

Specification for

Domestic gas cooker oven control valves with or without manual override

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Gas Standards Policy Committee (GSE/-) to Technical Committee GSE/22, upon which the following bodies were represented:

- Association of Control Manufacturers [TACMA (BEAMA Ltd.)]
- British Combustion Equipment Manufacturers' Association
- British Gas plc
- Department of Trade and Industry (Consumer Safety Unit, CA Division)
- Electricity Association
- Health and Safety Executive
- LP Gas Association
- Society of British Gas Industries

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Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 References	1
3 Definitions	1
4 Construction requirements	1
5 Operational requirements	3
6 Methods of test	5
7 Performance tests	7
8 Marking and information	8
Figure 1 — Paint scratch test apparatus	5
Figure 2 — Schematic illustration of torque test	6
Figure 3 — Schematic illustration of bending moment test	7
Table 1 — Minimum valve life	4
Table 2 — Torque and bending moment values	6
List of references	Inside back cover

Foreword

This British Standard has been prepared under the direction of the Gas Standards Policy Committee. It covers electrically operated valves for domestic cooker oven control that were previously covered by class 4 of BS 5963, which was withdrawn on publication of BS EN 161:1991.

Where valves are intended to perform a safety shut-off function, BS EN 161 for automatic gas shut-off valves should be consulted.

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 and ii, pages 1 to 8, 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 Scope

This British Standard specifies the requirements for electrically operated valves with or without manual override for use on domestic cooker oven control for burning 1st, 2nd and 3rd family gases up to and including DN 25 connection size for declared operating pressures up to 50 mbar¹⁾.

It covers valves intended for control purposes, which open when energized and close automatically when de-energized.

Where a manufacturer declares that a valve is suitable for only one gas family, only the relevant tests apply.

2 References

2.1 Normative references

This British Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed on the inside back cover. For a dated reference, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative reference

This British Standard refers to another publication that provides information. The edition of this publication current at the time of issue of this standard is given on the inside back cover, but reference should be made to the latest edition.

3 Definitions

For the purposes of this British Standard, the definitions given in BS 1179 apply, together with the following.

3.1

manual override

a lever or other similar means which enables the valve to be opened manually and maintained in the open position in the absence of an electrical supply to the valve

3.2

opening time

the time interval between the energization of the valve and the achievement of a flow rate equal to 80 % of the full rate as measured

3.3

closing time

the time interval between the de-energization of the valve and the cessation of flow

3.4

closing force

the force provided by the closing mechanism of the valve independent of any force provided by gas pressure

4 Construction requirements

4.1 Pressure test points

Where provision is made for pressure test points on a valve body then they shall be in the form of either:

- a) a suitable boss threaded conforming to BS 21 (female) or BS 2779 (female) which is either plugged or fitted with a suitable test nipple; or
- b) an integrally cast test nipple having an external diameter of $9 \begin{smallmatrix} 0 \\ -0.5 \end{smallmatrix}$ mm and useful length of at least 10 mm for connection to tubing. The equivalent diameter of the hole in the test nipple shall not exceed 1 mm.

4.2 Materials for gas-carrying parts

Parts of the body, other than O-ring or gasket seals, which directly or indirectly separate a gas-carrying chamber from the atmosphere shall be made of either:

- a) metallic material; or
- b) non-metallic material, provided that upon removal or fracture of this non-metallic part under all circumstances not more than 30 dm³/h of air can escape, when the valve is tested with air, at the declared maximum operating pressure.

4.3 Solder for joining parts

Solder that has a melting point below 450 °C after application shall not be used for joining gas-carrying parts.

4.4 Breather holes

Breather holes shall be so designed that when any diaphragm or other flexible seal is damaged, the flow of air through the hole shall not exceed 70 dm³/h at the maximum declared operating pressure.

This requirement shall be considered to have been met for maximum inlet pressures up to 30 mbar if the diameter of a breather hole is not greater than 0.7 mm.

¹⁾ 1 bar = 10⁵ N/m² = 100 kPa.