

Stationary circulation pumps for heating and hot water service systems —

Part 2: Specification for physical and performance requirements

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The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Association of Circulator Manufacturers
- British Pump Manufacturers' Association
- National Gas Consumers' Council
- Swimming Pool and Allied Trades' Association Ltd.

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Foreword

This Part of BS 1394 has been prepared under the direction of the Light Electrical Engineering Standards Committee and, together with the revision of Part 1, supersedes BS 1394-1 and BS 1394-2, both of which were published in 1971, which are now withdrawn.

The opportunity has been taken in this revision of BS 1394 to follow the general principle of separating requirements for safety from other requirements. In this respect Part 1 specifies safety requirements and aligns with a draft IEC standard for safety of stationary circulation pumps (soon to be published as a Part 2 in the IEC 335 series of publications) while Part 2 specifies physical and performance requirements. Both Parts 1 and 2 cover glanded and glandless pumps having a rated input not exceeding 300 W. Previously, Part 1 specified safety and performance requirements for glanded and glandless pumps with power input above 200 W and not exceeding 2 000 W while Part 2 specified safety and performance of domestic glandless pumps with power input not exceeding 200 W.

The physical and performance requirements specified in this Part of BS 1394, have been widened to include hydraulic performance, dimensions and reliability. Maximum sound levels for glandless pumps have also been added.

Attention is drawn to the fact that it is a requirement of BS 1394-2, that pumps comply with the safety requirements of BS 1394-1 (see clause 3 for details).

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 Part of BS 1394 specifies the physical and performance requirements for electric stationary circulation pumps intended to be used in heating systems or in hot water service systems, and having a rated input not exceeding 300 W.

In particular it specifies:

- a) marking requirements;
- b) hydraulic requirements;
- c) reliability requirements;
- d) acoustic requirements;
- e) dimensional requirements.

Pumps not intended for normal household use, but which nevertheless may be a source of danger to the public, such as pumps intended to be used by laymen in shops, in commercial use and on farms, are within the scope of BS 1394, but only if they have a rated input not exceeding 300 W.

BS 1394 does not take into account the special hazards which exist in nurseries and other places where there are young children or aged or infirm persons without supervision; in such cases, additional requirements may be necessary.

BS 1394 does not apply to:

- a) pumps within the scope of BS 3456-2.35 and pumps for circulating liquids other than water, which are covered by a separate British Standard;
- b) pumps designed exclusively for industrial purposes;
- c) pumps intended to be used in locations, where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour, or gas).

For pumps intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary.

For pumps intended to be used in tropical countries, special requirements may be necessary.

NOTE The titles of the publications referred to in this Part of BS 1394 are listed on the inside back cover.

2 Definitions

For the purposes of this Part of BS 1394 the definitions given in Part 1 apply together with the following.

2.1

glanded pump

a pump that incorporates a shaft sealing device to prevent leakage of fluid to the atmosphere and where the motor is isolated from the fluid being pumped

2.2

glandless pump

a pump that does not incorporate a shaft sealing device, the rotor of the motor being in direct contact with the fluid being pumped and where the motor is an integral part of the pump

2.3

twin pump

a device which consists of two independent pump units mounted on a single casing

2.4

generated head

the difference in head measured between the inlet and outlet ports of a pump

2.5

dynamic head

the head of water at the inlet port when the pump is operating at its normal working temperature

3 General

Before pumps are submitted for approval to this Part of BS 1394 they shall have met the requirements of BS 1394-1¹⁾.

To satisfy the requirements of this Part of BS 1394, a total of three pumps shall be submitted for testing and inspection.

a) One sample shall be submitted to the test requirements of clause 6.

b) One sample shall be submitted to the test requirements, in order, of 5.1, 5.8, 5.9 and clause 7.

c) One sample shall be for inspection purposes.

For compliance, the samples shall satisfy all the requirements and tests specified.

¹⁾ See the note to 16.1 of BS 1394-1:1987.