Optimized Acoustics™

There's a lot of noise out there. Take your acoustic design to the next level.
LISTENING TO DESIGN TRENDS

Everywhere you look, new, modern spaces are coming to life and while these open-concept spaces promote communication and collaboration, they also increase one main challenge - noise. Now more than ever an optimal acoustic experience is as important as the look, feel and function of a space. And it starts by choosing the right ceiling material to achieve the best level of sound absorption for your space.

A FOCUS ON ABSORPTION FOR HIGHER PERFORMANCE

With greater awareness of the impact noise has on our daily lives, it's not surprising that building standards and guidelines are evolving with more stringent acoustic requirements. To meet many of these higher performance criteria, it's important to consider how every structure, surface, fixture, material and even gap plays a role in the way noise is experienced. For the best results, this means focusing on the true strength of ceiling panels - noise absorption.

UNDERSTANDING THE REALITY OF BLOCKING

As you navigate the ceiling panel solutions available, you'll notice products on the market that attempt to absorb and block noise. There is a misconception that ceilings alone can block sound between rooms. The reality is, lightweight modular acoustic ceilings by themselves do not have enough mass to block sound. Additionally, ceiling systems will always have substantial noise leaks – created by installing light fixtures and air devices – making them even less effective at blocking sound.

By attempting to address both blocking and absorbing, those dual-purpose panels actually compromise both. Designers mistakenly sacrifice noise absorption for blocking (CAC - Ceiling Attenuation Class), and the blocking is simply not good enough. Instead, look to your ceiling panels to meet the high absorption requirements you need and to your walls for blocking, when it's needed. CAC is no longer compliant with most acoustic standards, guidelines and rating systems.

A FOCUS ON ABSORPTION FOR EFFECTIVE SOUND DESIGN

The idea is simple. Select a ceiling system to optimize absorption and where needed, use walls or plenum barriers to effectively block sound. This approach results in designs that comply with the standards and achieve the best sound experience at the best price.

EFFECTIVE SOUND DESIGN

Meet sound blocking requirements between rooms by using full-height walls or lightweight plenum barriers.

GLOSSARY

Optimized Absorption & Blocking

Compromised Absorption & Blocking

STC

WHAT IS STC?

Sound Transmission Class measures a wall's ability to block noise transfer between adjacent rooms.

WHAT IS NRC?

Noise Reduction Coefficient measures the amount of noise absorbed by a ceiling material.

QUESTIONS TO CONSIDER FOR YOUR NEXT PROJECT

What are the needs of the space you are designing?

Noise Sensitivity: What will occupants be doing and how important are speech intelligibility, privacy and freedom from disruptive noise? High, moderate or low?

Noise Potential: How much noise is expected inside the room and from adjacent rooms? Is it high, moderate or low?

Requirements: Which acoustic standards or guidelines need to be met?

What level of absorption does the space need?

Typically, the higher the NRC the better. Ceilings lower than NRC 0.70 often require additional absorption on the walls.

NRC - Optimizing Good, Better, Best*

Best (NRC 0.80)

Better (NRC 0.70)

Good (NRC 0.60)

Examples of common spaces:

Waiting room: Low Sensitivity/Medium Noise Potential | Good (NRC 0.70)

Restaurant: Low Sensitivity/High Noise Potential | Better (NRC 0.80)

Open office design: High Sensitivity/High Noise Potential | Best (NRC 0.90)

What level of blocking does the space need?

Typically, adjacent rooms require STC 40, 45 or 50. Values below 40 do not provide adequate speech privacy.

STC - Optimizing Good, Better, Best*

Best (STC 50)

Better (STC 45)

Good (STC 40)

Examples of common spaces:

Office next to office: Low Medium Sensitivity/Low Medium Noise Potential | Good (STC 40-45)

Patient room next to patient room: Medium Sensitivity/Medium Noise Potential | Better (STC 45)

Classroom next to classroom: High Sensitivity/High Noise Potential | Best (STC 50)

Open office: Blocking not required

*The values in these tables are based on the acoustic criteria sections of current standards, guidelines and building codes for healthcare, such as the American Society for Testing and Materials A1532-15 (2017), AGA B150.3-14 (2016), and the U.S. General Services Administration GSA (healthcare facilities), and LEED v4 for sustainable buildings.

The Optimized Acoustics™ approach is easy and results in a true sound experience for building occupants. Meet both absorption and blocking performance criteria while enjoying the style of a smooth-finished ceiling system – without breaking the budget. Hear the ROCKFON® difference at OptimizedAcoustics.com
We believe our acoustic stone wool and metal solutions for ceilings and walls are a fast and simple way to create beautiful, comfortable and safe spaces.

Easy to install and durable, they protect people from noise and the spread of fire. They are our way of making a constructive contribution towards a sustainable future.

Create and Protect is what drives us. It means putting people first, sharing success and maintaining trust.

It’s our rock-solid promise to you. At ROCKFON, Create and Protect is what we do and it’s inspired by you.

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