ACGI

# ACOUSTICAL SOLUTIONS

## *for* Performing Arts *&* Auditoriums

v2.2

**Allegro™ Curved Panels**
**Laurel High School**
**Laurel, MD, USA**

Architectural Components Group, Inc. was founded in 2001 and has since become a major factor in the wood walls and ceiling industry. ACGI provides innovative products that fit various acoustical design requirements while enhancing the appearance of the project with the warmth and beauty of veneered and solid wood wood.

Performing arts centers and auditoriums have particular needs when it comes to both sounds and aesthetics. ACGI's various systems are key to meeting sound requirements as well as creating an eye-catching atmosphere that serves to enhance the center of performance rather than distract from it. Our systems offer a variety of acoustical properties.

1

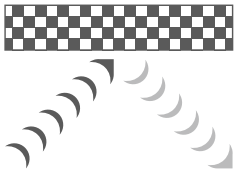
## REFLECTION

For areas where reflection is desired, our Flat Panel and Allegro systems offer unparalleled solutions that are aesthetically pleasing and blend with adjacent panels.

2

## ABSORPTION

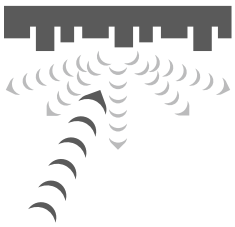
For sound absorption, ACGI offers several distinct systems for walls and ceilings that integrate with any of our other systems.



3

## DIFFUSION

Our diffusers offer a variety of aesthetic solutions and are frequently used in isolated locations in conjunction with absorptive and reflective panels to disperse sound over a broad region.



ACGI provides a variety of products to outfit the entire space, from custom ceiling and wall panels to meet acoustical requirements, to stage surrounds, balcony faces and railings, grille and louver panels to mask AV and HVAC components, and more. When all of the components coming from the same source, they work in concert together to create an aesthetically consistent and pleasing look. It's like music to your eyes.

Custom Flat Panels
The New School
New York, New York, USA

Allegro™
Marine Corps University
Quantico, Virginia, USA

Custom Grilles
Kauffman Center for the Performing Arts
Kansas City, Missouri, USA

Custom Flat Panels
Diller Theater
Chicago, Illinois, USA

ACGI manufactures a variety of wall and ceiling systems and can accommodate diverse custom designs. Interchangeable product lines work together to achieve perfect aesthetic and acoustic results. For a truly cohesive look consider extending ACGI's product line into the lobby and other areas connected to performance, practice, and lecture spaces.

**Allegro™ Curved Panels**
**St. Paul's Monastery**
**St. Paul, Minnesota, USA**

**Custom Grille Panels**
**Country Music Hall of Fame**
**Nashville, Tennessee, USA**


Custom Baffles, Grilles, Concerto™ Wall System
Washington University
St. Louis, Missouri, USA

Linear Ceiling & Walls
Grinnell College
Grinnell, Iowa, USA

## PRODUCTS

- Allegro™
- Linear
- Flat Panel
- MicroPerf
- Encore™
- Grille
- Baffle
- Louver
- Diffuser
- Concerto™

# ALLEGRO™ CURVED PANEL

Allegro™ Curved Panels
Farmington Hills City Hall
Farmington Hills, Michigan, USA

- Wall and ceiling applications
- Concave, convex and serpentine
- Complements other ACGI ceiling and wall systems
- Perfect for multi-panel ceiling cloud applications
- Perimeter trim and acoustic insulation options

The Allegro system is comprised of large format panels that are factory curved to direct sound to match architectural and acoustician designs. The Allegro system is beneficial on walls and ceilings of auditoriums, theaters, performance halls and lecture rooms.

## Reflection

As these panels are designed to reflect sound rather than absorb, the faces are typically non-perforated. Optional acoustic insulation on the back of panels absorbs non-directed sound within the plenum and enhances the overall acoustical performance of the room. Panels are factory curved to convex, concave and serpentine shapes with a minimum 6 inch radius. The acoustic characteristics are controlled with the panel curvature, size, location and space between panels. The panels are available with natural wood veneer, reconstituted wood veneer, high pressure laminate or factory painted faces. The ACGI Allegro suspension system offers fast and precise installation.

Allegro™ Curved Panels
Evangel University
Springfield, Missouri, USA

# LINEAR

Custom Linear & Beam Ceiling
First Presbyterian Church
Tulsa, Oklahoma, USA

- Wall and ceiling applications
- Planks and panels
- Closed and open reveals
- Reveal profile options
- Optional fiber-felt reveal strips
- Squared or rounded backers
- Solid wood, veneer or laminate

Linear Open Series
Sagewood Retirement
Pheonix, AZ, USA

## Absorption

The Linear Open system obtains NRC values of absorption by allowing sound waves to pass between the planks into the plenum. The NRC performance is controlled by installing 1" or 2" of acoustic insulation behind the planks. As most acoustic insulation blankets or mats are typically black coated, the insulation itself acts to hide the reveal. An optional black non-woven felt can be factory applied to create a visual barrier in the reveal space.

## Diffusion

The Linear Closed system provides diffusion by using planks installed without an open reveal. A V-joint or a flat-bottom V-joint provides a break in the surface plane that contributes to sound diffusion.

# FLAT PANEL

- Various suspension methods
- Wall and ceiling applications
- Degrees of acoustic treatment
- Custom and standard sizes
- Various perforation patterns

Custom Flat Panels & Concerto™ Walls
Howard Theatre
Washington D.C., USA

## Absorption

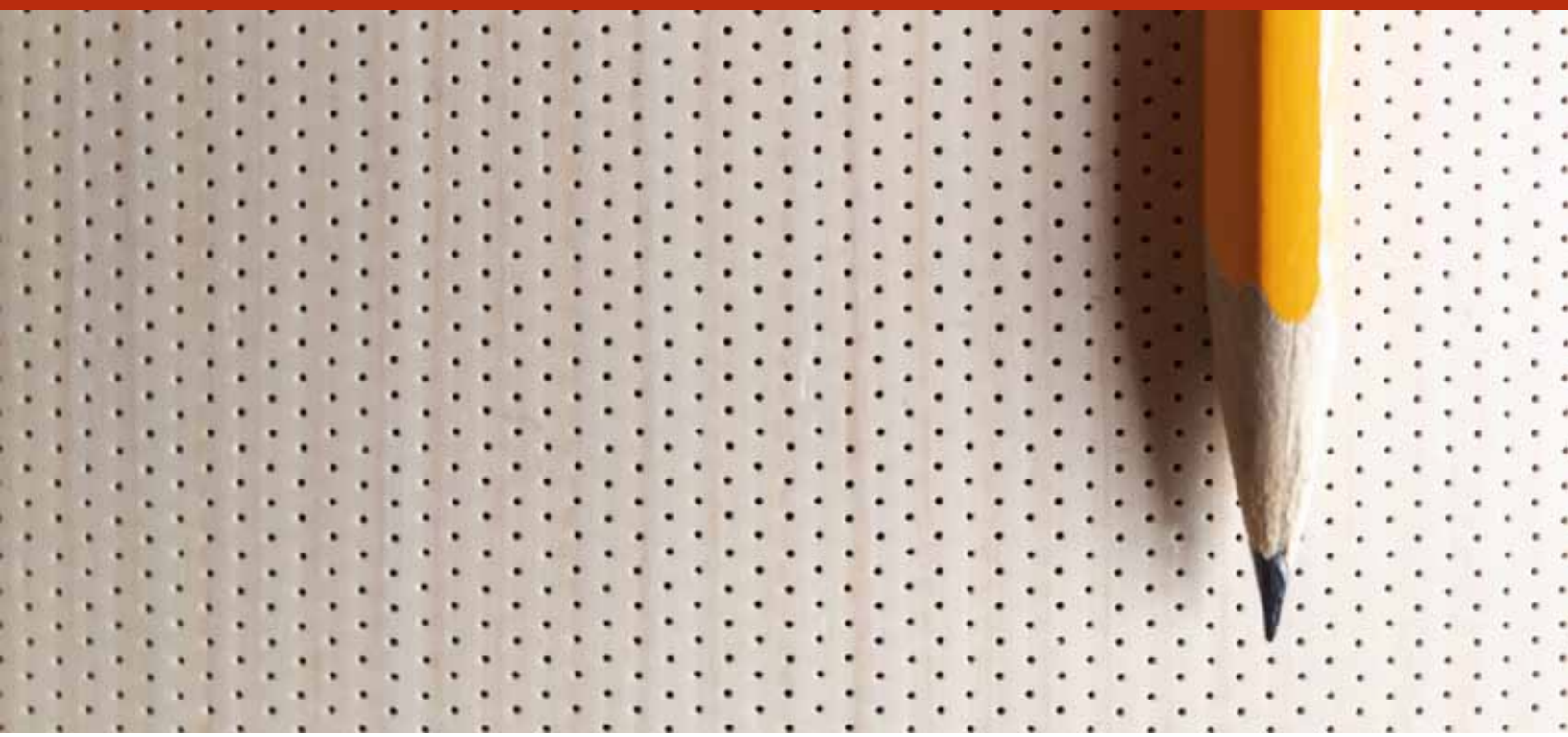
With a perforated Flat Panel, sound waves pass through the panel into the plenum space. The perforation spacing controls the amount of open area on the surface to accomplish specific NRC performance. For greater NRC performance add acoustic insulation behind the panel to increase absorption.  ACGI factory attaches acoustic fabric to the back of the panel to provide additional acoustical absorption and a light block.

## Reflection

When non-perforated panels are selected, the flat panel surface is reflective. To direct sound generated on a stage or speaking area, panels are mounted at an angle to control reflectivity.

Custom Flat Panels
Ag First
Columbia, SC, USA

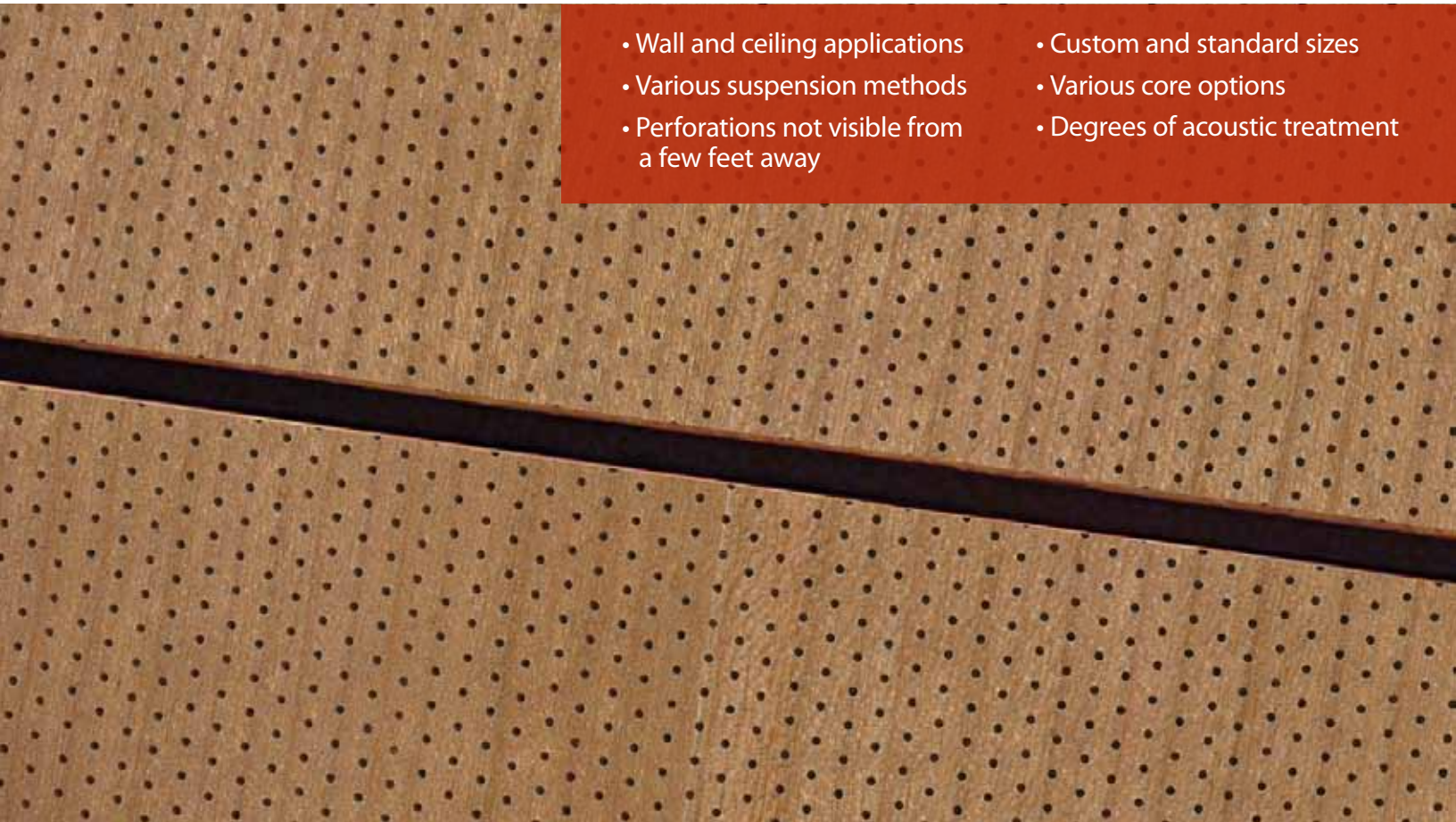
# MICROPERF



ACGI MicroPerf panels blend the aesthetic qualities of wood with excellent acoustical performance. Sound is absorbed through a micro-perforated wood that has the appearance of a non-perforated panel from a normal viewing distance.

MicroPerf is an excellent solution for both wall and ceiling applications, and can be applied to both flat and curved panels. Acoustic fabric is factory-attached to the back of the panel, and acoustic insulation is typically used for additional NRC performance.

- Wall and ceiling applications
- Various suspension methods
- Perforations not visible from a few feet away
- Custom and standard sizes
- Various core options
- Degrees of acoustic treatment



# ENCORE™

Encore™
Capitol One
New York, USA

- Wall and ceiling applications
- Blend acoustics with aesthetics
- Groove and spacing options
- Simple installation process
- Accommodate flat or curved, small or large-format panels, or linear planks

Encore acoustical wood panels and planks combine wood beauty with acoustical performance into a simple installation package for walls and ceilings. Finely detailed face grooves, along with complementary back perforations, create very small, yet frequent channels to capture sound. Factory-attached acoustic fabric on the back adds acoustical performance and a light block. For additional NRC, Encore panels and planks can be mounted in front of acoustic insulation.

## Encore Series 1

Encore Series 1 acoustical wood planks provide a T&G edge and a monolithic appearance. Depending on the desired acoustical performance, the backside of the plank is available with standard holes, over-sized holes, counter-bored holes or no holes.

## Encore Series 3

Encore Series 3 acoustical wood panels are a popular choice for composite panels. The face grooves can be either continuous to the end of the panel, stopped to create an integral border, or the panel can be constructed with a mitered perimeter frame. The back of the face has perpendicular grooves. EN3 is also available in a radius, factory-curved panel.

## Encore Series 5

Encore Series 5 acoustical wood panels combine the design of curved panels with the absorptive properties of other ACGI acoustical products. EN5 panels are factory curved to match design criteria of convex, concave and serpentine panel shapes. EN5 panels are available in various custom sizes and radii. EN5 is the curved version of EN6.

## Encore Series 6

Encore Series 6 acoustical wood panels incorporate multiple ceiling and wall applications. EN6 is the panelized version of EN1 planks. EN6 panels are typically edge banded and are available in a wide variety of custom sizes.

## Encore Series 7

The Encore Series 7 acoustical wood planks/panels incorporate various groove sizes and spacing with intermittent, parallel, intersecting saw penetrations on the backside of the face to absorb sound.

## Encore Series 8

Encore Series 8 is a specialty face-grooved panel with a thin face membrane for multiple applications such as sound absorption, airflow or speaker covers – all with the same visual face.

# GRILLE

Grilles
SFJAZZ Center
San Francisco, California, USA

- Wall and ceiling applications
- Squared and rounded profiles
- Notched backers
- Curvilinear blades and backers
- Substrates: particle board, MDF, fire-rated foam, laminate and solid wood

## Open Grilles

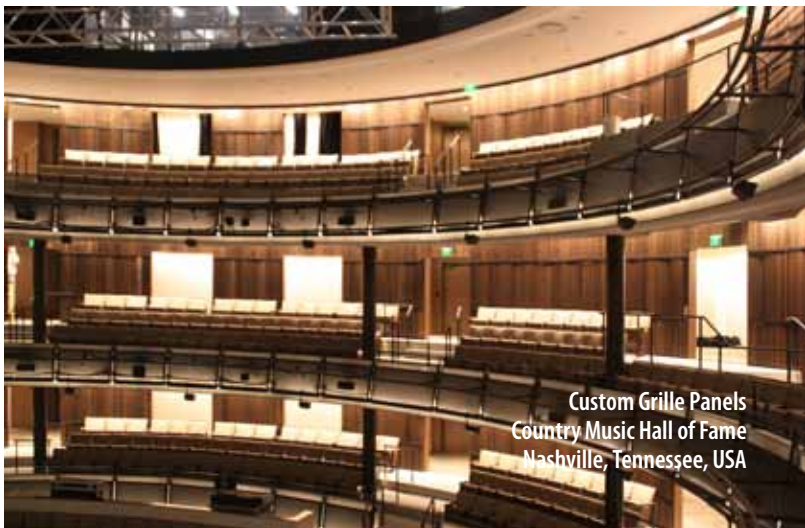
Wood Grilles are one of the more traditional products that provide the warmth of wood and acoustical treatment. Grilles are available in a variety of configurations, wood species, and finishes. A large amount of open area allows sound to pass virtually unobstructed into the plenum space and/or acoustic insulation behind the grille. Consequently acoustical performance of a wood grille system is determined by the properties of the absorbing medium behind the panels. Frequently this medium is fiberglass insulation in bags, mats or duct liner.

## Micro Grilles

Some design criteria, especially on walls, call for wood grilles with blade dimensions on a small scale, and Micro Grilles were designed to meet these criteria. Depending on the design, they can have acoustical properties of absorption and diffusion. As the open spaces between blades are more narrow, and there is less total open area, the NRC performance is not as high as traditional grilles. Micro Grilles are suited to provide matching panels for NRC considerations, air flow or speaker covers.

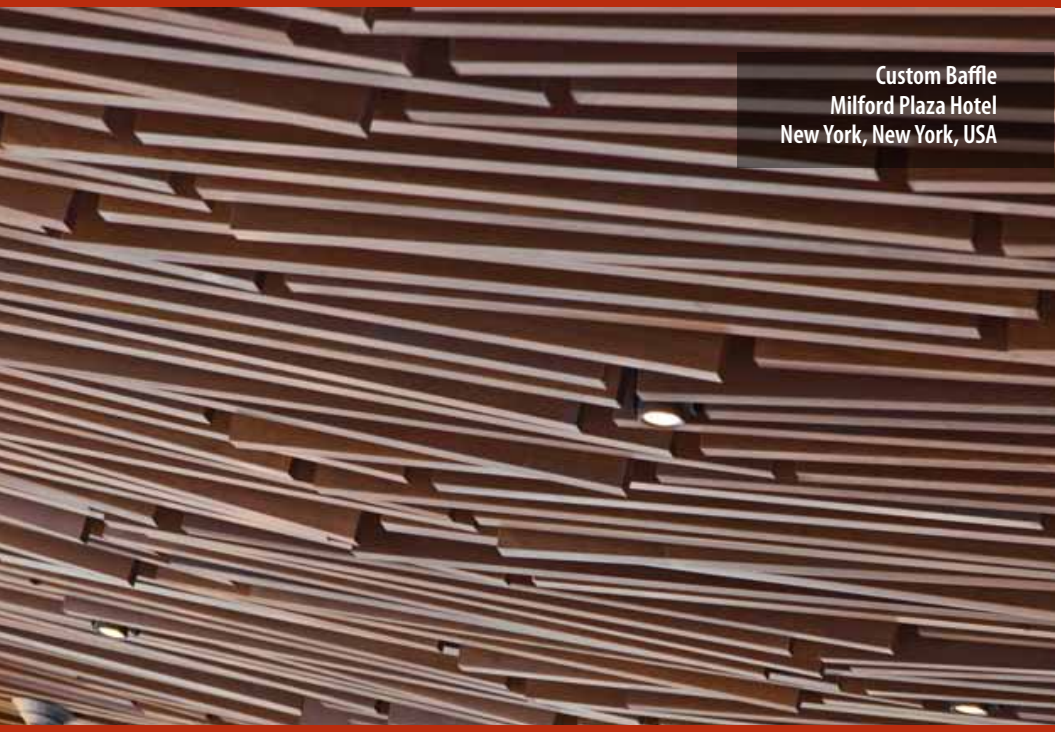
## Encapsulated Grilles

A special design exists where wood grilles are integrated with fabric-wrapped acoustical panels. Primarily a wall application, the wrapped panel and wood grille are factory assembled into a single component that is easily installed by one trade. This allows the full choices of fabric-wrapped panels, combined with the warmth and distinction of wood products without the installation difficulties of multiple components. NRC contribution will be largely dictated by the performance of the wrapped panel.



Custom Grille Panels
Country Music Hall of Fame
Nashville, Tennessee, USA

# BAFFLE



Custom Baffle
Milford Plaza Hotel
New York, New York, USA

- Wall and ceiling applications
- Panelized for easy installation
- Squared or rounded backers
- Optional notched backers
- Solid wood and flexible dowels
- Sophisticated Micro-Grilles

Baffles are a larger format than Grilles, and offer additional versatility. Baffles offer versatility and durability. Depending on size and design requirements, they can be produced from solid wood or veneer using MDF, particle board or fire-rated foam substrates. Panel options include size, thickness, spacing, members per foot and custom profiles. For a curvilinear style, we can produce radiused backers or radiused baffles.

# LOUVER


Louvers
First Presbyterian Church
Tulsa, Oklahoma, USA

- Wall and ceiling applications
- Open or encapsulated panels with optional acoustic insulation
- Custom and standard profiles
- Spacing and angle options

Larger scale openings incorporate custom louver panels with large blades, often set at an angle within the integral frame construction. The design of these devices can accommodate NRC performance with the inclusion of sound attenuation material behind the louver blades. Additionally, angled blades can provide sun shade, air flow or can be used to mask visual sight or sound lines between adjacent areas.

## Rubato™ Panel Diffuser

The sculptured face of these panels not only add decorative beauty to a project, but the various angles provide a superior diffusion of the sound pattern. The actual pattern of the decorative face can be uniquely tailored to the specific design aspects of a project. The face patterns can be distinctive within each panel or blend with adjacent panels. Although most frequently used for wall or column applications, they can also be incorporated into ceilings. Because of the unique face undulations, many patterns are painted or coated rather than covered with wood veneer.

## Toccata™ Linear Diffuser

The various depth channels molded into this linear plank system provide the breakup and redistribution of sound waves. As a plank system with matching trim, it is incorporated into localized areas within a wall. Relatively small percentages of the total surface are needed to effectively control flutter and echo. Planks are manufactured with the hardwood specie and factory finish that matches the surrounding panels and other millwork. The planks are field trimmed and installed to match the acoustician's requirement for sound diffusion in a particular area and within particular frequencies. Various groove widths and depths are available to control diffusion and flutter.

## Counterpoint™ Wave Panel

Counterpoint is a unique geometric panel that focuses sound direction to provide specific area diffusion. The panels are installed in horizontal or vertical bands on a wall or ceiling to isolate an echo or reverberation condition. The surface can be either wood veneer, high pressure laminate, or a painted surface. Any surrounding surface can be a complementary surface or a contrasting material. Like many diffusion panels, they generally do not cover an entire wall or ceiling, but are used sparingly in a space for localized control.

- Wall and ceiling applications
- Diminish flutter and echo
- Custom and standard designs
- Substrates: solid wood, veneer and thermally-fused laminate

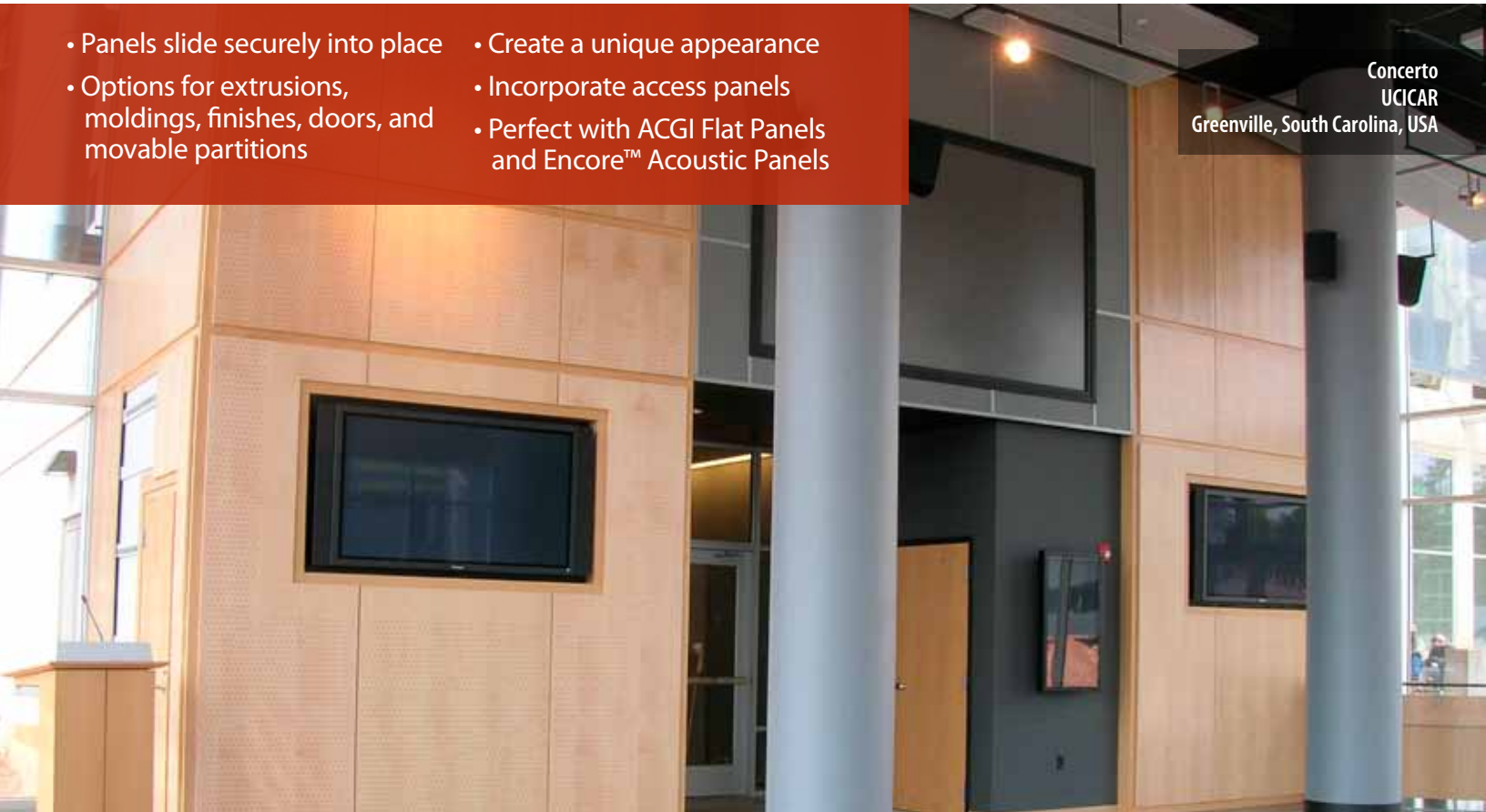
# CONCERTO™ WALL SYSTEM

The Concerto™ Wall System features various interchangeable aluminum extrusions with an assortment of reveal conditions. Ideal for creating a unique, consistent style, the system supports ACGI's perforated and non-perforated panels, including MicroPerf and Encore™ Acoustic Panels. The simplicity and flexibility makes standard, flat, curved and custom panels possible. Custom extrusions are available upon request.

Concerto
Temple University
Exeter, Pennsylvania, USA

Concerto
First Presbyterian Church
Tulsa, Oklahoma, USA

- Panels slide securely into place
- Options for extrusions, moldings, finishes, doors, and movable partitions
- Create a unique appearance
- Incorporate access panels
- Perfect with ACGI Flat Panels and Encore™ Acoustic Panels



Concerto
UCICAR
Greenville, South Carolina, USA

# TECHNICAL DATA

| Linear (Type 400 Mounting) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| Plank Only | 0.27 | 0.20 | 0.15 | 0.18 | 0.25 | 0.31 | **0.20** |
| 1" Acoustical Blanket | 0.87 | 0.74 | 0.69 | 0.57 | 0.37 | 0.40 | **0.60** |
| 2" Acoustical Blanket | 0.95 | 0.89 | 0.90 | 0.55 | 0.38 | 0.45 | **0.70** |

| Flat Panel (Type 400 Mounting) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| 32mm Perforations OC | | | | | | | |
| Panel Only | 0.38 | 0.41 | 0.33 | 0.26 | 0.26 | 0.26 | **0.30** |
| 1" Acoustical Blanket | 0.40 | 0.46 | 0.41 | 0.38 | 0.30 | 0.27 | **0.40** |
| 2" Acoustical Blanket | 0.39 | 0.46 | 0.41 | 0.33 | 0.29 | 0.29 | **0.35** |
| 16mm Perforations OC | | | | | | | |
| Panel Only | 0.63 | 0.82 | 0.67 | 0.66 | 0.65 | 0.61 | **0.70** |
| 1" Acoustical Blanket | 0.62 | 0.78 | 0.81 | 0.82 | 0.68 | 0.62 | **0.75** |
| 2" Acoustical Blanket | 0.65 | 0.84 | 0.89 | 0.82 | 0.69 | 0.65 | **0.80** |

| MicroPerf | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| 0.55 mm on 2 mm OC Type E 425 Mounting | | | | | | | |
| Panel Only | 0.89 | 0.90 | 0.62 | 0.70 | 0.74 | 0.57 | **0.75** |
| w/ 1" Acoustical Blanket | 0.87 | 0.88 | 0.90 | 1.04 | 0.83 | 0.61 | **0.90** |
| w/ 2" Acoustical Blanket | 0.71 | 0.88 | 1.04 | 1.06 | 0.89 | 0.62 | **0.95** |
| 0.55 mm on 2 mm OC Type F-6 Mounting | | | | | | | |
| Panel Only | 0.14 | 0.51 | 1.06 | 1.03 | 0.72 | 0.51 | **0.85** |
| w/ 1" Acoustical Blanket | 0.00 | 0.09 | 0.22 | 0.54 | 0.81 | 0.37 | **0.40** |
| w/ 2" Acoustical Blanket | 0.39 | 1.00 | 1.17 | 1.00 | 0.79 | 0.51 | **1.00** |
| 0.9 mm on 4 mm OC Type E 400 Mounting | | | | | | | |
| Panel Only | 0.83 | 0.89 | 0.55 | 0.71 | 0.79 | 0.62 | **0.75** |
| w/ 1" Acoustical Blanket | 0.69 | 0.84 | 0.86 | 0.93 | 0.72 | 0.53 | **0.85** |
| 0.9 mm on 4 mm OC Type F-6 Mounting | | | | | | | |
| Panel Only | 0.02 | 0.09 | 0.24 | 0.64 | 0.75 | 0.30 | **0.45** |
| w/ 1" Acoustical Blanket | 0.10 | 0.52 | 1.06 | 0.95 | 0.59 | 0.47 | **0.80** |

| Allegro Series | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| Panel Only | 0.12 | 0.21 | 0.07 | 0.05 | 0.06 | 0.01 | **0.10** |

| Open Grille Series | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| 1" Insulation | 0.08 | 0.25 | 0.49 | 0.72 | 0.86 | 0.91 | **0.60** |
| 2" Insulation | 0.20 | 0.53 | 0.79 | 0.94 | 0.95 | 0.97 | **0.80** |

| Encore Series | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| Encore 1 & 6 Type E 400 Mounting | | | | | | | |
| 16mm OC | 0.38 | 0.41 | 0.33 | 0.26 | 0.26 | 0.26 | **0.55** |
| 1" Acoustical Blanket | 0.60 | 0.65 | 0.64 | 0.67 | 0.55 | 0.47 | **0.65** |
| 2" Acoustical Blanket | 0.72 | 0.85 | 0.94 | 0.90 | 0.79 | 0.75 | **0.85** |
| Encore 3 Type F6 Mounting | | | | | | | |
| w/ Perforated Back | 0.10 | 0.30 | 0.75 | 0.97 | 0.88 | 0.76 | **0.75** |
| Non-Perforated Back | 0.11 | 0.31 | 0.82 | 0.93 | 0.87 | 0.76 | **0.75** |
| Encore 3 Type E 400 Mounting | | | | | | | |
| w/ Perforated Back | 0.77 | 0.78 | 0.75 | 0.92 | 0.98 | 0.81 | **0.85** |
| Non-Perforated Back | 0.06 | 0.30 | 0.79 | 0.88 | 0.86 | 0.70 | **0.70** |

***Note:*** *Specific test reports are available upon e-mail request with a project name to* ***info@acgiwood.com***

# ACGI

## OUR **MISSION**

We commit to providing the highest quality product possible through our highly skilled and dedicated personnel. Our intent is to provide innovation, quality and customer service unsurpassed in our industry.

We strive to conduct ourselves in a positive manner that sets us apart from our competition. We recognize the guidance and direction of God in our business and will always be thankful for the opportunities He provides to us.

## OUR **HISTORY**

Founded in January 2001 by its president, Gary Thompson, ACGI has become a leader in the walls and ceilings industry. We have strategically positioned ourselves through innovative products, ethical business practices and an accessible management team.

ACGI has an extensive network of independent representatives throughout the United States and abroad. We proudly manufacture all of our wood walls and ceilings in Marshfield, Missouri, USA.

Front Cover:
Concerto™ Wall System, Custom Flat Panels,
Allegro™ Curved Panels, Custom Railings
Pittsburgh State University
Pittsburgh, KS, USA

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