



BSI Standards Publication

European scheme for the classification of gas appliances according to the method of evacuation of the combustion products (types)

National foreword

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The UK participation in its preparation was entrusted to Technical Committee GSE/-/4, To brief SFG_U and consider horizontal issues affecting gas utilization.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

**European scheme for the classification of gas appliances
according to the method of evacuation of the combustion
products (types)**

This Technical Report was approved by CEN on 3 July 2014. It has been drawn up by the Technical Committee CEN/SS H99.

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Foreword

This document (CEN/TR 1749:2014) has been prepared by Technical Committee CEN/TC SFG_U “Sector Forum Gas Utilisation”, the secretariat of which is held by AFNOR.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TR 1749:2009.

This technical report has been prepared under the aegis of the Sector Forum Gas Utilization committee to provide guidance 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 evacuating the products of combustion. It will be stressed that this scheme only concerns gas appliances that are intended to be installed within buildings. It does not apply to outdoor appliances. Nevertheless, it is recognized that this appliance classification scheme could be utilized in other circumstances. For example, in the case of:

- a) appliances capable of utilizing heating oil or kerosene, and
- b) gas appliances intended¹⁾ for installation in a partially protected place external to a building.

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. Appliances classified in this way are generally described as “types” and this description has been retained for the purposes of this general scheme.

The main purpose of the scheme 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 scheme 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.

Explanatory notes:

The following notes are given in explanation of the classification scheme.

1) If the appliance is installed in a partially protected place (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 in a partially protected place according to manufacturer instructions). These appliances are subject to specific additional requirements and tests.

NOTE 1 The general scheme classifies appliances as type A, B or C according to the basic principle for the evacuation of the products of combustion. These definitions are written intentionally in very broad terms in order to cover any possible variations in the basic appliance types.

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

NOTE 2 Diagrams have been given in Annex A, showing examples of the various appliance types. However, it will be noted that diagrams for type C6 appliances have not been included. This is because such appliances are marketed without duct systems. When installed such an appliance will have a configuration similar to one of the arrangements shown for other type C appliances.

Appliance Technical Committees have the responsibility for inclusion of requirements and methods of test in their standards to ensure that type C₆ appliances are suitable for their intended method(s) of installation.

NOTE 3 The supplementary classification scheme for type A and type B appliances has been included to clarify the identification of such appliances when fitted with different safety devices. The subscript letters "AS" (atmosphere safety) refer to an atmosphere sensing device and the subscript letters "BS" (blocked safety) refer to a clearance monitoring device, which reacts to blockage or restriction of the flue system.

In order to provide information about appliance types that are recognized in certain CEN member states, Annexes B, C and D have been included in which special national appliance classifications may be identified. At present, Annex B identifies appliance types that are particular to Germany.

NOTE 4 In references to a gas appliance / gas appliances connected via "**its**" or "**their**" duct or ducts, the authors of the technical report expressed that the air inlet duct and 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

NOTE 5 In terms of this technical report 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.

NOTE 6 Annex E identifies appliance types that are designed for connection to separate chimney products which may be part of the construction of the building. In terms of this technical report a "**separate chimney products**" is a flue duct approved and marketed separately from the appliance.

1 Scope

This Technical Report gives details of a general scheme for the classification of gas appliances according to the method of supplying combustion air and of evacuating the products of combustion. This scheme refers to gas appliances that are intended to be installed within buildings and/or to gas appliances intended²⁾ for installation in a partially protected place external to a building.

This Technical Report is a guide for the harmonization of product standards and for the common understanding of the types of gas appliances.

This TR is not intended to be used as an installation standard or as a product standard, nor as a reference for market surveillance.

2 General scheme

2.1 General

The general scheme for type A, type B and type C appliances is given in 2.2, 2.3 and 2.4 respectively. Diagrams are also given in Annex A to assist in the identification of the various appliance types.

2.2 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.

2.3 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.

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.

2) If the appliance is installed in a partially protected place (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 in a partially protected place according to manufacturer instructions). These appliances are subject to specific additional requirements and tests.