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STN	**Bioplynové systémy Nedomáce a nesplyňovacie stanice (ISO 24252: 2021)**	**STN EN ISO 24252 38 6704**

Biogas systems - Non-household and non-gasification (ISO 24252:2021)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/22

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EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN ISO 24252

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English Version

Biogas systems - Non-household and non-gasification (ISO 24252:2021)

Installations de méthanisation - Non domestique et sans gazéification (ISO 24252:2021)

Biogasanlagen - Nicht häusliche und nicht auf Vergasung beruhende Anlagen (ISO 24252:2021)

This European Standard was approved by CEN on 5 September 2022.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

The text of ISO 24252:2021 has been prepared by Technical Committee ISO/TC 255 "Biogas" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 24252:2022 by Technical Committee CEN/TC 408 "Natural gas and biomethane for use in transport and biomethane for injection in the natural gas grid" 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of an identical text or by endorsement, at the latest by March 2023, and conflicting national standards shall be withdrawn at the latest by March 2023.

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

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association.

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Endorsement notice

The text of ISO 24252:2021 has been approved by CEN as EN ISO 24252:2022 without any modification.

INTERNATIONAL STANDARD

ISO 24252

First edition
2021-11

Biogas systems — Non-household and non-gasification

Installations de méthanisation — Non domestique et sans gazéification

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 255, *Biogas*.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 General

The technical committee on biogas (ISO/TC 255) was established in 2011 in order to:

— provide liberalization and facilitation for international trade of biogas systems;

— contribute to international co-operation on technical regulations, standards and assessment procedures;

— curb discriminatory technical requirements as the main form of trade protectionism; and

— reduce and eliminate the technical barriers for international trade of biogas systems.

This document about biogas systems is applicable for biogas production by anaerobic digestion, biogas conditioning, biogas upgrading and biogas utilization. The main purpose of this document is the safe operation of biogas systems without damaging the environment.

The availability of a standard for biogas systems is necessary in order to:

— ensure that biogas systems are built, operated and maintained safely;

— facilitate development of regional and national regulations and incentive programs to regulate methane emissions;

— moderate communication between the different biogas parties through meaningful discussions;

— contribute to reinforcement of biogas flares' safety and business competitiveness with recognized terms and definitions that clarify actors' expectations related to procurement, contracts and services as well as reporting on biogas related action plans, road maps, etc.; and

— contribute to the use of standards by facilitating their development and furthering users' understanding and application of standards.

ISO/TC 255 intends to promote international technology exchange and to accelerate international application of biogas (products) and equipment by developing and maintaining globally harmonized standards. For the avoidance of doubt, it is noted that national legislation may apply which may deviate from or may be additional to the contents of this document.

0.2 Description of the applied technologies

Biogas systems are amongst others applied at industrial plants like food and beverage industries, waste water treatment plants, waste plants, landfill sites, and small-scale plants next to agricultural companies.

Biogas is produced by anaerobic digestion of organic matter.

Biogas mainly comprises methane, carbon dioxide, nitrogen, oxygen, hydrogen sulphide and/or water and furthermore could contain hydrogen, carbon monoxide, heavier hydrocarbons (including aromatic hydrocarbons), siloxanes and/or other substances.

Biogas can be treated in order to eliminate hydrogen sulphide, siloxanes, water and other substances and be upgraded to a gas with higher methane content. Sometimes the biogas is pressurized.

A description of the most common technologies used in biogas systems is included in Annex B.

Guidelines to prevent risks from gasses and explosive atmospheres in buildings are included in Annex C.

INTERNATIONAL STANDARD **ISO 24252:2021(E)**

Biogas systems — Non-household and non-gasification

1 Scope

This document applies for systems for biogas production by anaerobic digestion, biogas conditioning, biogas upgrading and biogas utilization from a safety, environmental, performance and functionality perspective, during the design, manufacturing, installation, construction, testing, commissioning, acceptance, operation, regular inspection and maintenance phases.

The following topics are excluded from this document:

— boilers, burners, furnaces and lighting in case these are not specifically applied for locally produced biogas;

— gas fuelled engines for vehicles and ships;

— the public gas grid;

— specifications to determine biomethane quality;

— transportation of compressed or liquefied biogas;

— transportation of biomass or digestate;

— assessment and determination whether biomass is sourced sustainably or not.

An informative explanation of the scope is included in Annex A.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 20675, *Biogas — Biogas production, conditioning, upgrading and utilization — Terms, definitions and classification scheme*

ISO 22580, *Flares for combustion of biogas*

IEC 60079-10-1, *Explosive atmospheres — Part 10-1: Classification of areas — Explosive gas atmospheres*

IEC 62305-2, *Protection against lightning — Part 2: Risk management*