



Standard Guide for The Installation of Operable Partitions¹

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1. Scope

1.1 This guide describes options of intructions recommended to be considered in preparation for, and application and installation of, operable partitions and, to some extent, in the design of the building in which they are installed. Operable partitions are those that are quickly movable.

1.2 Excluded from this guide are those partitions that are classified by the building products industry as *demountable*. Demountable partitions are those that are designed and installed with the intent of later being taken down and re-erected by a crew over a period of time, with the components being reusable.

1.3 *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

E 90 Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements²

E 336 Test Method for Measurement of Airborne Sound Insulation in Buildings²

E 413 Classification for Rating Sound Insulation²

E 497 Practice for Installing Sound-Isolating Lightweight Partitions²

E 1155 Test Method for Determining Floor Flatness and Levelness Using the *F*-Number System³

E 1155M Test Method for Determining Floor Flatness and Levelness Using the *F*-Number System (Metric)³

3. Significance and Use

3.1 Rooms formed by operable partitions must often be isolated acoustically. Sound-isolating properties of operable

partitions are specified by architects in terms of sound transmission class (STC) and so advertised by the manufacturer on the basis of laboratory tests in accordance with Test Method E 90 and Classification E 413.

3.2 Because normal building design and construction practices are not the same as those used in acoustical laboratories, actual field performance of operable partitions will probably be less than that of test specimens. Sound transmission between areas to be isolated will occur through all of the connecting building components in addition to the operable partition, that is, floor and ceiling slabs, ceiling plenums, common walls, etc. All possible paths between the areas being isolated should have a sound insulation performance at least equal to the operable partition. Unless good acoustical practice is followed in both building design and installation, there may be a significant discrepancy between the sound isolation expected and that achieved.

3.3 Because of the complex nature of the sound flanking paths adjacent to operable partitions, it is highly recommended that all related construction details be reviewed by a person qualified in acoustical construction.

3.4 This guide does not specify requirements. However, persons desiring to write installation and construction specifications may find the contents useful in developing requirements for the site preparation, and installation practices necessary to minimize leakage and flanking sound around the operable partition.

4. Properties of Operable Partitions

4.1 There are several types of operable partitions: hinged panel groups, individual panel and continuously hinged partition systems. Some are supported by overhead track with or without a floor guide or track. Some are floor supported with an overhead track to guide them. They may be manual or power-operated. One type consists of movable panels secured in place by vertical expansion to seal against the floor and ceiling. Seals or gaskets are of many kinds; some consist of resilient material that maintains continuous flexible contact with floor or ceiling, and some include a mechanical, hydraulic or pneumatic mechanism that maintains clearance when in motion and a positive seal when finally closed.

4.2 Sound Leaks:

¹ This guide is under the jurisdiction of ASTM Committee E33 on Environmental Acoustics and is the direct responsibility of Subcommittee E33.04 on Application of Acoustical Materials and Systems.

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² *Annual Book of ASTM Standards*, Vol 04.06.

³ *Annual Book of ASTM Standards*, Vol 04.07.

