BT139/DG8432/DV
June 2010

139 BT BY CORRESPONDENCE – Item 5.2.7 Deadline: 2011-06-30

SUBJECT

Mandate M/488 " Mandate to CEN, CENELEC and ETSI for standardization in the field of air conditioning and comfort fans".

BACKGROUND

See Annex 1.

The mandate is being submitted to the CEN Technical Board acceptance.

PROPOSED DECISION(S)

BT left the execution of the EC mandate M/488 on standardization work on air conditioners and comfort fans to CEN.

ADC/2011-05-23

CEN Reference: Annex 1 to BT N 8639
CENELEC Reference: Annex 1 to BT139/DG8432/DV

Background:

- Mandate M/488 'Mandate to CEN, CENELEC and ETSI for standardization in the field of air conditioners and comfort fans'
- CEN/TC113 'Heat pumps and air conditioning units' was consulted and has no problems to accept the mandate.

The following proposal is made to CEN/BT:

- to accept mandate M/488 'Mandate to CEN, CENELEC and ETSI for standardization in the field of air conditioners and comfort fans'
- to allocate the work to CEN/TC 113 ‘Heat pumps and air conditioning units'.

It is proposed to CENELEC/BT to leave the execution of the mandate to CEN.

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY

Directorate C - New and renewable sources of energy, Energy efficiency & Innovation
C.3 - Energy efficiency of products & Intelligent Energy – Europe

Brussels, 18th February 2011
M/488 EN

MANDATE TO CEN, CENELEC AND ETSI FOR STANDARDISATION IN THE FIELD OF AIR CONDITIONERS AND COMFORT FANS

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 ecodesign requirements.

1.2. The aim of the Mandate

The Regulatory Committee established by Directive 2009/125/EC is expected to endorse in 2010 a Draft Commission Regulation implementing the Directive with regard to ecodesign requirements for air conditioners below 12 kW output power and comfort fans below 125W.

The draft implementing measure requires that the measurement and calculation procedures for establishing the seasonal energy efficiency ratio (SEER), the seasonal coefficient of performance (SCOP), the power consumption in auxiliary power modes, the indoor and outdoor A-weighted sound power, the design refrigerant mass, the energy efficiency ratio (EER) and coefficient of performance (COP), the cooling and heating capacity, the air flow rate for air conditioners and the power consumption, the air flow rate, the service value (SV), the power consumption in auxiliary power modes, and the sound power of comfort fans shall be reliable, accurate and reproducible and takes into account the generally recognised state of the art, in order to ensure comparable measurements and calculations of energy efficiency for the appliance types in the scope of the implementing measure, and to facilitate market surveillance activities.

The aim of this mandate is to create (a) harmonised standard(s) which cover(s) these requirements. The harmonised standard(s) shall incorporate relevant calculation and test methods, including calculation methods set out in Commission Communications which have been published for that purpose in the Official Journal of the European Union.

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2. DESCRIPTION OF THE MANDATED WORK

The Commission requests CEN, CENELEC and ETSI to elaborate (a) reliable, accurate and reproducible European standard(s), which take(s) into account the generally recognised state of the art, and/or to adopt or adapt existing European and international standards for air conditioners and comfort fans, laying down procedures and methods of measuring and calculating the power consumption and associated characteristics of air conditioners and comfort fans. The standard(s) ha(ve)s also to include the necessary definitions of the appliance types and of the parameters to be measured and/or calculated.

The standardisation tasks covered by this mandate are as follows.

Procedures and methods for measuring and calculating the power consumption and associated characteristics of air conditioners and comfort fans as follows:

(1) to ensure that the prospective harmonised standard(s) provide(s), where appropriate, revised and/or new definitions at least for the types and main characteristics of air conditioners and comfort fans, including 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 air conditioners and comfort fans';

(2) to ensure that the prospective harmonised standard(s) provides procedures and methods to measure and calculate at least the following aspects: (a) for all types of air conditioners within the scope: electric power consumption and the cooling and/or heating capacity for the designated points of operation, the electric power consumption for the relevant auxiliary power modes, the design refrigerant mass; (b) for air conditioners excluding double and singe duct units: the seasonal energy efficiency ratio (SEER) and the seasonal coefficient of performance (SCOP), the indoor and outdoor sound power levels, the air flow rate over the evaporator and condenser for the designated point of operation; (c) for double duct and single duct units: the energy efficiency ratio (EER), the coefficient of performance (COP), the indoor sound power level, including also outdoor sound power level for double ducts) (d) for comfort fans: the air flow rate for the designated point of operation, the service value (SV), the power consumption in auxiliary power modes and the sound power level;

(3) to ensure that the prospective harmonised standard(s) include(s) a procedure that avoids an appliance being programmed to recognize the harmonised standard(s)' specific test conditions, and react specifically to them, except as to the necessary supply of information for air conditioners to adapt the capacity to the environmental needs in real use, or with the exclusion of test cycle recognition that is active only during the manufacturing of the appliance;

(4) to ensure that the prospective harmonised standard(s) takes 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 care shall be taken about:

   (a) the extension of the standard(s), such as EN14511 and PrEN14825, to provide procedures and methods to measure and calculate the power consumption and energy efficiency ratios of products allowing free cooling by introduction of direct outside air, if appropriate;

(b) the extension of the standard(s) on refrigerant compressors such as EN12900 and EN13771-1 to provide procedures and methods to measure and calculate the power consumption and energy efficiency ratio (EER) at reduced capacity and the power consumption of the compressor oil heater and of its control;

(c) the extension of the standard(s), such as EN 14511 and EN15218:2007, to provide procedures and methods to measure and calculate the power consumption and energy efficiency ratios of air conditioners, including appliances making use of evaporative cooling.

(d) the extension of the standard(s), such as EN 14511 and EN 62301 to provide procedures and methods to measure and calculate standby power.

(e) the adaptation of the procedures and methods to measure and calculate the airborne noise of air conditioners and comfort fans (as in standards EN 12102 and EN 60704-2-7). For this an examination (and eventually an adjustment of the operating conditions for the measurement of the sound power) should be carried out with respect to the practical relevance, reproducibility and efficiency.

(f) the extension of the standard(s), such as IEC 60879 and EN 62301 to provide procedures and methods to measure and calculate the power consumption, the flow rates and energy efficiency of comfort fans, including standby power.

(5) to ensure compliance with the efficiency levels identified in the draft Ecodesign Regulation on air conditioners and comfort fans;

(6) the extension of the standard(s) to include tolerances, as defined in the draft Ecodesign Regulation on air conditioners and comfort fans; the extension of standards such as IEC 60879 to include 'tower' fans and other types of fans for personal thermal comfort and to take into account methods applied internationally or in relevant third countries, such as Brazil, to establish comfort fan energy efficiencies.

<u>Verification procedure for market surveillance purposes:</u>

– 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 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…).

<u>Template for test report:</u>

– 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 air conditioners and comfort fans.

3. EXECUTION OF THE MANDATE

CEN, CENELEC and ETSI are requested to communicate to the Commission, within 4 months 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 11 months from the acceptance of this mandate an interim report on the progress of the tasks set out in this mandate for the stage 1 requirements of the Regulation on air conditioners and comfort fans and after 12 months for the second stage requirements of the Regulation, 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 working languages of the ESOs, a copy of the standard(s) developed under this mandate within 16 months.

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 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-REHS) 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 DG Joint Research Centre in order to explore if the Commission's research institutes dispose of specific competence to support the standardisation work.