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Australian Standard 2474—1981

VALVES FOR COMPRESSED GAS CYLINDERS (DIAMETER-INDEXED OUTLET)

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and departments were officially represented on the committee entrusted with the preparation of this standard:

Aluminium Development Council

Australasian Steamship Owners Federation

Australian Chamber of Commerce

Australian Liquefied Petroleum Gas Association

Australian Underwater Federation

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

Department of the Capital Territory

Department of Defence

Department of Industrial Affairs and Employment, S.A.

Department of Industrial Relations, N.S.W.

Department of Labour and Industry, Vic.

Department of Labour and Industry, W.A.

Department of Labour and Industry, Tas.

Department of Labour Relations, Qld

Department of Mines, Qld

Department of Mines and Energy, N.T.

Insurance Council of Australia

Railways of Australia Committee

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VALVES FOR COMPRESSED GAS CYLINDERS (DIAMETER-INDEXED OUTLET)

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PREFACE

This standard was prepared by the Association's Committee on Gas Cylinders concurrently with AS 2473, which is a replacement for AS B240—1966, and AS 2472, which is a revision of Supplement No 1 to AS CB4—1955. It provides an alternative and true metric system of valve connections intended for use with industrial compressed gases. The system was offered by Commonwealth Industrial Gases Limited, and employs a non-interchangeable series of diameter-indexed elements for the valve outlet connection, the elements being separated according to the gas characteristics. At this stage only six elements are allocated to nominated gases or groups of gases, and a further sixteen elements remain reserved for future use.

It is not intended at this time to apply the system to breathing gases, but it has been noted that the pin-indexed system is near saturation, and that the reserved diameter-indexed system elements could provide connections for the rapidly increasing range of industrial and other gases and gas combinations.

This standard refers to AS 2473 for connection features other than outlet connection details.

This standard requires reference to the following standards:

AS 1721	General Purpose Metric Screw Threads
AS 2030	SAA Gas Cylinders Code
AS 2473	Valve for Compressed Gas Cylinders (Threaded Outlet)

CONTENTS

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
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 1 l kg water capacity for self-contained breathing apparatus, or to valves for fire extinguishers.

2 DEFINITIONS. For the purpose of this standard, the definitions given in AS 2030 apply.

3 VALVE STEM THREAD. The valve stem (inlet) thread shall comply with Clause 3.1 of AS 2473.

4 VALVE OUTLET, AND OUTLET CONNECTION DETAILS. The valve outlet and outlet connection details shall be as designated in Table 1 for the particular gas. Dimensions and tolerances shall comply with Tables 2 to 7 as nominated in Table 1.

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

5 VALVE OPERATION. Valves of this type 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 Clauses 4.1 and 5 of AS 2473.

6 MATERIALS. Materials shall comply with Clause 6 of AS 2473.

7 MANUFACTURE. Valve bodies shall not be manufactured as castings.

8 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 Clause 9.4 of AS 2473.

9 TESTING. Testing shall be in accordance with Clause 9 of AS 2473, except that in addition to leak testing of any spindle gland a leakage test in accordance with Clause 9.4.2 of AS 2473 shall be applied with the outlet-connecting parts fully engaged and fully disengaged.

10 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 Table
Air	B	3
Acetylene	A	2
Argon	E	6
Carbon dioxide	F	7
Helium	E	6
Hydrogen	C	4
Krypton	E	6
Neon	E	6
Nitrogen	E	6
Oxygen	D	5
Xenon	E	6

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