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Natural gas - Energy determination (ISO 15112:2018)

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

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**Natural gas - Energy determination (ISO 15112:2018)**

Gaz naturel - Détermination de l'énergie (ISO  
15112:2018)

This European Standard was approved by CEN on 27 October 2018.

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**EN ISO 15112:2018 (E)**

<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>

## **European foreword**

This document (EN ISO 15112:2018) has been prepared by Technical Committee ISO/TC 193 "Natural gas" in collaboration with Technical Committee CEN/TC 238 "Test gases, test pressures, appliance categories and gas appliance types" 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of an identical text or by endorsement, at the latest by June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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.

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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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **Endorsement notice**

The text of ISO 15112:2018 has been approved by CEN as EN ISO 15112:2018 without any modification.

# INTERNATIONAL STANDARD

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## Natural gas — Energy determination

*Gaz naturel — Détermination de l'énergie*



Reference number  
ISO 15112:2018(E)

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# Contents

Page

<b>Foreword</b>	<b>v</b>
<b>Introduction</b>	<b>vi</b>
<b>1 Scope</b>	<b>1</b>
<b>2 Normative references</b>	<b>1</b>
<b>3 Terms and definitions</b>	<b>1</b>
<b>4 Symbols and units</b>	<b>6</b>
<b>5 General Principles</b>	<b>7</b>
<b>6 Gas measurement</b>	<b>8</b>
6.1 General	8
6.2 Volume measurement	9
6.3 Calorific value measurement	9
6.3.1 Measurement techniques and sampling	9
6.3.2 Direct measurement — Calorimetry	10
6.3.3 Inferential measurement	10
6.3.4 Correlation techniques	10
6.3.5 Pressure and temperature	10
6.3.6 Gas quality tracking	10
6.4 Volume conversion	10
6.4.1 General	10
6.4.2 Density	11
6.4.3 Compression factor	11
6.5 Calibration	11
6.6 Data storage and transmission	11
<b>7 Energy determination</b>	<b>12</b>
7.1 Interfaces	12
7.2 Methods of energy determination	14
7.2.1 Direct determination of energy	14
7.2.2 Indirect determination of energy	14
<b>8 Strategy and procedures</b>	<b>16</b>
8.1 General	16
8.2 Strategies for energy determination	17
8.2.1 Strategies for single interfaces	18
8.3 Plausibility checks	22
<b>9 Assignment methods</b>	<b>23</b>
9.1 Fixed assignment	23
9.1.1 Fixed assignment of a measured calorific value	23
9.1.2 Fixed assignment of a declared calorific value	24
9.2 Variable assignment	25
9.2.1 Input at two or more different stations with zero floating point	25
9.2.2 Input at two or more different stations with comingled gas flows	26
9.3 Determination of the representative calorific value	27
9.3.1 Arithmetically averaged calorific value	27
9.3.2 Quantity-weighted average calorific value	27
9.3.3 Gas quality tracking	27
<b>10 Calculation of energy quantities</b>	<b>30</b>
10.1 General formulae for energy	30
10.2 Calculation of averaged values — Calculation from average calorific values and cumulative volumes	31
10.2.1 Arithmetic average of the calorific value	31
10.2.2 Quantity-weighted average of the calorific value	32

**ISO 15112:2018(E)**

10.3	Volume and volume-to-mass conversions.....	32
10.4	Energy determination on the basis of declared calorific values .....	32
<b>11</b>	<b>Accuracy on calculated energy.....</b>	<b>32</b>
11.1	Accuracy.....	32
11.2	Calculation of uncertainty .....	33
11.3	Bias.....	34
<b>12</b>	<b>Quality control and quality assurance.....</b>	<b>35</b>
12.1	General.....	35
12.2	Check of the course of the measuring data.....	35
12.3	Traceability .....	36
12.4	Substitute values .....	36
<b>Annex A (informative) Main instruments and energy-determination techniques.....</b>		<b>38</b>
<b>Annex B (informative) Different possible patterns in the change of the calorific value.....</b>		<b>42</b>
<b>Annex C (informative) Volume conversion and volume-to-mass conversion.....</b>		<b>45</b>
<b>Annex D (informative) Incremental energy determination .....</b>		<b>46</b>
<b>Annex E (informative) Practical examples for volume conversion and energy quantity calculation.....</b>		<b>48</b>
<b>Annex F (informative) Practical examples for averaging the calorific value due to different delivery situations.....</b>		<b>52</b>
<b>Annex G (informative) Ways of determining substitute values .....</b>		<b>57</b>
<b>Annex H (informative) Plausibility check graphical example.....</b>		<b>59</b>
<b>Annex I (informative) Uncorrected data, bias correction and final result graphical example.....</b>		<b>60</b>
<b>Annex J (informative) Single-reservoir calorific value determination .....</b>		<b>62</b>
<b>Annex K (informative) .....</b>		<b>64</b>
<b>Bibliography .....</b>		<b>70</b>



## 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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 193, *Natural gas*.

This third edition cancels and replaces the second edition (ISO 15112:2011), which has been technically revised.

The main changes compared to the previous edition are as follows:

- [Figures 7](#) and [8](#) have been redrafted;
- [Clause 9](#) has been updated;
- [Annex K](#) has been added.

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](http://www.iso.org/members.html).

**ISO 15112:2018(E)****Introduction**

Since the early 1800s, it has been general practice for manufactured gas and, subsequently, natural gas to be bought and sold on a volumetric basis. Much time and effort has therefore been devoted to developing the means of flow measurement.

Because of the increasing value of energy and variations in gas quality, billing on the basis of thermal energy has now become essential between contracting partners and the need to determine calorific value by measurement or calculation has led to a number of techniques. However, the manner in which calorific value data are applied to flow volume data to produce the energy content of a given volume of natural gas has been far from a standardized procedure.

Energy determination is frequently a necessary factor wherever and whenever natural gas is metered, from production and processing operations through to end-user consumption. This document has been developed to cover aspects related to production/transmission and distribution/end user. It provides guidance to users of how energy units for billing purposes are derived, based on either measurement or calculation or both, to increase confidence in results for contracting partners.

Other standards relating to natural gas, flow measurement, calorific value measurement, calculation procedures and data handling with regard to gas production, transmission and distribution involving purchase, sales or commodity transfer of natural gas can be relevant to this document.

This document contains eleven informative annexes.

# Natural gas — Energy determination

## 1 Scope

This document provides the means for energy determination of natural gas by measurement or by calculation, and describes the related techniques and measures that are necessary to take. The calculation of thermal energy is based on the separate measurement of the quantity, either by mass or by volume, of gas transferred and its measured or calculated calorific value. The general means of calculating uncertainties are also given.

Only systems currently in use are described.

**NOTE** Use of such systems in commercial or official trade can require the approval of national authorization agencies, and compliance with legal regulations is required.

This document applies to any gas-measuring station from domestic to very large high-pressure transmission.

New techniques are not excluded, provided their proven performance is equivalent to, or better than, that of those techniques referred to in this document.

Gas-measuring systems are not the subject of this document.

## 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 6976, *Natural gas — Calculation of calorific values, density, relative density and Wobbe index from composition*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**