LEKKE AVASTAMISE SÜSTEEMID. OSA 4: NÕUDED JA KATSE-/HINDAMISMEETODID SENSORIPÕHISTELE LEKKE AVASTAMISE SÜSTEEMIDELE

Leak detection systems - Part 4: Requirements and test/assessment methods for sensor based leak detection systems

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13160-4:2016 sisaldab Euroopa standardi EN 13160-4:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 13160-4:2016 consists of the English text of the European standard EN 13160-4:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.07.2016.	Date of Availability of the European standard is 06.07.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 23.020.01, 23.040.99, 29.260.20

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13160-4

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Supersedes EN 13160-4:2003

English Version

Leak detection systems - Part 4: Requirements and test/assessment methods for sensor based leak detection systems

Systèmes de détection de fuites - Partie 4: Exigences et méthodes d'essai/d'évaluation des systèmes de détection de fuites par capteur

Leckanzeigesysteme - Teil 4: Anforderungen und Prüf-/Bewertungsverfahren für sensorbasierte Leckanzeigesysteme

This European Standard was approved by CEN on 8 April 2016.

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This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
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Contents

European foreword

This document (EN 13160-4:2016) has been prepared by Technical Committee CEN/TC 393 “Equipment for tanks and filling stations”, 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 January 2017, and conflicting national standards shall be withdrawn at the latest by April 2018.

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.

This document supersedes EN 13160-4:2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to edition 2003 the following fundamental changes are given:

— requirements from EN 13160-1:2003 included, which are no longer contained in EN 13160-1:2016;

— new structure — requirements, testing, marking divided;

— new test procedure for vapour sensors and reusability of vapour sensors;

— test liquids revised.

This European Standard *Leak detection systems* consists of 7 parts:

— *Part 1: General principles*

— *Part 2: Requirements and test/assessment methods for pressure and vacuum systems*

— *Part 3: Requirements and test/assessment methods for liquid systems for tanks*

— *Part 4: Requirements and test/assessment methods for sensor based leak detection systems*

— *Part 5: Requirements and test/assessment methods for in-tank gauge systems and pressurized pipe work systems*

— *Part 6: Sensors in monitoring wells*

— *Part 7: Requirements and test/assessment methods for leak detection linings*

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard gives requirements and the corresponding test/assessment methods applicable to sensor based leak detection systems (leak detection kits). The leak detection kits are intended to be used in interstitial spaces, leakage containments or monitoring wells. The leak detection kits are usually composed by:

— sensing device(s);

— evaluation device;

— alarm device.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 228, *Automotive fuels — Unleaded petrol — Requirements and test methods*

EN 12285-1, *Workshop fabricated steel tanks — Part 1: Horizontal cylindrical single skin and double skin tanks for the underground storage of flammable and non-flammable water polluting liquids*

EN 13160-1:2016, *Leak detection systems — Part 1: General principles*

EN 13160-3:2016, *Leak detection systems — Part 3: Requirements and test/assessment methods for liquid systems for tanks*

EN 14879-4:2007, *Organic coating systems and linings for protection of industrial apparatus and plants against corrosion caused by aggressive media — Part 4: Linings on metallic components*

EN 60079-29-1, *Explosive atmospheres — Part 29-1: Gas detectors — Performance requirements of detectors for flammable gases (IEC 60079-29-1)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13160-1:2016 and the following apply.

3.1
re-usability of the sensor
capability of a sensor to be used again after already detected liquid or vapour

4 Requirements

4.1 Effectiveness

4.1.1 General

This type of leak detection kit is classified according to EN 13160-1:2016 as class III.