that avoids an appliance being programmed to recognise the test conditions, and reacting specifically to them;
- to ensure that the prospective harmonised standard(s) take(s) into account improved test conditions, test materials and new appliance types to better reflect the user behaviour and the state of the art at European and international level. In particular the following points should be included:
 - the definition of energy efficiency classes for new technologies, such as permanent magnet motor technology, if appropriate;
 - the definition of efficiency levels, taking particular account of ISO 12759:2010, fans – efficiency classification for fans;
 - the definition of test measurement methods and efficiency levels for power ranges 125 W – 500 kW, including static/dynamic/total pressure, as appropriate;
- to ensure that, for the purpose of the ‘Draft Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for fans integrating motors’, they can be equipped for operation on low voltage power supplies, as specified in Low Voltage Directive 2006/95/EC, use one and three phase low voltage (below 1,000 V AC, 1,500 DC) etcetera;
- to ensure that the prospective harmonised standard addresses testing of fans with housing that is necessary for the operation of such fans, and in situ testing of large fans (see EN ISO 5802:2008, industrial fans – methods of performance testing in-situ), or reliable alternatives for the testing of such fans, in line with ISO 12759:2010;

- to ensure that the prospective harmonised standard(s) take(s) into due account the definitions and parameters needed to fulfil the scope of the foreseen Draft Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for fans and the needs of the revision of that Regulation, as far as the extension of the scope of the standard is described above.

Verification procedure for market surveillance purposes:

- to ensure that the prospective harmonised standard(s) identifies and controls the sources of variability to be considered for market surveillance purposes;
- to provide values for measurement uncertainties (see e.g. ISO13348:2007 tolerance, methods of conversion and technical data presentation) for the purposes of the verification procedure for the measured parameters taking into account the different sources of variability to be considered when a specific product is taken from the market and measured for market surveillance purposes;
- to verify if, in order to reduce the impact of variability to the system, the standard(s) should include specific criteria to be met by laboratories involved in the verification of the declared data (e.g. quality management system, qualification system, personnel training...).

Template for test report:

- to define a template for a test report indicating the information to be declared by the manufacturers to fulfil at least the ecodesign requirements set out by Draft Commission Regulation implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for ventilation fans.

3. EXECUTION OF THE MANDATE

CEN, CENELEC and ETSI are requested to communicate to the Commission, within 9 month of the acceptance of this mandate, a work plan for the execution of the above mentioned standardisation tasks, indicating the standard(s) requiring revision or amendment, and the new standard(s) that would need to be developed, if any.

CEN, CENELEC and ETSI are requested to communicate to the Commission after 15 months from the acceptance of this mandate an interim report on the progress of the tasks set out in this mandate, indicating any eventual difficulties encountered and communicating details of any Standard(s) that has been taken into consideration and modified to answer to the needs of the Mandate.

CEN, CENELEC and ETSI are requested to provide, in the respective working language(s) of the ESOs, a copy of the standard(s) developed under this mandate within 20 months of the acceptance of the mandate, for the needs of the first phase.

CEN, CENELEC and ETSI are requested to provide, in the respective working language(s) of the ESOs, a copy of the standard(s) developed under this mandate within 36 months of the acceptance of the mandate, for the needs of the second phase.

CEN, CENELEC and ETSI are requested to forward the titles of the standard(s) developed or adapted under this mandate in all the official languages of the European Union.

CEN, CENELEC and ETSI are requested to draw up the work plan and execute the above mentioned tasks in close cooperation in order to ensure consistency and avoid overlapping standards.

Wherever possible the tasks should be executed within the framework of the Vienna and Dresden Agreements with a view to duly take into consideration the activities already done or in process at international level.

CEN, CENELEC and ETSI are requested to indicate in the standards produced under this mandate the relationship between the clauses of the standard and the essential requirements covered.

Acceptance by CEN, CENELEC and ETSI, as applicable, of this mandate starts the standstill period referred to in Article 7 of the Directive 98/34/EC of 22 June 1998 (Of N° L 204/37 of 21 July 1998).

4. BODIES TO BE ASSOCIATED

As appropriate, CEN, CENELEC and ETSI will invite the representative organisations of consumers' interests (ANEC), environmental protection (ECOS), workers (ETUI) and small and medium-size enterprises (NORMAPME) to take part in the standardisation work.

CEN, CENELEC and ETSI are also requested to consult with the European Commission Directorate-General Joint Research Centre in order to explore if the Commission's research institutes dispose of specific competence to support the standardisation work.