Võnkumispõhised tihedusmõõturid. Osa 2: Protsessi mõõtevahendid homogeensetele vedelikele

Oscillation-type density meters - Part 2: Process instruments for homogeneous liquids

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 15212-2:2007 sisaldab Euroopa standardi EN ISO 15212-2:2002+AC:2009 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 15212-2:2007 consists of the English text of the European standard EN ISO 15212-2:2002+AC:2009.
Standard on kinnitatud Eesti Standardikeskuse 06.08.2002 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 06.08.2002 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 01.03.2002.	Date of Availability of the European standard text 01.03.2002.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

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English version

Oscillation-type density meters

Part 2: Process instruments for homogeneous liquids
(ISO 15212-2 : 2002)

Densimètres à oscillation – Partie 2: Instruments industriels pour liquides homogènes (ISO 15212-2 : 2002)

Dichtemessgeräte nach dem Schwingerprinzip – Teil 2: Prozessgeräte für homogene Flüssigkeiten (ISO 15212-2 : 2002)

This European Standard was approved by CEN on 2002-03-01.

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 Management Centre or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

International Standard

ISO 15212-2 : 2002 Oscillation-type density meters – Part 2: Process instruments for homogeneous liquids, which was prepared by ISO/TC 48 'Laboratory glassware and related apparatus' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 332 'Laboratory equipment', the Secretariat of which is held by DIN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by September 2002 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 15212-2 : 2002 was approved by CEN as a European Standard without any modification.

Contents

Introduction

Density values of pure water at different temperatures and information on how to calculate the density values at different pressures can be found in ISO 15212-1:1998, annex A.

1 Scope

This part of ISO 15212 specifies metrological requirements, among others, for oscillation-type density meters as well as for functional units (see 4.2) of oscillation-type density meters, which are used in process for all kinds of homogeneous liquids. This includes liquified gases. Instructions and methods for installation, preadjustment, adjustment and calibration of process instruments are also given. The instruments are either integral systems or functional units, which can be combined into an integral measuring system.

This part of ISO 15212 does not describe the method of use of process density meters for particular applications or products, e.g. petroleum products or beverages. Such methods of use can be defined by relevant institutions such as ISO or responsible Government agencies.

This part of ISO 15212 does not define an instrument specification for any particular application. For this information reference should be made to the relevant standard covering the method of use.

This part of ISO 15212 is addressed to manufacturers of density meters and to bodies, testing and certifying the conformity of density meters. This part of ISO 15212 also gives recommendations for adjustment and calibration of process density meters.

Oscillation-type density meters used in laboratories are addressed in ISO 15212-1.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 15212. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 15212 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 15212-1:1998, *Oscillation-type density meters — Part 1: Laboratory instruments*

IEC 61010-1, *Safety requirements for electrical equipment for measurement, control and laboratory use — Part 1: General requirements*

IEC 61326-1, *Electrical equipment for measurement, control and laboratory use — EMC requirements*

Guide to the Expression of Uncertainty in Measurement (GUM). BIPM, IEC, IFCC, ISO, IUPAC, IUPAP, OIML