Gas cylinders - Cylinder bundles - Design, manufacture, testing and inspection (ISO 10961:2010)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 10961:2012 sisaldab Euroopa standardi EN ISO 10961:2012 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 10961:2012 consists of the English text of the European standard EN ISO 10961:2012.
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 04.04.2012.	Date of Availability of the European standard is 04.04.2012.
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.

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EUROPEAN STANDARD

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English Version

Gas cylinders - Cylinder bundles - Design, manufacture, testing and inspection (ISO 10961:2010)

Bouteilles à gaz - Cadres de bouteilles - Conception, fabrication, essais et inspection (ISO 10961:2010)

Gasflaschen - Flaschenbündel - Auslegung, Herstellung, Prüfung und Inspektion (ISO 10961:2010)

This European Standard was approved by CEN on 9 March 2012.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN ISO 10961:2012: E

Foreword

The text of ISO 10961:2010 has been prepared by Technical Committee ISO/TC 58 “Gas cylinders” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10961:2012 by Technical Committee CEN/TC 23 “Transportable gas cylinders” the secretariat of which is held by BSI.

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 October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

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 13769:2003.

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, 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.

Endorsement notice

The text of ISO 10961:2010 has been approved by CEN as a EN ISO 10961:2012 without any modification.

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Introduction

For some applications, the contents of an individual gas cylinder may not satisfy the gas demand, in which case assemblies of cylinders can be used to supply larger volumes of gas in a single unit. The single unit, which contains a number of cylinders, is known as a cylinder bundle.

A cylinder bundle is a portable assembly which is designed to be routinely lifted and which consists of a frame and two or more cylinders connected to a manifold by cylinder valves or fittings so that the cylinders can be filled, transported and emptied without disassembly.

A cylinder bundle can be subjected to rough handling in the course of normal operations.

There are types of gas cylinder assemblies which use cylinder bundle components, but which are designed to be disassembled at each filling to enable the cylinders to be filled individually. Although these assemblies do not conform to the basic definition of a cylinder bundle, they are commonly referred to as bundles. Their special requirements are included in Annex A.

Acetylene cylinder bundles are often filled without disassembly. However, in order to confirm their solvent content, they are disassembled after a defined number of fillings.

In International Standards, weight is equivalent to a force, expressed in newtons. However, in common parlance (as used in terms defined in this International Standard), the word “weight” continues to be used to mean “mass”, even though this practice is deprecated (see ISO 80000-4).

Gas cylinders — Cylinder bundles — Design, manufacture, testing and inspection

1 Scope

This International Standard specifies the requirements for the design, construction, testing and initial inspection of a transportable cylinder bundle. It is applicable to cylinder bundles containing compressed gas, liquefied gas and mixtures thereof. It is also applicable to cylinder bundles for acetylene.

This International Standard does not apply to packages in which cylinders are manifolded together in a support frame which is designed to be fixed permanently to a road vehicle, to a railway wagon or to the ground as a customer storage vessel. It does not apply to cylinder bundles which are designed for use in extreme environmental or operational conditions when additional and extraordinary requirements are imposed to maintain safety standards, reliability and performance, e.g. offshore cylinder bundles.

Some special applications (e.g. electronics) require an alternative design approach. With the agreement of the inspection body, the manifold and its piping components may be designed and tested at a pressure which is appropriate to the service conditions.

Specific requirements for acetylene cylinder bundles containing acetylene in a solvent are included in Annex B. This International Standard does not, however, cover acetylene cylinder bundles with solvent-free acetylene cylinders.

This International Standard is intended primarily for industrial gases other than liquefied petroleum gases (LPGs), but it may also be used for LPGs.

Unless otherwise stated, individual cylinders within cylinder bundles will have to conform to applicable standards for single cylinders. This International Standard specifies the additional requirements that apply when individual cylinders are assembled into a bundle.

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 7225, *Gas cylinders — Precautionary labels*

ISO 10297, *Transportable gas cylinders — Cylinder valves — Specification and type testing*

ISO 13769, *Gas cylinders — Stamp marking*

ISO 14113, *Gas welding equipment — Rubber and plastics hose and hose assemblies for use with industrial gases up to 450 bar (45 MPa)*