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Respiratory protective devices — Human factors —

Part 4:

Work of breathing and breathing resistance: Physiologically based limits

Appareils de protection respiratoire — Facteurs humains —

*Partie 4: Travail de respiration et de résistance à la respiration: Limites
physiologiques*



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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.

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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.

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ISO/TS 16976-4 was prepared by Technical Committee ISO/TC 94, *Personal Safety — Protective clothing and equipment*, Subcommittee SC 15, *Respiratory protective devices*.

ISO/TS 16976 consists of the following parts, under the general title *Respiratory protective devices — Human factors*:

- *Part 1: Metabolic rates and respiratory flow rates*
- *Part 2: Anthropometrics*
- *Part 3: Physiological responses and limitations of oxygen and limitations of carbon dioxide in the breathing environment*
- *Part 4: Work of breathing and breathing resistance: Physiologically based limits*

The following parts are under preparation:

- *Part 5: Thermal effects*
- *Part 7: Hearing and speech*
- *Part 8: Ergonomic factors*

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Introduction

A respiratory protective device (RPD) is designed to offer protection from the inhalation of hazardous substances. However, this protection requires extra effort by the respiratory muscles as they need to generate higher pressures to overcome the associated respiratory loads imposed by the RPD.