

Specification for

Performance and construction of electric circulating fans and regulators

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Light Electrical Engineering Standards Committee (LEL/-) to Technical Committee LEL/28, upon which the following bodies were represented:

- Association of Manufacturers of Domestic Electrical Appliances
- British Electrotechnical Approvals Board
- Consumer Standards Advisory Committee of BSI
- Department of Trade and Industry (Consumer Safety Unit, CA Division)
- Department of Trade and Industry (National Engineering Laboratory)
- Hevac Association
- Rotating Electrical Machines Association (BEAMA Ltd.)

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National foreword

This British Standard has been prepared under the direction of the Light Electrical Engineering Standards Committee and is identical with IEC 879:1986 “*Performance and construction of electric circulating fans and regulators*”, published by the International Electrotechnical Commission (IEC).

This standard supersedes BS 5060:1974, which is withdrawn. The revised standard now lists the preferred sizes of ceiling and deck-head type fans, and the preferred sizes, number of regulated speeds and types of pedestal type fans.

Terminology and conventions. The text of the International Standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

In some places the comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Cross-references

International Standard	Corresponding British Standard
IEC 51:1984	BS 89:1977 <i>Specification for direct acting indicating electrical measuring instruments and their accessories</i> (Identical)
IEC 342-1:1981	BS 3456 <i>Safety of household and similar electrical appliances</i> Section 102.342 ^a <i>Particular requirements for electric fans and regulators</i> (Technically equivalent)

^a In preparation.

The Technical Committee has reviewed those provisions of IEC 342-2:1982, IEC 535:1977 and IEC 665:1980, to which reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard.

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 standard applies to the following types of electric motor directly driven fans and their associated regulators intended for use on single-phase a.c. and d.c. circuits not exceeding 250 V:

- a) Fans for household and similar purposes:
 - ceiling type fans;
 - table type fans;
 - pedestal type fans.
- b) Fans for use in ships:
 - deck-head type fans;
 - cabin type fans.

Wherever applicable the term “fan” used in this standard includes its associated regulator, if any.

This standard does not apply to the following types of fans which are covered in separate standards:

- jet fans (see IEC Publication 535: Jet Fans and Regulators);
- ventilating fans (see IEC Publication 665: A.C. Electric Ventilating Fans and Regulators for Household and Similar Purposes).

This standard does not apply to safety requirements for electric circulating fans and regulators, which are covered by IEC Publication 342: Safety Requirements for Electric Fans and Regulators.

2 Definitions

For the purpose of this standard, in addition to those given in IEC Publications 342-1 Part 1: Fans and Regulators for Household and Similar Purposes, and 342-2: Part 2: Fans and Regulators for Use in Ships, the following definitions shall apply.

2.1 ceiling or deck-head type fan

a propeller-bladed fan having two or more blades, and provided with a device for suspension from the ceiling of a room so that the blades rotate in a horizontal plane

2.2 table or cabin type fan

a smaller-diameter propeller-bladed fan having two or more blades, and intended for use with free inlet and outlet of air. It may be a table fan or bracket-mounted fan for wall or ceiling mounting

2.3 pedestal type fan

a propeller type fan having two or more blades mounted on a pedestal of fixed or variable height and intended for use with free inlet and outlet of air

2.4 blade sweep

the diameter of the circle traced out by the extreme tips of the fan blades

2.5 size of fan

the sweep in millimetres

2.6 plane of fan blades

the middle plane of the solid of revolution traced out by the fan blades

2.7 plane of anemometer vanes

the middle plane of the solid of revolution traced out by the vanes of the anemometer

2.8 test plane

the horizontal (in the case of ceiling type fans) and vertical (in the case of table and pedestal type fans) plane containing the plane of the anemometer vanes

2.9 Types of enclosures of motors and regulators

2.9.1 totally enclosed type enclosure

an enclosure which does not provide for circulation of air between the inside and outside of the case, but not necessarily “air-tight”

2.9.2 ventilated type enclosure

an enclosure in which the ventilation is not materially obstructed while the live and internal rotating parts are protected mechanically against accidental or careless contact

2.10 air delivery

quantity of air delivered in a given time under specified conditions

2.11 rated air delivery

air delivery of the fan assigned by the manufacturer

2.12 service value

the air delivery in cubic metres per minute divided by electrical power input to the fan in watts at the voltage and frequency specified for the test