

Specification for

Predominantly key-operated cast iron gate valves for waterworks purposes

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Foreword

This British Standard has been prepared under the direction of the Piping Systems Components Standards Committee and is a revision of BS 5163:1974, which is withdrawn.

This British Standard takes into account ISO 7259¹⁾, to be published by the International Organization for Standardization (ISO). It incorporates most of the requirements of ISO 7259 for flanged valves though not necessarily in the same format; the essential differences are as follows.

- a) The scope has been extended to cover the nominal sizes DN 50 to DN 600.
- b) The PN 20 flange given in ISO 7259 has not been included.
- c) Height dimensions are included in this standard but are not in the international standard.
- d) Minimum stem diameters for type B valves are included in this standard but are not in the international standard.
- e) Valve cap details are included in this standard but are not in the international standard.
- f) Operation has been given in greater detail.
- g) Testing has been included in greater detail.
- h) Test durations in this standard are considerably greater than those specified in ISO 7259 and ISO 5208-1982.
- i) Marking requirements have been included in greater detail.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 14, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

¹⁾ In preparation.

Section 1. General

1 Scope

This British Standard specifies requirements for two types, type A and type B (see clause 3), of cast iron gate valves with flanged ends, predominantly key-operated, for underground use for waterworks purposes and primarily for use with potable water. The range of valve sizes covered is DN 50 to DN 600 for nominal pressures of PN 10, PN 16 and PN 25.

This standard does not cover the design of either the obturator or the stem diameter and stem thread lead for type A valves, for which only performance criteria are given.

NOTE 1 The information to be supplied by the purchaser at the time of his or her enquiry or order is detailed in Appendix A.

NOTE 2 The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this British Standard the following definitions apply.

2.1

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 only loosely related to manufacturing dimensions

NOTE 1 Nominal size is designated by the letters "DN" followed by the appropriate reference number, e.g. DN 150.

NOTE 2 The definition is identical with that given in ISO 6708-1980.

2.2

nominal pressure (PN)

a numerical designation which is a convenient rounded number for reference purposes
all equipment of the same nominal size (DN) designated by the same PN number shall have compatible mating dimensions

NOTE 1 The maximum allowable working pressure depends on materials, design and working temperatures, and should be selected from the tables of pressure/temperature ratings given in the appropriate standards.

NOTE 2 Nominal pressure is designated by the letters PN followed by the appropriate reference number, e.g. PN 16.

NOTE 3 This definition is identical with that given in ISO 7268-1983.

2.3

face-to-face dimension

the distance, expressed in millimetres, between two planes perpendicular to the valve axis located at the extremities of the body end ports

3 Types of valves

Valves shall be one of the following types.

- Type A, which is for T-key operation only (see Figure 1).
- Type B, which is for key/bar operation, but which can be operated by a T-key (see Figure 2).

However, both types shall be capable of operation by a handwheel or actuator.

NOTE Type B valves are designed for heavier duty than type A valves and will withstand higher torque loads and bending moments (see 18.3 and Table 8 and Table 9).

