

Respiratory equipment — Open-circuit self-contained compressed air diving apparatus — Requirements, testing, marking

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British Standard

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National foreword

This British Standard has been prepared under the direction of the Personal Safety Equipment Standards Policy Committee and is the English language version of EN 250:1993 *Respiratory equipment — Open-circuit self-contained, compressed air diving apparatus — Requirements, testing, marking*, published by the European Committee for Standardization (CEN). It is the first British Standard specification for open-circuit self-contained compressed air diving apparatus, and no existing standard is superseded.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 16, an inside back cover and a back cover.

This Standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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English version

Respiratory equipment — Open-circuit, self-contained, compressed air diving apparatus — Requirements, testing, marking

Appareils respiratoires — Appareils de plongée autonomes à air comprimé et à circuit ouvert — Exigences, essais, marquage

Atemgeräte — Autonome Leichttauchgeräte mit Druckluft — Anforderungen, Prüfung, Kennzeichnung

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CEN

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

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Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 79 “Respiratory protective devices” of which the secretariat is held by DIN.

The text has been submitted to the formal vote and has been approved by CEN as a European Standard.

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 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of an identical text or by endorsement, at the latest by September 1993, and conflicting national standards shall be withdrawn at the latest by September 1993.

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, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom.

Introduction

A given self-contained open-circuit compressed air underwater breathing apparatus 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 are similar to those of the complete apparatus.

1 Scope

This European Standard applies to self-contained open-circuit compressed air underwater breathing apparatus.

The object of the requirements and tests set out in this European Standard is to ensure a minimum level of safe operation for underwater breathing apparatus to a maximum depth of 50 m.

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.

ISO 263, *ISO inch screw threads — General plan and selection screw, bolts and nuts — Diameter range 0,06 to 6 in.*

EN 132, *Respiratory protective devices; Definitions.*

EN 135, *Respiratory protective devices; List of equivalent terms.*

EN 144-1, *Respiratory protective devices; Gas cylinder valves; Thread connection for insert connector.*

EN 148-1, *Respiratory protective devices; Threads for facepieces; Standard thread connection.*

EN 148-2, *Respiratory protective devices; Threads for facepieces; Centre thread connection.*

EN 148-3, *Respiratory protective devices; Threads for facepieces; Thread connection M 45 × 3.*

DIN 477-1:1990, *Gas cylinder valves rated for test pressures up to max. 300 bar; Types, sizes, connections, screw-threads.*

3 Definitions and description

For the purposes of this European Standard the following definitions apply. They are taken from EN 132 as far as possible:

a) self-contained, open-circuit compressed air underwater breathing apparatus

a self-contained, open-circuit compressed air underwater breathing apparatus is an apparatus which has a portable supply of compressed air carried by the diver, allowing him to breathe under water. Abbreviation: SCUBA

the SCUBA, when ready to use, consists of a number of independent elements which comply with the requirements of this standard and are functionally compatible with each other. When connected together, the complete SCUBA is designed to enable the wearer to breathe air on demand from a high pressure cylinder (or cylinders) via a demand regulator connected to a facepiece. The exhaled air passes, without re-circulation, from the demand regulator via the exhalation valve to ambient water

b) high pressure

high pressure is the pressure inside the air cylinder(s) and between the air cylinder(s) and the pressure reducer

c) medium pressure

medium (intermediate) pressure is the pressure between the pressure reducer and the demand valve

d) low pressure

low pressure is the pressure within the facepiece, approximately ambient pressure

e) rated working pressure

the rated working pressure is the maximum working pressure of the respective components

f) reference pressure

the reference pressure is the equilibrium pressure which exists in the facepiece when there is no respiratory gas flow

g) respiratory pressure

the respiratory pressure is the differential pressure in the facepiece relative to the reference pressure measured during inhalation and exhalation

h) opening negative pressure (cracking pressure)

the opening negative pressure is the respiratory pressure during inhalation required to open the inhalation valve