
British Standard Specification for
Cast iron plug valves

Robinets à boisseau en fonte — Spécifications

Kegelventile aus Gußeisen

Foreword

This revision of BS 5158 has been prepared under the direction of the Piping Systems Components Standards Policy Committee and supersedes BS 5158 : 1974 which is withdrawn.

The opportunity has been taken in carrying out this revision to introduce internationally agreed pressure/temperature ratings, based on the definition of nominal pressure (PN) given in ISO 7268, published by the International Organization for Standardization (ISO), covering ratings previously given in German (DIN) and American (ANSI) standards. However, in this revision the use of PN has been limited to valves with flanges designated PN 10, PN 16 and PN 25 in accordance with BS 4504 : Section 3.2. For valves with flanges complying with BS 1560 : Section 3.2, Class ratings have been retained.

This revision also takes account of the latest agreements in ISO/TC 153/SC 1, Valves — Design, construction, marking and testing, and ISO/TC 5/SC 10, Metallic flanges and their joints. On this basis the terminology and definitions in this standard are in accordance with those given in ISO standards and the minimum bore dimensions conform to those agreed in ISO/TC 153/SC 1. However, at the time of publication of this British Standard no corresponding international standard exists.

The main differences between this British Standard and BS 5158 : 1974 are as follows.

- (a) Only cast iron bodied plug valves are covered (steel bodied plug valves are now covered only in BS 5353).
- (b) Nominal sizes DN 10 for flanged-end valves and $\frac{1}{4}$ for threaded-end valves have been omitted.
- (c) Cast iron plug valves designated Class 150, Class 250 and Class 300 have been included for the first time.
- (d) Pressure/temperature ratings of body materials have been revised to align with BS 1560 : Section 3.2 and BS 4504 : Section 3.2, as appropriate, and minimum pressure/temperature ratings for soft seat materials have been included for the first time.
- (e) More details are specified for design and operation requirements.
- (f) Anti-static requirements are given for soft seated and lined valves.

(g) A greater choice of materials is available for the pressure-containing shell and some requirements are given for trim components.

(h) Production pressure testing is now in accordance with BS 6755 : Part 1.

The minimum pressure/temperature seat ratings given in this standard for soft seated valves are based on the use of PTFE without fillers, of virgin material completely free of reclaimed processed material for the valve seats, but attention is drawn to the use of alternative seat materials that could give higher pressure/temperature ratings.

Pressure/temperature ratings of the soft seated valve are dependent on both the body rating and the pressure capability of the seats. Seat pressure capability will be limited by the strength of the seat material, particularly by the loss of strength which may occur at elevated temperatures. The applicable valve pressure rating at any temperature will, therefore, be limited by either the body rating or the seat rating.

Throughout this British Standard those dimensions shown in parentheses are non-preferred. The non-preferred sizes are given for replacement of existing valves; they are not recommended for new pipework systems.

Attention is drawn to BS 5353 which specifies steel plug valves for more arduous duties than valves covered by this standard and to BS 6683 for guidance on the installation of valves.

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing surveillance, which may be coupled with assessment of a supplier's quality systems against the appropriate Part of BS 5750.

Enquiries as to the availability of third party certification schemes will be forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

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