INTERNATIONAL STANDARD

**ISO 16900-2**

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# Respiratory protective devices — Methods of test and test equipment —

## Part 2:
## Determination of breathing resistance

*Appareils de protection respiratoire — Méthodes d'essai et équipement d'essai —*

*Partie 2: Détermination de la résistance respiratoire*

Reference number
ISO 16900-2:2009(E)

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# Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 16900-2 was prepared by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 15, *Respiratory protective devices*.

ISO 16900 consists of the following parts, under the general title *Respiratory protective devices — Methods of test and test equipment*:

- *Part 1: Determination of inward leakage*
- *Part 2: Determination of breathing resistance*
- *Part 3: Determination of particle filter penetration*
- *Part 4: Determination of gas filter capacity*

## Introduction

This part of ISO 16900 is intended as a supplement to the relevant performance standards for respiratory protective devices. Test methods are specified for complete devices or parts of devices. If deviations from the test method given in this part of ISO 16900 are necessary, these deviations will be specified in the relevant performance standard.

# Respiratory protective devices — Methods of test and test equipment —

## Part 2:
## Determination of breathing resistance

## 1 Scope

This part of ISO 16900 specifies the method(s) of test for breathing resistance for:

- complete respiratory protective devices [1];
- filters for respiratory protective devices;
- respiratory interfaces.

## 2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 16972, *Respiratory protective devices — Terms, definitions, graphical symbols and units of measurement*

ISO/TS 21748:2004, *Guidance for the use of repeatability, reproducibility and trueness estimates in measurement uncertainty estimation*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16972 apply together with the following.

**3.1**
**static breathing resistance**
differential pressure caused by an RPD when the breathing gas is passed through the device at a constant flow

**3.2**
**dynamic breathing resistance**
differential pressure caused by an RPD when the breathing gas is delivered by a breathing machine adjusted to a specified breathing minute volume and waveform

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[1] Respiratory protective device = RPD.