

ACOUSTIC GUIDE



WHAT ARE ACOUSTIC FABRICS?



- Acoustic fabrics are **designed to improve sound conditions in architectural environments.**
- From ensuring focus & silence to enhancing speech intelligibility, every problem has its own solution.
- They are used in all types of settings including performance spaces such as theatres, concert halls, auditoriums, recording studios and rehearsal spaces. Or in venues such as public spaces, offices, museums, schools, gyms and swimming pools. Our acoustic engineers are constantly putting our textiles to the test to offer you the ultimate noise controlling solution.

WHY SHOULD YOU USE ACOUSTIC FABRICS?



- Noise standards and regulations concerning maximum noise levels make optimal sound quality more important than ever before.
- Acoustics solutions are an important consideration in the design, operation and construction of all buildings and can improve acoustic conditions. They ensure **a healthy auditive environment** and are a counter measure for health problems, bad communication and slacking productivity.
- Curtains and fabric panels are easily adjusted, relatively economical and often an integral design element.

TYPES OF ACOUSTIC FABRICS?

Acoustical fabrics come in many types and forms:

- Sound absorption
- Sound insulation
- Acoustically transparent fabrics

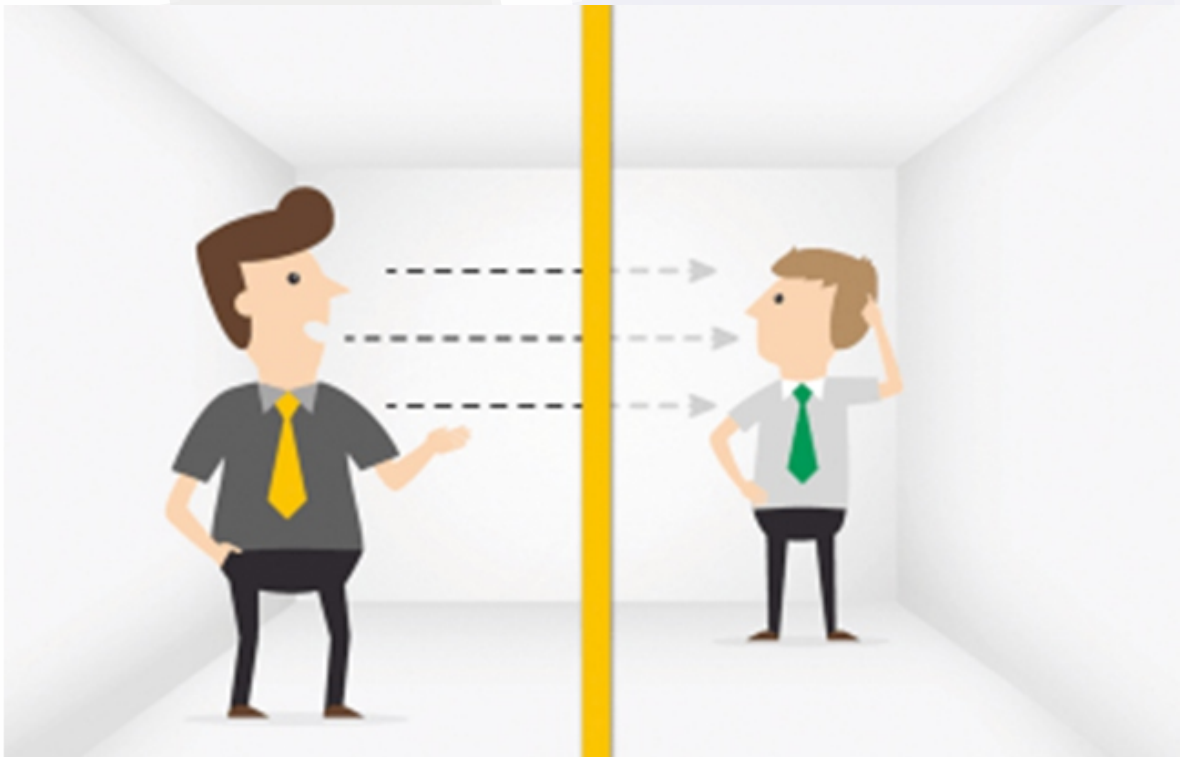
Easily restore focus, silence and speech intelligibility in any space by choosing the right acoustic enhancements.

SOUND ABSORPTION



- Spaces that create an echo or which are noisy even when very little sound is being made, need sound-absorbing materials. These focus on sound problems occurring inside a space that is probably large, open or that has many hard surfaces reflecting the sound.
- **Sound-absorbing curtains and panels primarily deal with the shortening of reverberation times**, improving speech intelligibility and decreasing background noise.
- NexGen acoustic fabrics are ideal for absorbing and controlling sound waves.

- Want to improve sound quality and reduce reverberation levels within a venue? Discover our sound absorbing products.



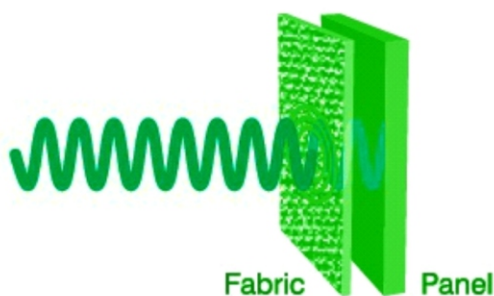
- SOUND INSULATION
- Where sound absorption focuses on how sound behaves inside a single room, **sound insulation deals with problems occurring between several spaces or buildings.**
- NexGen offers fabric acoustic solutions that reduce the transmission of sound from one area to another. Combining either sound-absorbing and/or sound-reflective fabrics will improve the degree of speech privacy or reduce unwanted noises from within or outside a room.

- **ACOUSTICALLY TRANSPARENT FABRICS**

- Fabrics with netted structure can be used to **mask speakers or other audio installations without changing the sound characteristics**. NexGen even offers a unique acoustically transparent velvet which lets sound through perfectly:

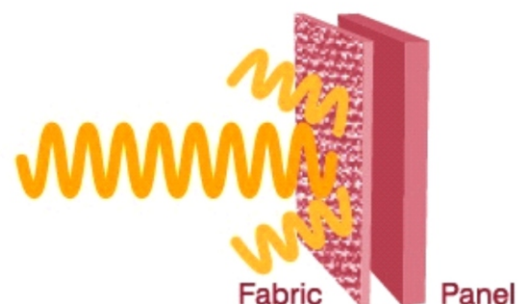
Acoustically transparent

Good

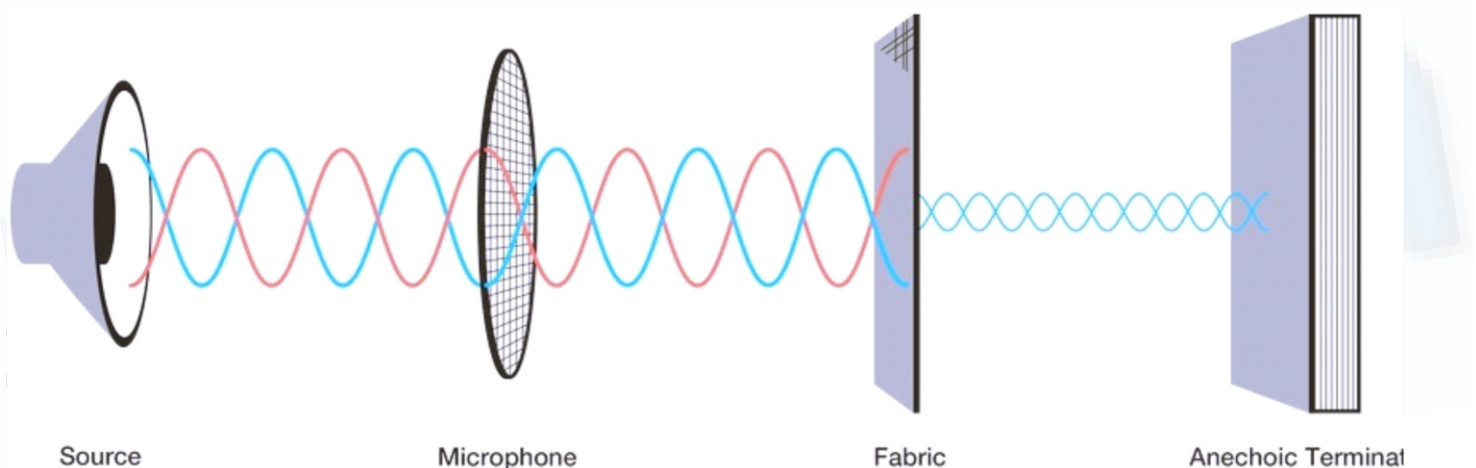


Sound reflection

Bad

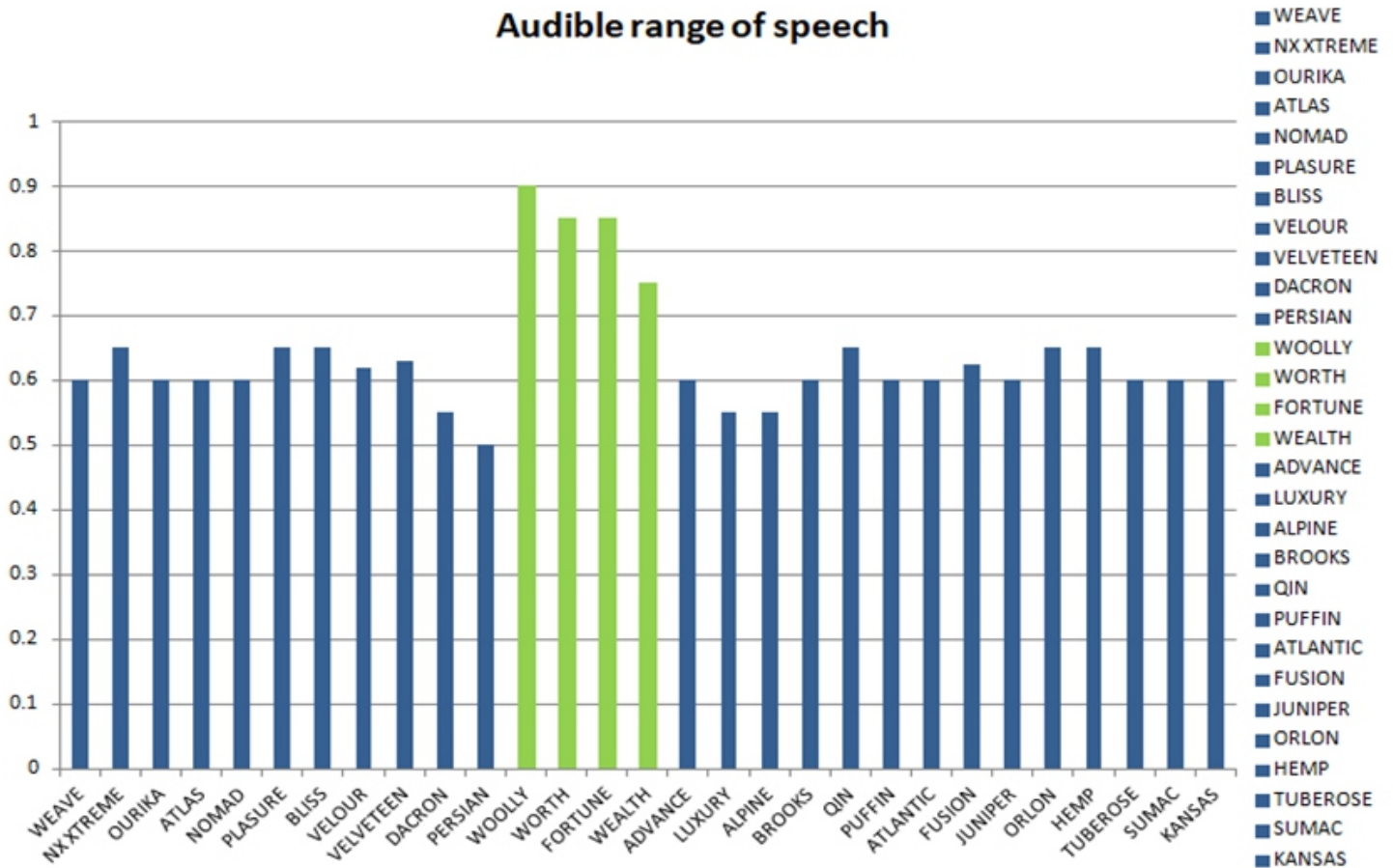


- We know what we are looking for in a fabric, how do we test whether or not it's acoustically sound?
- The test is an Impedance Tube Test (ISO 10534-2). Don't let words like impedance or anechoic termination scare you. It's a pretty straight forward process.
- Sound is directed through the fabric and into an Anechoic Termination, which is basically a fancy way of saying "the place where no sound can escape". It's like a black hole for sound in that no sound is reflected back off of the anechoic termination. Because fabrics are tested using a standard anechoic end-point, rather than a specific manufacturer's sound-absorbing product, this test allows
- Fabrics to be tested on their own merit, giving you more meaningful data for making decisions.
- The amount of sound that goes through the fabric is measured, resulting in a number between 0 — a highly sound reflective surface, to 1 — a surface that the sound entirely goes through. This number is called the NRC (noise reduction coefficient) rating. With NRC numbers, the higher the number, the greater the sound absorption, and the better it is for acoustically sensitive settings.



Our Acoustic Performance

Audible range of speech



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