

SLOVENSKI STANDARD

SIST EN 145-2:1996

01-april-1996

Oprema za varovanje dihal - Avtonomni dihalni aparat z zaprtim krogom z dovodom stisnjenega kisika za posebno uporabo - Zahteve, preskušanje, označevanje

Respiratory protective devices - Self-contained closed-circuit compressed oxygen breathing apparatus for special use - Requirements, testing, marking

Atemschutzgeräte - Regenerationsgeräte mit Drucksauerstoff für besondere Verwendung - Anforderungen, Prüfung, Kennzeichnung

Appareils de protection respiratoire - Appareils de protection respiratoire autonomes a circuit fermé, a oxygene comprimé pour utilisation particuliere - Exigences, essai, marquage

Ta slovenski standard je istoveten z: EN 145-2:1992

ICS:

13.340.30 Varovalne dihalne naprave Respiratory protective devices

SIST EN 145-2:1996

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 145-2:1996

<https://standards.iteh.ai/catalog/standards/sist/c3838816-ca37-4f2d-acc6-ae4be39598b7/sist-en-145-2-1996>

EUROPEAN STANDARD

EN 145-2:1992

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 1992

UDC 614.894.72:614.8:620.1:62-777

Descriptors: Personal protective equipment, accident prevention, respiratory protective equipment, compressed gas, oxygen, specifications, safety, tests, marking

English version

**Respiratory protective devices - Self-contained
closed-circuit compressed oxygen breathing
apparatus for special use - Requirements, testing,
marking**

iTeh STANDARD PREVIEW

Appareils de protection respiratoire
Appareils de protection respiratoire autonomes
à circuit fermé, à oxygène comprimé pour
utilisation particulière - Exigences, essai,
marquage

Atenschutzgeräte - Regenerationsgeräte mit
Drucksauerstoff für besondere Verwendung -
Anforderungen, Prüfung, Kennzeichnung

SIST EN 145-2:1996

<https://standards.iteh.ai/catalog/standards/sist/c3838816-ca37-4f2d-acc6-ae4be39598b7/sist-en-145-2-1996>

This European Standard was approved by CEN on 1992-11-16. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

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

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

Page 2
EN 145-2:1992

Foreword

This European Standard was prepared by the Technical Committee CEN/TC 79 "Respiratory protective devices", of which the secretariat is held by DIN.

The text of the draft was submitted to the Formal Vote and was approved as EN.

This European Standard has been prepared under a mandate given to CEN by the Commission of the European Communities and the European Free Trade Association, and supports essential requirements of the EC Directive(s).

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 1993, and conflicting national standards shall be withdrawn at the latest by May 1993.

(standards.iteh.ai)

The Standard was approved and in accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, 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 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 refers to self-contained closed-circuit compressed oxygen breathing apparatus as described in EN 133, intended for special use like fire fighting, mining.

This European Standard aims to supplement the general requirements for self-contained closed-circuit apparatus specified in EN 145 by specifying additional specific requirements for apparatus for special use.

Laboratory and practical performance tests are included for the assessment of compliance with the requirements.

2 Normative References

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 133	Respiratory protective devices; Classification
EN 136	Respiratory protective devices; Full face masks; Requirements, testing, marking
EN 136-10	Respiratory protective devices; Full face masks for special use; Requirements, testing, marking

Page 4
EN 145-2:1992

- EN 145 Respiratory protective devices; Self-contained closed-circuit breathing apparatus, compressed oxygen type; Requirements, testing, marking
- EN 148-2 Respiratory protective devices; Threads for facepieces; Centre thread connection

3 Requirements

3.1 General

Closed-circuit compressed oxygen breathing apparatus for special use shall comply with EN 145.

The additional or restrictive requirements given in 3.2 to 3.6 shall also be met.

3.2 Design

All individual components of the apparatus, except the breathing tubes and the pressure gauge connecting tube with pressure gauge shall be provided with a protective cover to provide protection against external damage. The oxygen cylinder valve shall be protected against damage from external elements. The protective cover shall not be able to open automatically whilst the apparatus is in use.

The apparatus shall be designed such that it has to be carried on the back.

Testing in accordance with 4.1.

3.3 Body harness

The material of the straps and the buckles shall be considered to be flame resistant if it does not burn or if it does not continue to burn for more than 5 s after removal from the test flame.

Testing in accordance with 4.2.2.

The harness shall be considered to be satisfactory if during the practical performance test it does not slip and continues to hold the apparatus securely to the wearer's body throughout the duration of the test.

3.4. Resistance to temperature and flammability

3.4.1. Heat resistance of equipment connector

During and after storage in accordance with 4.2.3 the apparatus shall be tested for security of equipment connector. After this test for all equipment connectors a pull test as described in 4.12.3 and 5.7 of EN 136 (500 N tensile force) shall be applied and no separation shall occur and the equipment connector shall remain dimensionally correct.

Testing in accordance with 4.1.

3.4.2 Flammability

When tested in accordance with 4.2.1 the breathing tubes leading to the facepiece, the connector and the lung governed demand valve (if connected to the facepiece) shall prove to be "self-extinguishing", i.e. the material must not be of highly flammable nature and the parts shall not continue to burn for more than 5 s after removal from the flame.

Testing in accordance with 4.2.2.

3.4.3 Resistance to radiant heat

The breathing tubes, the connector and the lung governed demand valve (if connected to the facepiece) shall be tested for resistance to radiant heat in accordance with EN 136-10, clause 3.4.

The components are considered to be resistant to thermal radiation in accordance with this standard if they remain leaktight after a test period of 20 min although they may be deformed.

Warning: The cylinders are to be charged to not more than 50 % of the manufacturer's maximum recommended filling pressure during conditioning in accordance with 3.4.3.

3.5 Pressure-relief valve

The pressure-relief valve shall consist of two single consecutive valves.

Testing in accordance with 4.1.

Page 6
EN 145-2:1992

4 Testing

4.1 Visual inspection

In accordance with EN 145.

4.2 Resistance to temperature and flammability

4.2.1 Flammability

The parts of the apparatus shall be tested for flammability in accordance with clause 5.5 of EN 136.

4.2.2 Flammability of body harness

The flame resistance properties of the harness material are tested by placing the material in a luminous propane gas flame. The air valve on the burner is fully closed. The flame height is adjusted to 40 mm by regulation of the gas supply and the flame has a temperature of (950 ± 50) °C measured at a height of 20 mm above the base of the flame. The material under test is held horizontally at a height of 20 mm above the base of the flame for a period of 5 s.

A typical test arrangement is shown in figure 1.

SIST EN 145-3:1996
<https://standards.iteh.ai/catalog/standards/sist/c3838816-ca37-412d-acc6-ac4be39598b7/sist-en-145-2-1996>

4.2.3 Resistance to temperature

One apparatus shall be exposed during successive tests:

- a) for 72 h to a dry atmosphere of (70 ± 3) °C
- b) for 72 h to an atmosphere of (70 ± 3) °C at 95 - 100 % relative humidity
- c) for 24 h to a temperature of (-30 ± 3) °C

Warning: The cylinders shall be charged to not more than 50 % of the manufacturer's maximum recommended filling pressure during conditioning.

5 Instructions for use

The instructions for use shall comply with EN 145.

6 Marking

6.1 The apparatus shall be permanently marked (type designation plate) in a place that is protected and the marking shall be as specified in clause 7 of EN 145.

6.2 The apparatus shall be marked with the number of this European Standard.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 145-2:1996

<https://standards.iteh.ai/catalog/standards/sist/c3838816-ca37-4f2d-acc6-ae4be39598b7/sist-en-145-2-1996>