Today’s office landscape supports changing demographics, technologies, and multiple work styles that combine focused work with teamwork. While there are many financial and performance benefits to this type of environment, it can be challenging to control noise.
Noise is a leading source of employee dissatisfaction in offices. In a University of California–Berkeley study, workers talking on the phone and overhearing private conversations were the source of acoustic concerns for 86% of the respondents. Another survey reported that 60% of the respondents said they could get more done if their workspace was quieter.

Understanding sound is key to creating an environment which is supportive of the work that needs to be accomplished. When a sound wave is produced, it travels and bounces off the reflective surfaces it comes in contact with. The amount of time it takes (in seconds) for that sound energy to dissipate is termed “reverberation time” or RT.

The reverberation of a sound wave is affected by all surfaces (and contents) within a room, including the furnishings, window treatments, and even people. In a space where the walls, floors, and ceiling are all hard and reflective, the sound waves bounce around the room multiple times before they become inaudible. Lengthy reverberation times allow sounds to build up and conflict with one another. Ideal reverberation times vary based on the space use however shorter RTs (<1 second) are preferable for high quality intelligibility in private offices, meeting rooms, and classrooms.

Given this information, how do we improve the acoustic experience in high performing work environments? The solution is either reduce the noise or sound events that take place within the space or add materials that will absorb the sound.
Felt is the Solution

Since we know we often can’t control the sound that takes place in an office, we can compliment the space with well-designed acoustic materials and products to provide sound absorption and reduce the reverberation time to an acoustically comfortable range. FilzFelt offers a range of products that achieve a NRC rating from 0.2 for direct applied felt to 1.2 for acoustic baffles. These acoustically absorptive products may be combined to provide a little to a lot of sound absorption with wall and floor coverings, hanging panels, acoustic panels, and baffles.

Want to get technical? Noise Reduction Coefficient (or NRC) is a representation of the amount of sound absorbed when a sound wave strikes a surface. A NRC of 0 indicates perfect reflection; a NRC of 1 indicates perfect absorption however due to the formulas used, it’s important to note that the NRC rating is not a percentage so values larger than one are possible. And while NRC ratings are commonly used in reference to office furniture components and are indicators of absorptive characteristics, it is the RT that is most meaningful when determining how sound is controlled in a space.

To aid clients in determining the appropriate products to achieve their acoustic goals, FilzFelt has developed a proprietary RT calculator. By entering data including the cubic feet of space, ceiling height and finish materials, the calculator establishes a baseline RT without added acoustic materials. We can then determine approximately how many square feet is needed of the appropriate product—yardage, baffles, panels, or planks—required to meet the desired reverberation goals and a report is generated showing the metrics.
Wallcovering

Wool felt wallcovering is a cost effective way to achieve texture, saturated color, and sound absorption wherever you need it. Available in thickness from 2mm to über-thick 10mm, felt can be directly adhered without a backing to walls, ceilings, and even millwork to provide a NRC rating of 0.2, which provides modest muffling of sound.
Custom Cut Wallcovering

One of the super features of this nonwoven textile is that it can be cut with the edges left raw and will not fray. This characteristic allows for installations created through a variety of custom cutting techniques including CNC and roll cutting. FilzFelt’s custom cut felt options create patterning, corporate logos, or even dimension through layering pieces of felt.
Cabanas + Canopies

A nod to wool felt’s early uses as tents and yurts, wool felt may also be draped to create semi-private work cabanas or acoustic canopies in open areas. These straightforward (but anything other than boring) installations make the most of wool felt’s thickness and rigidity in sound-mitigated spaces draped in soft, natural texture.
Floor Coverings

Acoustic testing indicates that soft surfaces may mute reverberation by as much as 40–50%. So by simply adding a felt floor covering, color and texture is added in addition to improved room acoustics. Choose from standard sizes and shapes or create a custom floor covering that is one-of-a-kind with CNC cut shapes, machine and hand stitching, embellishment, and backing options.
Hanging Panels

Hanging Panels are another way to add functional acoustic absorption. Wool felt is the ideal choice due to its thickness and density that allows the panels to hang freely without a backing or additional support. And since it’s a nonwoven textile, intricate cut-out patterning can be achieved without the need for finishing the edges. This modern screening system provides visual and acoustic separation and may be fixed or slide on FilzFelt’s Hanging Panel Track System to divide space at a moment’s notice.
Modular

Made from a minimum of 25% remnant material, these flexible, modern screening systems provide soft and textural space separation as eye-catching room dividers and can grow or shrink by simply adding or removing modules. Add to the mix 63 colors of 100% Wool Design Felt that can be arranged in a variety of ways and this product provides countless sizes, shapes, and color configurations. Have a change of heart later on? The panels can be quickly and easily reassembled. Plus, they are compatible with FilzFelt’s Hanging Panel Track System, allowing a complete solution.
Akustika Collection

The Akustika Collection rose out of growing client demands for higher acoustic performance. By pairing 100% wool felt with acoustic substrates, the sound absorption is increased dramatically. Akustika’s substrate is an acoustic PET material in either 10mm or 25mm thicknesses and can be suspended as baffles and panels or surface-mounted to the walls, ceiling, or even workstation systems. Available in 63 colors of felt and two substrate colors, these flexible acoustic products provide NRC ratings from 0.65–1.20.
Architecture Research Office Collection

The Architecture Research Office Collection combines the natural beauty of wool felt with repetition and pattern to create architectural finishes with a high acoustic performance. The modular components assemble to create standard or custom patterns for the walls, ceiling, or dividing space and yield a continuous, acoustically absorptive architectural finish. Plus, they allow for customized configurations such as a built-in bench. NRC ratings vary from 0.65–1.20 and may be combined to maximize acoustic performance.
Eva Zeisel Collection

Eva Zeisel was a “maker of useful things.” Born in Hungary with her early career spent in the potteries of Germany and Russia, Eva’s sensuous forms were inspired by the curves of the human body and those found in nature. Though best know for her modernist ceramics, the Eva Zeisel Collection takes inspiration from her room dividers and glazed tiles in six shapes of acoustic tiles that feature curvilinear forms nesting together to create soft, fluid patterning. In true Eva Zeisel spirit, the playful patterns may go bold with saturated colors or soft and sensual with neutral tones. The lightweight, sound softening tiles assemble in customizable patterns of 100% wool felt and are easy to install with standard wallcovering adhesive.
Ruckstuhl Collection

In North America, FilzFelt exclusively represents a collection of high performing acoustic products from Switzerland-based, Ruckstuhl. The collection includes freestanding and desk mounted screens and a variety of cable suspended and wall mounted panels. Ruckstuhl panels provide sound abatement with NRCs up to 1.05 and reduce sound reverberation time in an elegantly designed package.
Submaterial Collection

Taking advantage of the inherent thickness and rigidity of a natural, nonwoven textile—wool felt—the collection is a modular acoustic wallcovering system. In fourteen designs from sinuous organic patterns to repeated rectilinear forms, the patterns use varied thicknesses of felt with a composite cork backing. These dimensional tiles create depth and shadow or simple graphic patterning while providing soft sound absorption.
Noise Reduction Coefficient (NRC) Ratings

1. 100% Wool Design Felt 0.20
2. Submaterial Collection 0.20
3. Pannello Paravent 0.40
4. Pannello Tavola 0.40
5. ARO Block 0.50
6. Akustika 10 Block 0.50
7. Eva Zeisel Block 0.50
8. Akustika 10 Wall with Z-Clip 0.60
9. ARO Plank 2—5 0.65
10. Akustika 10 Suspended 0.65
11. Akustika 10 Wall with Interlock Mounting System 0.75
12. ARO Shingle 0.75
13. Akustika 25 Ceiling 0.80
14. Pannello Semplice 0.80
14. ARO Plank 2—5 with Infill 0.80
15. Akustika 25 Suspended 0.85
15. Akustika 10 Wall with Z-Clip and Infill 0.85
15. ARO Shingle with Infill 0.85
16. Pannello Murale 0.95
17. Pannello Sospeso 0.95
18. Pannello Supporto 0.95
19. ARO Plank 1 1.00
20. Silento Murale 1.05
21. Silento Sospeso 1.05
22. Akustika 25 Baffle 1.20
23. ARO Baffle 1.20