CEILING | SYSTEMS

[**Between us, ideas become reality.**]®

OPTIMA® Capz™

Acoustical Ceiling System

Mount to Deck

Mount to Drywall

Suspended

Armstrong®

Solving acoustical challenges in exposed structure spaces has never looked so good!

The sleek Optima® Capz™ system pairs Capz accent hardware with the exceptional acoustical benefits of fine-textured OPTIMA ceiling panels. This unique combination gives you the opportunity to improve acoustics by about 50%* with only 20% coverage of the available ceiling area, resulting in a sound acoustical solution that gives you the look you want now without noise problems that can follow.

Outstanding Acoustics

- Noise is absorbed on both the front and back of the panels
- NRC 0.90 (UL Classified)

High performance panels

- Exclusive fine-textured clean, white DuraBrite® finish:
  - High Light reflectant 0.90
  - Scratch and soil resistant
  - Washable
- Low VOC
- Factory-finished Reverse Tegular edges offer a crisp reveal
- Variety of sizes, including:
  - Square panels in 3′ x 3′, 4′ x 4′
  - Rectangular panels in 2′ x 4′, 4′ x 8′
  - Plank looks in 2′ x 5′, 2′ x 6′, 2′ x 8′
- Panels are pre-drilled for easy installation

NOTE: We do not recommend painting panels as it negatively impacts acoustical performance.

Installation:

- Lightweight, accessible panels
- Easily demountable
- Installs using standard tools
- Grid system provides easy alignment and leveling for a quick and aesthetically pleasing installation
- Can be installed:
  - As close as 2-3/4″ to the deck (approximate distance between deck and panel face)
  - Up to 6-1/2″ (approximate distance between deck and panel face)
  - Suspended off wires at your desired ceiling elevation

* Reduce overall reverberation time in the space by 50% with only 20% coverage.

Right: St. Michael's Country Day School, Newport, RI. In this busy cafeteria, the fourth graders are happy with their retrofit ceiling – now they can actually hear what their friends are saying. Product installed 5″ from deck with adjustable brackets.

Optima Capz, installed 6-1/2″ from a metal deck.

Optima Capz, installed 2-3/4″ from a metal deck.

Flexible for multiple applications

Optima® Capz™ works well in either retrofit or new spaces – it's a flexible fit and offers 7 panel sizes that can be installed:

- directly to the deck
- on drywall
- suspended like a continuous ceiling

Panels can be designed in long runs or grouped based on the acoustical needs of the space.

Standard cap finish

White Textured

Silver Smooth

Capz offers a fun, architectural detail

Custom RAL Caps

Capz hardware is available in a coordinating clean, crisp white that is textured like Optima panels or a more contrasting sleek and cool clear-coated silver. It's up to you. Or choose a custom color for a more playful installation. (See over 180 RAL color options on our web site or in our ceilings catalog.)

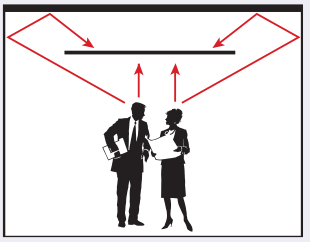
Acoustical Performance

Total acoustical absorption for a suspended ceiling is calculated by multiplying the exposed surface area by the material NRC while “space absorbers” are directly measured. Optima® Capz™ provides greater sound absorption than a continuous ceiling of the same surface area because the sound is absorbed from both the front and back surfaces.

The installation of Optima Capz in a reverberant space can significantly reduce the background noise and reverberaton time, enhancing speech intelligibility.

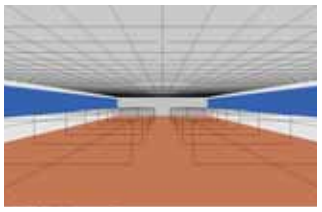
Factors that may affect the installed acoustical performance relative to the published results are:

- Size of area
- Number of panels
- Layout of panels
- Suspension distance below exposed deck or finished ceiling

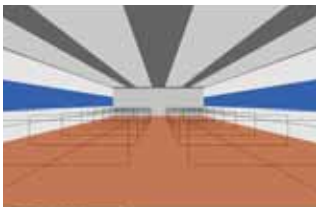


100% Suspended Ceilings Coverage vs. Partial Coverage with Optima Capz

- 5000 sf open plenum office (50′ x 100′)
- Ceiling height: 15′ to deck
- Drywall walls, with windows on 2 sides, and commercial carpet



Optima Suspended Ceilings representing 100% coverage



Optima Capz with 50% coverage

Optima Capz with 25% coverage

Optima Capz with 10% coverage

CEILING	None Exposed Structure	OPTIMA Capz (10% of ceiling)	OPTIMA Capz (25% of ceiling)	OPTIMA Capz (50% of ceiling)	OPTIMA Ceiling Continuous 10′ H (100% of ceiling)
Reverberation time (s)	3.4s	2.2s	1.5s	1.0s	0.5s
RT reduction (%)	n/a	35%	55%	72%	86%
SPL reduction (dB)	n/a	1dB	1.6dB	2.6dB	6.3dB

Case Study:

Project: St. Michael’s Country Day School Cafeteria

Location: Newport, RI

Product: Optima® Capz™ Ceiling System

Problem: Space suffered acoustically from both high reverberation time and high levels of background noise

Situation: Exposed concrete ceiling deck, drywall walls, vinyl on concrete floor, wood and glass doors

The Solution: Optima Capz Ceiling System placed in 23% of the ceiling area, reduced reverberation time 55%. Panels also lowered the unoccupied background noise level by over 3 decibels and occupied noise levels by 5 decibels.

For more information and other acoustical information, visit armstrong.com/capz and click on St. Michael’s Case Study.

Easy to specify for the best sound control

Optima® Capz™ is easy to specify and install. Simply review these steps to ensure you've thought about design and installation considerations before making your final choices. If your goal is to improve sound control in the space, keep this simple rule of thumb in mind:

For a 50% improvement in reverberation time, you want to cover a minimum of 20% of the space.

Example:
In a 100,000 sf area, you want to ensure you've got a minimum of 20,000 sf of Optima Panels. Page three provides an acoustical coverage overview to help you make the best decisions.

Reverberation Calculation tools – Two options for you:

- Our on-line reverberation calculator can help you with these calculations or
- Call our TechLine group and they'll run numbers for you

armstrong.com/ceilings

Select your panel sizes and layout

1. Review current space plan, noting all potential interruptions to panel layout; i.e., lighting, sprinklers, plumbing, HVAC, electrical conduits as well as joists or beams that are part of the structure. In new construction, depending upon the phase of the process in which you're specifying ceilings, you may be able to organize mechanical systems around your panel design to achieve design and acoustical performance. In renovation, you'll have to plan around what's already there.
2. Reference available panel sizes, see chart below and select the sizes that work best with your plan/design intent.

Field Panel Sizes

Standard Sizes – all Reverse Tegular edge, all White

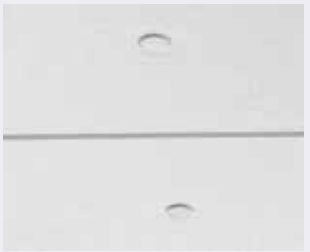
Item	Description
3934	2′ x 4′ Optima Capz
3935	2′ x 5′ Optima Capz
3930	2′ x 6′ Optima Capz
3931	2′ x 8′ Optima Capz

Item	Description
3936	3′ x 3′ Optima Capz
3932	4′ x 4′ Optima Capz
3933	4′ x 8′ Optima Capz

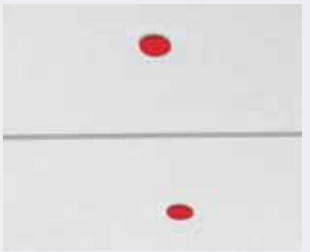
Select your Capz!

You can go with a textured Optima finish on your Capz for a coordinated look, or a sleek, aluminum finish for more of a contrast.

Standard color – White Cap (textured)

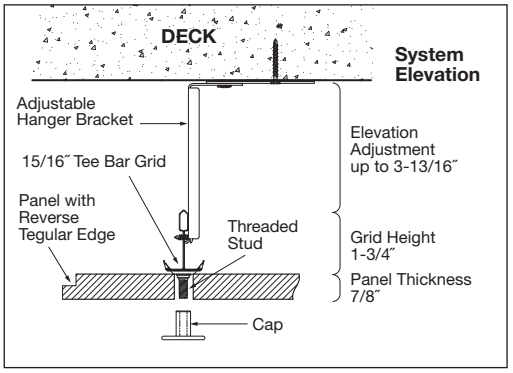


Standard color – Silver Cap (smooth)

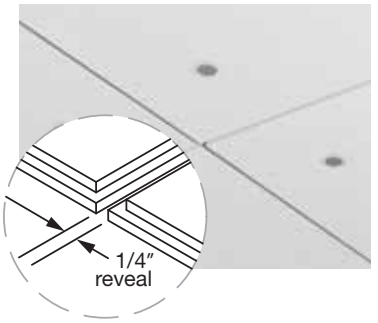


Special order color. See RAL colors on our web site at armstrong.com/ceilings

Four easy steps to install

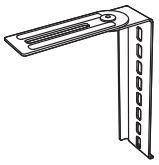


All Optima® Capz™ is installed with standard 15/16″ Prelude® grid. May be installed 2-3/4″ to 6-1/2″ (approximately) from the deck to the panel face.



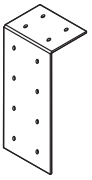
1. **Attach adjustable hanger bracket or rigid bracket to the deck**
2. **Screw 15/16″ grid to bracket, insert cross tees and plug clip**
3. **Snap on threaded stud, raise Capz panel**
4. **Thread on cap**

Capz Hardware Components

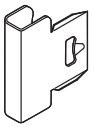


Adjustable Hanger Bracket (ARBRKT)

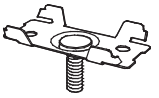
OR



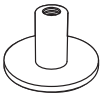
Rigid Attachment Clip (QSUTC)



Cross Tee Plug Clip (ARPLUG)

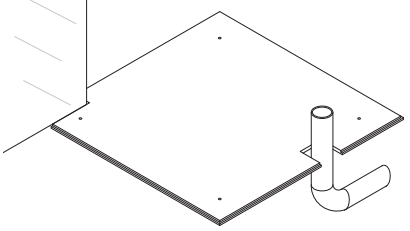


Threaded Stud (ARSTUD)

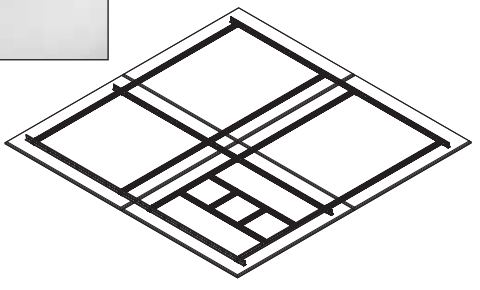


Cap (ARCAP)

Handling Penetrations



Cut notch to provide 1″ – 2″ clearance around penetration.



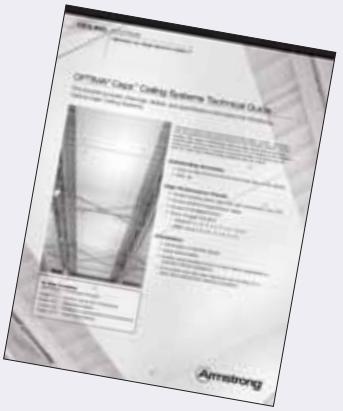
Sprinkler heads, speakers or other requirements are easily cut into Optima panels; handled like a regular ceiling installation.

Additional installation/technical details available at armstrong.com/capz or see CS-3939 Tech Guide or LA-297435 Installation Instructions.

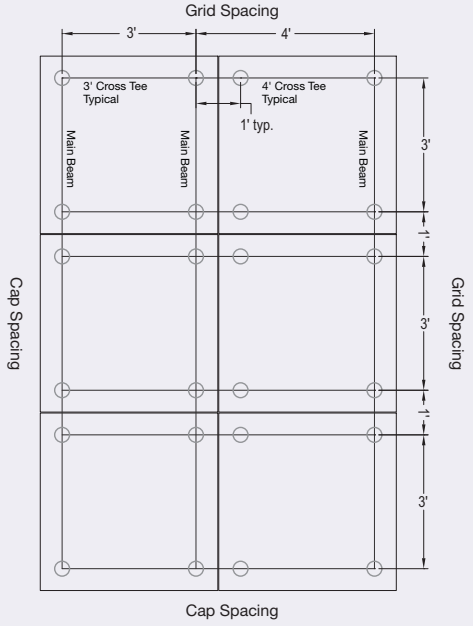
Layout Ideas – Capz and grid locations

In your Technical guide, CS-3939, we've given you some examples of potential layouts, including panel sizes, cap spacing, grid components and details.

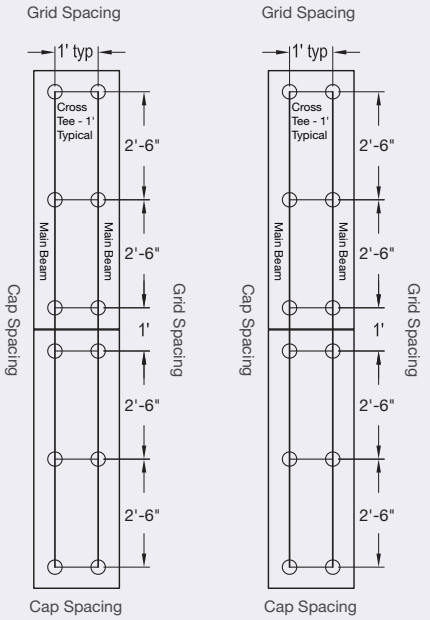
A complete technical guide as well as installation instructions are available online at armstrong.com/capz to assist your installers.



4′ x 4′ Panels



2′ x 6′ Panels



St. Michael's Country Day School, Newport, RI

Arium Architects, Columbia, MD

OPTIMA® Capz™
Acoustical Ceiling System

Physical Data – Field Panels

Material
Optima® is fiberglass and features a DuraBrite® acoustically transparent membrane.

Surface Finish
DuraBrite with factory-applied acrylic latex paint providing superior light reflectance.

Acoustics
Optima panels provide outstanding acoustical performance. NOTE: Acoustical properties are negatively affected by paint application to this surface.

Panel Deflection
Optima Capz will naturally deflect due to the Capz four-point suspension system. Deflection of up to 1/8″ has been documented in some cases.

Mold/Mildew and Antimicrobial Resistance
Optima is formulated to inherently resist the growth of microorganisms.

Low/No-Added Formaldehyde
Optima Capz panels are rated “Low Formaldehyde.”

Weight; Square Feet/Carton
Please see armstrong.com or call 1 877 ARMSTRONG.

Warranty
Optima Capz Acoustical Ceiling System carries a 10-year limited warranty.

Design Considerations

- In situations where all four suspension points cannot be used, follow our technical guide for recommendations.
- Panels are installation directional and are marked on the back with arrows. Install all Optima Capz panels with the directional arrow in the same direction to provide installation consistency, uniform visual and proper panel alignment.

Installation Considerations

- Please refer to installation instructions LA-297435 before installing Optima Capz
- Panels are pre-drilled to accept hardware caps
- Panels may be stacked in layers
- Panels may be installed on a slope using installation guidelines found in installation instructions LA-297435
- For minor surface or edge scratches use the Armstrong SuperCoat™ Touch-up Paint item #5761

TechLine℠ / 1 877 ARMSTRONG
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armstrong.com/capz

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