

Laboratory fume cupboards —

**Part 2: Recommendations for the
exchange of information and
recommendations for installation**

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Laboratory Apparatus Standards Policy Committee (LBC/-) to Technical Committee LBC/18, upon which the following bodies were represented:

- Association for Science Education
- Association of the British Pharmaceutical Industry
- British Furniture Manufacturers' Federation
- British Occupational Hygiene Society
- Chartered Institution of Building Services Engineers
- Chartered Society of Designers
- Chemical Industries' Association
- CLEAPSS School Science Service
- Department for Education
- Department of Health
- Department of the Environment (The Buying Agency)
- Furniture Industry Research Association
- GAMBICA (BEAMA Ltd.)
- Health and Safety Executive
- Manufacturing Science Finance
- Medical Research Council
- National Association of Teachers in Further and Higher Education
- Royal Institute of British Architects
- Royal Society of Chemistry
- Universities Safety Association
- Coopted members

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Foreword

This Part of BS 7258 has been prepared under the direction of the Laboratory Apparatus Standards Policy Committee. It supersedes BS 7258-2:1990, which is withdrawn.

This edition introduces technical changes but it does not reflect a full review or revision of the standard, which will be undertaken in due course.

BS 7258 is published in four Parts as follows.

- *Part 1: Specification for safety and performance;*
- *Part 2: Recommendations for the exchange of information and recommendations for installation;*
- *Part 3: Recommendations for selection, use and maintenance;*
- *Part 4: Method for determination of the containment value of a laboratory fume cupboard.*

IMPORTANT NOTE It is essential that this Part be read in conjunction with BS 7258-1.

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 to ii, pages 1 to 14, 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

Introduction

The recommendations given in section 2 of this Part of BS 7258 apply to contracts for the supply and installation of laboratory fume cupboards, and these recommendations include items embodied in BS 7258-1. It is therefore essential that the recommendations given in section 2 of this Part be followed in order for the purchaser's requirements to be satisfied.

1.1 Scope

This Part of BS 7258 gives recommendations for the minimum information to be exchanged between the parties to contracts for the supply and/or installation of general purpose laboratory fume cupboards as specified in BS 7258-1. It also gives recommendations for installation, including siting and provision for extract systems and laboratory make-up systems.

1.2 References

1.2.1 Normative reference

This Part of BS 7258 incorporates, by reference, provisions from specific editions of other publications. These normative references are cited at the appropriate points in the text and the publications are listed on the inside back page. Subsequent amendments to, or revisions of, any of these publications apply to this Part of BS 7258 only when incorporated in it by updating or revision.

1.2.2 Informative references

This Part of BS 7258 refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

1.3 Definitions

For the purposes of this Part of BS 7258, the definitions given in BS 7258-1:1994 apply.

Section 2. Exchange of information

2.1 General

It is strongly recommended that, for laboratory fume cupboards complying with BS 7258-1, the information given in 2.2, 2.3 and 2.4 of this Part should be exchanged by the purchaser and the vendor/installer.

2.2 Information to be obtained from the purchaser by the vendor/installer

NOTE For the purposes of this British Standard, it is assumed in this clause that the vendor is the same party as the installer. If this is not the case both parties should obtain the information listed in items a) to g) but it is necessary only for the installer to obtain the information listed in items h) to n).

The following information should be obtained from the purchaser by the vendor/installer:

- a) the material of construction for any part of the fume cupboard that will be affected by fumes emanating from the processes for which the fume cupboard will be used (see 5.2 of BS 7258-1:1994);
- b) any specific requirements such as minimum flow rate which transpire from consideration by the purchaser of the guidance given in BS 7258-3:1994;
- c) the minimum dimensions of the work surface;
- d) the normal sash working height, the maintenance sash height, and the width of the opening in the plane of the sash;
- e) the services to be fitted;
- f) the maximum external dimensions of the fume cupboard, and its dismantled components if appropriate, and the dimensions available for access into the building and internal access to where the fume cupboard is to be installed;
- g) whether the fume cupboard is to be used for manipulation of highly flammable liquids;
- h) the following details of the siting of the fume cupboard:
 - 1) general details of the building in which the fume cupboard is to be installed, the location of the laboratory and the intended siting of the fume cupboard(s) within the laboratory;
 - 2) the locations of doors, windows, other fume cupboards, other laboratory furniture, ventilation grilles, diffusers, or other air moving equipment;
 - 3) the absence of any features listed in item 2);
- i) general details of the intended method of supplying laboratory make-up air and of the room ventilation existing or to be provided;
- j) the environment requirements of the laboratory including:
 - 1) requirements for the room in which the fume cupboard is to be installed (see 3.3.3, 3.3.4 and 3.3.8) including maximum sound-pressure levels in dB(A);
 - 2) requirements, e.g. noise levels, for other rooms in the building;
 - 3) requirements under the Environmental Protection Act, 1990 [1] for emission exterior to the building (see 3.2.4);
- k) the accommodation spaces, routes available and any specific design requirements of the fume extract system, including the range of working temperatures and the fittings to be provided, such as flow control devices, alarms and indicators, condensate collectors, and duct washing facilities;
- l) the locations and details of any existing mechanical, electrical, plumbing and drainage services to be utilized in connection with the complete fume cupboard installation;
- m) the following details of the fume cupboard:
 - 1) the required air extract volume flow rates, corresponding face velocity(ies) and pressure drops across the fume cupboard(s);
 - 2) whether a facility to vary the set extract volume flow rate is required and, if so, the range that is required;
 - 3) whether the fume cupboard extract system is to be for continuous or intermittent use;
- n) the commissioning tests to be undertaken by the installer. (See 7.2 of BS 7258-1:1994).

2.3 Further exchange of information before installation

NOTE For the purposes of this British Standard, it is assumed in this clause that the vendor is the same party as the installer. If this is the case, the information listed should be supplied to the purchaser by the vendor/installer. If this is not the case, the vendor should supply the information listed to the purchaser, and the installer should obtain the information listed from the purchaser (who will have received it from the vendor).

The following information should be exchanged before the fume cupboard is installed (see note):

- a) dimensioned drawings of the fume cupboard (including maximum sash opening for access and normal maximum working sash opening corresponding to the sash positions at the maintenance sash height and the normal maximum sash height respectively);
- b) an identification of all materials of construction;
- c) fume cupboard type and serial number;
- d) all the information reported on successful completion of the type test procedure as specified in BS 7258-1;