



Armstrong[®]
World Industries

Experience,
Above All[™]

Total Acoustics[®]

Design Guide



Total Acoustics® ceiling panels provide the ideal combination of sound absorption and sound blocking, making it easy to get the acoustics right for every space.



NRC + CAC =
Total Acoustics

Helping You Select the Right Acoustics



Why Sound
Blocking Matters



A Better Learning
Experience for
Students



A Quieter Healing
Experience for
Patients



An Improved Work
Experience for
Office Personnel



Total Acoustics®
Solutions



Getting the acoustics right is easy with Total Acoustics® ceilings, providing the ideal combination of noise reduction and sound blocking in one ceiling panel. With three levels of sound absorption and high sound-blocking performance, Total Acoustics makes it easy to choose the right ceiling for every space, every time.

To make your choice even simpler – request a complimentary Custom Acoustical Report for your project needs. Our TechLine experts can help you get the right sound control for your design and your budget.

The Right Acoustics For Every Space

BEST

NRC 0.80+ | CAC 35+

BETTER

NRC 0.70-0.75 | CAC 35+

GOOD

NRC 0.60-0.65 | CAC 35+

Why choose Total Acoustics®?

Ceilings with high NRC only can absorb sound within the space – but cannot block sound from leaving or entering the space.

Ceilings with a CAC of 35+ will help block sound from traveling to adjacent spaces through the plenum, providing improved sound isolation, speech privacy, and design flexibility.

Sound absorption
is not a substitute
for blocking.



See the Difference:
Watch the video on the importance of sound blocking in your ceilings.

Did you know?

It costs up to 50% less to use a Total Acoustics® ceiling than to install plenum barriers or finish walls to the deck.

Running HVAC duct work, plumbing, and conduit in the plenum above the ceiling make finishing walls to the deck costly and impractical.



Learn more: Read the white paper “Attaining Speech Privacy with Acoustical Ceiling Tiles”.

Why do we recommend ceiling panels with a sound-blocking performance of CAC 35+? Testing in real-world scenarios¹ has proven Total Acoustics® panels with a CAC of 35+ and wall STC of 35+ isolates sound and prevents distracting noise from transferring to adjacent workspaces.

Ultima® Health Zone™ ceiling panels®

Field Test Parameters

- Adjacent Offices (same size)
- Plenum (with no barrier)
- Common Wall (STC 35+)
- Commercial carpeting
- Background noise at 42dBA with sound masking system

¹ Independent acoustical measurements and report by Acentech Inc.



Acoustic Design For Education

Making the grade.

Each day, thousands of students are unable to understand one out of every four spoken words in classrooms due to inadequate acoustical treatments. Total Acoustics® ceilings will help you meet or exceed ANSI/ASA standards, and contribute to LEED® points to create a better place for teachers to teach and students to learn.

Ultima® ceiling panels



Sound blocking between spaces/classrooms is critical to minimize distraction and preserve speech privacy. A ceiling with a CAC of 35+ and wall STC of 50+ will work together to provide proper noise isolation.

Top Specified Ceiling Panels for Education

ANSI/ASA S12.60
American National
Standard

Acoustical Performance Criteria, Design
Requirements and Guidelines for Schools

Background Sound

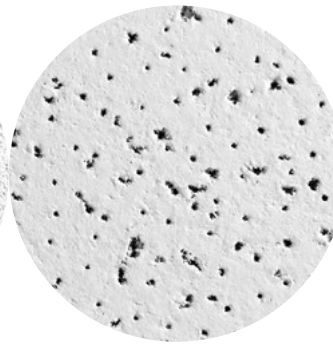
Max 35dBA (from HVAC)

Reverberation Time

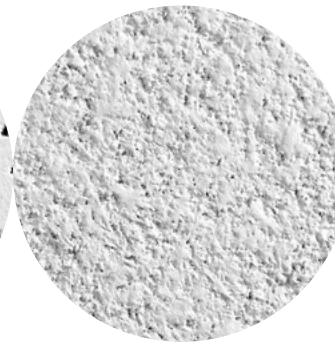
< 0.60 Seconds



Ultima®



School Zone®
Fine Fissured™



Cirrus®

Ultima ceiling panels

School Zone Fine Fissured ceiling panels



Want help? Request a complimentary Custom Acoustical Report to help get the acoustics right in your classrooms





Acoustic Design For Healthcare

Caring for outcomes.

Hospital noise satisfaction ranks low on HCAHPS scores. Excessive noise in corridors, busy nurses' stations, and chaotic treatment rooms negatively affect patients and interactions between doctors and staff. Total Acoustics® ceilings can help you address that and meet HIPAA healthcare requirements, as well as aid in optimum patient recuperation.

Calla® ceiling panels



Sound blocking between healthcare spaces is critical to maximize sound isolation and create speech privacy. A ceiling with a CAC of 35+ and wall STC of 45+ will work together to provide proper noise isolation.

Top Specified Ceiling Panels for Healthcare

FGI Facilities Guidelines Institute	Guidelines for the Design and Construction of Hospitals (2022)
Background Sound	Up to 45dBA for patient rooms
Reverberation Time	0.5 to 0.6 seconds for patient rooms



Calla® Health Zone™ AirAssure®

Ultima® Health Zone™

Ultima®

Calla Health Zone AirAssure ceiling panels

Ultima Health Zone ceiling panels

➔ **Want help?** Request a complimentary Custom Acoustical Report to help get the acoustics right in your healthcare spaces.





Acoustic Design For Office Spaces

Doing the job well.

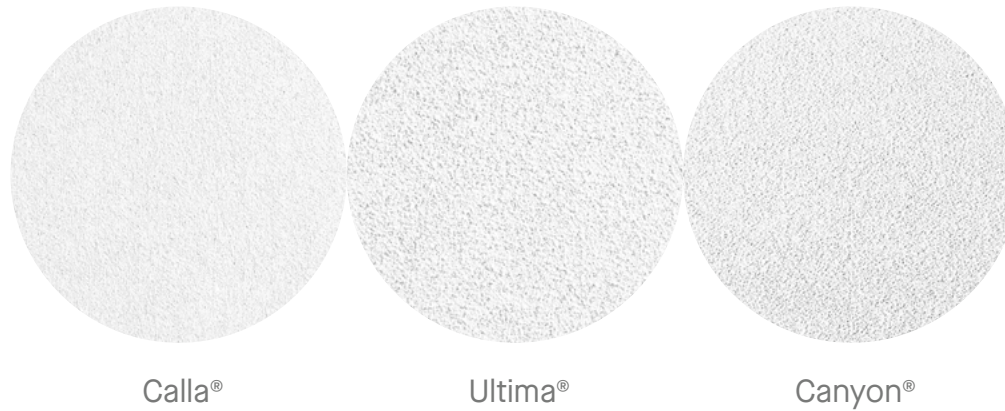
Studies show excessive noise reduces employee effectiveness, raises stress, and lowers productivity. Work and workplaces call for both concentration and collaboration. Total Acoustics® ceilings help you address quiet concentration, energetic collaboration, and speech privacy in today's workplace – creating an optimal work environment.



Calla® ceiling panels

Sound blocking between office spaces is critical to minimize distraction and preserve speech privacy. For private offices, a ceiling with a CAC of 35+ and wall STC of 35+ will work together to provide proper noise isolation.

Top Specified Ceiling Panels for Office Spaces



Canyon ceiling panels

Ultima ceiling panels

LEED v4.1®

Leadership in Energy and Environmental Design

Background Sound

35dBA to 48dBA for open-plan spaces

Reverberation Time

0.6 seconds maximum for private offices



Want help? Request a complimentary Custom Acoustical Report to help get the acoustics right in your workspaces.



A Product Portfolio to Fit Every Space

NRC
+ CAC
= Total Acoustics

BEST Performance
NRC 0.80+ | CAC 35+



Calla®
Product Family



Calla® Health Zone™
AirAssure®



Ultima®
High NRC



AcoustiBuilt®
Ceiling System

BETTER Performance
NRC 0.70-0.75 | CAC 35+



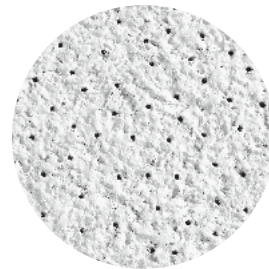
Ultima®/
Ultima® Health Zone™
AirAssure®



Fine Fissured™
High NRC



School Zone®
Fine Fissured™/
School Zone® Fine
Fissured™ AirAssure®



Cirrus®/
Cirrus®
High NRC

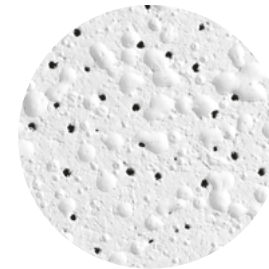
GOOD Performance
NRC 0.60-0.65 | CAC 35+



Canyon®



Mesa™



School Zone®
Georgian™



Cirrus®
Second Look®/
Cirrus® Profiles

Left to right:

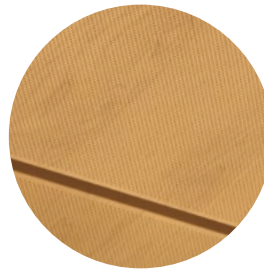
- WoodWorks
Grille Tegular with
Calla infill panel
in Black
- Tectum
DesignArt - Lines
Tegular ceiling
panels
- MetalWorks
Immix Blades



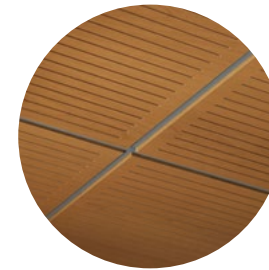
Your Choice

Pair these wood, metal, and wood-fiber ceilings with an infill panel to reach the level of performance your space needs.

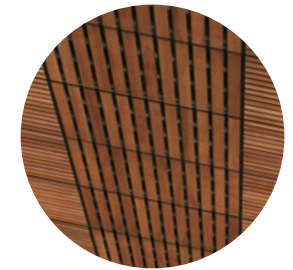
Acoustical performance for these ceilings is determined by the product, perforation, infill panel, and installation method.



WoodWorks®
Tegular/
WoodWorks®
Shapes



WoodWorks®
Channeled
Tegular



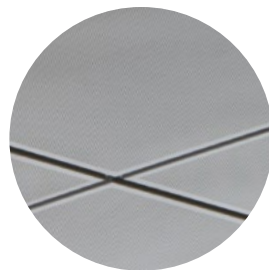
WoodWorks®
Grille Tegular



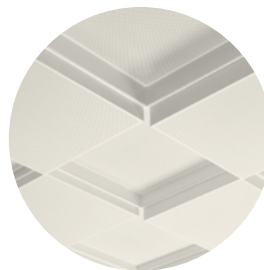
MetalWorks™
Immix



CastWorks™
Metaphors®



MetalWorks™
Tegular



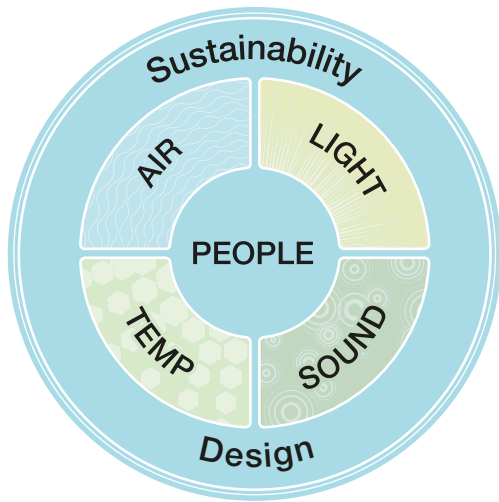
MetalWorks™
3D



Tectum® DesignArt™ -
Lines Tegular



Tectum®
Tegular



A Quiet Space is a Healthy Space

Acoustic comfort is just one of the important factors that contributes to the well-being, comfort, satisfaction, and productivity of the people inhabiting indoor spaces. Choosing Total Acoustics® ceiling panels helps to improve Indoor Environmental Quality (IEQ) and create healthy, sustainable, quiet spaces.

➔ [More About Healthy Spaces](#)



Keep Learning

Continue learning about acoustics and earn CEUs using these links:

➔ [Acoustics Academy Hosted By Architectural Record](#)

➔ [Rep Hosted Courses](#)

➔ [Find Your Armstrong Rep](#)

How Can We Help You?

1 877 276 7876

Customer Service Representatives
7:45 a.m. to 5:00 p.m. EST
Monday through Friday

TechLine – Custom reverberation and privacy index calculation reports, technical information, detail drawings, CAD design assistance, installation information, other technical services – 8:00 a.m. to 5:30 p.m. EST, Monday through Friday.
FAX 1 800 572 8324 or email: techline@armstrongceilings.com

armstrongceilings.com/commercial

Latest product news
Standard and custom product information
Online catalog
CAD, Revit®, SketchUp® files
A Ceiling for Every Space® Visual Selection Tool
Product literature and samples – express service or regular delivery
Contacts – reps, where to buy, who will install

 **ProjectWorks®**

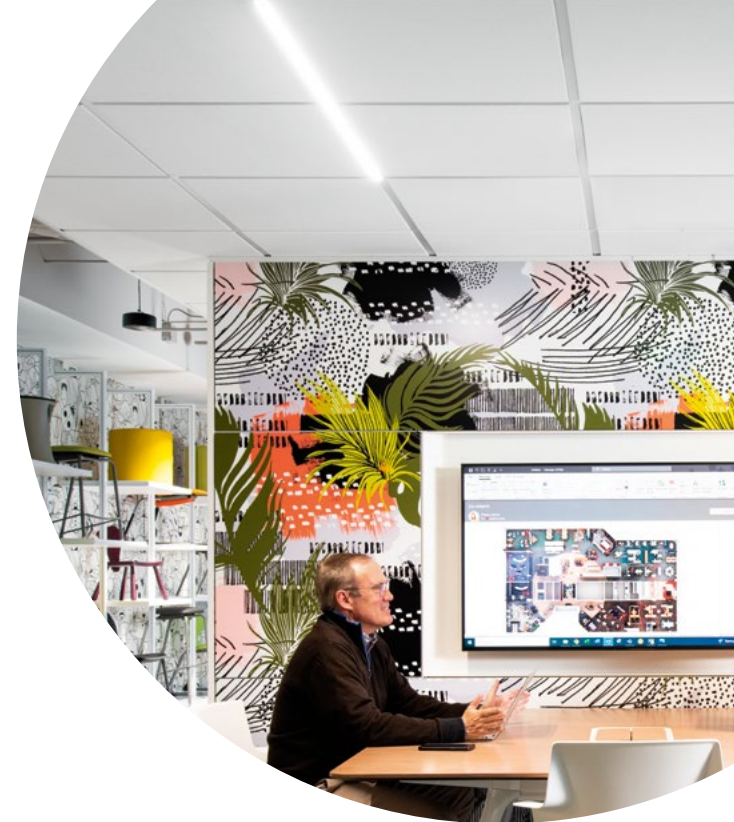
armstrongceilings.com/projectworks

The power of ProjectWorks® Design and Pre-construction Service
Mix and match different sizes, shapes, colors, and materials to reinvent your standard, specialty, or custom ceiling.
Visit our pattern gallery online to see ideas for your next project at armstrongceilings.com/patterngallery
Contact your local representative to get a design started! Not sure who your local rep is?
Visit armstrongceilings.com/findarep

Photo above: Ultima® Tegular HRC ceiling panels
Cover photo: Calla® Health Zone™ ceiling panels

armstrongceilings.com/totalacoustics

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