

Partitions (including matching linings) —

Part 1: Code of practice for design and installation

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the General Building Codes Technical Committee (B/209) to Subcommittee B/209/5, upon which the following bodies were represented:

- Aluminium Federation
- Association of Building Component Manufacturers
- Autoclaved Aerated Concrete Products Association
- British Board of Agrément
- British Precast Concrete Federation Ltd.
- Building Employers' Confederation
- Cold Rolled Sections Association
- Department of Health
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property Services Agency)
- Federation of Plastering and Drywall Contractors
- Flat Glass Manufacturers' Association
- Glass and Glazing Federation
- Gypsum Products Development Association
- Institution of Structural Engineers
- Local Authority Organizations
- Loss Prevention Council
- Partitions Industry Association
- Royal Institute of British Architects
- Timber Research and Development Association

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Foreword

This British Standard has been prepared under the direction of the General Building Codes Technical Committee and supersedes BS 5234:1975 which is withdrawn. This edition of BS 5234 is being issued in two Parts. BS 5234-1 deals with design and siteworks, and BS 5234-2 specifies performance requirements for strength and robustness, including methods of test.

A partition is now defined as “non-loadbearing” and accordingly this adjective no longer appears in the title. Definitions of different types of partition are now given.

The recommendations given are applicable to all partitions including masonry partitions, but the standard makes no reference to specific materials and methods used in their construction. Masonry should be designed in accordance with the recommendations given in BS 5628-1, BS 5628-2 and BS 5628-3. Information on other forms of partition construction is given in BS 5268-6 and BS 8212.

Partitions have now been given grades. These relate to the level of activity in adjacent spaces and the degree of care the partition is likely to receive. Grades are defined by the strength and robustness of a sample partition when tested by the methods described in BS 5234-2. A summary of performance criteria for grades of partitions is given in Annex B.

Assessed capability. Users of this British Standard are advised to consider the desirability of quality system assessment and registration against the appropriate Part of BS 5750 by a third party certification body.

Enquiries as to the availability of third party certification schemes are forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members.

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 iv, pages 1 to 30, 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 5234 gives recommendations for the design and installation of partitions. Types of partition are defined and the functions and properties of partitions to be considered are given. Recommendations for ensuring that the design is realized on site and maintained after completion are given.

Partitions are graded by their categories of duty, assessed against performance criteria when sample partitions are tested for strength and robustness by the methods given in BS 5234-2:1992. The performance requirements are for partitions complete with their surface finishes where these are part of the partition specification.

Performance requirements specific to special purpose partitions are not included. Examples of excluded properties are:

- structural stability of screens;
- thermal insulation to cold store partitions;
- sound absorption of partitions to large auditoria;
- bullet-resistance of glazed high security partitions (see BS 5051-1);
- X-ray resistance of partitions (see HTM 56¹⁾ [1];

all properties of patent glazing partitions (see BS 5516).

1.2 References

1.2.1 Normative references

This Part of BS 5234 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 page 30. Subsequent amendments to, or revisions of, any of these publications apply to this Part of BS 5234 only when incorporated in it by updating or revision.

1.2.2 Informative references

This Part of BS 5234 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 5234 the definitions given in BS 6100 apply. Terms which are particularly relevant are reproduced together with others not in BS 6100. Illustrations of some terms, with additional information, are shown in Figure 1, Figure 2 and Figure 3.

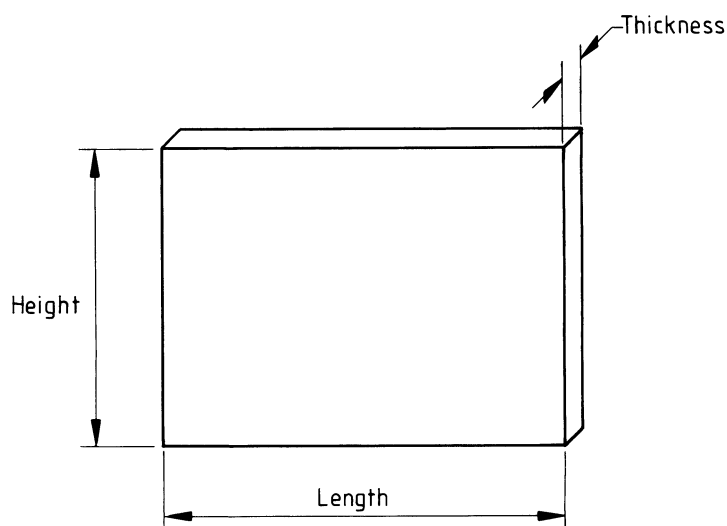
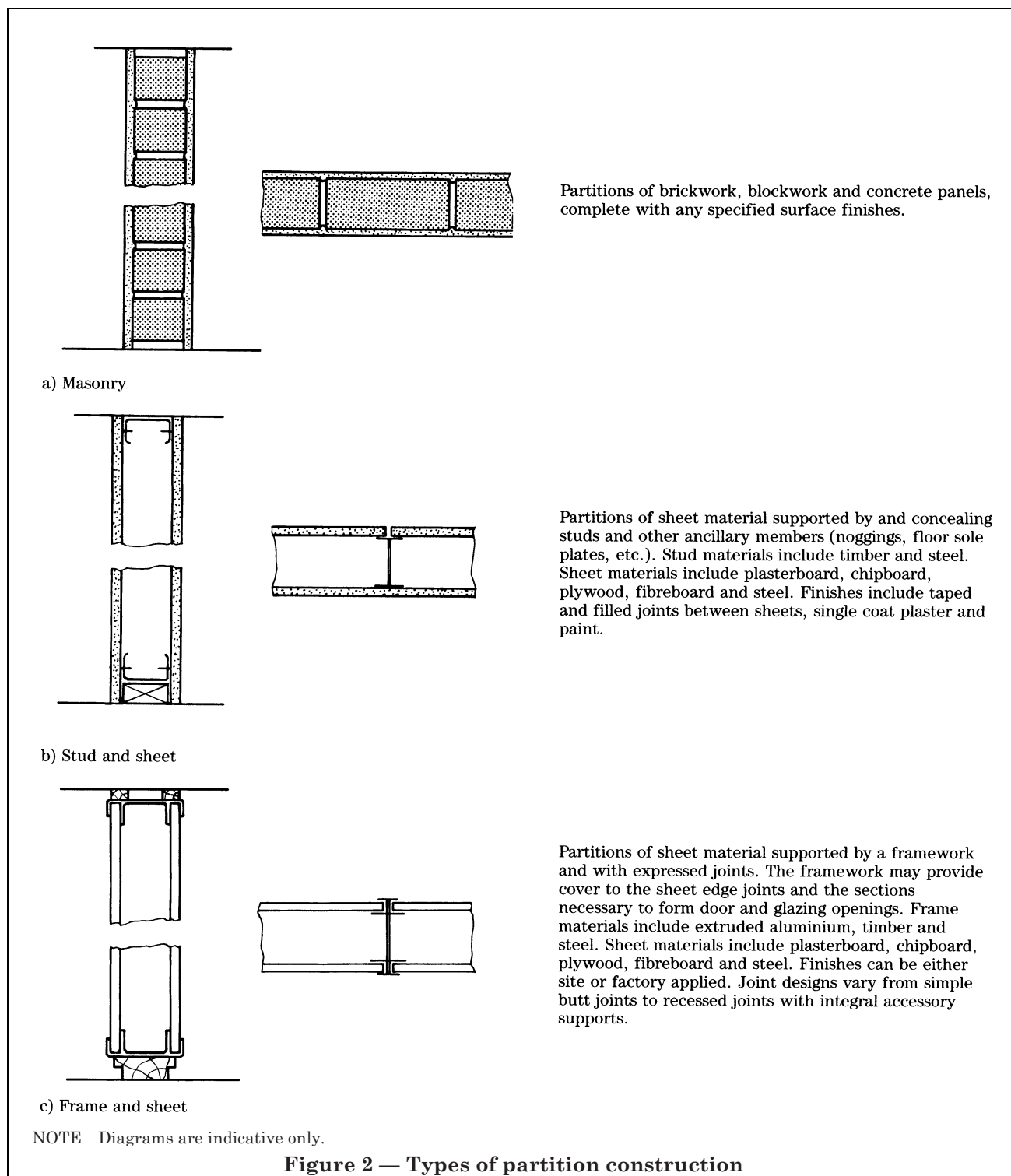
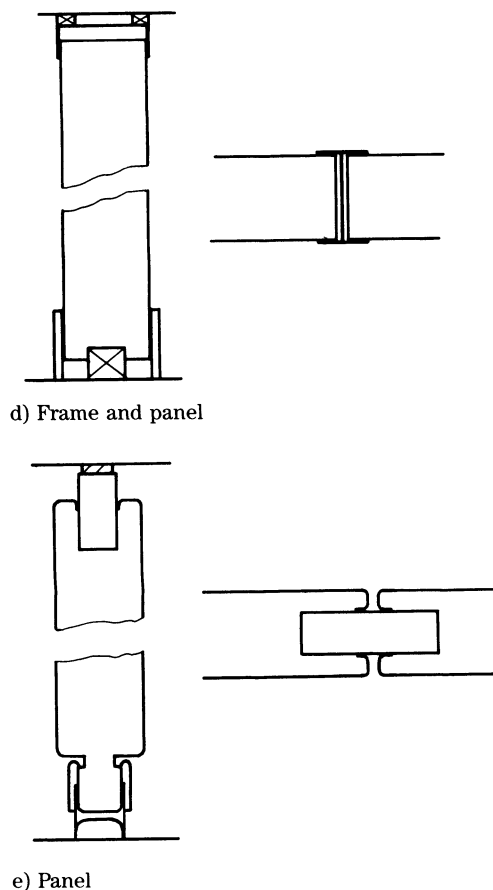


Figure 1 — Dimensional terms for partitions

¹⁾ Health Technical Memorandum 56, Partitions. Obtained from: HMSO, 49 High Holborn, London WC1.





d) Frame and panel

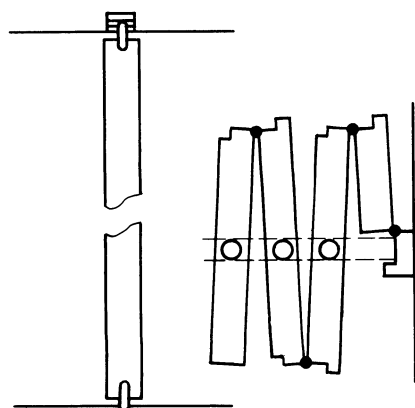
e) Panel

NOTE Diagrams are indicative only.

Partitions of composite panels supported by an exposed framework. Typically the panel edges are concealed by the framework. Therefore the panels may be cut to fit on site where necessary. The framework sections form door and glazing openings. Frame materials include extruded aluminium, steel and timber. Panels are usually proprietary products and include prefabricated gypsum wallboard panels, steel facings, wood wool slabs and particle boards.

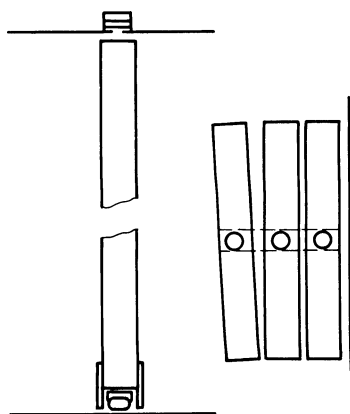
Partitions of prefabricated panels butted together in floor and head tracks without supporting framework. The range of panels includes glazed panels and doorsets. Generally relocatable with the loss only of such items as some perimeter fixings and sealing materials. The simplest are sandwich panels fixed together with a tongue and groove joint. Proprietary panel materials include sheet steel facings with lightweight cores. In relocatable systems, channels can normally be fixed to ceilings and on floor finishes with limited damage.

Figure 2 — Types of partition construction (concluded)



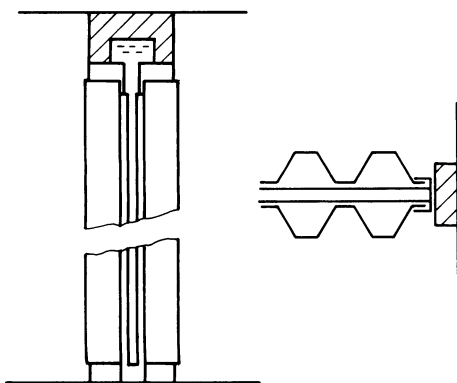
a) Sliding folding partition

Solid panels are hinged together and run on rollers on top and/or bottom tracks. They range from lightweight non-acoustic timber to acoustically sealed systems. Track and storage configurations vary and adjacent storage space is necessary for flush stacking of panels.



b) Tracked monoblock panel partition (single panel, centre supported)

Independent panels are track-supported for ease of movement and lock into position with expanding seals. Panels may be top hung or floor supported, or both. Electrically operated versions are available. There is a variety of stacking configurations. Recessed storage is necessary for flush stacking of panels.



c) Tracked flexible (concertina partition)

Variable length partitions with a concealed pantograph or similar supporting mechanism and flexible or hinged panel outer facings. They are usually top hung and incorporate top and bottom 'sweep strips' to enhance their acoustic performance.

NOTE 1 These partitions are supported and guided by ceiling and/or floor track mechanisms and can be moved by the building occupants. They should not be used where fire resistance is required.

NOTE 2 Diagrams are indicative only.

Figure 3 — Tracked, movable partitions

1.3.1**partition**

internal dividing non-loadbearing vertical construction

NOTE It is incorrect to assume that there is no subjection to incidental loads, particularly lateral loads.

1.3.2**lining**

dry covering to any internal building surface

1.3.3**matching lining**

independent vertical lining that is similar in construction and appearance to adjacent partition(s)

1.3.4**hollow partition**

partition that has usable voids throughout most of its area

1.3.5**solid partition**

partition that has no usable void throughout most of its area

1.3.6**glazed partition**

partition that includes transparent or translucent glass or plastics in its construction

NOTE It may be fully or partially glazed.

1.3.7**solid area partition**

partition without glazing

1.3.8**monobloc panel**

prefabricated partition unit, capable of being removed without affecting adjacent units

1.3.9**screen**

partition that may not extend fully from floor to ceiling, sometimes self-supporting, that provides a degree of protection or privacy

1.3.10**framed partition**

partition consisting of a continuously supported plane frame with facings or infillings

1.3.11**stud and sheet partition**

framed partition in which the studs and other ancillary members are concealed by the facings

1.3.12**frame and sheet partition**

framed partition in which the framework is exposed

1.3.13**frame and panel partition**

framed partition in which the panels are supported by an exposed framework

1.3.14**panel partition**

partition of rigid panels without supporting framework

1.3.15**relocatable partition**

partition capable of removal and reassembly elsewhere without substantial repair other than replacement of ancillary seals and fixings

NOTE The term "demountable partition" is deprecated.

1.3.16**movable partition**

partition of separate sections, that is capable of rearrangement by the occupants of a building

1.3.17**sliding and folding partition**

partition of hinged leaves that can be folded away by moving them horizontally on a fixed track

1.3.18**tracked monobloc panel partition**

movable monobloc panels supported and guided by track mechanism

1.3.19**tracked flexible partition**

partition of variable length with flexible or hinged panel facings, supported by track mechanism

1.3.20**floating head fixing**

head fixing which allows a specified amount of movement in the structure to occur without it imposing any direct loading onto the partition

1.3.21**platform floor**

floor that comprises loadbearing fixed or removable panels, adjustable pedestal supports and necessary accessories, to provide an underfloor space for the housing and distribution of services

NOTE The terms "raised access floor", "modular floor", "palette floor" are deprecated.

1.4 Exchange of information

The exchange of information should be comprehensive to ensure that proper quotations can be provided and that adequate provision is made for site operations to proceed correctly. The following checklist is included for guidance and includes items that should, if appropriate, be considered:

- a) contract arrangements, e.g. attendances, storage, protection, handling, removal of waste, supply of utilities, indicative lighting, setting out, programming and dates and sample requirements;
- b) site, conditions and access;
- c) drawings and specifications showing the extent of the work and materials of construction;
- d) lengths, heights, thicknesses, centres of studs or joints (if applicable) and mass;
- e) permitted tolerances and deviations;
- f) deflections of surrounding structures;
- g) fire resistance, surface spread of flame, closing of cavities, fire stopping;
- h) sound insulation and/or sound absorption;
- i) thermal insulation and water vapour control;
- j) strength and wind loading;
- k) tests and performance required;
- l) method of fixing to structure and other elements and fixings for fittings;
- m) provision for services;
- n) humidity, moisture and temperature range during construction and in service;
- o) biological attack;
- p) finishes, integral or applied;
- q) doors and glazing, integral or allowance for;
- r) detail and trim;
- s) special requirements, e.g. security screens, radiation resistance;
- t) maintenance.

1.5 Time schedule

The time schedule should show the date of commencement, the sequence of work, the rate of erection and the date of completion. It should provide for the completion of the works of preceding trades prior to commencement on site of the partition contractor.

NOTE The erection of partitions, apart from masonry partitions, is often one of the last operations before a building is occupied, and unless carefully controlled, previous trades can intrude into the programme time allotted for partitioning. In order to meet a handing over date, it is advised that pressure should not be applied to the partition erector to start work before the building is ready and weather-tight unless the partition is designed for unprotected conditions. Hasty construction can waste much of the effort that has been put into a partition's design and development to achieve the designed performance.

The time schedule should be carefully planned to avoid the risk of serious damage to the partition by subsequent work and to avoid last-minute alterations in the sequence of operations. If permanent decoration is delayed, the surfaces should be given an appropriate protective treatment.

The programme should be arranged to ensure that prefabricated partitions are installed as late as possible and adequate provision made for protection.

Allowance should be made in the time schedule for decorators' preparatory work which may become necessary if finished surfaces are likely to be subjected to adverse atmospheric conditions or damage by other trades, this being particularly relevant when surfaces are unfinished for a protracted period of time.

The time schedule should allow for the necessary curing or drying out times of:

- a) screeds and other wet construction in the vicinity of dry partitioning prior to its erection;
- NOTE** It is advised that drying be continued until any water vapour generated is unlikely to cause moisture movement problems, such as warping of panels and jamming of door leaves.
- b) masonry partitions prior to the application of finishes;
 - c) wet surface finishes, e.g. plaster, prior to decoration;
 - d) any "wet" joint system used prior to decoration;
 - e) decorative finishes on all types of partitioning.

NOTE Allowing adequate drying times is particularly important during the winter as the drying and hardening of many materials depend upon atmospheric conditions.

Where services are to be installed within partitions, time should be allowed in the schedule for their installation, testing and acceptance.