



Institut luxembourgeois de la normalisation  
de l'accréditation, de la sécurité et qualité  
des produits et services

## ILNAS-EN 12941:2023

### **Respiratory protective devices - Powered filtering devices incorporating a loose fitting respiratory interface - Requirements,**

Atemschutzgeräte - Gebläsefiltergeräte  
mit einem Atemanschluss ohne Dichtsitz  
(Haube) - Anforderungen, Prüfung,  
Kennzeichnung

Appareils de protection respiratoire -  
Appareils filtrants à ventilation assistée  
avec interface respiratoire à ajustement  
lâche - Exigences, essais, marquage

12/2023



## National Foreword

This European Standard EN 12941:2023 was adopted as Luxembourgish Standard ILNAS-EN 12941:2023.

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- Participate in the design of standards
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EUROPEAN STANDARD ILNAS-EN 12941:2023 **EN 12941**  
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English Version

**Respiratory protective devices - Powered filtering devices  
incorporating a loose fitting respiratory interface -  
Requirements, testing, marking**

Appareils de protection respiratoire - Appareils  
filtrants à ventilation assistée avec interface  
respiratoire à ajustement lâche - Exigences, essais,  
marquage

Atemschutzgeräte - Gebläsefiltergeräte mit einem  
Atemanschluss ohne Dichtsitz (Haube) -  
Anforderungen, Prüfung, Kennzeichnung

This European Standard was approved by CEN on 9 August 2021.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 12941:2023) 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 June 2024 and conflicting national standards shall be withdrawn at the latest by June 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12941:1998.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

The following main technical changes have been made compared to EN 12941:1998:

- a) Clause 4 Designation was deleted;
- b) number of test samples was added to the requirements, where necessary;
- c) classification table was amended to cover Hg and NO filter for all classes (TH1, TH2 and TH3);
- d) nominal values and tolerances were added;
- e) clogging was deleted;
- f) warning facilities were amended to cover low energy and low flow warning;
- g) visual inspection was changed to inspection and detailed list inserted;
- h) test substances and number of test subjects for inward leakage test was changed;
- i) requirement for field of vision integrated into the requirements for visor (5.8.3);
- j) test for noise level was adapted to the test procedure specified in ISO 16900-14:2020;
- k) Annex A was deleted;
- l) Annex B was deleted;
- m) figures were adapted to the changes made in the test procedures, where appropriate.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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

## 1 Scope

This document specifies minimum requirements for powered filtering Respiratory Protective Devices (RPD) incorporating a loose fitting respiratory interface (RI). It does not cover devices designed for use in circumstances where there is or might be an oxygen deficiency.

Escape RPD and filters for use against CO are not covered by this document.

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

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 148-1:2018, *Respiratory protective devices — Threads for facepieces — Part 1: Standard thread connection*

EN 148-2:1999, *Respiratory protective devices — Threads for facepieces — Part 2: Centre thread connection*

EN 148-3:1999, *Respiratory protective devices — Threads for facepieces — Part 3: Thread connection M 45 × 3*

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

EN 13274-2:2019, *Respiratory protective devices — Methods of test — Part 2: Practical performance tests*

EN 13274-4:2020, *Respiratory protective devices — Methods of test — Part 4: Flame test*

EN 13274-7:2019, *Respiratory protective devices — Methods of test — Part 7: Determination of particle filter penetration*

EN ISO 16972:2020, *Respiratory protective devices — Vocabulary and graphical symbols (ISO 16972:2020)*

ISO 16900-11:2013, *Respiratory protective devices — Methods of test and test equipment — Part 11: Determination of field of vision*

ISO 16900-14:2020, *Respiratory protective devices — Methods of test and test equipment — Part 14: Measurement of sound pressure level*

## 3 Terms and definitions, description and symbols

### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 16972:2020 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp/>

**3.1.1****as received**

not pre-conditioned or modified to carry out a test

[SOURCE: EN ISO 16972:2020, definition 3.16]

**3.1.2****ready for assembly state**

component with seals, plugs or other environmental protective means, if applicable, still in place

[SOURCE: EN ISO 16972:2020, definition 3.195]

**3.1.3****Respiratory Interface****(RI)**

part of a respiratory protective device (RPD) that forms the protective barrier between the wearer's respiratory tract and the ambient atmosphere

Note 1 to entry: The RI is connected to the filtering part of the RPD or the part managing the supply of breathable gas.

[SOURCE: EN ISO 16972:2020, definition 3.202]

**3.1.4****loose-fitting respiratory interface**

RI that does not rely on forming a complete seal to the wearer's skin

[SOURCE: EN ISO 16972:2020, definition 3.132]

**3.1.5****powered filtering RPD**

filtering RPD in which air is moved through the filter(s) by means of a blower to supply the wearer with breathable air

[SOURCE: EN ISO 16972:2020, definition 3.180]

**3.1.6****unencapsulated filter**

filter that in itself is not contained in a rigid housing

[SOURCE: EN ISO 16972:2020, definition 3.247]

**3.2 Description**

The device typically consists of:

- a loose-fitting respiratory interface, e.g. hood, blouse or suit which can be combined with other types of PPE;
- a blower unit with an energy supply intended to be carried/worn by the wearer which supplies filtered ambient air to the respiratory interface;

The energy supply for the blower unit may or may not be carried on the person.

- a filter or filters through which all air supplied passes.