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**Gas cylinders — Outlet connections  
for gas cylinder valves for compressed  
breathable air**

*Bouteilles à gaz — Raccords de sortie pour robinets de bouteilles à  
gaz pour air comprimé respirable*



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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 12209 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 2, *Cylinder fittings*, in collaboration with Technical Committee CEN/TC 23, *Transportable gas cylinders*.

This first edition of ISO 12209 cancels and replaces the first editions of the ISO 12209 series (ISO 12209-1:2000, ISO 12209-2:2000, ISO 12209-3:2000), which have been technically revised.

The main changes are:

- combination of former three parts of ISO 12209 into a single ISO 12209;
- modification of valve outlet, adaptor and o-ring dimensions; and
- addition of an outlet connection type test procedure in [Annex A](#).

# Gas cylinders — Outlet connections for gas cylinder valves for compressed breathable air

## 1 Scope

This International Standard specifies the characteristics of outlet connections for gas cylinder valves for compressed breathable air gas cylinders. It states the fundamental requirements for both; the connection and its components and includes basic dimensions. Included in this International Standard are the following connections:

- yoke type outlet connection for SCUBA use up to a maximum cylinder working pressure of 232 bar;
- threaded type outlet connections up to a maximum cylinder working pressure of 232 bar and 300 bar; and
- threaded type outlet connection for SCUBA use up to a maximum cylinder working pressure of 232 bar including adaptor for users to convert into a yoke type outlet.

[Annex A](#) gives the outlet connection type test procedures.

Requirements for cylinder valves (see ISO 10297) are not covered by this International Standard.

Requirements for material specifications and gas/material compatibility (see ISO 11114-1 and ISO 11114-2) are not covered by this International Standard.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **working pressure**

settled pressure of a compressed gas at a uniform reference temperature of 15 °C in a full gas cylinder

[SOURCE: ISO 10286:2007, definition A.2.8]

### 3.2

#### **SCUBA**

self-contained underwater breathing apparatus

### 3.3

#### **compressed breathable air**

gas which has the nominal composition of atmospheric air and is subject to purity level controls