

Specification for Butterfly valves

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- STC Water Regulations and Fittings Scheme
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The following body was also represented in the drafting of the standard:

- Institution of Civil Engineers

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Foreword

This revision of BS 5155 has been prepared under the direction of the Mechanical Standards Committee. It is one of a series of revised standards for valves that are designed to meet the majority of national requirements and to assist both manufacturers and users. This revision reflects current manufacturing practice, deletes the PN 2.5 pressure designation but extends the pressure range to include Class 300. It supersedes the 1974 edition which is withdrawn.

The satisfactory performance of any valve depends on design, manufacture, correct installation and maintenance; this standard specifies requirements for design and manufacture but not installation or maintenance. Guidance on the installation and use of valves is given in BS 6683.

This standard does allow options to the standard product, the preferred option being indicated by a note to the appropriate clause. Particular requirements should be indicated by the purchaser, as stated in appendix A, otherwise the manufacturer will supply the product in accordance with the preferred option(s) in respect of the following:

- a) means of operation;
- b) direction of operating effort to close;
- c) trim materials;
- d) flanged ends drilled.

Throughout this standard all pressure ratings specified are gauge pressures.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

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.

Section 1. General

1 Scope

This British Standard specifies requirements for size, rating, design, materials, marking and preparation for transport and storage for double flanged and wafer type butterfly valves with nominal pressure up to PN 40 and Class 300, in the normal size (DN) range DN 40 to DN 2000 and 1½ in to 24 in respectively. It also specifies test requirements for pressure testing, fire-tested designs and anti-static designs, and gives methods of test for pressure testing.

This standard does not cover the installation of butterfly valves. Strict compliance with the instructions of the manufacturer is necessary.

NOTE 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

face-to-face dimensions

the distance between the two planes perpendicular to the body axis located at the extremities of the body end ports. Where a liner extends over the end faces and acts as a gasket, the face-to-face dimension is inclusive of the double thickness of the liner (e.g. the thickness over each face) when in the installed (i.e. compressed) condition

2.2

double flanged

a valve having flanged ends for connection to pipe flanges by individual bolting

2.3

wafer

a valve primarily intended for clamping between pipe flanges using through bolting

NOTE Some types may be suitable for individual bolting (see clause 3).

2.4

nominal pressure (PN)

nominal pressure (PN) is a numerical designation which is a convenient round 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 upon materials, design and working temperatures and shall be selected from the "pressure/temperature rating" tables in the appropriate standards.

NOTE 2 It is designated by PN followed by the appropriate reference number.

NOTE 3 This definition is in accordance with ISO 7268.

2.5

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 DN followed by a number.

NOTE 2 This definition is in accordance with ISO 6708.

2.6

tight shut-off valve

a valve having no visible leakage past the disk in the closed position under test conditions

2.7

low-leakage-rate valve

a valve which has a specified maximum leakage rate past the disk in the closed position

2.8

regulating valve

a valve intended for regulating purposes, and which may have a clearance between the disk and the body in the closed position

3 Types

Valves shall be one of the following types, as shown in Figure 1 to Figure 4, with metal or resilient seatings or linings:

- a) double flanged;
- b) wafer:
 - 1) single flange;
 - 2) flangeless;
 - 3) U-section.

NOTE The type of valve required should be specified by the purchaser in accordance with item a) of appendix A.

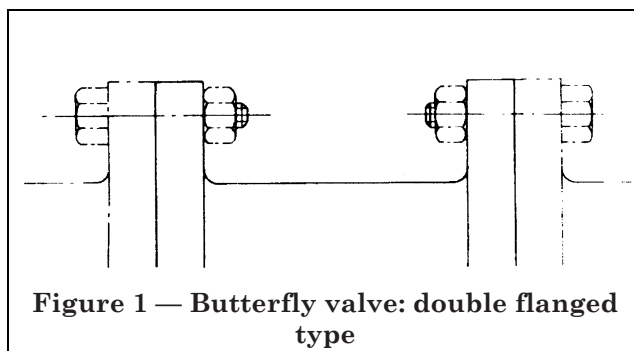


Figure 1 — Butterfly valve: double flanged type