



**Standards
Association of
Australia**



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CAST IRON WEDGE GATE VALVES FOR GENERAL PURPOSES



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Australian Valve Manufacturers Association
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Department of Public Works, N.S.W.
Engineering and Water Supply Department, S.A.
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AUSTRALIAN STANDARD

**CAST IRON WEDGE GATE
VALVES FOR GENERAL
PURPOSES**

AS 3579—1988

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PREFACE

This Standard was prepared by the Association's Committee on Valves for Water Supply Purposes at the request of the Australian Valve Manufacturers' Association.

In the past, cast iron gate valves have generally been manufactured in accordance with BS 3464, *Cast iron wedge and double disk gate valves for general purposes*, which was subsequently superseded by BS 5150 using the same title. (The former covered imperial sizes whereas the latter covers metric sizes.) This Standard incorporates some features of both British Standards and takes account of current Australian practice. Assistance gained from these sources is duly acknowledged.

This Standard will be further revised to add performance requirements while retaining essential references of deemed-to-satisfy dimensions.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

CAST IRON WEDGE GATE VALVES FOR GENERAL PURPOSES

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard specifies requirements for flanged end, cast iron gate valves with solid wedge, metal seat, and either inside screw, non-rising stem or outside screw, rising stem, for general purposes in nominal sizes of DN 50 to DN 300. The gate valves are generally handwheel-operated and not recommended for buried service. The valves can be installed with the stem in any orientation.

NOTES:

1. Cast iron gate valves to this Standard differ from valves to AS 2638 which are recommended for buried service for waterworks purposes.
2. Guidelines for purchasers on requirements that must or may need to be agreed upon at the time of enquiry or order are given in Appendix A.

1.2 REFERENCED DOCUMENTS. The documents below are referred to in this Standard.

AS

- 1110 ISO metric hexagon precision bolts and screws
 1111 ISO metric hexagon commercial bolts and screws
 1252 High strength steel bolts with associated nuts and washers for structural engineering
 1565 Copper and copper alloys—Ingots and castings
 1567 Copper and copper alloys—Wrought rods, bars and sections
 1830 Iron castings—Grey cast iron
 1831 Iron castings—Spheroidal or nodular graphite cast iron
 1833 Iron castings—Austenitic cast iron
 2074 Steel castings
 2129 Flanges for pipes, valves and fittings
 2345 An accelerated laboratory test method for assessment of the susceptibility of brass to dezincification
 2638 Cast iron sluice valves for waterworks purposes
 2837 Wrought alloy steels—Stainless steel bars and semi-finished products

BS

- 5292 Specification for jointing materials and compounds for installations using water, low pressure steam or 1st, 2nd and 3rd family gases

1.3 DEFINITIONS. For the purpose of this Standard, the following definitions apply.

1.3.1 Gate valve—a valve in which a sliding gate is moved in its own plane at right angles to the flow. The valve is generally handwheel operated and when fully opened gives a clear waterway.

1.3.2 Class—the maximum working pressure of the valve expressed in hundreds of kilopascals.

1.3.3 Maximum working pressure—the maximum internal working pressure which may be applied to the valve either as a continuous or transient peak pressure.

1.3.4 Maximum working temperature—the maximum internal or external temperature to which the valve is exposed in service.

1.3.5 Face-to-face dimensions—the distance between the two planes perpendicular to the valve axis located at the extremities of the body end ports. (See Figure 3.1, Dimension A.)

1.3.6 Nominal size (DN)—a numerical designation of size which is common to all components in a piping system other than components designated by outside diameters or by thread size. It is a convenient round number for reference purposes and is loosely related to the internal bore diameter.

1.4 DESIGNATION OF SIZE. Valve size shall be designated by the nominal size as follows: DN 50, DN 65, DN 80, DN 100, DN 125, DN 150, DN 200, DN 225, DN 250, and DN 300.

1.5 PRESSURE CLASSIFICATION. Cast iron gate valves shall be classified according to maximum working pressure and temperature range as given in Table 1.1.

TABLE 1.1
CLASSIFICATION

Class of valve	Maximum working pressure, kPa	
	Grey iron (Note 1)	Cast ductile iron (Note 2)
14	1 400	1 400
21	2 100	2 100

NOTES:

1. Temperature range -10°C to 65°C .
2. Temperature range -10°C to 120°C .