Bass Trap Wall | New

Slim design, powerful impact



The Bass Trap Wall represents a significant upgrade in low-frequency acoustic control, designed to deliver high-performance absorption precisely where it's needed most. Constructed with dual independent cavities and featuring two finely tuned diaphragmatic membranes, the Bass Trap Wall effectively addresses low-end frequencies that are often difficult to manage.
A key component of its performance is the dual-membrane surface optimisation. The specialised polymer membrane works together with an internal absorber to achieve optimised performance. By targeting absorption specifically from 80Hz to 120Hz, it delivers exceptional results within the second and third octaves. This innovative configuration not only enhances low-frequency absorption but also allows the Bass Trap to be slimmer than ever. Combined with swappable fronts, it blends seamlessly with other acoustic treatments in the room.

Features

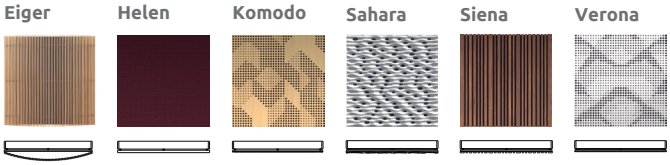
Pistonic Diaphragmatic Absorber
Absorption Range: 80 Hz to 120 Hz
Peak Absorption Frequency: 90 Hz

Purpose

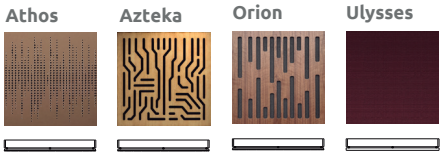
- Room mode control
- Bass ratio control
- Low frequency RT reduction
- Improving low frequency response
- Reducing low frequency time decay

Design Options

Bass Trap Wall | Hi-Fi & Living Room

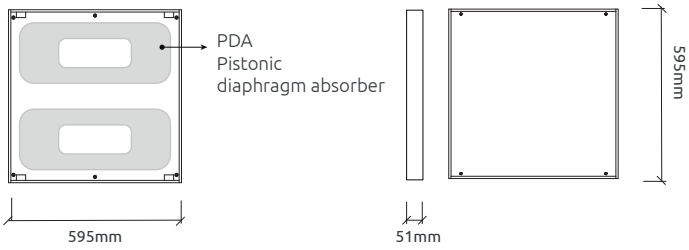


Bass Trap Wall | Music & Broadcast



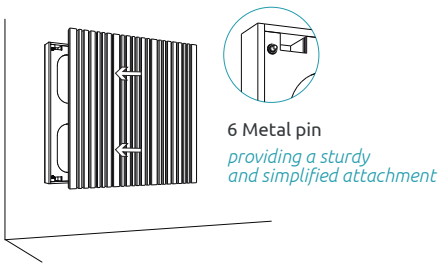
Dimensions

Bass Trap Wall | 595x595x51mm



Fixing Systems

Integrated Fixing Systems



Performance

An experiment was carried out in a reverberation chamber with a volume of 73.54 m³, using three units of the product to empirically evaluate its performance. While the absorber is not perfectly tuned to the room's modal frequency, it still demonstrates substantial absorption, utilizing only 0.6 m² of surface area (and a cavity depth of just 51 mm!) - more units will obviously offer better performance.

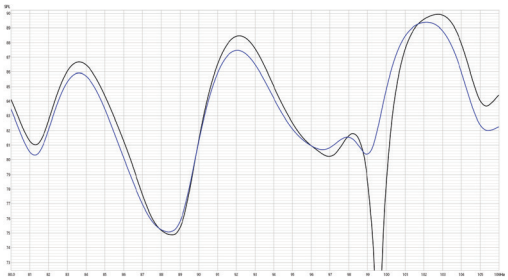


Figure 1: The black line represents the initial conditions, and the blue line shows the room response with three units installed.

To further investigate and pinpoint the resonant frequency of the proposed solution, mobility measurements were conducted using a Laser Doppler Velocimeter (LDV). These measurements highlight the absorber's tuning and provide crucial insights into its dynamic behavior — specifically whether it operates in a pistonic mode or exhibits more complex motion. The LDV proved invaluable during development, allowing precise adjustments to the membrane to ensure resonance aligns perfectly with the target frequency.

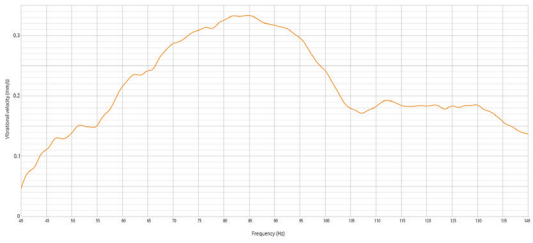


Figure 2: Vibrational velocity of the BT Wall membrane, measured using a LDV with the product mounted on the wall.