

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

Respiratory protective devices - Compressed air line  
breathing apparatus with demand valve - Part 1:  
Apparatus with a full face mask - Requirements,  
testing, marking

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14593-1:2005 sisaldab Euroopa standardi EN 14593-1:2005 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 14593-1:2005 consists of the English text of the European standard EN 14593-1:2005.</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></p> <p>This European Standard specifies minimum requirements for compressed air line breathing apparatus with demand valve for use with a full face mask as a respiratory protective device. Escape and diving apparatus 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 given.</p>	<p><b>Scope:</b></p> <p>This European Standard specifies minimum requirements for compressed air line breathing apparatus with demand valve for use with a full face mask as a respiratory protective device. Escape and diving apparatus 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 given.</p>
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Võtmesõnad:

English version

Respiratory protective devices - Compressed air line breathing apparatus with demand valve - Part 1: Apparatus with a full face mask - Requirements, testing, marking

Appareils de protection respiratoire - Appareils de protection respiratoire isolants à adduction d'air comprimé avec soupape à la demande - Partie 1: Appareil avec masque complet - Exigences, essais, marquage

Atemschutzgeräte - Druckluft-Schlauchgeräte mit Lungenautomat - Teil 1: Geräte mit einer Vollmaske - 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 14593-1:2005) 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 14593-2 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 full face mask as a respiratory protective device. Escape and diving apparatus 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 given.

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 136:1998, *Respiratory protective devices — Full face masks — Requirements, testing, marking*

prEN 137:2002, *Respiratory protective devices — Self-contained open-circuit compressed air breathing apparatus with full face mask — 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 402:2003, *Respiratory protective devices — Lung governed demand self-contained open-circuit compressed air breathing apparatus with full face mask or mouthpiece assembly for escape — Requirements, testing, marking*

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 the inhalation air*

EN 50020, *Electrical apparatus for potentially explosive atmospheres — Intrinsic safety "i"*

EN 60079-0, *Electrical apparatus for explosive gas atmospheres — Part 0: General requirements (IEC 60079-0:2004)*

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, EN 134:1998 and the following apply.

#### 3.1

##### **compressed air line breathing apparatus with a demand valve for use with a full face mask**

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

##### **facepiece**

full face mask conforming to EN 136 (Class 2 or Class 3)

#### 3.3

##### **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

#### 3.4

##### **switch over device**

device that ensures that in the event of a malfunction or disconnection of the airline, the air supply, when airline is used in conjunction with self contained breathing apparatus, automatically switches over to the self contained air supply, without interruption of supplied air to the wearer

### 4 Description

This apparatus, with or without positive pressure, 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 negative pressure (apparatus without positive pressure), or at positive pressure (apparatus with positive pressure) to a suitable facepiece, possibly via a breathing hose. A compressed air supply tube connects the wearer to a 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.