

**Natural gas - Calculation of compression factor - Part 2:
Calculation using molar-composition analysis**

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 12213-2:2009 sisaldab Euroopa standardi EN ISO 12213-2:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.10.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 09.09.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

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This standard is ratified with the order of Estonian Centre for Standardisation dated 30.10.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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English Version

**Natural gas - Calculation of compression factor - Part 2:
Calculation using molar-composition analysis (ISO 12213-
2:2006)**

Gaz naturel - Calcul du facteur de compression - Partie 2:
Calcul à partir de l'analyse de la composition molaire (ISO
12213-2:2006)

Erdgas - Berechnung von Realgasfaktoren - Teil 2:
Berechnungen basierend auf einer molaren Gasanalyse als
Einganggröße (ISO 12213-2:2006)

This European Standard was approved by CEN on 13 August 2009.

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Foreword

The text of ISO 12213-2:2006 has been prepared by Technical Committee ISO/TC 193 "Natural gas" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 12213-2:2009.

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of an identical text or by endorsement, at the latest by March 2010, and conflicting national standards shall be withdrawn at the latest by March 2010.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

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Endorsement notice

The text of ISO 12213-2:2006 has been approved by CEN as a EN ISO 12213-2:2009 without any modification.

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Natural gas — Calculation of compression factor —

Part 2: Calculation using molar-composition analysis

1 Scope

ISO 12213 specifies methods for the calculation of compression factors of natural gases, natural gases containing a synthetic admixture and similar mixtures at conditions under which the mixture can exist only as a gas.

This part of ISO 12213 specifies a method for the calculation of compression factors when the detailed composition of the gas by mole fractions is known, together with the relevant pressures and temperatures.

The method is applicable to pipeline quality gases within the ranges of pressure p and temperature T at which transmission and distribution operations normally take place, with an uncertainty of about $\pm 0,1\%$. It can be applied, with greater uncertainty, to wider ranges of gas composition, pressure and temperature (see Annex E).

More detail concerning the scope and field of application of the method is given in ISO 12213-1.

2 Normative references

The following referenced documents are indispensable for the application 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*

ISO 12213-1, *Natural gas — Calculation of compression factor — Part 1: Introduction and guidelines*

ISO 80000-4, *Quantities and units — Part 4: Mechanics*

ISO 80000-5, *Quantities and units — Part 5: Thermodynamics*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12213-1 apply.