

**Gas cylinders - Refillable seamless steel tubes for compressed gas transport, of water capacity between 150 l and 3000 l - Design, construction and testing**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 11120:2001 sisaldab Euroopa standardi EN ISO 11120:1999 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 11120:2001 consists of the English text of the European standard EN ISO 11120:1999.</p> <p>This document is endorsed on 18.06.2001 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><b>Käsitlusala:</b></p> <p>The purpose of this standard is to provide a specification for the design, construction, inspection and approval of seamless quenched and tempered steel containers intended for the transportation and distribution of compressed gases.</p>	<p><b>Scope:</b></p> <p>The purpose of this standard is to provide a specification for the design, construction, inspection and approval of seamless quenched and tempered steel containers intended for the transportation and distribution of compressed gases.</p>
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ICS 23.020.30

Võtmesõnad:

ICS 23.20.30

English version

Gas cylinders

Refillable seamless steel tubes of water capacity  
between 150 l and 3 000 l

Design, construction and testing  
(ISO 11120 : 1999)

Bouteilles à gaz – Tubes en acier  
sans soudure rechargeables d'une  
contenance en eau de 150 l à  
3 000 l – Conception, construction et  
essais (ISO 11120 : 1999)

Ortsbewegliche Gasflaschen – Naht-  
lose wiederbefüllbare Großflaschen  
aus Stahl mit einem Fassungsraum  
zwischen 150 l und 3 000 l – Gestal-  
tung, Konstruktion und Prüfung  
(ISO 11120 : 1999)

This European Standard was approved by CEN on 1999-02-20.

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 Central Secretariat 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 Central Secretariat 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, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

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

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**

# Foreword

International Standard  
ISO 11120 : 1999 Gas cylinders – Refillable seamless steel tubes of water capacity between 150 l and 3 000 l – Design, construction and testing,  
which was prepared by ISO/TC 58 ‘Gas cylinders’ of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 23 ‘Transportable gas cylinders’, the Secretariat of which is held by BSI, 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 1999 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, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

# Endorsement notice

The text of the International Standard ISO 11120 : 1999 was approved by CEN as a European Standard without any modification.  
NOTE: Normative references to international publications are listed in Annex ZA (normative).

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## Introduction

The purpose of this International Standard is to provide a specification for the design, manufacture, inspection and testing of tubes for worldwide usage. The objective is to balance design and economic efficiency against international acceptance and universal utility.

This International Standard aims to eliminate concern about climate, duplicate inspections and restrictions currently existing because of lack of definitive International Standards. This International Standard should not be construed as reflecting on the suitability of the practice of any nation or region.

## 1 Scope

This International Standard specifies minimum requirements for the material, design, construction and workmanship, manufacturing processes and tests at manufacture of refillable quenched and tempered seamless steel tubes of water capacities from 150 l up to and including 3 000 l for compressed and liquefied gases exposed to extreme world-wide ambient temperatures (normally between  $-50\text{ }^{\circ}\text{C}$  and  $+65\text{ }^{\circ}\text{C}$ ). This International Standard is applicable to tubes with a maximum tensile strength  $R_m$  of less than 1 100 MPa.

These tubes can be used alone or in batteries to equip trailers or skids (ISO modules) for the transportation and distribution of compressed gases.

This International Standard does not include consideration of any additional stresses that may occur during service or transport, e.g. bending stresses, etc.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard 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 148<sup>1)</sup>, *Steel — Charpy impact test (V-notch)*.

ISO 6506<sup>2)</sup>, *Metallic materials — Hardness test — Brinell test*.

ISO 6892, *Metallic materials — Tensile testing at ambient temperature*.

ISO 11114-1, *Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 1: Metallic materials*.

ISO 11484, *Steel tubes for pressure purposes — Qualification and certification of non-destructive testing (NDT) personnel*.

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<sup>1)</sup> To be replaced by ISO 148-1, ISO 148-2 and ISO 148-3.

<sup>2)</sup> To be replaced by ISO 6506-1, ISO 6506-2 and ISO 6506-3.