

**Non-destructive testing - Leak test -
Guide to the selection of
instrumentation for the measurement of
gas leakage**

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selection of instrumentation for the measurement of
gas leakage

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13625:2002 sisaldab Euroopa standardi EN 13625:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.06.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13625:2002 consists of the English text of the European standard EN 13625:2001.</p> <p>This document is endorsed on 19.06.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies criteria for the selection of equipment for the leak detection methods described in EN 1779. The minimum requirements for the performance of the instruments used are also given as a guideline for personnel involved in testing.</p>	<p>Scope: This European Standard specifies criteria for the selection of equipment for the leak detection methods described in EN 1779. The minimum requirements for the performance of the instruments used are also given as a guideline for personnel involved in testing.</p>
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ICS 19.100

Võtmesõnad: device list, inspection, leak testing, leak tests, leakage, leaks, materials testing, methods, non-destructive testing, nondestructive tests, reference methods, selection, selection support, test equipment, test gases, testing, tightness

ICS 19.100

English version

Non-destructive testing - Leak test - Guide to the selection of instrumentation for the measurement of gas leakage

Essais non destructifs - Contrôle d'étanchéité - Guide pour la sélection des instruments utilisés pour le mesurage des fuites gazeuses

Zerstörungsfreie Prüfung - Dichtheitsprüfung - Anleitung zur Auswahl von Geräten zur Messung von Gasleckagen

This European Standard was approved by CEN on 5 October 2001.

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.

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 Management Centre has the same status as the official versions.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 138 "Non-destructive testing", 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 2002, and conflicting national standards shall be withdrawn at the latest by June 2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies criteria for the selection of equipment for the leak detection methods described in EN 1779. The minimum requirements for the performance of the instruments used are also given as a guideline for personnel involved in testing. The definite selection of an instrument for a given test is within the responsibility of a qualified operator (at minimum level 2 qualification – see EN 473).

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1330-8, *Non-destructive testing – Terminology – Part 8: Terms used in leak tightness testing.*

EN 1779:1999, *Non-destructive testing – Leak testing – Criteria for method and technique selection.*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 1330-8 apply.

In this document the methods and techniques are referred to the annex A of the EN 1779:1999.

4 Tracer gas method - Group A techniques (gas flowing into object)

4.1 Equipment and Material required for all group A techniques

4.1.1 Leak detector

In this type of test, a leak detector (LD) of the mass spectrometer type (MSLD) according to the minimum requirements of Table 1 is used.

4.1.2 Calibration leaks

At least one calibration leak for discharge to vacuum or against atmospheric pressure shall be used. These are used for the direct calibration of the MSLD (if a built-in calibration leak does not exist) or for system calibration (response time, sensitivity). If required, standard leaks shall be used. See Table 2.

4.1.3 Auxiliary pumping system

An auxiliary pumping system should be used if:

- the object volume or desorption gas load are too large for the built-in pumps of the MSLD;
- the leakage rate to be measured is too large for the measurement range of the MSLD.

The auxiliary vacuum pumping system shall comply with the minimum requirements of Table 4.