National Standards Authority of Ireland

IRISH STANDARD

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VENTILATION FOR BUILDINGS - ENERGY PERFORMANCE OF BUILDINGS - GUIDELINES FOR INSPECTION OF AIR-CONDITIONING SYSTEMS

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland
Tel: +353 1 807 3800
Fax: +353 1 807 3838
http://www.nsai.ie

Sales
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EUROPEAN STANDARD

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Ventilation for buildings - Energy performance of buildings - Guidelines for inspection of air-conditioning systems

Ventilation des bâtiments - Performance énergétique des bâtiments - Lignes directrices pour l'inspection des systèmes de climatisation

Lüftung von Gebäuden - Gesamtenergieeffizienz von Gebäuden - Leitlinien für die Inspektion von Klimaanlagen

This European Standard was approved by CEN on 26 March 2007.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This document (EN 15240:2007) has been prepared by Technical Committee CEN/TC 156 “Ventilation for buildings”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2007, and conflicting national standards shall be withdrawn at the latest by October 2007.

This standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association (Mandate M/343), and supports essential requirements of EU Directive 2002/91/EC on the energy performance of buildings (EPBD). It forms part of a series of standards aimed at European harmonisation of the methodology for the calculation of the energy performance of buildings. An overview of the whole set of standards is given in CEN/TR 15615, Explanation of the general relationship between various CEN standards and the Energy Performance of Buildings Directive (EPBD) ("Umbrella document").

Attention is drawn to the need for observance of the relevant EU Directives transposed into national legal requirements. Existing national regulations with or without reference to national standards, may restrict for the time being the implementation of the European Standards mentioned in this report.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

Article 9 of the Energy Performance of Buildings Directive (abbreviated as EPBD) requires the introduction of “measures to establish a regular inspection of air conditioning systems of an effective rated output of more than 12 kW”. The inspection is to include “an assessment of the air conditioning efficiency and the sizing compared to the cooling requirements of the building”. Advice is also to be provided to the users on “possible improvement or replacement of the air-conditioning system and on alternative solutions”. Therefore, it is not the intention to have a full audit of the air conditioning system but a correct assessment of its functioning and main impacts on energy consumption, and as a result determine any recommendations on improvement. The target groups of this standard are national regulators as well as the building services sector including professional building owners, and persons and organisations responsible for inspections.

Article 2 of the EPBD defines an “air conditioning system” as “a combination of all components required to provide a form of air treatment in which temperature is controlled or can be lowered, possibly in combination with the control of ventilation, humidity and air cleanliness.”

The inspection described here is therefore intended to include all types of comfort cooling and air conditioning systems that provide a total cooling output for the building above the specified 12 kW which is in turn taken to mean the rated cooling capacity of the included air conditioning systems. The total cooling output of 12 kW is associated to a building or a zone of a building according to national regulations. The term “air conditioning system” is used to represent any of the systems described below, which may heat and cool, and includes the associated water and air distribution and exhaust systems that form a necessary part of the system. It also includes the controls that are intended to regulate the use of these systems. It excludes mechanical ventilation systems that provide no mechanical cooling and components that, although they may be co-located in air conditioning systems, are dedicated to providing heating duty only. EN 15239 gives details for inspection of ventilation systems, and of the associated air distribution and exhaust systems and thus provides complementary information to this standard. prEN 15378 specifies procedures and methods for the inspection of boilers and heating systems, according to Article 8 of the EPBD.

The possibility to introduce classes is given in this standard in order to leave Member States freedom to choose between different objectives and extent of inspection, within a harmonised framework.

Air conditioning systems can be described according to the list of systems and subsystems presented in Annex A. Inspection classes can also be specified on national level. Examples of inspection classes are introduced in Annex B.