

Double and Triple Glazed Custom Designed

Principally for internal applications on new build projects, but units can also be used as secondary glazing to improve the performance of existing windows. Designed for the education, recording and broadcast markets, for installation in music practice rooms, studios and control rooms. The units can be used for any internal applications demanding high levels of sound transmission loss.



Glazing

For most applications we use laminated glass, which provides better acoustic performance than monolithic glass. Designs often utilise dissimilar thickness panes of 6.4mm, 8.8mm or 10.8mm. Double glazed arrangements and the outer panes on triple glazed designs utilise presealed units. These comprise aluminium-framed units that can be directly fixed to timber linings with concealed fixings. Central panes within triple glazed arrangements are fitted into the timber lining within a peripheral neoprene seal. Toughened, Georgian Wired or Polycarbonate alternatives can also be provided. The use of a raked pane can eliminate resonances in the air cavity between the panes, but this does need careful consideration, as the benefit can be negated in those instances where the separation is reduced.

Reveals

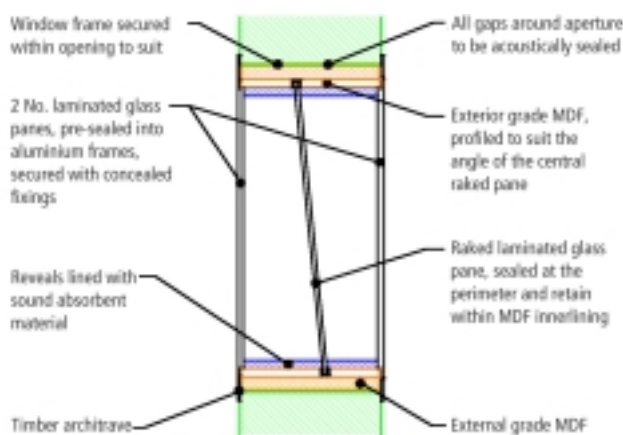
An acoustically absorbent material is used to line the reveals between the panes, to enhance the overall sound transmission loss, by helping to reduce acoustic coupling. This would comprise a fabric covered foam or resin bonded glass fibreboard.

Construction

Various window designs are available to suit both the acoustic demands and physical constraints of most applications. These can be of either triple or double glazed design. Care, however, needs to be taken in determining which will afford the optimum sound transmission loss, as double glazing can afford very favourable levels of attenuation. The triple glazed option only really being a viable consideration where the wall is particularly deep and airspaces of at least 100mm can be maintained.

Acoustic Performance

Windows will generally be supplied to meet specific design criteria. In the case of installations within the education sector, this will usually be to meet the requirements of Building Bulletin 93 Acoustic Design of Schools.



A typical triple glazed arrangement is shown in the figure above. The construction shown would be generally similar for double glazing, but without the central pane. Windows can be supplied in any size to suit, but we do not advise the use of very large areas of glass. Wherever possible we recommend that large windows are broken down into smaller sections with separating mullions.

