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European standard for the classification of gas appliances according to the method of supplying combustion air and of evacuation of the combustion products (types)

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Voorbeeld
Preview

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English Version

European standard for the classification of gas appliances
according to the method of supplying combustion air and
of evacuation of the combustion products (types)

Norme européenne pour la classification des appareils
utilisant les combustibles gazeux selon le mode
d'amenée d'air comburant et le mode d'évacuation des
produits de combustion (types)

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 238.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (prEN 1749:2018) has been prepared by Technical Committee CEN/TC 238 “Test gases, test pressures, appliance categories and gas appliance types”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede CEN/TR 1749:2014.

Forbiede
Preview

Introduction

This standard has been prepared to provide reference to CEN Technical Committees who are preparing European Standards for appliances burning combustible gases.

It gives details of a general scheme for the classification of such appliances according to the method of air supply and evacuating the products of combustion. This standard concerns gas appliances that are intended to be installed within buildings or outside buildings. Nevertheless, it is recognized that this appliance classification scheme could be utilized in other circumstances. For example, in the case of appliances capable of utilizing heating other fuels.

This form of appliance classification is widely used in the preparation of European Standards for gas appliances to identify the requirements and methods of test that are applicable to the various methods of evacuating the products of combustion and air supply. Appliances classified in this way are generally described as “types” and this description has been retained for the purposes of this standard.

The definitions are written intentionally in very general terms in order to cover any possible variations in the basic appliance types.

The main purpose of the standard is to promote harmonization in the classification of appliance types. This should ensure that there is a clear understanding of the various appliance types and will avoid confusion arising from Technical Committees describing them in different ways. CEN Technical committees are therefore requested to use this standard as reference in all circumstances in which it is appropriate. They should not deviate from it unless there are sound technical reasons for so doing.

In the preparation of this scheme it was noted that there were methods of evacuating products of combustion that were particular to a specific Technical Committee or to a particular gas appliance. These particular methods have not been included in the present scheme because, as indicated above, the main purpose of the scheme is to promote harmonization across Technical Committees.

However, it is intended that this scheme should be reviewed from time to time in order to consider its extension to other, possibly new, methods of evacuating products of combustion. At that time, such specific methods of evacuating products of combustion may be included at the request of the Technical Committees concerned.

1 Scope

This document gives details for the classification of gas appliances according to the method of supplying combustion air and of evacuating the products of combustion (types). This classification refers to gas appliances that are intended to be installed within buildings and/or outside of the building¹.

The European Standard classifies appliances as type A, B or C according to the basic principle for the evacuation of the products of combustion and air inlet.

In references to a gas appliance/gas appliances connected via **“its”** or **“their”** duct or ducts, it is intended that the air inlet duct and/or the discharge duct for carrying any products of combustion are part of the gas appliance. This means that such ducts are certified together with the gas appliance.

In terms of this standard a **“single duct”** is a flue duct designed and capable to discharging the products of combustion and/or air inlet duct for the air supply for only one appliance.

In terms of this standard a **“common duct”** is a flue duct designed and capable to discharging the products of combustion and/or air inlet duct for the air supply for more than one appliance.

This European Standard is a guide for the harmonization of product standards, for the preparation of installation standards and for the common understanding of the types of gas appliances.

This European Standard is neither an installation standard nor a product standard.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 General scheme

4.1 General

The general scheme for Type A, type B and type C appliances is given in 4.2, 4.3 and 4.4 respectively.

A series of subscript numbers is used in addition to these letters to identify specific variations within these basic principles.

Where this first subscript number exceeds “9” it is given in brackets to clarify that it is a single subscript number and not two subscript numbers.

The last subscript number of each specific variation indicates the absence or presence of an integral fan for the supply of combustion air and/or for the evacuation of the products of combustion. Where such a

¹ If the appliance is installed outside of the building (if this circumstance is explicitly allowed by the manufacturer) it will not change its classification (i.e.: a type B53 boiler will remain B53 if installed outside according to manufacturer instructions). These appliances are subject to specific additional requirements and tests, according to specific product standards.

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fan is present, the numbers 2, 3 or 4 are given. These three numbers are used solely to identify the location of this fan.

Figures are also given in Annex A to assist in the identification of the various appliance types.

Those pictures are to be considered as examples; for each type, they do not represent all the possible details of applications.

4.2 Type A

An appliance not intended for connection to a flue or to a device for evacuating the products of combustion to the outside of the room in which the appliance is installed.

Type A₁. An appliance without a fan.

Type A₂. An appliance with a fan downstream of the combustion chamber/heat exchanger.

Type A₃. An appliance with a fan upstream of the combustion chamber/heat exchanger.

4.3 Type B

An appliance intended to be connected to a flue that evacuates the products of combustion to the outside of the room containing the appliance. The combustion air is drawn directly from the room.

Type B₁. A type B appliance incorporating a draught diverter, marketed without duct systems, intended to be connected to a separately approved and marketed system for discharge of the combustion products.

Type B₁₁. A natural draught type B₁ appliance.

Type B₁₂. A type B₁ appliance designed for a natural draught flue incorporating a fan downstream of the combustion chamber/heat exchanger and upstream of the draught diverter.

Type B₁₃. A type B₁ appliance designed for a natural draught flue incorporating a fan upstream of the combustion chamber/heat exchanger.

Type B₁₄. A type B₁ appliance having an integral fan downstream of both the combustion chamber/heat exchanger and the draught diverter.

Type B₂. A type B appliance without a draught diverter, marketed without duct systems, intended to be connected to a separately approved and marketed system for discharge of the combustion products.

Type B₂₁. ²⁾ A natural draught type B₂ appliance.

Type B₂₂. A type B₂ appliance incorporating a fan downstream of the combustion chamber/heat exchanger.

Type B₂₃. A type B₂ appliance incorporating a fan upstream of the combustion chamber/heat exchanger.

Type B₃. A type B appliance without a draught diverter, which is designed for connection via its concentric duct to a common duct system. This common duct system consists of a single natural draught flue. All pressurized parts of the appliance containing products of combustion are completely enclosed by parts of the appliance supplying combustion air. Combustion air is drawn into the appliance from the room by means of a concentric duct, which encloses the flue. The air enters through defined orifices situated in the surface of the duct.

2) A type B₂₁ appliance will not generally be included in the scope of European Standards for gas appliances. However, it may apply in special circumstances, e.g. gas-fired incinerators.

Type B₃₁. A natural draught type B₃ appliance.

Appliances of this type are not foreseen.

Type B₃₂. A type B₃ appliance incorporating a fan downstream of the combustion chamber/heat exchanger.

Type B₃₃. A type B₃ appliance incorporating a fan upstream of the combustion chamber/heat exchanger.

Type B₄. A type B appliance, incorporating a draught diverter, that is designed for connection via its flue duct to its flue terminal.

Type B₄₁. ³⁾ A natural draught type B₄ appliance.

Type B₄₂. A type B₄ appliance designed for a natural draught flue incorporating a fan downstream of the combustion chamber/heat exchanger and upstream of the draught diverter.

Type B₄₃. A type B₄ appliance designed for a natural draught flue incorporating a fan upstream of the combustion chamber/heat exchanger.

Type B₄₄. A type B₄ appliance having an integral fan downstream of both the combustion chamber/heat exchanger and the draught diverter.

Type B₅. A type B appliance, without a draught diverter, that is designed for connection via its flue duct to its flue terminal.

Type B₅₁. ⁴⁾ A natural draught type B₅ appliance.

Type B₅₂. A type B₅ appliance incorporating a fan downstream of the combustion chamber/heat exchanger.

Type B₅₃. A type B₅ appliance incorporating a fan upstream of the combustion chamber/heat exchanger.

4.4 Type C

An appliance in which the combustion circuit (air supply, combustion chamber, heat exchanger and evacuation of the products of combustion) is sealed with respect to the room in which the appliance is installed.

Type C₁. A type C appliance that is designed for connection via its ducts to its horizontal terminal, which at the same time admits fresh air to the burner and discharges the products of combustion to the outside through orifices that are either concentric or close enough to come under similar wind conditions.

Type C₁₁. A natural draught type C₁ appliance.

Type C₁₂. A type C₁ appliance incorporating a fan downstream of the combustion chamber/heat exchanger.

Type C₁₃. A type C₁ appliance incorporating a fan upstream of the combustion chamber/heat exchanger.

3) Type B₄₁ appliances installed in mobile homes (caravan holiday homes) are commonly described as “closed flue” appliances; this terminology being used in EN 1949, which covers the installation of such appliances.

4) A type B₅₁ appliance will not generally be included in the scope of European Standards for gas appliances. However, it may apply in special circumstances, e.g. gas-fired incinerators.

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