

The Coffee Gulper

The Apple Cruncher

The Ear-Splitting Cackler

The Constant Gabber

The Loud Talker

The Door Slammer

The Weighty Walker

The Heavy Sigher

## 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.

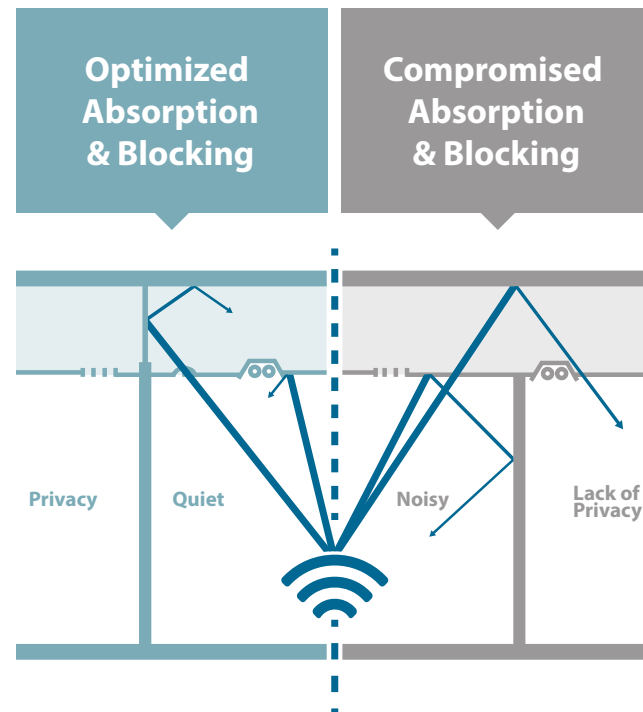
## UNDERSTANDING THE REALITY OF BLOCKING

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.

## OPTIMIZED ACOUSTICS™ 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.



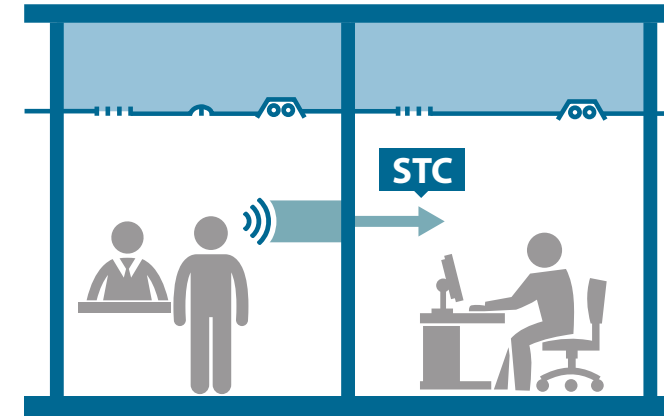
## QUESTIONS TO CONSIDER FOR YOUR NEXT PROJECT

### 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?



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

## GLOSSARY

### What is NRC?

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

### What is STC?

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

### What is CAC?

Ceiling Attenuation Class measures a ceiling panel's ability to block noise transfer between adjacent rooms.

### 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.

Sensitivity to Noise	Amount of noise inside the room		
	Low	Medium	High
High	BETTER NRC 0.80	BEST NRC 0.90	BEST NRC 0.90
Medium	GOOD NRC 0.70	BETTER NRC 0.80	BEST NRC 0.90
Low	GOOD NRC 0.70	GOOD NRC 0.70	BETTER NRC 0.80

#### 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 of 40, 45 or 50. Values below 40 do not provide adequate speech privacy.

Sensitivity to Noise	Amount of noise in adjacent rooms		
	Low	Medium	High
High	BETTER STC 45	BEST STC 50	BEST STC 50
Medium	GOOD STC 40	BETTER STC 45	BEST STC 50
Low	GOOD STC 40	GOOD STC 40	BETTER STC 45

#### 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 rating systems including ANSI/ASA S12.60-2010 (schools), WELL Building Standard 2016 GSA PBS-P100 2016 (office buildings), The FGI Guidelines 2014 (healthcare facilities), and LEED v4 ID+C (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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