- The Abffusor is the industry's first absorption phase grating. It is an extension of the reflection phase grating which provides sound diffusion from a series of divided reflective wells of equal width and different depths.
- The Abffusors absorption efficiency extends below that of a traditional flat porous absorber because it utilizes two absorption mechanisms.
- The first is the traditional dissipation of sound energy into heat by frictional losses in the pores of a porous absorber. The second is the viscous losses due to high particle velocity flows across the well dividers induced by the pressure differences in adjacent wells.
- This pressure gradient mechanism results in additional low frequency absorption. The absorption phase grating topology also offers efficient glancing angle reflection control and near field diffusion to create a natural sounding, attractive room treatment.

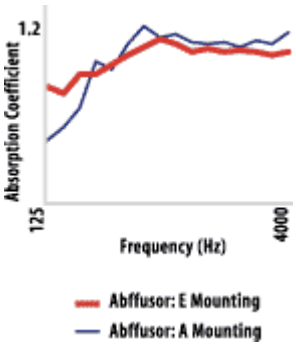
Problem

There is a need for a surface treatment that controls strong first order reflections over a wide range of frequencies and angles of incidence which also offers near field scattering to provide a natural ambiance.

Solution

The Abffusor accomplishes solves these problems by using two absorption mechanisms in addition to diffusion. Absorption extends to lower frequencies than flat porous absorbers due to the QRD pressure gradient mechanism. Near field QRD diffusion provides additional sound control.

Performance



Absorption

The graph illustrates the absorption efficiency of the Abffusor for an A mounting directly on a wall and an E mounting with a rear cavity depth of 16 inches. Note the excellent low frequency absorption the Abffusor offers when attached directly to a wall and the improvement that is possible when a rear air cavity can be employed.

Installation

The Abffusor can be mounted on a wall, in a T-bar ceiling grid, or left free standing. Type E Flush Mounting provides improved absorption. Hardwood feet are available for free standing installation.