



BUSINESS PLAN

CEN/TC 109 Central heating boilers using gaseous fuels version 2022-10-27

EXECUTIVE SUMMARY

Scope of CEN/TC 109

All the gas-fired central heating boilers, including the boilers of the condensing type, with or without integrated domestic hot water production, of all types and all nominal inputs, i.e. :

- the boilers fitted with atmospheric burners or premixed burners (fan-assisted or not),
- the units composed of a boiler body and its fan-assisted burner, constituting an indissociable entity,
- the assemblings of a boiler body (according to the requirements prescribed by the CEN/TC 57) and a fan-assisted burner (according to the requirements prescribed by the CEN/TC 131), but only for the specific characteristics suited to the utilisation of gaseous fuels.

Business Environment

CEN/TC 109 is responsible for the standardization of safety, constructional and performance environmental requirements as well as efficiency and emission test methods for all gas-fired central heating boilers, including hybrid systems, with or without integrated domestic hot water production.

CEN/TC 109 supports free trade in the EU by harmonizing requirements, testing, marking and environmental requirements of gas-fired central heating boilers, by providing a common set of European standards.

CEN/TC 109 ensures, that the requirements of all the relevant directives and regulations will be transferred into product standards (today: the GAR, BED, ErP, ecodesign, energy labelling and RoHS). The standards of CEN/TC 109 also contain requirements of other relevant directives such as the LVD, EMCD and MD, this is generally done by reference to other standards.

Parties involved

- manufacturers of central heating boilers;
- manufacturers of components like controls and safety devices;
- testing and certification bodies;
- regulatory authorities.
- NGO's

Benefits of CEN/TC 109

The main stimulus for the CEN work is to facilitate development of efficient central heating boilers using gaseous fuels which operate safely with minimum economic cost to the end user/purchaser. Additionally having harmonized safety, performance, construction and testing standards across

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Europe compliant with EU legislation will support the free movement of products throughout the EU community.

Procedures related to the use of gas-fired central heating boilers therefore need to keep pace with the increasing environmental and safety standards.

Since 1990, more than 23 standards were adopted, establishing confidence of consumers in respect of safety, quality and energy efficiency.

CEN/TC 109 is in the process of reducing the number of standards needed to cover the scope by using a two part approach: *(The common requirements are given in part 1. Special requirements for specific boiler types are given in a second part that is to be used in conjunction with part 1.)*. CEN/TC 109 expects that this two part approach results in a much more efficient revision, amendment and expansion process

Priorities of CEN/TC 109

- Ensuring a high level of consumer safety and to eliminate barriers to trade in the EU for boilers.
- Supporting compliance with the (essential) requirements of the relevant EU legislation.
- To have annex Z for the GAD replaced by an annex Z for the GAR, as the GAD is replaced by the GAR.
- To have the references of the standards listed in the official journal of the EU as standards having the presumption of conformity with the requirements of the GAR (EU 2016/426); the ecodesign regulation (EU 813/2013 and EU 814/2013) and labeling directive (EU 811/2013 and EU 812/2013) (for both the spaceheating and domestic hot water production); and the BED (92/42/EEC).
- To cover new technologies such as: Adaptive combustion control function (ACCF), hybrid heating boilers (gas boilers including a heatpump that is using both gas and electrical energy in a single product to provide spaceheating and domestic hot water production) .
- To cover the use of low carbon gases like: H2NG and H2 (Admixtures of hydrogen to natural gas and hydrogen)
- The standards may also further specify the essential requirements of other relevant directives, e. g. EMC Directive, LV Directive, Machine directive.

The developments of the implementing regulations are being followed closely.

=====END of Executive SUMMARY =====

1 BUSINESS ENVIRONMENT OF THE CEN/TC

1.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

CEN/TC 109 is responsible for gas-fired central heating boilers:

- The standards shall be capable of accommodating technical developments.
- The standards shall fulfill the essential requirements of the relevant EU Directives.
- The standards shall fix a common European level for the equipment regarding safety aspects.

Political factors:

Energy saving is an important topic in European politics. Standardization helps all interested market parties to introduce modern, energy saving central heating appliances.

Economical factors:

The product volume of gas-fired central heating boilers is still growing in Europe. Due to the requirements of the ErP this growth is coming from condensing boilers. The main reasons are the continuing penetration of natural gas, the increasing number of dwellings and the constant popularity of central heating boilers for heating dwellings and drinking water.

Technical factors:

The major trends are:

- An increased efficiency and reduced emissions due to the implementation measures of the ErP-Directive.
- A broader variation of the gas quality in the future. CEN/TC 109 will closely follow all developments.
- Reducing the life cycle impact of the products. CEN/TC 109 will closely follow the latest recast of the RoHS-Directive.

Legal factors:

Several European countries (e.g. CH, DE, NL, UK) have more stringent specifications for efficiency and/or emissions than required under the present EU legislation. These national requirements will certainly have an impact on future standardization of central heating appliances.

Societal factors:

Drive towards green society and use of sustainable energy sources.

International trade and standardization aspects:

The last few decades, European companies producing central heating boilers have been growing by merging. The market for these big companies covers several to all European countries. The use of European standards helps companies in reducing costs for marketing their products in the different European countries. The standards of CEN/TC 109 aim for simplified testing and keeping the number of required tests to a minimum.

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1.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the CEN /TC:

- The central heating boiler market comprises a small number of boiler manufacturers feeding a large number of users for the domestic side as well as commercial and industrial applications.
- The market tends to be still nationally based on well established national laws and practices in each European country.
- The European Standards should support implementation of EU-Directives and regulations.
- The annual European sales of all types of gas-fired central heating boilers is about 5 million pieces/year in the European market (for further information see <http://www.ehi.eu>).

2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC

Gas-fired central heating boilers, their safety devices and the procedures covering their use in the field are subject to continuous development aimed at improving appliance efficiency while maintaining safety and cost effectiveness for the end user/purchaser. The standardization process has an important role to play in achieving this balance.

Further benefits are the preparation of harmonized European standards to support the relevant EU Directives and the removal of trade barriers within the European market by replacing national standards of the EU members.

3 PARTICIPATION IN THE CEN/TC

All the CEN national members are entitled to nominate delegates to CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognized European or international organizations is also possible under certain conditions. To participate in the activities of this CEN/TC, please contact the national standards organization in your country.

Apart from manufacturers and users of gas-fired heating boilers, also manufacturers of gas burners, safety devices, nozzles etc. have a key interest in the standardization process. Regulatory authorities and testing/certification bodies that have enforced the existing national requirements also have a significant interest in this work.

Industry participation from boiler and equipment manufacturers is well established both through inclusion in national delegations and through liaison membership of the industrial organisations European Heating Industry (EHI) and MARCOGAZ

4 OBJECTIVES OF THE CEN/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

4.1 Defined objectives of the CEN/TC

Elaboration and maintenance of standards on gas-fired central heating boilers combi boilers and hybrid boilers.

4.2 Identified strategies to achieve the CEN/TCs defined objectives.

The current set of standards has been based on national standards supplied by the CEN members. Decisions are taken at meetings and by correspondence when necessary.

CEN/TC 109 has several active working groups for distinct groups of appliances; manufacturers also differ from one working group to another:

WG / AHG	Title	Status
CEN/TC 109/WG 1	Domestic central heating boilers using gaseous fuels	Active
AHG	Hybrids	Dormant
AHG	Annex ZE (GAR)	Dormant
AHG	ErP	Dormant
JWG	ACCF (adaptive combustion control function)	Dormant
AHG	Surface temperatures related to elderly/children	Active
AHG	Hydrogen	Active
AHG	C(10) boilers	Active
AHG	Revision of EN 15502 Part 2-2	Active
CEN/TC 109/WG 2	Non-domestic central heating boilers using gaseous fuels	Dormant
CEN/TC 109/WG 3	Assembly of boiler bodies and forced draught burners	Active
CEN/TC 109/WG 4	Hot water production of central heating boilers for domestic use	Active
CEN/TC 109/WG 5	Steering Group ECOTEST	Active
CEN/TC 109/WG 6	Material efficiency	Active

In order to avoid any duplication of work, the TC has liaisons with:

TC	Title
CEN/TC 57	Central heating boilers
CEN/TC 58	Safety and control devices for burners and appliances burning gaseous or liquid fuels
CEN/TC 166	Chimneys
CEN/TC 228	Heating systems and water based cooling systems in buildings
CEN/TC 238	Test gases test pressures and appliance categories
CEN/TC 299	Gas-fired sorption appliances, indirect fired sorption appliances, gasfired endothermic engine heat pumps and domestic gas-fired washing and drying appliances
CEN/TC 371	Energy performance of buildings
CEN/CLC/ JTC 10	Material efficiency aspects for products in scope of Ecodesign legislation

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CEN/TC 109 has connections with the following organizations:

Organization	Role in CEN/TC 109
EHI, European Heating Industry	Observer
Afecor, European Control Manufacturers Association	Liaison
ANEC, European Association for the coordination of Consumer Representation in Standardization	Observer
EC	Observers GAR , BED, Ecodesign and Labeling Directive
ECOS, Environmental Coalition on Standards	Observer
Liquid Gas Europe	Liaison
MARCOGAZ	Liaison
HAS Gas Appliances Regulations (EY)	HAS Consultant
HAS Ecodesign & Labeling Directives (VHK)	HAS Consultant

4.3 Environmental aspects

CEN/TC 109 contributes with its standards to the following UN Sustainable Development Goals:

- GOAL 7: Affordable and Clean Energy
- GOAL 9: Industry, Innovation and Infrastructure
- GOAL 11: Sustainable Cities and Communities
- GOAL 12: Responsible Consumption and Production
- GOAL 13: Climate Action

The major environmental trends are towards increased efficiency and reduced emissions. In detail:

- A new development is the use of combined technologies in one product, like micro combined heat and power (mCHP or cogeneration), hybrid solar systems and hybrid heatpumps (gas and/or electric).
- Consideration of the impact of varying gas quality, including hydrogen production based on renewable electricity production
- Standardization of test methods for the determination of emissions to the air.
- Fixing of emission classes under the consideration of national regulation in the different CEN member countries.
- Standardization of efficiency requirements.
- Recyclability of the products at the end of the life cycle (M/543).

5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC WORK PROGRAMME

- In order to improve the development of standards that will guarantee safe operation of gas-fired boilers under the various installation practices that exist throughout Europe, more active participation of Eastern European countries is desirable.
- Combustion air must be supplied appropriately, and the products of combustion exhausted safely, to avoid appliances operating in an unsafe condition and endangering health. To

ensure this boilers are either supplied with its flue exhaust, or give information how to connect the boiler to a chimney, that is a part of a building.

- The Working Groups are well supported by relevant manufacturers and other interested parties. Additional direct support from regulatory authorities would help minimize adverse comments at the enquiry stage. Much of the detailed drafting is carried out by a small number of individual industry experts. Progress is therefore dependent on the limited time available to these experts and the necessary demands of their employers.
- Changes in key personnel – e.g. through retirement or redeployment – can seriously affect the progress of drafting and/or revising standardst, particulary when this happens suddenly and timely transfer of the person's experience to a successor is not possible. Most significantly this applies to project leaders, the secretariats and at CCMC.
- Draft standards reflect good practice within the industry participating in CEN/TC 109. However, occurences in the field may sometimes necessitate technical changes. Those changes may require additional consultations and hence delays.
- The publication of new/updated EU Directives or Regulations shall be observed and the consideration of relevant EU Directives/Regulations shall result in a review of published standards.
- Differences between global legislation, European legislation and practice would make it very difficult to achieve common standards in a short time frame, but harmonization of existing ISO and CEN standards remains a long-term goal.
- The mandates of the European Commission entrusted to CEN/CCMC have a significant impact on the work and the work program of the CEN/TC 109. This is particularly the case with the open mandate relative to the Gas Appliances Directive/Regulation and the mandates M/534 and M/535 on Ecodesign and Energy Labelling.