

Gas Supply Systems — Pipelines for maximum operating pressure up to and including 16 bar —

Part 1: General functional recommendations

The European Standard EN 12007-1:2000 has the status of a
British Standard

ICS 75.200

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National foreword

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The UK participation in its preparation was entrusted by Technical Committee GSE/33, Gas supply, to Subcommittee GSE/33/2, Gas supply — distribution, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 19 and a back cover.

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pression maximale de service inférieure ou égale à 16 bar -
Partie 1: Recommandations fonctionnelles générales

Gasversorgungssysteme - Rohrleitungen mit einem
maximal zulässigen Betriebsdruck bis einschließlich 16 bar
- Teil 1: Allgemeine funktionale Empfehlungen

This European Standard was approved by CEN on 9 April 1999.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 234, 'Gas supply', the Secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by July 2000, and conflicting national standards shall be withdrawn at the latest by July 2000.

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

There is a complete suite of functional standards prepared by CEN/TC 234, 'Gas Supply' to cover all parts of the gas supply system from the input of gas to the transmission system up to the inlet connection of the gas appliances, whether for domestic, commercial or industrial purposes.

In preparing this standard a basic understanding of gas supply by the user has been assumed.

Gas supply systems are complex and the importance on safety of their construction and use has led to the development of very detailed codes of practice and operating manuals in the member countries. These detailed statements embrace recognized standards of gas engineering and the specific requirements imposed by the legal structures of the member countries.

1 Scope

This European Standard describes the general functional recommendations for pipelines up to the point of delivery, and also for buried sections of pipework after the point of delivery, for maximum operating pressures up to and including 16 bar for gaseous fuels in accordance with table 1 of EN 437:1993. It applies to their design, construction, commissioning, decommissioning, operation, maintenance, renovation, extension and other associated works.

This European Standard does not apply to the materials, design, construction, testing and commissioning of gas supply systems in use prior to the publication of this standard. However, this European Standard does apply to the operation, maintenance, renovation and extension of all gas supply systems.

Specific functional recommendations for polyethylene pipelines are given in EN 12007-2, for steel pipelines in EN 12007-3 and for the renovation of pipelines in EN 12007-4. Functional recommendations for pipework for buildings are given in EN 1775.

Functional requirements for pressure testing, commissioning and decommissioning are given in EN 12327.

Functional requirements for measuring systems are given in EN 1776.

Functional requirements for pressure regulating stations are given in EN 12186. Functional requirements for pressure regulating installations are given in EN 12279.

Functional requirements for gas transmission are given in EN 1594.

This European Standard specifies common basic principles for gas supply systems. Users of this European Standard should be aware that more detailed national standards and/or codes of practice can exist in the CEN member countries.

This European Standard is intended to be applied in association with these national standards and/or codes of practice setting out the above mentioned basic principles.

2 Normative references

This European Standard incorporates by dated or undated references, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 437: 1993	Test gases - Test pressures - Appliance categories.
EN 1594	Gas supply systems - Pipelines for maximum operating pressure over 16 bar - Functional requirements
EN 1775	Gas supply - Gas pipework for buildings - Maximum operating pressure ≤ 5 bar - Functional recommendations
EN 1776	Gas supply - Natural gas measuring stations - Functional requirements
EN 12007-2	Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 2: Specific functional recommendations for polyethylene (MOP up to and including 10 bar)
EN 12007-3	Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 3: Specific functional recommendations for steel
EN 12007-4	Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 4: Specific functional recommendations for renovation
EN 12186	Gas supply systems - Gas pressure regulating stations for transmission and distribution

EN 12279 Gas supply systems - Gas pressure regulating installations for service lines

EN 12327 Gas supply systems - Pressure testing, commissioning and decommissioning procedures - Functional requirements

3 Definitions and abbreviations

For the purposes of this standard, the following definitions and abbreviations apply:

3.1 gas supply system: The pipeline systems including pipework and their associated stations or plants for the transmission and distribution of gas.

3.2 pipeline: A system of pipework with all associated equipment and stations up to the point of delivery. This pipework is mainly below ground but includes also above ground parts.

3.3 pipeline components: The elements from which the pipeline is constructed. The following are distinct pipeline elements:

- pipes, including cold formed bends;

- fittings;

EXAMPLE 1: Reducers, tees, factory-made elbows and bends, flanges, caps, welding stubs, mechanical joints

- ancillaries;

EXAMPLE 2: Valves, expansion joints, insulating joints, pressure regulators, pumps, compressors

- pressure vessels.

3.4 main: A pipework in a gas supply system to which service lines are connected.

3.5 service line: The pipework from the main to the point of delivery of the gas into the installation pipework.

3.6 installation pipework: The pipework downstream of the point of delivery terminating at the appliance inlet connection.

NOTE: This pipework is normally the property of the customer.

3.7 point of delivery: The point of transfer of ownership of gas from the supplier to the customer.

NOTE: This can be at a means of isolation or at the meter outlet connection.

3.8 competent authority: A body authorized by the member country to ensure that the pipeline operator fulfils the requirements of this and other relevant standards.

3.9 pipeline operator: The private or public organization authorized to design, construct and or operate and maintain the gas supply system.

3.10 competent person: A person who is trained, experienced and approved to perform activities relating to gas supply systems.

NOTE: Means of approval, if any, will be determined within each member country.

3.11 gas: A gaseous fuel which is in gaseous state at a temperature of 15 °C under atmospheric pressure (1,013 25 bar absolute).

3.12 pressure: The gauge pressure of the fluid inside the system, measured in static conditions.

3.13 design pressure (DP): The pressure on which design calculations are based.