

Partitions

vleweb.ccn.ac.uk/constructionweb/finishes/partitions/section7.htm

For the last 40 years or so proprietary plasterboard partitions have been available. The two shown here are both made by British Gypsum. These partitions are light, easy to handle, quick to erect and relatively cheap. Unlike timber stud partitions these can only be non-loadbearing. They are ideal for use in modern housing, particularly on upper floors where timber trussed rafter are used. These do not require any intermediate support and span from external wall to external wall. The roof should be tiled, ie loaded, before these partitions are erected to avoid any risk of buckling. The partitions can be self finished or given a skim coat of plaster. Since 2004 it has been a requirement that partitions between adjacent bedrooms, and partitions between bedrooms and WCs meet or exceed specific levels of sound insulation. The PaneWall partition (shown below) may have some difficulty in achieving this required level of insulation. Indeed, it was withdrawn from the British Gypsum product line at the end of 2005. It is included here because so many existing houses have these partitions.



The PanelWall partition, formerly called Paramount, comprises two layers of wallboard bonded to a cellular core of stiff cardboard. They are available in two widths, 900mm and 1200mm, and a variety of heights. The first stage requires a timber batten to be fitted to the supporting walls and the ceiling. A sole plate can be fixed to the floor if required. This provides better fixings for the skirting and, when fixed over a chipboard floor on joists, provides an acceptable cavity fire barrier. Services such as cables can be run inside the partition.



When the battens have been fixed to the wall and ceiling the first panel is cut to the right height (floor to ceiling height less 3mm). The panel is located into the ceiling batten and the panel is swung into the vertical position and then pushed over the wall batten. A special sealant applied to the batten beforehand helps improve acoustical performance. A 300mm length of batten is then located into the base of the panel and the projecting end is nailed to the floor. A vertical joint batten is then inserted into the vertical edge of the fixed panel ready for the subsequent panel. The panels should be fixed to the battens with nails or special screws at 230mm centres.





The graphic on the left shows a number of typical details including right-angle returns and door openings. The panels can be taped and jointed for self finishing or taped and skimmed. The finished weight of a 50mm self finished partition is approximately 17kg/m².

Timber battens can be driven into the core to support heavy shelves. Light loads can be supported using a variety of plasterboard plugs.



The SolidWall system (often referred to as a laminated partition) is a slightly more complex form of construction which can offer better sound insulation and improved fire protection. The partition is constructed by laminating three (or even four) layers of plasterboard bonded together using special adhesive to give 50 or 65mm nominal thickness. The finished weight of the partition can vary from 35 to 50 kg/m² depending on the arrangement of the laminate.

Standard construction comprises outer layers of Wallboard (12.5mm thick) and an inner core of 19mm Gypsum Plank.



The first stage is to fix a 25mm x 38mm batten around the perimeter of the partition position. The first layer of Wallboard is nailed to the outer face (above left). Cut the first Plank so that joints are staggered and press into bands of adhesive already applied to inner face of Wallboard. Continue fixing full widths of Plank. Fix outer layer of Wallboard. Battens can be added to help carry heavy shelves.

