



## **Valves for compressed gas cylinders**

### **Part 2: Outlet connections (threaded) and stem (inlet) threads**



This Australian Standard® was prepared by Committee ME-002, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 13 October 2015. This Standard was published on 12 November 2015.

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The following are represented on Committee ME-002:

- Australasian Fire and Emergency Service Authorities Council
  - Australia New Zealand Industrial Gas Association
  - Australian Chamber of Commerce and Industry
  - Engineers Australia
  - Fire Protection Association of Australia
  - Gas Energy Australia
  - Gas Technical Regulators Committee
  - Materials Australia
  - National Association of Testing Authorities Australia
  - SafeWork New South Wales
  - The Australian Gas Association
  - Welding Technology Institute of Australia
  - WorkSafe Victoria
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This Standard was issued in draft form for comment as DR AS 2473.2:2014.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard<sup>®</sup>

## Valves for compressed gas cylinders

### Part 2: Outlet connections (threaded) and stem (inlet) threads

Originated as part of AS B240—1966.  
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Second edition AS 2473.2:2015.  
Reissued incorporating Amendment No. 1 (October 2020).

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## PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee ME-002, Gas Cylinders to supersede AS 2473.2—2007, *Valves for compressed gas cylinders, Part 2: Outlet connections (threaded) and stem (inlet) threads*.

*This Standard incorporates Amendment No. 1 (October 2020). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

A1 | If a Standard is referenced in legislation, the legislative instrument or regulation specifies when the Standard or Amendment comes into effect. Regulatory Authorities have indicated 6 months, following the date of publication, as an appropriate transition period for this amendment.

The changes in this amendment introduce a Type 27 outlet to replace the Type 21 (POL) outlet for cylinders less than 25 L water capacity as new cylinders are introduced or existing cylinders are retested. The Type 27 outlet includes additional safety features including a right-hand thread, no gas flow possible until a mating fitting is connected and a thermal fuse which shuts off the gas flow in a fire.

This Standard follows from a decision to expand AS 2473—1996 into a suite of Standards for valves for compressed gas cylinders based as much as possible on ISO Standards. AS 2473 comprises three parts as follows:

Part 1: Specifications, type testing, and manufacturing tests and inspections.

Part 2: Outlet connections (threaded) and stem (inlet) threads (this Standard).

Part 3: Outlet connections for medical gases (including pin-indexed yoke connections).

This Part specifies the system of threaded outlet connections for non-medical gases. It also includes specifications for valve stem threads. In the absence of a universally recognized threaded outlet system, this system has been continuously developed in Australia since the original release of AS B240—1966 by selective adoption and modification of specifications from ISO and overseas national standards. It therefore represents a unique solution.

This revision of Part 2 of the Standard continues the long term program of moving towards a system of valve outlet connections with greater differentiation of gas types and maximum filling pressures. The following is a summary of the main changes in this revision:

- (a) Guidance for the integrity and leak tightness of outlet connections, including the possible use of O-ring and soft sealing tips, was revised to be based on general principles applicable to all the gases in the scope of the standard. Detail specification should be made from Australian and ISO material standards and standards applying to assembled equipment. This guidance is now provided in a main clause of the Standard and a Note to Figure 2.6 replacing Appendices B and C in the previous edition.
- (b) The description and references applying to outlet connections Type 50 and Type 60 were clarified to indicate the Australian valves adopted in the absence of a full specification in the originating ISO Standard.
- (c) Minimum body port lengths for the outlets were given or increased for several externally threaded outlet connections to avoid potential interference with the nipple tightening nut.
- (d) Application details for the main legacy Australian stem (inlet) thread in the Standard were clarified to allow its use in valves designed for inherent protection according to AS 2473.1—2006.

(e) General detail error correction.

The program for conversion of relevant cylinders from the existing threaded outlet connections to the pin-indexed yoke connections of AS 2473.3 is now complete, and outlet connections for medical gases are only specified in that part of AS 2473.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

Statements expressed in mandatory terms in notes to Figures are deemed to be requirements of this Standard.

**NOTE THAT FULL COMPLIANCE WITH THIS STANDARD MIGHT NOT NECESSARILY FULFIL ALL LEGAL OBLIGATIONS.**

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