Australian Standard®

# Valves for compressed gas cylinders (diameter-indexed outlet)

This Australian Standard was prepared by Committee ME/2, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 17 August 1990 and published on 12 November 1990.

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The following interests are represented on Committee ME/2:

ACT Administration—Office of City Management

Aluminium Development Council

Australian Assembly of Fire Authorities

Australian Chamber of Commerce

Australian Gas Association

Australian Liquefied Petroleum Gas Association

Australian Underwater Federation

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Welding Technology Institute of Australia

WorkCover Authority, N.S.W.

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## PREFACE

This Standard was prepared by the Standards Australia Committee on Gas Cylinders to supersede AS 2474—1981. As the previous edition provided only for self-sealing outlet connections, it was considered necessary to provide for additional types of outlet connections, especially when dealing with inert gases. The new edition of AS 2473—1990, *Valves for compressed gas cylinders (threaded outlets)* also specifies connector type E as the alternative outlet connection.

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STANDARDS AUSTRALIA

# Australian Standard

# Valves for compressed gas cylinders (diameter-indexed outlet)

**1 SCOPE** This Standard specifies outlet connection dimensions for a system of diameter-indexed valve connections for a limited range of nominated gases.

NOTE: Requirements for other aspects of the valves are specified by reference to AS 2473. Requirements for valves employing the pin-indexed outlet connections (for medical application) are specified in AS 2472.

This Standard does not apply to valves for portable gas cylinders of less than 11 kg water capacity for self-contained breathing apparatus, or to valves for fire extinguishers.

**2 REFERENCED DOCUMENTS** The following documents are referred to in this Standard:

AS
1721 General purpose metric screw threads

2030 SAA Gas Cylinders Code
2030.1 Part 1: Cylinders for compressed gases other than acetylene

2472 Valves for medical gas cylinders
2473 Valve for compressed gas cylinders (threaded outlet)

**3 DEFINITIONS** For the purpose of this Standard, the definitions given in AS 2030.1 apply.

**4 CLASSIFICATION AND DESIGNATION** The valve outlet and outlet connection details shall be as designated in Table 1 for the particular gas. Dimensions and tolerances shall comply with Figures 1 to 6 as nominated in Table 1.

NOTE: Appendix A provides the basis for allocation of outlet connections within the system of diameter-indexed connections.

**5 MATERIALS** Materials shall comply with AS 2473.

**6 MANUFACTURING CONSIDERATIONS**

**6.1 General** Valve bodies shall not be manufactured as castings.

**6.2 Valve stem thread** The valve stem (inlet) thread shall comply with AS 2473.

**6.3 Valve operations** Diameter-indexed outlet valves are intended to be operated by the connection or disconnection of the outlet-connecting parts. If valves are spindle operated, the valve shall comply with AS 2473.

**6.4 Pressure rating** The maximum service pressure for which the valve is rated shall be nominated by the valve manufacturer and shall be verified by testing in accordance with AS 2473.

**7 TESTING** Testing shall be in accordance with AS 2473, except that, in addition to leak testing of any spindle gland, a leakage test in accordance with AS 2473 shall be applied with the outlet-connecting parts fully engaged and fully disengaged.

**8 MARKING** Valves shall be permanently and legibly marked on the body with the manufacturer's name or mark, and sufficient information to determine the maximum service pressure for which the valve is designated.

**TABLE 1**

**OUTLET CONNECTION DESIGNATION FOR LISTED GASES**

| Gas | Outlet connection | Reference figure |
|---|---|---|
| Air | B | 2 |
| Acetylene | A | 1 |
| Argon | E | 5 |
| Carbon dioxide | F | 6 |
| Helium | E | 5 |
| Hydrogen | C | 3 |
| Krypton | E | 5 |
| Neon | E | 5 |
| Nitrogen | E | 5 |
| Oxygen | D | 4 |
| Xenon | E | 5 |

NOTE: Additional gases and outlet connection types are expected to be added in accordance with the scheme of allocation given in Appendix A.