BRITISH STANDARD

BS EN
142:2002

Respiratory protective devices — Mouthpiece assemblies — Requirements, testing, marking

The European Standard EN 142:2002 has the status of a British Standard

ICS 13.340.30

National foreword

This British Standard is the official English language version of EN 142:2002. It supersedes BS 7309:1990 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee PH/4, Respiratory protection, to Subcommittee PH/4/3, Facepieces, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Find" facility of the BSI Standards Electronic Catalogue.

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This British Standard, having been prepared under the direction of the Health and Environment Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 13 May 2002

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English version

Respiratory protective devices - Mouthpiece assemblies - Requirements, testing, marking

Appareils de protection respiratoire - Ensembles embouts buccaux - Exigences, essais, marquage

Atemschutzgeräte - Mundstückgarnituren - Anforderungen, Prüfung, Kennzeichnung

This European Standard was approved by CEN on 27 December 2001.

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 Management Centre 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 Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Contents

Foreword

This document EN 142:2002 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 2002, and conflicting national standards shall be withdrawn at the latest by October 2002.

This document supersedes EN 142:1989.

This document 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(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

The annexes A and ZA are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the 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 mass distribution are similar to those of the complete apparatus.

1 Scope

This European Standard refers to mouthpiece assemblies for respiratory protective devices, except escape apparatus and diving apparatus.

It specifies minimum requirements for mouthpiece assemblies for use as part of respiratory protective devices.

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 (including amendments).

EN 132, *Respiratory protective devices - Definitions of terms and pictograms.*

EN 134, *Respiratory protective devices - Nomenclature of components.*

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 13274-2, *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: Determination of resistance to flame and flammability.*

3 Terms and definitions

For the purpose of this European Standard the definitions given in EN 132 and the nomenclature given in EN 134 apply.

4 Description

Air enters the mouthpiece assembly and passes directly into the mouth. The exhaled air flows back either through the facepiece connector into the breathing apparatus (closed-circuit breathing apparatus, pendulum breathing) or directly to the ambient atmosphere, via the exhalation valve(s), in other types of respiratory protective devices.

5 Designation

Mouthpiece assemblies meeting the requirement of this European Standard shall be designated in the following manner:

Mouthpiece assembly EN 142.

6 Requirements

6.1 General

In all tests all test samples shall meet the requirements.

6.2 Ergonomics

The requirements of this standard are intended to take account of the interaction between the wearer, the mouthpiece assembly, and where possible, the working environment in which the mouthpiece assembly is likely to be used. See annex ZA.

6.3 Design

The design of the mouthpiece assembly shall be such as to allow its inspection in accordance with the manufacturers instructions.

The mouthpiece assembly shall be sufficiently robust to withstand the rough usage it is likely to receive in service.

The mouthpiece assembly shall be designed so that there are no protruding parts or sharp edges likely to be caught on projections in narrow passages.

The surface of any part of the mouthpiece assembly likely to be in contact with the wearer shall be free from sharp edges and burrs.

The mouthpiece assembly shall be designed to ensure its full function in any orientation.

The mouthpiece shall be so designed that inward leakage between lips and mouthpiece is negligible.

The mouthpiece shall be so designed that the airflow is not restricted unintentionally when the mouthpice assembly is being worn.

Testing shall be done in accordance with 7.3 and 7.13.

6.4 Materials

All materials used in the construction shall have adequate mechanical strength.

Exposed parts, i.e. those which may be subjected to impact during use of the apparatus shall not be made of aluminium, magnesium, titanium or alloys containing such proportions of these metals as will, on impact, give rise to frictional sparks capable of igniting flammable gas mixtures.

Materials which come into direct contact with the wearer's skin shall not be known to be likely to cause irritation or any other adverse effect to health.

Testing shall be done in accordance with 7.3 and 7.13.

6.5 Cleaning and disinfecting

All materials used shall withstand the cleaning and disinfection agents and procedures recommended by the manufacturer.

Testing shall be done in accordance with 7.3 and 7.13.

6.6 Resistance to temperature

Following the conditioning in accordance with 7.4 and after being allowed to return to ambient temperature the mouthpiece assembly shall show no appreciable deformation and any incorporated threaded connector to EN 148-1 or EN 148-2 shall be gauged and shall comply with the appropriate standard.

Testing shall be done in accordance with 7.3.

6.7 Flammability

Parts of the mouthpiece assembly that might be exposed to a flame during use shall not burn or continue to burn for more than 5 s after removal from the flame.

Testing shall be done in accordance with 7.3 and 7.5.

6.8 Demountable parts

All demountable connections shall be readily connected and secured, where possible by hand. Any means of sealing used shall be retained in position when the connection is disconnected during normal maintenance.

Testing shall be done in accordance with 7.3 and 7.13.

6.9 Replaceable components

Unless integral with the mouthpiece assembly the following components (if fitted) shall be replaceable:

Head harness, connector(s), inhalation and exhalation valves.

Testing shall be done in accordance with 7.3.

6.10 Head harness

The head harness shall be designed so that the mouthpiece assembly can be donned and removed easily.

Testing shall be done in accordance with 7.13.

The head harness shall be adjustable or self-adjusting and shall hold the mouthpiece assembly firmly and comfortably in position.

Testing shall be done in accordance with 7.13.

Each strap of the head harness, buckles and other adjusting means shall withstand a pull of 50 N applied for 10 s in the direction of pulling when the facepiece is donned. No breaks or sliding of the straps shall occur.

The requirement applies to the buckles and attachment lugs as well as to the straps.

Testing shall be done in accordance with 7.3 and 7.6.

6.11 Connection

6.11.1 General

The connection between the mouthpiece assembly and the apparatus may be achieved by a permanent or special (e.g. insert) type of connection or by a thread connection.

Testing shall be done in accordance with 7.3.

The mouthpiece assembly shall not be equipped with a thread connection according to EN 148-3.

Testing shall be done in accordance with 7.3.

Correct and reliable connection between mouthpiece assembly and other parts of the respiratory protective device shall be assured.

Testing shall be done in accordance with 7.3, 7.11 and 7.13.

The connection between the mouthpiece body and the connector shall be sufficiently robust to withstand axially a tensile force of 50 N.

Testing shall be done in accordance with 7.7.

6.11.2 Thread connection according to EN 148-1

This thread connection may be used as the mouthpiece assembly connection for all respiratory protective devices, except closed-circuit breathing apparatus and positive pressure demand breathing apparatus.

If this thread connection is used then the relevant requirements of EN 148-1 shall be satisfied.

Testing shall be done in accordance with 7.3.

6.11.3 Thread connection according to EN 148-2

This thread connection may be used as the mouthpiece assembly connection for closed-circuit breathing apparatus.

If this thread connection is used then the relevant requirements of EN 148-2 shall be satisfied.

Testing shall be done in accordance with 7.3.

6.12 Inhalation valves and exhalation valves (if fitted)

6.12.1 General

Valve assemblies shall be such that they can be readily maintained and correctly replaced.

It shall not be possible to fit an exhalation valve assembly into the inspiratory circuit or an inhalation valve assembly into the exhalation circuit.

Inhalation and exhalation valve assemblies, sub-assemblies and piece parts that are by the manufacturer designed to be identical, are acceptable.

Differently designed inhalation and exhalation valves are acceptable if a precise and comprehensible description is given in the information manual supplied by the manufacturer. The description in the information manual supplied by the manufacturer should be supported by illustrations (photographs, drawings) on how to assemble the unit correctly.

To enable correct assembly, the parts shall be be precisely and comprehensibly described or marked.

An appropriate method of checking correct assembly shall be described, e.g. visual inspection, check by the wearer, test by maintenance personnel, etc.

A mouthpice assembly with centre thread connection to EN 148-2 shall not have valves.

Testing shall be done in accordance with 7.3.

6.12.2 Inhalation valve(s)

If a thread connection according to EN 148-1 is used, an inhalation valve shall be incorporated in the mouthpiece assembly. Where the facepiece is intended to be used with filters it shall be provided with an integral inhalation valve, if there is no valve in the filter.

Inhalation valve(s) shall function correctly in all orientations and shall meet the requirements of 6.14.

Testing shall be done in accordance with 7.12 and 7.13.

6.12.3 Exhalation valve(s)

Exhalation valve(s) shall function correctly in all orientations and shall meet the requirements of 6.14.

Testing shall be done in accordance with 7.12 and 7.13.

The mouthpiece assembly except one with a centre thread connection to EN 148-2 shall have at least one exhalation valve or appropriate means to allow the escape of exhaled air and, where applicable, any excess air delivered from a supplied air source.

Testing shall be done in accordance with 7.3.

Exhalation valve(s) shall be protected against or be resistant to dirt and mechanical damage. They may be shrouded or include any other device that may be necessary to comply with 6.13.

Exhalation valve(s) shall continue to operate correctly after a continuous exhalation flow of 300 l/min over a period of 30 s and meet the requirements of 6.14.

Testing shall be done in accordance with 7.8.

When the exhalation valve housing is attached to the mouthpiece body, it shall withstand axially a tensile force of 50 N applied for 10 s.

Testing shall be done in accordance with 7.9.

The inward leakage through the exhalation valve(s) shall not exceed 0,01 %.

Testing shall be done in accordance with 7.10.

6.13 Leaktightness

The leakage of the mouthpiece assembly shall not exceed that indicated by a change of pressure of 1 mbar in 1 min.

Testing shall be done in accordance with 7.11.

6.14 Breathing resistance

6.14.1 Mouthpiece assembly with thread connection according to EN 148-1

The breathing resistance shall not exceed 1,5 mbar for inhalation and 3,0 mbar for exhalation.

Testing shall be done in accordance with 7.12.

6.14.2 Mouthpiece assembly with thread connection according to EN 148-2

The breathing resistance shall not exceed 0,6 mbar for inhalation or exhalation.

This requirement does not apply to mouthpiece assemblies which contain valves or other components as an integral part of the assembly when used with closed-circuit breathing apparatus.

Testing shall be done in accordance with 7.12.

6.15 Nose clip

The nose clip shall be designed to afford maximum security against accidental displacement. It shall not slip when the nose becomes moist with perspiration, and suitable means shall be provided for attaching it to the apparatus to prevent loss.

The parts of the nose clip shall be designed not to cause burns, when used in hot environments.

Testing shall be done in accordance with 7.3 and 7.13.

6.16 Practical performance

The complete apparatus shall undergo practical performance tests under realistic conditions. These general tests serve the purpose of checking the equipment for imperfections that cannot be determined by the tests described elsewhere in this European Standard. In addition to the tests described in this European Standard, details of practical performance tests for breathing apparatus are given in the relevant European Standard.

Where a mouthpiece assembly is to be used for filtering devices testing shall be done in accordance with 7.13.

Where practical performance tests show the apparatus has imperfections related to wearer's acceptance, the test house shall provide full details of those parts of practical performance tests which revealed these imperfections. This will enable other test houses to duplicate the tests and assess the results thereof.

Testing shall be done in accordance with 7.13.

7 Testing

7.1 General

If no special measuring devices or measuring methods are specified commonly used methods and devices should be applied.

Before performing tests involving human subjects account should be taken of any national regulations concerning the medical history, examination or supervision of the test subjects.

7.2 Nominal values and tolerances

Unless otherwise specified the values stated in this 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 from 16 °C to 32 °C and the temperature limits shall be subject to an accuracy of $\pm$ 1 °C.

7.3 Visual inspection

The visual inspection shall be made by the test house prior to laboratory or practical performance tests. This may entail a certain amount of dismantling in accordance with the manufacturer's instructions for maintenance. The visual inspection shall include marking and information supplied by the manufacturer.

7.4 Conditioning

Two samples in the state as received shall be subjected to the following thermal cycle:

a) 24 h in a dry atmosphere of (70 ± 3) °C;

b) 24 h at a temperature of (-30 ± 3) °C.

The conditioning shall be carried out in a manner which ensures that no thermal shock occurs.

7.5 Flammability

The mouthpiece assembly shall be tested in accordance with EN 13274-4, method 3.

Two samples shall be tested: both in the state as received.

7.6 Head harness (pull test)

Two samples shall be tested: one in the state as received and one conditioned in accordance with 7.4.

The force is to be applied to the free end of the straps. Where there is no 'free-end' the force is to be applied adjacent to the point where the strap is joined to the mouthpiece body.

Where buckles or other adjusting means are present, they shall be firmly placed in their normal wearing position on a dummy head, with the head strap engaged in one end and pulled from the other.

7.7 Connection

Two samples shall be tested: one in the state as received and one conditioned in accordance with 7.4.

The test time shall be 10 s. The mouthpiece assembly shall be supported on a dummy head which can be adjusted so that the load can be applied axially to the connection (Figure 1). Additionally, a system of restraining straps or bands shall be fitted over the mouthpiece body around the connection, so that the load is applied as directly as possible to the fitting of the connection in the mouthpiece body and the restraining force is not applied wholly to the head harness.

7.8 Exhalation valve (flow test)

Two samples shall be tested: one in the state as received and one conditioned in accordance with 7.4.

7.9 Exhalation valve housing (pull test)

Two samples shall be tested: one in the state as received and one conditioned in accordance with 7.4.

7.10 Exhalation valve leakage

7.10.1 Samples

Two samples shall be tested: one in the state as received and one conditioned in accordance with 7.4.

7.10.2 Test equipment

This consists mainly of:

a) a small volume (volume: 1 l to 1,2 l) leaktight box attached to a tube, with opening(s) between the box and tube in which the valve assemblies are mounted in suitable adaptors of low dead space (Figure 2). There are baffle plates in the box to promote smooth test gas flow (100 l/min continuous flow).

b) a breathing machine delivering sinusoidal air flows corresponding to 20 strokes/min and 1,5 l/stroke;

c) a supply of CO_2;

d) a purifier containing absorbent for CO_2;

e) a unit to saturate the air with water vapour at 37 °C;

f) an instrument capable of measuring test gas concentrations.

7.10.3 Test procedure

All the exhalation valve assemblies attached to the mouthpiece body are tested.

The test shall be performed at ambient temperature and relative humidity. The valve assemblies under test shall be fitted into the box with a suitable adaptor in a vertical position. The components shall be arranged according to whether a single or twin cylinder breathing machine is to be used (Figures 3 and 4).

The inlet valve shall be adjusted so that the back pressure of the valve(s) is 1 mbar to 1,5 mbar at 30 l/min continuous flow.

The breathing machine shall be set at 1,5 l/stroke, 20 strokes/min. A flow of test gas shall be maintained through the box. Samples of the air from before and after the valve assemblies shall be continuously analysed for test gas concentrations.

The test shall be run for a sufficient time to obtain a steady reading of the test gas concentration in the inspiratory air stream.

The difference in the test gas concentrations between the two samples is a measure of the total valve leakage.

The test shall be carried out using carbon dioxide.

7.11 Leaktightness

All samples are subject to testing of leaktightness as specified elsewhere in this standard.

The test shall be carried out using an adaptor and a pressure of -10 mbar created in the cavity of the mouthpiece assembly. When conducting this test the inhalation port shall be sealed and the exhalation valve disc shall be moistened. The volume of air subject to the negative pressure, up to the adaptor port excluding the volume of the mouthpiece assembly shall be (500 $\pm$ 50) ml.

The pressure shall be measured by usual test methods using a scale, divided in maximal 0,1 mbar steps.

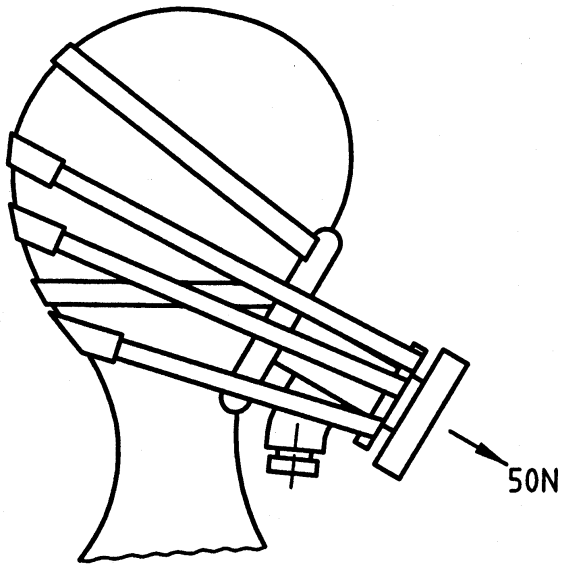
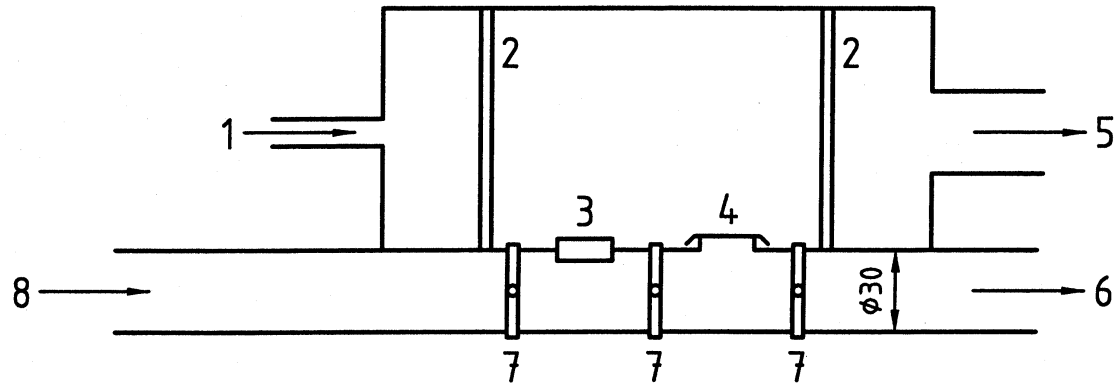


Figure 1 — Typical arrangement for testing connections

Dimensions in millimetres



Key

1 Test gas in

2 Baffle plate

3 Blanking plate

4 Valve under test

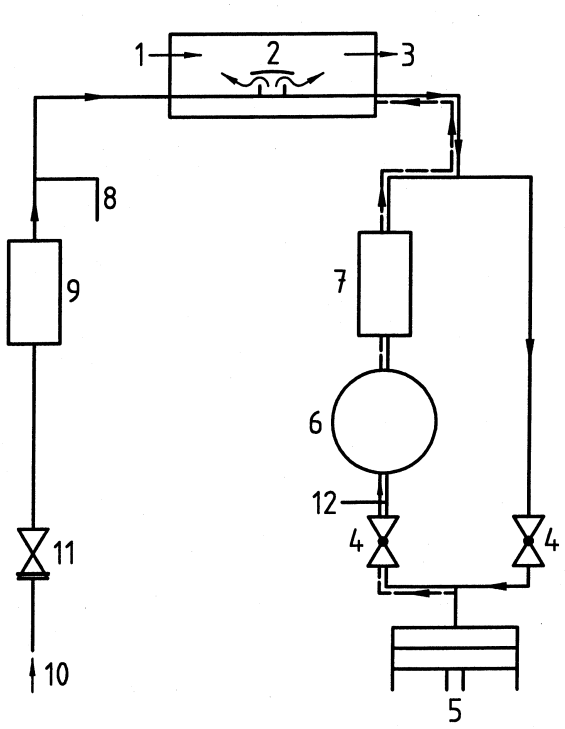
5 Test gas out

6 To breathing machine

7 Pressure measurement port

8 Saturated gas in

Figure 2 — Typical scheme of exhalation valve leakage test box

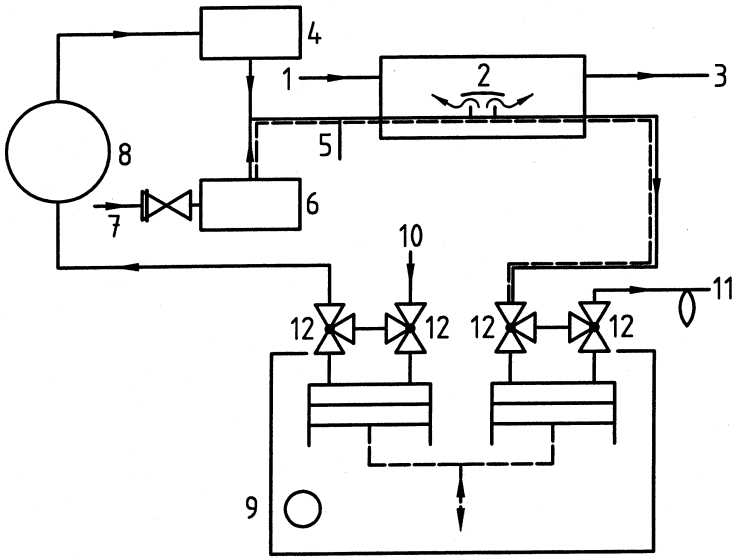


Key

1	Test gas in	7	Purifier
2	Valve under test	8	Reference gas samples
3	Test gas out	9	Purifier
4	Breathing machine valves	10	Laboratory air in
5	Breathing machine	11	Adjustable non-return valve
6	Saturator	12	Test gas sample

The difference between concentrations of samples taken at points 8 and 12 is a measure of the valve leakage.

Figure 3 — Typical scheme of test rig for valve leakage using a single cylinder machine



Key

1 Test gas in

2 Valve under test

3 Test gas out

4 Purifier

5 Reference gas sample

6 Purifier

7 Laboratory air in through adjustable non-return valve

8 Saturator

9 Twin cylinder breathing machine

10 Laboratory air in

11 Test gas sample

12 Breathing machine valves

The difference between concentrations of the samples taken at points 5 and 11 is a measure of the valve leakage.

Figure 4 — Typical scheme of test rig for valve leakage using a twin cylinder breathing machine

7.12 Breathing resistance

For this test, method 1 or method 2, setting E of EN 13274-3 shall be used.

Two samples shall be tested: one in the state as received and one conditioned in accordance with 7.4.

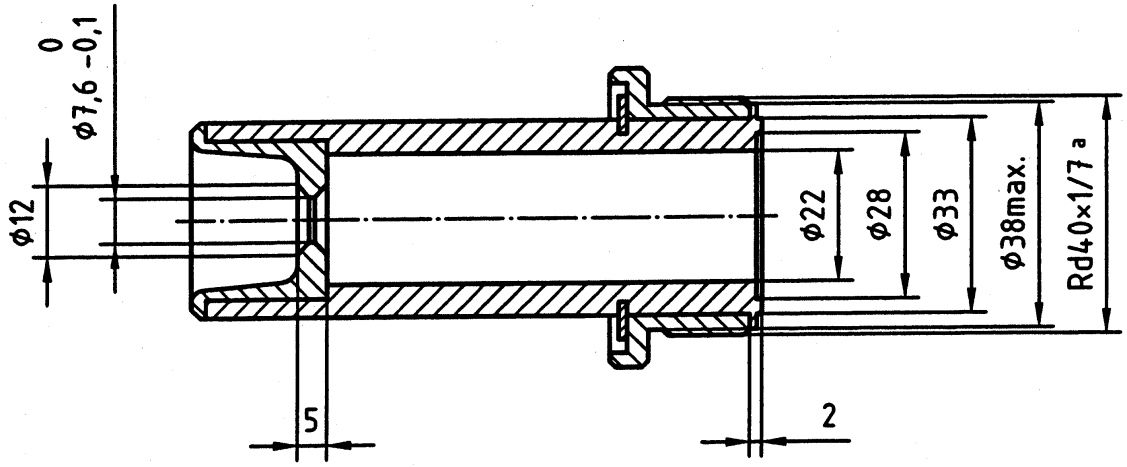
7.13 Practical performance

7.13.1 General

Practical performance tests shall be performed with two samples: one in the state as received and one conditioned in accordance with 7.4 and two test subjects in accordance with EN 13274-2.

A filter simulator (Figure 5) shall be used for mouthpiece assemblies with a thread according to EN 148-1. For other mouthpiece assemblies a filter or other equipment normally used with the mouthpiece assemblies shall be used.

Dimensions in millimetres



a) see EN 148-1

Data of filter simulator:

Weight: 300 g, equally distributed along the length

Pressure drop: 10 mbar at 95 l/min continuous flow

Total length: 50 mm

Figure 5 — Filter simulator for mouthpiece assembly employing a thread complying with EN 148-1

7.13.2 Walking test

Two subjects in normal working clothes wearing the apparatus shall carry out the activity number 1 of EN 13274-2 without removal of the mouthpiece assembly.

7.13.3 Work simulation test

During this test the following activities shall be done in simulation of the practical use of the apparatus. The test shall be completed within a total working time of 20 min.

The sequence of activities is at the discretion of the test authority. The individual activities shall be arranged so that sufficient time is left for the measurements prescribed.

a) activity 2 of EN 13274-2;

b) activity 3 of EN 13274-2;

c) activity 4 of EN 13274-2.

8 Marking

The apparatus shall be marked as follows:

8.1 The manufacturer, supplier or importer shall be identified by name, trademark, or other means of identification.

8.2 All units of the same model shall be provided with a manufacturers model designation.

8.3 The number of this European Standard.

8.4 Where the reliable performance of piece parts may be affected by ageing, means of identifying the date (at least the year) of manufacture shall be given.

8.5 For parts which cannot reasonably be marked, e.g. straps of head harness, the relevant information shall be included in the information supplied by the manufacturer.

8.6 Parts which are designed to be replaced by the authorized users and sub-assemblies with considerable bearing on safety shall be marked so that they can be identified (see annex A).

8.7 The marking shall be as clearly visible and as durable as possible.

9 Information supplied by the manufacturer

9.1 On delivery information supplied by the manufacturer shall accompany every apparatus enabling trained and qualified persons to use it.

9.2 Information supplied by the manufacturer shall be in the official language(s) of the country of destination.

9.3 The information supplied by the manufacturer shall contain all information necessary for trained and qualified persons on:

— application/limitation;

— checks prior to use;

— donning and fitting;

— use;

— cleaning/disinfection;

— maintenance (preferably separately printed instructions);

— storage;

— shelf life or equivalent;

of the equipment.

9.4 The information supplied by the manufacturer shall be unambiguous.

NOTE If helpful, illustrations, part numbers, marking etc. may be added.

9.5 Warning shall be given against problems likely to be encountered, for example

— fit of mouthpiece (check prior to use);

— hazards of oxygen and oxygen-enriched air;

— air quality;

— use of equipment in explosive atmosphere.

9.6 Any other information the manufacturer may wish to supply.

Table 1 — Summary of requirements and tests

Title	Requirement clause	Number of samples[1)]	Conditioning[2)]	Test clause
Ergonomics	6.2	All	-	Annex ZA
Design	6.3	All	-	7.3, 7.13
Materials	6.4	All	-	7.3, 7.13
Cleaning and disinfecting	6.5	2 (in the course of practical performance)	1 a.r., 1 ac. 7.4	7.3, 7.13
Resistance to temperature	6.6	2	2 acc. 7.4	7.3
Flammability	6.7	2	2 a.r.	7.3, 7.5
Demountable parts	6.8	-	-	7.3, 7.13
Replaceable components	6.9	-	-	7.3
Head harness	6.10	2	1 a.r., 1 acc. 7.4	7.13
- pull test	6.10	2	1 a.r., 1 acc. 7.4	7.3, 7.6
Connection	6.11	2	1 a.r., 1 acc. 7.4	7.3, 7.7, 7.11, 7.13 EN 148-1, EN 148-2
Inhalation and exhalation		-	-	
valves	6.12.1	2	1 a.r., 1 acc. 7.4	7.3
- Inhalation valve	6.12.2	2	7.12, 7.13	7.12, 7.13
- Exhalation valve	6.12.3	2	7.12, 7.13	7.12, 7.13
- exhalation valve: flow test	6.12.3	2	1 a.r., 1 acc. 7.4	7.8
- exhalation valve: pull test	6.12.3	2	1 a.r., 1 acc. 7.4	7.9
- inward leakage	6.12.3	2	1 a.r., 1 acc. 7.4	7.10
Leaktightness	6.13	All	-	7.11
Breathing resistance	6.14	2	1 a.r., 1 acc. 7.4	7.12
Nose clip	6.15	2	1 a.r., 1 acc. 7.4	7.3, 7.13
Practical performance	6.16	2	1 a.r., 1 acc. 7.4	7.13
Marking	8	-	-	7.3
Information supplied by the manufacturer	9	-	-	7.3

1) Most samples are used for more than one test.

2) acc. = in accordance with

a.r. = as received („as received“ shall be taken as meaning „not conditioned“).

Annex A
(informative)

Marking

It is recommended to consider for marking the following components and sub-assemblies to be identifiable:

Table A.1 — Marking

Components/ sub-assemblies	Part-marking	Date of Manufacture	Remarks
Inhalation valve disc (if fitted)	-	-	1
Exhalation valve disc	-	+	1
Connector (if fitted)	+	-	-
Mouthpiece body	+	+	-
Head harness	-	-	1

+ The marking is necessary
- The marking is not necessary
1 For parts which cannot reasonably be marked the relevant information shall be included in the information to be supplied by the manufacturer

The components of a sub-assembly need not be marked when the sub-assembly is identifiable. Those components not offered as spare parts by the manufacturer need not be marked but the relevant information should be given in the information to be supplied by the manufacturer.

Annex ZA
(informative)

Clauses of this European Standard addressing essential requirements or other provisions of EU Directives

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.

WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this European Standard.

The clauses of this European Standard are likely to support requirements of Directive 89/686/EEC, Annex II:

Table ZA.1

EU Directive 89/686/EEC, Annex II	Clauses of this European Standard
1.1.1	6.2, 6.12, 6.13, 6.15, 6.16
1.1.2.1	6.10, 6.11, 6.12, 6.13, 6.15, 6.16
1.2.1	6.3, 6.4, 6.6, 6.7, 6.16
1.2.1.1	6.3, 6.4, 6.6, 6.7
1.2.1.2	6.15, 6.16
1.2.1.3	6.16
1.3.1	6.10, 6.15, 6.16
1.3.2	6.10, 6.11.1
1.4	9
2.1	6.10, 6.15, 6.16
2.4	8, 9
2.6	6.4
2.8	9
2.9	6.8, 6.9
2.12	8
3.10.1	6.5, 6.12, 6.13, 6.14, 6.15, 6.16, 9

Compliance with this standard provides one means of conforming with the specific essential requirements of the Directive concerned and associated EFTA regulations.

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