

Australian Standard[®]

Valves for compressed gas cylinders

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



This Australian Standard® was prepared by Committee ME-002, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 26 October 2007. This Standard was published on 4 December 2007.

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 - Australia New Zealand Industrial Gas Association
 - Australian Chamber of Commerce and Industry
 - Australian Industry Group
 - Australian Steel Association
 - Department of the Premier and Cabinet, Safework S.A.
 - Fire Protection Association of Australia
 - International Association for Natural Gas Vehicles
 - LPG Australia
 - Materials Australia
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 - Victorian WorkCover Authority
 - Welding Technology Institute of Australia
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STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 2473.3—2007

Valves for compressed gas cylinders

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

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Technical Committee ME-002 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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SafeWork NSW
The Australian Gas Association
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Worksafe New Zealand
WorkSafe Victoria

NOTES

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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 2473.3—2004, *Valves for compressed gas cylinders—Outlet connections for medical gases (including pin-indexed yoke connections)*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to provide manufacturers of medical equipment, the medical gases industry and medical facilities with specifications for outlet connections for gas cylinders containing medical gases.

Dimensions for pin-indexed yoke connection in earlier versions of this Standard up to 1996, when its designation was changed from AS 2472 to AS 2473.3, were taken from the metric range of BS 1319:1976, *Specification for medical gas cylinders, valves and yoke connections* (later replaced by EN 850), which in turn aligned closely with ISO 407, *Small medical gas cylinders—Pin-index yoke-type valve connections*. Both Standards were derived from earlier versions of CGA V-1:2002, *Compressed gas cylinder valve outlet and inlet connections*. However, all these Standards differ in minor but noticeable ways in the dimensions of the connections. Although connections made to each Standard are believed to be functionally interchangeable, users should be aware of the existence of differences.

This Standard maintains the general structure and much of the content of ISO 407, however, some changes have been made and considerable material has been added to accommodate existing Australian practice. However, cylinder valves complying with ISO 407 are functionally interchangeable with yoke connections made to this Standard and vice-versa. The figure numbers for the yoke outlet connections from the 2004 revision of this Standard are those in ISO 407 and users should be aware that they differ from those in AS 2472—1996 and earlier revisions.

Appendix A summarizes the correspondence between clauses in this Standard and ISO 407.

In this revision the outlet connections for all sizes of oxygen cylinders are specified as the pin-indexed yoke connection from Table 1. The formerly specified threaded outlet for cylinders with a water capacity exceeding 5 kg has been removed, and cylinders currently fitted with valves with that connection will be converted to pin-indexed yoke connections over a period of time. Hence from this revision all outlet connections for medical gas cylinders are specified only in this Standard.

A revision of ISO 407 in 2004 corrected some errors. To maintain alignment as well as to correct other errors in AS 2473—2004, Figures 1(a), 2, 3 and 4, Table 2 and Table 3 (connections A-F, B-F, D-F, E-F, A-G, E-G, E-H, B-J and E-J) have been modified in detail in this edition.

The titles of this Standard and ISO 407 both refer to outlet connections only, yet a number of associated requirements pertaining to other features of the valve itself are specified in both documents. However, AS 2473.1—2006 is now referred to for the general valve requirements.

It is important to note that users of existing equipment with connection to AS 2472—1996, Figure 14 will be required to change to the corresponding applicable connection from this Standard.

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard
Valves for compressed gas cylinders

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

1 SCOPE

This Standard specifies the outlet connections for gas cylinders containing medical gases. Additionally, it specifies certain related design and manufacturing features of the valve. It includes the following:

- (a) Outlet connections to be used with nominated medical gases.
- (b) Basic dimensions for pin-indexed yoke connections.
- (c) Design of the pin-indexed yoke.
- (d) Dimensions and positions of the holes and pins for the valve and yoke.
- (e) Requirements for cylinder valves to be fitted to medical gas cylinders, including working pressures and certain design and manufacturing features.

WARNING: THE CONTENTS OF A GAS CYLINDER ARE IDENTIFIED PRIMARILY BY MARKING AND LABELLING ON THE CYLINDER. CYLINDER COLOURS ARE USED AS A SECONDARY MEANS OF IDENTIFICATION. LABELS AND MARKINGS ON A GAS CYLINDER SHOULD ALWAYS BE CONSULTED PRIOR TO USE.

NOTE: Correspondence between the provisions of ISO 407 and this Standard is provided in Appendix A.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
2030	The verification, filling, inspection, testing and maintenance of cylinders for storage and transport of compressed gases
2030.1	Part 1: Cylinders for compressed gases other than acetylene
2473	Valves for compressed gas cylinders
2473.1	Part 1: Specifications, type testing, and manufacturing tests and inspections
2473.2	Part 2: Outlet connections (threaded) and stem (inlet) threads
4484	Gas cylinders for industrial, scientific, medical and refrigerant use—Labelling and colour coding
ISO	
407	Small medical gas cylinders—Pin-index yoke-type valve connections
10286	Gas cylinders—Terminology
CGA V-1	Standard for compressed gas cylinder valve outlet and inlet connections

NOTE: Additional related documents are listed in Appendix B.

3 DEFINITIONS

For the purposes of this Standard, the definitions in AS 2030.1 and those below apply.