

Safety and control devices for use in hot water systems —

**Part 3: Specification for combined
temperature and pressure relief valves
for pressures from 1 bar to 10 bar**

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Building Services Standards Policy Committee (SEB/-) to Technical Committee SEB/2, upon which the following bodies were represented:

- Association of Manufacturers of Domestic Electrical Appliances
- Association of Manufacturers of Domestic Unvented Supply Systems Equipment (MODUSSE)
- Association of Water Officers Ltd.
- British Bathroom Council
- British Gas plc
- British Non-ferrous Metals Federation
- British Plastics Federation
- British Plumbing Fittings Manufacturers' Association
- British Valve and Actuator Manufacturers' Association
- Builders' Merchants' Federation
- Consumer Policy Committee of BSI
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property Services Agency)
- Department of the Environment (Water Directorate)
- Department of Trade and Industry (National Weights and Measures Laboratory)
- Institute of Clerks of Works of Great Britain Inc.
- Institute of Plumbing
- Institution of Gas Engineers
- Institution of Water and Environmental Management (IWEM)
- Metal Sink Manufacturers' Association
- National Association of Plumbing, Heating and Mechanical Services Contractors
- Royal Institute of British Architects
- Society of British Gas Industries
- South London Consortium
- Water Authorities' Association
- Water Companies' Association
- Water Heater Manufacturers' Association

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Foreword

This Part of BS 6283 has been prepared under the direction of the Building Services Standards Policy Committee at the request of the Department of the Environment on the advice of the Standing Technical Committee on Water Regulations. It supersedes BS 6283-3:1982 which is withdrawn. Each Part of BS 6283 specifies requirements for a particular device for preventing overheating and/or excess pressures in water installations, and is intended to be suitable for citing as deemed to satisfy the relevant regulations or byelaws.

This British Standard comprises the following Parts:

- *Part 1: Specification for expansion valves for pressures up to and including 10 bar;*
- *Part 2: Specification for temperature relief valves for pressures from 1 bar to 10 bar;*
- *Part 3: Specification for combined temperature and pressure relief valves for pressures from 1 bar to 10 bar;*
- *Part 4: Specification for drop-tight pressure reducing valves of nominal size up to and including DN 50 for supply pressures up to and including 12 bar.*

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 12, 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

1.1 Scope

This Part of BS 6283 specifies the design, construction and testing requirements for combined temperature and pressure relief valves of the automatic reseating type, of nominal sizes DN 15 to DN 40 for working pressures from 1 bar¹⁾ to 10 bar. The valves are intended for the protection of storage water heaters of the unvented type that are required to operate at temperatures not normally exceeding 90 °C and not exceeding 100 °C under emergency conditions. However, they may be used for other water applications where appropriate.

This Part of BS 6283 does not cover the application or installation of these valves, nor does it cover energy input control or over-temperature energy cut-out devices.

Advice on the information to be supplied by the purchaser is given in Appendix A.

NOTE The titles of the publications referred to in this Part of BS 6283 are listed on the inside back cover.

1.2 Definitions

For the purposes of this Part of BS 6283 the following definitions apply.

1.2.1

temperature relief valve

a temperature actuated valve which opens automatically at a specified temperature to discharge fluid. It is fitted to water heaters to prevent the temperature in the container from exceeding 100 °C

1.2.2

pressure relief valve

a pressure actuated valve which opens automatically at a specified set pressure to discharge fluid. It is fitted to prevent the pressure in a water heater from exceeding a predetermined safe margin over the maximum working pressure when pressure controls fail to operate

1.2.3

combined temperature and pressure relief valve

a valve which is capable of performing the function of both a temperature relief valve and a pressure relief valve

1.2.4

maximum working pressure

the maximum static water pressure at which a combined temperature and pressure relief valve is designed to be used

1.2.5

set pressure

the nominal inlet pressure at which a combined temperature and pressure relief valve is set to open in service

1.2.6

reseating pressure

the inlet pressure at which a combined temperature and pressure relief valve closes after discharging

1.2.7

maximum working temperature

the maximum water temperature at which the valve is designed to be used

1.2.8

set temperature

the nominal temperature at which a combined temperature and pressure relief valve is set to open

1.2.9

reseating temperature

the temperature at which a combined temperature and pressure relief valve closes after discharging

1.2.10

rated discharge capacity

the power that can be dissipated through the combined temperature and pressure relief valve under the conditions described in the discharge capacity test

1.3 Nominal size

The nominal size of the combined temperature and pressure relief valve and the nominal size of the appropriate inlet connection shall be as given in Table 1.

1.4 Marking

1.4.1 Flow marking

Each combined temperature and pressure relief valve shall be legibly and permanently marked to identify the discharge connection. This marking shall be stamped, etched, cast or moulded on the valve.

¹⁾ 1 bar = 10⁵ N/m² = 100 kPa. All pressures are gauge pressures unless otherwise stated.

Table 1 — Nominal size of valve

Nominal size of valve	Nominal size of inlet connection		
	Screwed (complying with BS 2779 or BS 21)	Compression (complying with BS 864-2)	Flanged (complying with BS 4504-2)
DN			
15	½	15/18	15
20	¾	22	20
25	1	28	25
32	1 ¼	35	32
40	1 ½	42	40

1.4.2 Identification marking

Each combined temperature and pressure relief valve shall be legibly and permanently marked with the following:

- a) the number of this British Standard i.e. BS 6283/3²⁾;
- b) the manufacturer's or agent's name, trademark or symbol;
- c) the name or model number of the valve and its nominal size;
- d) the month and year of manufacture, e.g. 12–91;
- e) the rated discharge capacity in kilowatts to the nearest 0.1 kW;
- f) the set pressure in bar;
- g) the set temperature in °C.

NOTE Adhesive labels complying with BS 4781 are considered to be permanent for the purposes of this Part of BS 6283.

²⁾ Marking BS 6283/3 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is therefore solely the responsibility of the person making the claim. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.