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Transportable liquid oxygen systems for medical use -  
Part 2: Particular requirements for portable units  
(ISO 18777-2:2025)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN ISO 18777-2:2025 sisaldab Euroopa standardi EN ISO 18777-2:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 26.11.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN ISO 18777-2:2025 consists of the English text of the European standard EN ISO 18777-2:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 26.11.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

EN ISO 18777-2

NORME EUROPÉENNE

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Supersedes EN ISO 18777:2009

English Version

## Transportable liquid oxygen systems for medical use - Part 2: Particular requirements for portable units (ISO 18777-2:2025)

Systèmes transportables d'oxygène liquide à usage médical - Partie 2: Exigences particulières s'appliquant aux unités portables (ISO 18777-2:2025)

Flüssigsauerstoffsysteme für medizinische Anwendungen - Teil 2: Besondere Anforderungen für tragbare Einheiten (ISO 18777-2:2025)

This European Standard was approved by CEN on 22 November 2025.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

## European foreword

This document (EN ISO 18777-2:2025) has been prepared by Technical Committee ISO/TC 121 "Anaesthetic and respiratory equipment" in collaboration with Technical Committee CEN/TC 215 "Respiratory and anaesthetic equipment" 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of an identical text or by endorsement, at the latest by May 2026, and conflicting national standards shall be withdrawn at the latest by May 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 18777:2009.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## Endorsement notice

The text of ISO 18777-2:2025 has been approved by CEN as EN ISO 18777-2:2025 without any modification.

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 121, *Anaesthetic and respiratory equipment*, Subcommittee SC 6, *Medical gas supply systems*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 215, *Respiratory and anaesthetic equipment*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition of ISO 18777-2 together with ISO 18777-1 cancels and replaces ISO 18777:2005, which has been technically revised.

The main changes are as follows:

- requirements that are common with *base units* refer to the applicable clauses ISO 18777-1;
- requirements for the filling port connector have been included.

A list of all parts in the ISO 18777 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Transportable liquid oxygen systems comprise a *base unit* and a *portable unit* primarily for use in home-care applications. This document specifies requirements unique to *portable units*, which provide a controlled flow of oxygen for inhalation by the patient and are refilled from the *base unit* by the patient. ISO 18777-1 specifies the common requirements and particular requirements for the *base unit*.

The *portable unit* is a lightweight device that can be carried by the patient so that they have access to oxygen around the home and when they leave the home.

NOTE Terms defined in ISO 18777-1 are delineated throughout this document in *italic font*.

In this document, the following verbal forms are used:

- “shall” indicates a requirement;
- “should” indicates a recommendation;
- “may” indicates a permission;
- “can” is used to describe a possibility or capability.

# Transportable liquid oxygen systems for medical use —

## Part 2: Particular requirements for portable units

### 1 Scope

This document specifies particular requirements for *portable units* which are part of a transportable liquid oxygen system and used to provide a controlled flow of oxygen for inhalation by the patient in the home-care environment.

*Portable units* are intended to be used without professional supervision, carried by patients while moving around and during their off-site activities and refilled from a *base unit* via a *transfilling device* through the *portable unit's* filling port connector.

NOTE Requirements that are common to both *portable units* and *base units* are specified in ISO 18777-1.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 18777-1:2026, *Transportable liquid oxygen systems for medical use: Part 1 — Common requirements and particular requirements for base units*

ISO 80601-2-67, *Medical electrical equipment — Part 2-67: Particular requirements for basic safety and essential performance of oxygen-conserving equipment*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18777-1 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 4 General requirements

The applicable requirements of ISO 18777-1:2026, Clause 4, shall apply.

### 5 Design requirements

#### 5.1 General

The applicable requirements of ISO 18777-1:2026, Clause 5, shall apply.