

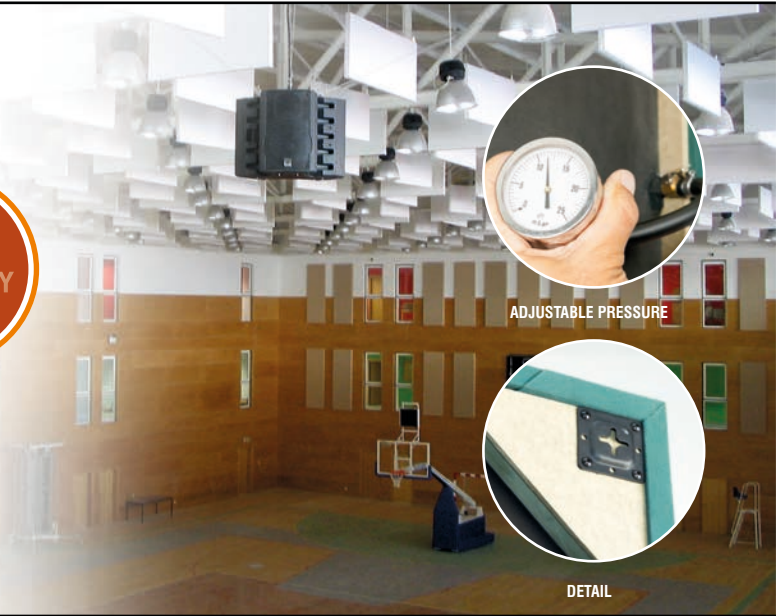


ABSTRACT[®]

TUNED ABSORPTION PANEL



LARGE-SIZED
LOW
FREQUENCY
ABSORBENTS



ADJUSTABLE PRESSURE

DETAIL

Image of 200x100x20cm model Ref.:BSW200 and 100x100x20cm model Ref.:BSW100(on the left) and Ref.:BSW200 applied (ambient image).

DESCRIPTION

The creation of this bass trap patent and its manufacturing method consists of a very solid metal box, on which a bitumen elastic layer on each of the two sides is applied. The resonator's absorbing surfaces are thin massive plates: the front one with high elasticity and low internal friction and the back plate with less elasticity causing a high internal friction. This combination creates an all-over solid connection through the metal box between the front and back plates. This compound forms a box sealed all around, closed to the air pressure, but opened to the sound. The front and the back plates do not prevent the entering of low frequencies from going inside the box interacting with a different air pressure. Like a tunable Helmholtz resonator, the membrane is excited by the resonance frequency and it vibrates so strong that the weight of the limp mass pushes and pulls the air cushion inside the box.

The ABSTRACT[®] resonance box formula comprises two limp elastic masses separated by the distance between them, benefiting the isothermal compression, thus providing better sensibility by absorbing the low-end frequencies at very low sound pressure levels. This system is very sensitive, however, the louder the sound system is, pumping the volume up, the more absorption you can get. Consequently it is an incredible high-efficiency low-frequency absorber panel.

By using a simple air compressor device you are free to vary and change the internal air pressure, hence obtaining various different frequencies of absorption. The distance between the membranes

varies according to the internal air pressure difference; for example with positive air pressurization we have a bigger distance and the air pressure superior to the original exterior pressure. As result, the frequency varies in accordance with the mentioned frequencies pattern.

In a more or less intense way, the problem of the low-frequencies control is widespread in most room types; This model is ideal for Concert venues, Auditoriums, Pavilions, studios, music rooms; these are the type of rooms that can greatly benefit from the integration of these acoustic modules, once they are the most effective and accurate way to intervene in solving the problems of low-frequencies.

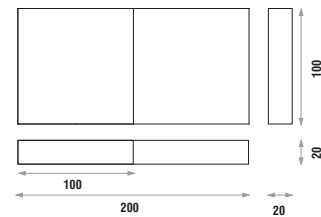
MODELS AND SIZES

| MODELS | HEIGHT | WIDTH | DEPTH | WEIGHT |
|--------|--------|--------|-------|--------|
| BSW200 | 200 cm | 100 cm | 20 cm | 45 Kg |
| BSW100 | 100 cm | 100 cm | 20 cm | 24 Kg |

FEATURES

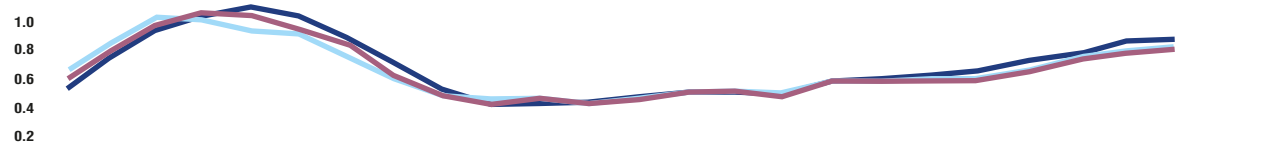
- Uses 60% of recycled materials and 100% recyclable.
- Fire-resistance: Euroclass B (similar to old M1).
- Variable tuned: 80Hz, 100Hz or 125Hz [$>50\text{Hz}; <250\text{Hz}$].
- Peak absorption at Low Frequency:
 - nominal pressure = 0.85 / 80Hz
 - 8 mBar = 0.86 / 100Hz
 - 14 mBar = 0.88 / 125Hz.
- Package and Installation: individual and accessories included.
- Ideal for mid and large size halls.

TECHNICAL DRAWINGS



ABSORPTION COEFFICIENT

| | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1k | 1.25k | 1.6k | 2k | 2.5k | 3.15k | 4k | 5k | 6.3k | 8k | 10k | AVERAGE [$>50\text{Hz}; <250\text{Hz}$] | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|-------|------|------|------|------|------|--|------------------|
| ■ αS | 0.56 | 0.76 | 0.94 | 1.04 | 1.10 | 1.04 | 0.88 | 0.72 | 0.52 | 0.43 | 0.44 | 0.45 | 0.49 | 0.55 | 0.55 | 0.53 | 0.56 | 0.59 | 0.61 | 0.65 | 0.70 | 0.77 | 0.83 | 0.84 | 0.88 | 14 mBar PRESSURE |
| ■ αS | 0.60 | 0.79 | 0.97 | 1.08 | 1.05 | 0.94 | 0.84 | 0.63 | 0.47 | 0.43 | 0.46 | 0.44 | 0.49 | 0.56 | 0.55 | 0.52 | 0.57 | 0.58 | 0.60 | 0.60 | 0.67 | 0.74 | 0.79 | 0.81 | 0.86 | 8 mBar PRESSURE |
| ■ αS | 0.66 | 0.84 | 1.04 | 1.02 | 0.95 | 0.92 | 0.76 | 0.60 | 0.48 | 0.45 | 0.46 | 0.44 | 0.48 | 0.55 | 0.56 | 0.54 | 0.57 | 0.58 | 0.59 | 0.59 | 0.66 | 0.73 | 0.78 | 0.80 | 0.85 | NORMAL PRESSURE |



■ ■ ■ ABSORPTION COEFFICIENT: Values in accordance with the standards: EN 20654, ASTM C423 and EN 11654.

■ Values [$<100\text{Hz}$ and $>5\text{K}$] are Non Standard Values.

STANDARD FABRIC COLOURS



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