

**Higamisteede kaitsevahendid.  
Suruõhusüsteemiga ühendatud  
hingamisaparaadid, mis on varustatud  
koormusventiiliga. Osa 1: Poolmaskiga  
ülerõhuaparaadid. Nõuded,  
katsetamine, tähistamine**

Respiratory protective devices - Compressed air line breathing apparatus with demand valve - Part 2: Apparatus with a half mask at positive pressure - Requirements, testing, marking

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14593-2:2005 sisaldab Euroopa standardi EN 14593-2:2005 + AC:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 22.06.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14593-2:2005 consists of the English text of the European standard EN 14593-2:2005 + AC:2005.</p> <p>This document is endorsed on 22.06.2005 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> This European Standard specifies minimum requirements for compressed air line breathing apparatus with demand valve for use with a half mask at positive pressure, as a respiratory protective device. Escape and diving apparatus, apparatus for fire fighting and apparatus used in abrasive blasting operations without additional protective features are not covered by this European Standard, although certain requirements addressing the use in conjunction with escape apparatus and escape conditions are noted.</p>	<p><b>Scope:</b> This European Standard specifies minimum requirements for compressed air line breathing apparatus with demand valve for use with a half mask at positive pressure, as a respiratory protective device. Escape and diving apparatus, apparatus for fire fighting and apparatus used in abrasive blasting operations without additional protective features are not covered by this European Standard, although certain requirements addressing the use in conjunction with escape apparatus and escape conditions are noted.</p>
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**Võtmesõnad:**

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English version

## Respiratory protective devices - Compressed air line breathing apparatus with demand valve - Part 2: Apparatus with a half mask at positive pressure - Requirements, testing, marking

Appareils de protection respiratoire - Appareils de protection respiratoire isolants à adduction d'air comprimé avec soupape à la demande - Partie 2: Appareil avec demi-masque à pression positive - Exigences, essais, marquage

Atemschutzgeräte - Druckluft-Schlauchgeräte mit Lungenautomat - Teil 2: Geräte mit einer Halbmaske und Überdruck - Anforderungen, Prüfung, Kennzeichnung

This European Standard was approved by CEN on 15 March 2005.

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.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This European Standard (EN 14593-2:2005) has been prepared by Technical Committee CEN/TC 79 "Respiratory protective devices", 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 October 2005, and conflicting national standards shall be withdrawn at the latest by October 2005.

This European Standard 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 89/686/EEC.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this European Standard.

Together with EN 14593-1 and EN 14594, this European Standard supersedes EN 139:1994.

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

## Introduction

A given respiratory protective device can only be approved, when the individual components satisfy the requirements of the test specification which may be a complete standard or part of a standard and practical performance tests have been carried out successfully on complete apparatus where specified in the appropriate standard. If for any reason a complete apparatus is not tested then simulation of the apparatus is permitted provided the respiratory characteristics and weight distribution are similar to those of the complete apparatus.

## 1 Scope

This European Standard specifies minimum requirements for compressed air line breathing apparatus with demand valve for use with a half mask at positive pressure, as a respiratory protective device. Escape and diving apparatus, apparatus for fire fighting and apparatus used in abrasive blasting operations without additional protective features are not covered by this European Standard, although certain requirements addressing the use in conjunction with escape apparatus and escape conditions are noted.

Laboratory and practical performance tests are included for the assessment of conformance to the requirements.

## 2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 132:1998, *Respiratory protective devices — Definitions of terms and pictograms*

EN 134:1998, *Respiratory protective devices — Nomenclature of components*

EN 140, *Respiratory protective devices — Half masks and quarter masks — Requirements, testing, marking*

EN 148-1, *Respiratory protective devices — Threads for facepieces — Part 1: Standard thread connection*

EN 148-2, *Respiratory protective devices — Threads for facepieces — Part 2: Centre thread connection*

EN 148-3, *Respiratory protective devices — Threads for facepieces — Part 3: Thread connection M45 x 3*

EN 12021, *Respiratory protective devices — Compressed air for breathing apparatus*

EN 13274-1:2001, *Respiratory protective devices — Methods of test — Part 1: Determination of inward leakage and total inward leakage*

EN 13274-2:2001, *Respiratory protective devices — Methods of test — Part 2: Practical performance tests*

EN 13274-3, *Respiratory protective devices — Methods of test — Part 3: Determination of breathing resistance*

EN 13274-4, *Respiratory protective devices — Methods of test — Part 4: Flame tests*

EN 13274-6, *Respiratory protective devices — Methods of test — Part 6: Determination of carbon dioxide content of inhalation air*

EN ISO 8031, *Rubber and plastics hoses and hose assemblies — Determination of electrical resistance (ISO 8031:1993)*

### 3 Terms, definitions and pictograms

For the purposes of this European Standard, the terms, definitions and pictograms given in EN 132:1998 and EN 134:1998 and the following apply,

#### 3.1 compressed air line breathing apparatus with a demand valve for use with a half mask at positive pressure

apparatus, which is not self-contained, in which the wearer is supplied with breathable air from a source of compressed air at a maximum pressure of 10 bar

#### 3.2 mobile high pressure air supply system

supply system that may include a compressor, filters, compressed air pressure vessels, for use as a mobile source of breathing air

### 4 Description

This apparatus enables the wearer to be provided with breathable air, which shall be in accordance with EN 12021, which, on inhalation flows through a lung governed demand valve operating at positive pressure to a suitable facepiece, possibly via a breathing hose. A compressed air supply tube connects the wearer to supply of compressed air. Exhaled air flows into the ambient atmosphere via an exhalation valve.

NOTE Conformance to EN 12021 can be ensured by a breathable air supply system or an additional device such as a compressed air filter system.

### 5 Requirements

#### 5.1 General

Unless otherwise specified, the values stated in this European Standard are expressed as nominal values. Except for temperature limits, values which are not stated as maxima or minima shall be subject to a tolerance of  $\pm 5\%$ . Unless otherwise specified, the ambient temperature for testing shall be between 16 °C and 32 °C and the temperature limits shall be subject to an accuracy of  $\pm 1$  °C. Where a test clause is referenced, all subclauses of the test clause shall apply, unless otherwise stated.

#### 5.2 Ergonomics

The requirements of this European Standard are intended to take account of the interaction between the wearer, the respiratory protective device, and where possible the working environment in which the respiratory protective device is likely to be used. The device shall satisfy 5.3, 5.9 and 5.10.

Testing shall be done accordance with 6.4.

#### 5.3 Materials

**5.3.1** All materials used in the construction shall have adequate resistance to deterioration by heat and adequate mechanical strength. Testing shall be done in accordance with 6.3, after any pre-conditioning according to 6.8, and any safety data sheet, if applicable, and declaration of the manufacturer related to materials used in the construction of the device.