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Standards

Irish Standard  
I.S. EN 778:2009

Domestic gas-fired forced convection air heaters for space heating not exceeding a net heat input of 70 kW, without a fan to assist transportation of combustion air and/or combustion products

## I.S. EN 778:2009

*Incorporating amendments/corrigenda issued since publication:*

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<b>NSAI</b> 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	<b>Sales:</b> T +353 1 857 6730 F +353 1 857 6729 W standards.ie
Údarás um Chaighdeáin Náisiúnta na hÉireann		

English Version

**Domestic gas-fired forced convection air heaters for space heating not exceeding a net heat input of 70 kW, without a fan to assist transportation of combustion air and/or combustion products**

Générateurs d'air chaud à convection forcée utilisant les combustibles gazeux pour le chauffage de locaux à usage d'habitation de débit calorifique sur Hi inférieur ou égal à 70 kW, sans ventilateur pour aider l'alimentation en air comburant et/ou l'évacuation des produits de combustion

Gasbefeuerte Warmlufterzeuger mit erzwungener Konvektion zum Beheizen von Räumen für den häuslichen Gebrauch mit einer Nennwärmebelastung nicht über 70 kW, ohne Gebläse zur Beförderung der Verbrennungsluft und/oder der Abgase

This European Standard was approved by CEN on 12 September 2009.

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**Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## Foreword

This document (EN 778:2009) has been prepared by Technical Committee CEN/TC 180 “Domestic and non-domestic gas fired air heaters and non-domestic gas fired overhead radiant heaters”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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 EN 778:1998.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, and Annex ZB, which are integral parts of this document.

This revision modifies EN 778:1998. It has been prepared to incorporate requirements for combustion products evacuation ducts, POCEDs, supplied as an integral part of the system to support the EU Directive 89/106/EEC on construction products under mandate M 105. To this end, it extends the scope of the standard to cover type B<sub>4</sub> appliances.

Furthermore, the opportunity presented by this revision has been taken to update the standard in respect to EN 437:2003.

NOTE For countries requesting special categories (specified in EN 437:2003), the absence of specific information concerning A.3.3 and A.3.4 implies that the general requirements described in the body of the standard (see 4.1.1, 4.2.2, 4.2.3 and 4.2.5) also apply to these special categories.

- EN 525, *Non-domestic direct gas-fired forced convection air heaters for space heating not exceeding a net heat input of 300 kW*
- EN 621, *Non-domestic gas-fired forced convection air heaters for space heating not exceeding a net heat input of 300 kW, without a fan to assist transportation of combustion air and/or combustion products*
- EN 1020, *Non-domestic gas-fired forced convection air heaters for space heating not exceeding a net heat input of 300 kW, incorporating a fan to assist transportation of combustion air and/or combustion products*
- EN 1196, *Domestic and non-domestic gas-fired air heaters — Supplementary requirements for condensing air heaters*
- EN 1319, *Domestic gas-fired forced convection air heaters for space heating, with fan-assisted burners not exceeding a net heat input of 70 kW*
- EN 12669, *Direct gas-fired hot air blowers for use in greenhouses and supplementary non-domestic space heating*

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 the United Kingdom.

## 1 Scope

This European Standard specifies the requirements and test methods for the safety and efficiency of domestic gas-fired air heaters with (an) atmospheric burner(s) and without a fan to assist the transportation of combustion air and/or flue gases, hereafter referred to as "appliances".

This European Standard applies to Type B<sub>11</sub>, B<sub>11AS</sub>, B<sub>11BS</sub>, B<sub>41</sub>, B<sub>41AS</sub>, B<sub>41BS</sub>, C<sub>11</sub>, C<sub>21</sub>, C<sub>31</sub> and C<sub>41</sub> appliances with an input not exceeding 70 kW (net cv-basis), intended primarily for use in single unit residential dwellings. Provision of the heated air may be by means of ducting.

This European Standard does not apply to:

- a) appliances of the condensing type;
- b) appliances for outdoor installation;
- c) dual purpose air conditioning appliances (heating and cooling);
- d) appliances where the air is heated by an intermediate fluid;
- e) appliances with forced draught burners;
- f) appliances fitted with a manual or automatic means of adjusting the combustion air supply or the combustion products evacuation (including flue dampers);
- g) portable or transportable forced convection appliances;
- h) appliances having multiple heating units with a single draught diverter;
- i) appliances fitted with more than one flue outlet;
- j) C<sub>21</sub> and C<sub>41</sub> appliances for 3rd family gases;

NOTE For C<sub>41</sub> appliances, see all requirements and test methods that are valid for C<sub>21</sub> appliances, unless otherwise stated.

- k) appliances that are designed for continuous condensation within the flue system under normal operating conditions;
- l) appliances having Products Of Combustion Evacuation Ducts (POCED), that are non-metallic.

This European Standard is applicable to appliances which are intended to be type tested. It also includes requirements concerning the evaluation of conformity, including factory production control, but these requirements only apply to POCEDs and their associated terminals.



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