

SA/SNZ TS ISO 16976.1:2021
ISO/TS 16976-1:2015



Technical Specification

Respiratory protective devices — Human factors

Part 1: Metabolic rates and respiratory flow rates



SA/SNZ TS ISO 16976.1:2021

This Joint Australian/New Zealand Technical Specification was prepared by Joint Technical Committee SF-010, Occupational Respiratory Protection. It was approved on behalf of the Council of Standards Australia on 24 March 2021 and by the New Zealand Standards Executive on 29 March 2021.

This Technical Specification was published on 28 May 2021.

The following are represented on Committee SF-010:

- Association of Accredited Certification Bodies, Australia
- Australasian Fire and Emergency Service Authorities Council
- Australian Industry Group
- Australian Institute of Health & Safety
- Australian Institute of Occupational Hygienists
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- CSIRO
- Joint Accreditation System of Australia and New Zealand
- National Measurement Institute, Australia
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This Technical Specification was issued in draft form for comment as DR SA/SNZ TS ISO 16976.1:2020.

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ISBN 978 1 76113 324 4

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Originated in Australia as SA TS ISO 16976.1:2015.
Jointly revised and redesignated as SA/SNZ TS ISO 16976.1:2021.

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Preface

This Technical Specification was prepared by the Joint Standards Australia/Standards New Zealand Committee SF-010, Occupational Respiratory Protection, to supersede SA TS ISO 16976.1:2015.

The objective of this document is to provide information on factors related to human anthropometry, physiology, ergonomics, and performance for the preparation of standards for performance requirements, testing, and use of respiratory protective devices.

This document contains information related to respiratory and metabolic responses to rest and work at various intensities. Information is provided for the following:

- (a) Metabolic rates associated with various intensities of work.
- (b) Oxygen consumption as a function of metabolic rate and minute ventilation for persons representing three body sizes.
- (c) Peak inspiratory flow rates during conditions of speech and no speech for persons representing three body sizes as a function of metabolic rates.

The information contained within this document represents data for healthy adult men and women of approximately 30 years of age, but is applicable for the age range of the general population.

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