



CEILING&WALL SYSTEMS

SOUNDSCAPES® Shapes
Acoustical Clouds and Walls

Armstrong®

SOUNDSCAPES® Shapes

Acoustical Clouds and Walls



SoundScapes Shapes Hexagon panels in Pale Lemon; Secchia Center – Michigan State University College of Human Medicine, Grand Rapids, MI

Key Selection Attributes

- Enhance acoustics in open areas
- Aesthetically define spaces
- Ten standard flat panels in multiple sizes and shapes; Custom shapes available
- Fourteen standard colors and Custom colors available to coordinate with Armstrong and other interior finishes, including Metaphors® Coffers infill panels and Infusions® Canopies, Lay-in Panels, Partitions, Walls, and Wings
- Select items stocked in 4 piece cartons for fast shipment
- 360° panel finishing capability available; contact Architectural Specialties
- Install individually or in groups to create your own unique design
- Full line of hanging kits and accessories
- Adjustable to various heights and angles
- Quick and easy to install from a deck, through a ceiling, directly attached to drywall, on a standard suspension system, or on a wall
- Engineered and tested for use in seismic areas
- For more information about Custom shapes and colors, contact Architectural Specialties at 1 877 ARMSTRONG, select options 1-1-4

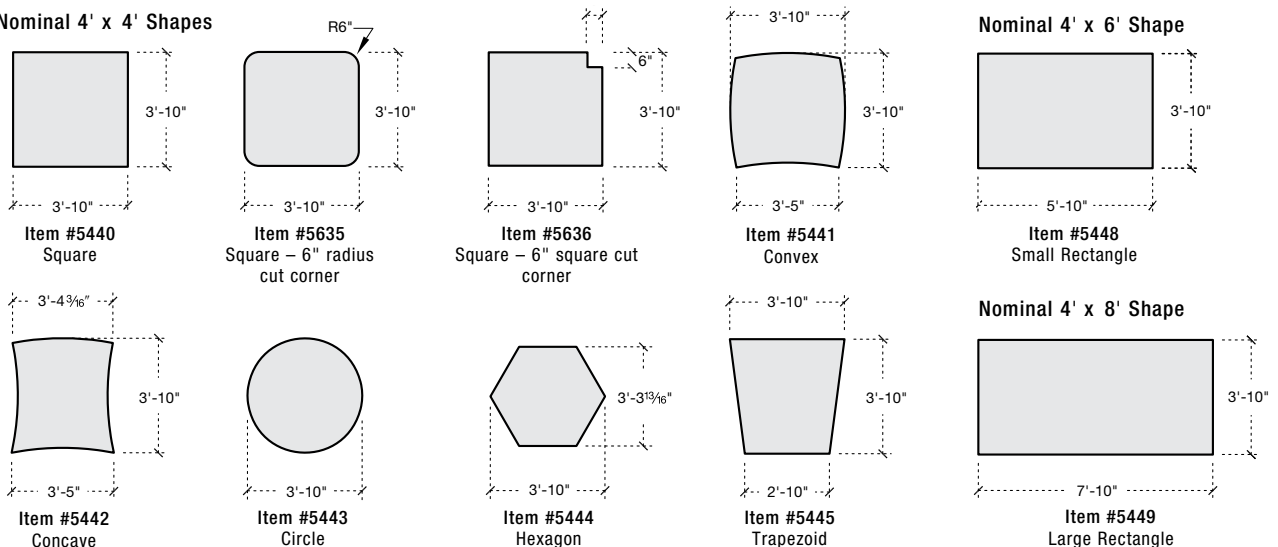
Color Selection Due to printing limitations, shades may vary from actual product.



NOTE: Special care in installation and handling must be taken with color shapes to avoid surface damage to the paint finish. Custom colors are available. Contact Architectural Specialties with a Sherwin-Williams 4-digit color code from the Durations or Harmony flat interior paint families (Code SW _ _ _ _)

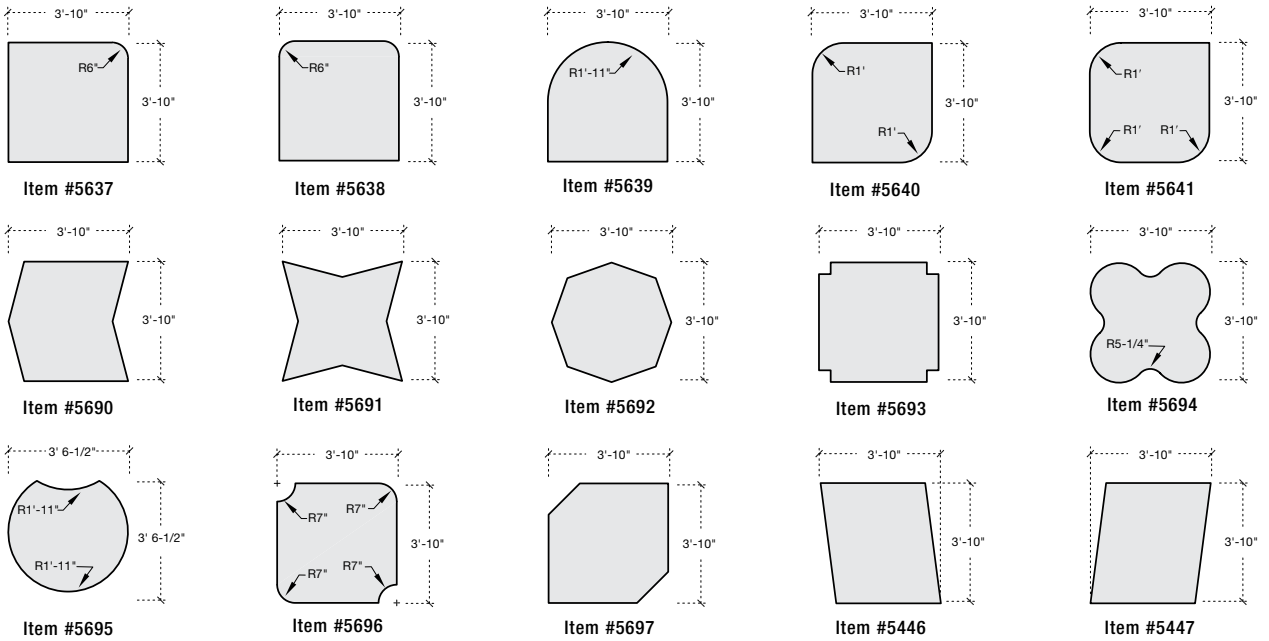
Panel Selection Shown in finish view from below ceiling

Nominal 4' x 4' Shapes



NOTE: All shapes above, except Hexagon, are available with 360° finishing. See pages 5 and 8 for details.

Custom Panel Selection Shown in finish view from below ceiling



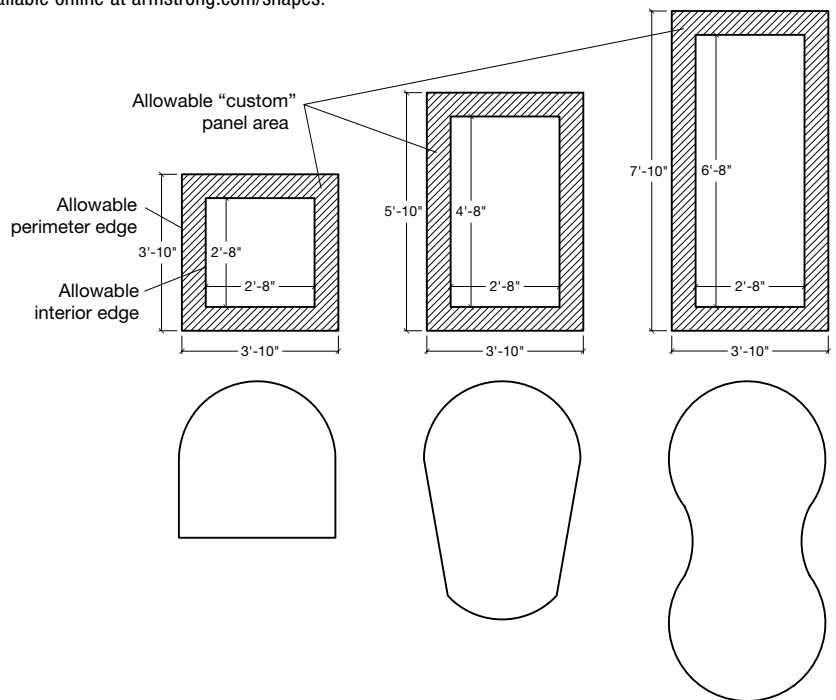
Custom Shapes

Now, you can create your own shapes!

Simply carve your creation out of the allowable custom panel area (interior edge to perimeter edge) as instructed below and send a CAD file to Architectural Specialties at 1 877 ARMSTRONG and select options 1-1-4. The drawings below are also available online at armstrong.com/shapes.



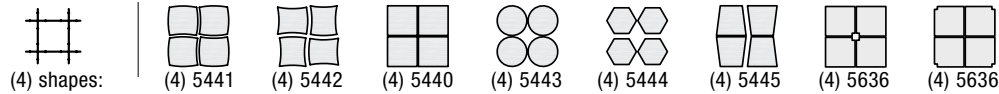
SoundScapes Shapes Custom panels in Custom colors
Carmen & David's Creamery, Lancaster, PA



Ways You Can Suspend SoundScapes® Shapes in Groups

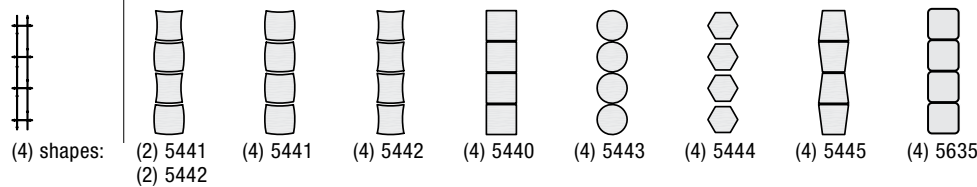
Standard Grouping Ideas To create standard groups with a minimum of 2" spacing between shapes, order the kits listed below each group.

4-Panel Square Group Layouts



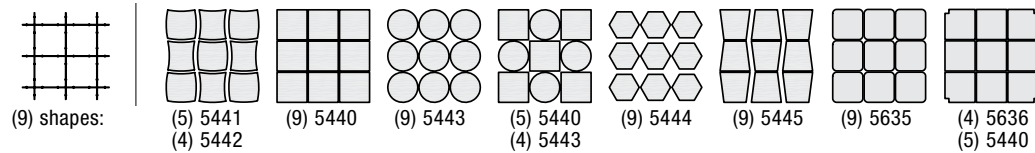
+ (2) 5450 Deck Hanging Kits (1) 5451 Grouping Frames Kit (1) 5453 Frame Alignment Kit (4) 5454 Panel Hook Kits

4-Panel Linear Group Layouts



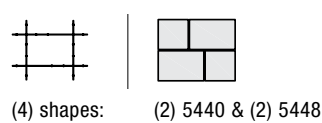
+ (4) 5450 Deck Hanging Kits (1) 5451 Grouping Frames Kit (1) 5452 Frame Splice Kit (2) 5453 Frame Alignment Kits
(4) 5454 Panel Hook Kits

9-Panel Square Group Layouts



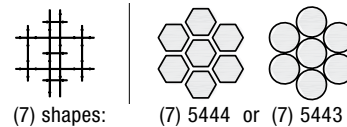
+ (5) 5450 Deck Hanging Kits (2) 5451 Grouping Frames Kits (3) 5453 Frame Alignment Kits (9) 5454 Panel Hook Kits

4-Panel Rectangular Layout



+ (3) 5450 Deck Hanging Kits (1) 5453 Frame Alignment Kit
(1) 5451 Grouping Frames Kit (4) 5454 Panel Hook Kits

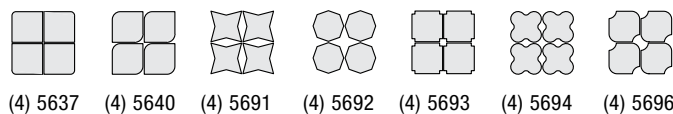
7-Panel Group Layouts



+ (5) 5450 Deck Hanging Kits (3) 5453 Frame Alignment Kits
(2) 5451 Grouping Frames Kits (7) 5454 Panel Hook Kits

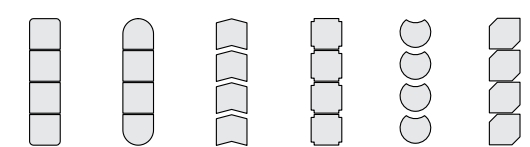
Custom Grouping Ideas

4-Panel Square Group Layouts



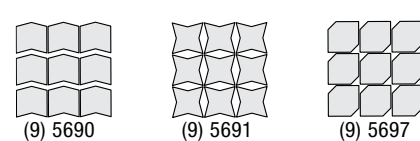
+ (2) 5450 Deck Hanging Kits (1) 5451 Grouping Frames Kit (1) 5453 Frame Alignment Kit (4) 5454 Panel Hook Kits

4-Panel Linear Group Layouts



+ (4) 5450 Deck Hanging Kits (1) 5451 Grouping Frames Kit
(1) 5452 Frame Splice Kit (2) 5453 Frame Alignment Kits
(4) 5454 Panel Hook Kits

9-Panel Square Group Layouts



+ (5) 5450 Deck Hanging Kits (2) 5451 Grouping Frames Kits
(3) 5453 Frame Alignment Kits (9) 5454 Panel Hook Kits

NOTE: For more information on group configurations and spacing options, visit armstrong.com/shapes or see installation instructions LA-297302. CAD details showing various spacing options depending on panel shape are also available on the web. If you need assistance identifying what and how many accessory kits are needed for your project, please contact TechLine™ at 1 877 ARMSTRONG and select options 1-1-4.

Acoustical Performance

Sound Absorption in Sabin

The Sabin is the unit of total sound absorption provided by an object. This is the preferred metric for “space absorbers” such as clouds, canopies, or baffles installed within an architectural space.

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. SoundScapes Shapes Acoustical Clouds provide greater sound absorption than a continuous ceiling of the same surface area because the sound is absorbed from both the front and back surfaces.

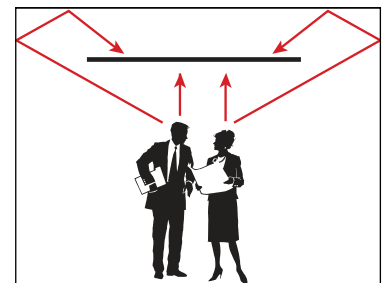
The installation of clouds in a reverberant space can significantly reduce the background noise and reverberation time, enhancing speech intelligibility.

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

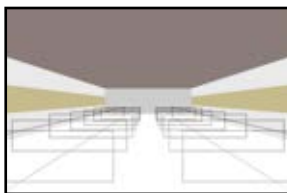
- Size and shape of cloud
- Number of clouds and their layout
- Suspension distance below exposed deck or finished ceiling
- Location and vertical or horizontal layering of clouds
- Material selection (fiberglass clouds or mineral fiber canopies)



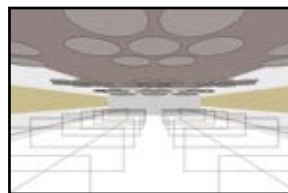
SoundScapes® Shapes Convex and Concave panels in White
RPA Design, Charlotte, NC



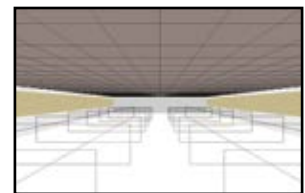
EXPOSED STRUCTURE



SOUNDSCAPES SHAPES



FULL ULTIMA® CEILING



5,000 SF Exposed Structure (50' x 100'), 15' to deck, drywall with windows on two sides, commercial carpet

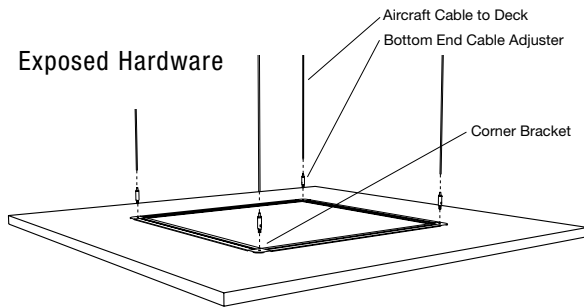
Ceiling	No Ceiling/ Exposed Structure	SoundScapes (25% of ceiling)		SoundScapes (50% of ceiling)		Full Ultima Ceiling
		52 SoundScapes Canopies*	105 SoundScapes Shapes-Circles	100 SoundScapes Canopies*	217 SoundScapes Shapes-Circles	
Reverberation Time (RT)	3.4s	1.6s	1.4s	1.0s	0.9s	0.5s
RT Improvement	ref+	53%	+58%	+70%	+74%	+85%
Background Noise Reduction	ref	-1.6 dB	-2.0 dB	-2.6 dB	-3.0 dB	-5.0 dB
Total Sabin for Coverage Area	none	1248 sf x 1.25 = 1560	1216 sf x 1.49 = 1812	2400 sf x 1.25 = 3000	2515 sf x 1.49 = 3747	5000 sf x 0.70 = 3500

* For product information on SoundScapes Acoustical Canopies, see CS-3691 or visit armstrong.com/soundsapes. You can calculate the acoustical difference that SoundScapes make in your space by using our online Reverb Calculator Tool at armstrong.com/reverbtool

NOTE: Results based on acoustical testing of White SoundScapes Shapes Circle panels suspended 48" below the deck. The absorption is approximately 10% lower for color panels and 20% lower for direct attachment to drywall.

Installation Options

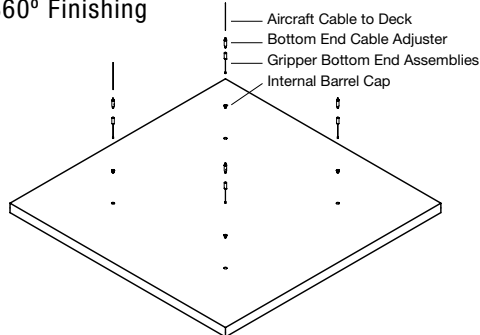
1. Individual Suspension



With individual suspension to the deck, you need the following for each type of shape:

Nominal 4' x 4' and 4' x 6' Shapes
(1) Shape (Items 5440 through 5448 and 5635, 5636)
(2) Deck Hanging Kits (Item 5450)
Nominal 4' x 8' Shape
(1) Large Rectangle (Item 5449)
(3) Deck Hanging Kits (Item 5450)

Concealed Hardware with 360° Finishing



* Panels with 360° finishing come with suspension hardware included (order through Architectural Specialties – contact information and available Shapes on page 8).

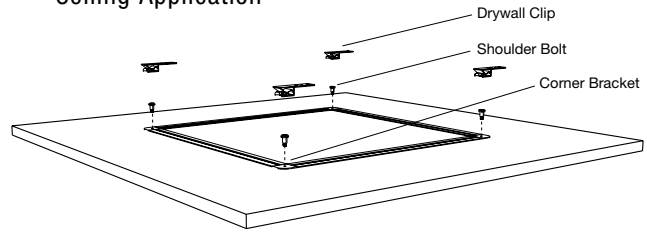
Installation View



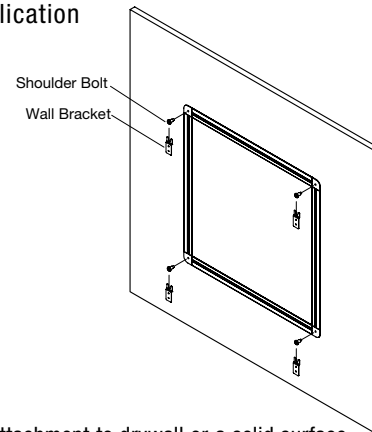
Custom Square in White with 360° finishing (hardware included)

2. Individual Attachment to Drywall (or a solid surface)

Ceiling Application



Wall Application



With individual attachment to drywall or a solid surface, you need the following for each type of shape:

Nominal 4' x 4' and 4' x 6' Shapes
(1) Shape (Items 5440 through 5448 and 5635, 5636)
(2) Drywall Hanging Kits (Item 5455) for a ceiling installation (1) Wall Hanging Kit (Item 5588) for a 4' x 4' wall panel (2) Wall Hanging Kits (Item 5588) for a 4' x 6' wall panel
Nominal 4' x 8' Shape
(1) Large Rectangle (Item 5449)
(3) Drywall Hanging Kits (Item 5455) for a ceiling installation (2) Wall Hanging Kits (Item 5588) for a wall installation

Installation View

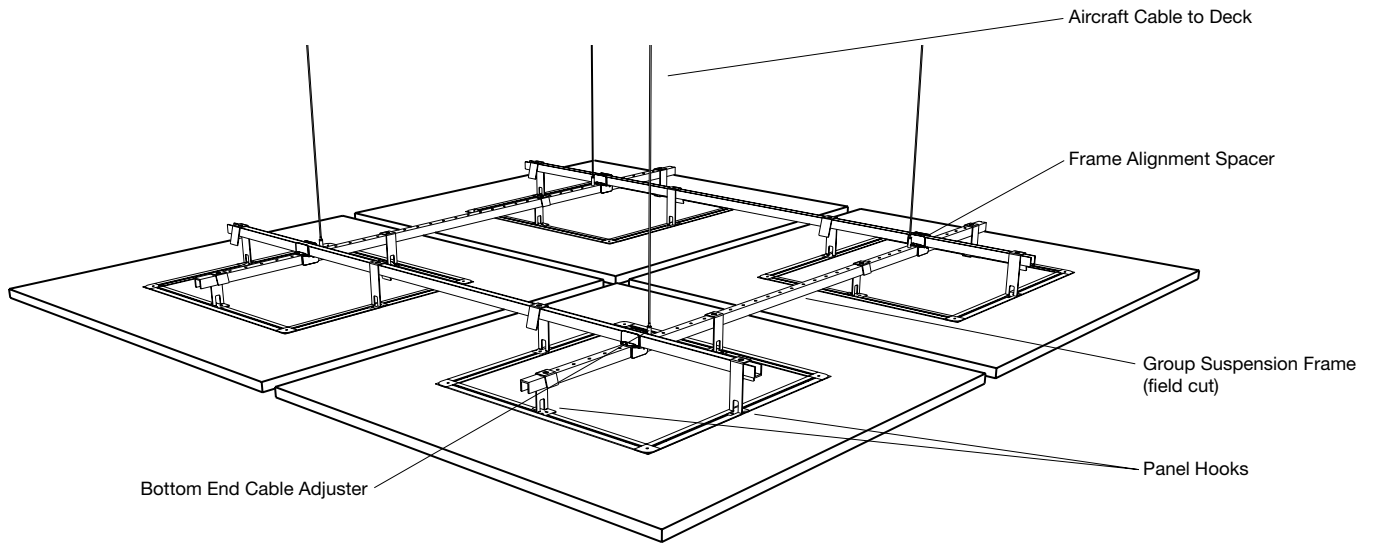


Items 5440 and 5448 in Tangerine (upper wall and ceiling)

NOTE: See installation instructions LA-297302 for details. If you need assistance identifying what and how many accessory kits are needed for your project, please contact TechLineSM at 1 877 ARMSTRONG.

Installation Options

3. Group Suspension



Nominal 4' x 4' Shapes
(4) Shapes (Items 5440 through 5447 and 5635, 5636)
(2) Deck Hanging Kits (Item 5450)
(1) Grouping Frames Kit (Item 5451 __)
(1) Frame Alignment Kit (Item 5453)
(4) Panel Hook Kits (Item 5454 __)

Installation Views



Items 5441 and 5442 in White
9 panel square group layout



Item 5636 in Stone and Moss (on ceiling)
4 panel square group layout
with multi-plane hanging kit



Items 5441 and 5442 in White and Moss
9 panel square group layouts

NOTE: See installation instructions LA-297302 for details on typical group configurations. CAD details are also available on the web at armstrong.com/shapes. Installation will require field cutting of the grouping frames. Please note: Increasing the spacing between shapes may require additional hardware. If you need assistance identifying what and how many accessory kits are needed for your project, please contact TechLineSM at 1 877 ARMSTRONG.



Before: Acoustical tile

Case Study

Project: Carmen & David's Creamery

Location: Lancaster, PA

Product: SoundScapes Custom Acoustical Shapes and Canopies

Challenge: Before they opened their new establishment, the owners of Carmen & David's Creamery transformed a former coffee shop with dark purple and deep red interior into a whimsical ice cream parlor with bright, cheerful sherbet colors.

As co-owner Carmen Garcia-Hommel explained, "We were able to add color to just about every surface in the shop but the ceiling because we thought we couldn't do anything with it."

Solution: To complete the transformation, co-owner David Hommel partnered with Armstrong Ceilings to install a variety of new SoundScapes Custom Shapes and Canopies throughout the shop.

A three-part custom ceiling cloud in the shape of a cone with two scoops of ice cream now highlights the ceiling in the serving area, while a pair of cones, each with a single scoop, adorn the adjacent seating area. In addition, seven convex and concave SoundScapes Canopies were installed. All of the clouds and canopies are in custom colors that coordinate with the sherbet-like colors of the shop's interior.

"The installation of the shapes and canopies has added wonderful depth and visual appeal to the ceiling. Everyone who comes in looks up and can't help but notice them," said Garcia-Hommel.

After: SoundScapes® Custom Shapes and Canopies in Custom colors



SOUNDSCAPES® Shapes

Acoustical Clouds and Walls

Recycled Content: 82%

armstrong.com/greengenie

LEED® Credits

Energy	Waste Mgmt	Recycled Content	Local Materials	Renewable Materials	Daylight & Views
✓	✓	✓	✓		✓
Location Dependent					

LEED for Schools

Acoustics



Colors

White (WH)	Pecan (PC)	Stone (SE)	Plum (PM)	Tangerine (TG)
Shell (SH)	Sky (SK)	Reef (RE)	Cranberry (CN)	Black (BK)
Pale Lemon (LM)	Moss (MS)	Lagoon (LA)	Kiwi (KW)	

Visual Selection

Item No.	Description	Dimensions		360° Finishing Available
5440__	Square	Nominal 4' x 4' x 7/8"		Yes
5441__	Convex	Nominal 4' x 4' x 7/8"		Yes
5442__	Concave	Nominal 4' x 4' x 7/8"		Yes
5443__	Circle	Nominal 4' x 4' x 7/8"		Yes
5444__	Hexagon	Nominal 4' x 4' x 7/8"		No
5445__	Trapezoid	Nominal 4' x 4' x 7/8"		Yes
5635__	Square – 6" radius cut corner	Nominal 4' x 4' x 7/8"		Yes
5636__	Square – 6" square cut corner	Nominal 4' x 4' x 7/8"		Yes
5448__	Small Rectangle	Nominal 4' x 6' x 7/8"		Yes
5449__	Large Rectangle	Nominal 4' x 8' x 7/8"		Yes

* Add 2-letter color suffix to item number when specifying or ordering. (Ex: 5440WH for Square panel in White)

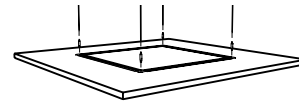
* Exact dimensions for each shape are shown on page 1 inside.

NOTE: Concealed hardware with 360° finishing is available for all Shapes except Hexagon. Contact Architectural Specialties for ordering information.

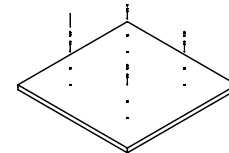
Suspension Options

1. Individual Suspension (See page 5 inside)

Exposed Hardware

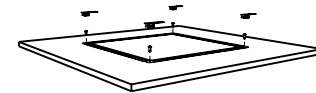


Concealed Hardware with 360° Finishing

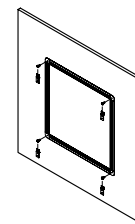


2. Individual Attachment to Drywall (or a solid surface) (See page 5 inside)

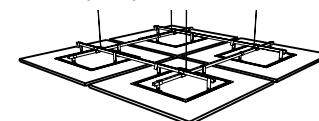
Ceiling Application



Wall Application



3. Group Suspension (See page 6 inside)



SoundScapes Stocking Program

The items below are stocked for fast shipment. No other colors or increments are stocked.

Material	Description
BP5440CTN4WH	SoundScapes Shapes – Square White
BP5441CTN4WH	SoundScapes Shapes – Convex White
BP5442CTN4WH	SoundScapes Shapes – Concave White
BP5443CTN4WH	SoundScapes Shapes – Circle White
BP5444CTN4WH	SoundScapes Shapes – Hexagon White
BP5445CTN4WH	SoundScapes Shapes – Trapezoid White

Physical Data

Material

7/8" thick fiberglass with DuraBrite® scrim on face and sides or custom 1-3/4" thick fiberglass with DuraBrite scrim on all sides (360° finishing). To order custom panels, contact Architectural Specialties at 1 877 ARMSTRONG, select options 1-1-4.

Surface Finish

DuraBrite with factory-applied paint on face and sides. Standard White has energy-saving, high light-reflective finish (LR 0.90). Back of panel is unfinished with embedded metal extrusions.

Design Considerations

SoundScapes Shapes maintain a natural sag that may be noticeable when installed 6" or less apart. Deflection up to 1/8" has been documented in some cases.

Shapes available with 360° finishing for use in areas where panel back is exposed (can only be installed with included individual suspension).

Special care in installation and handling must be taken with color shapes to avoid surface damage to the paint finish. Custom colors are available. Contact Architectural Specialties with a Sherwin-Williams color code from the Durations or Harmony flat interior paint families (Code SW _ _ _ _)

Custom shapes are available by providing a custom shape drawing within guidelines for creating a custom shape on page 2 to Architectural Specialties at 1 877 ARMSTRONG, and select options 1-1-4.

Fire Performance

SoundScapes Shapes panel material is ASTM E84 Class A: Flame Spread 25 or under and Smoke Developed 50 or less.

SoundScapes Shapes, as with other architectural features located in the ceiling plane, may obstruct or skew the existing or planned fire sprinkler water distribution pattern, or possibly delay the activation of the fire sprinkler or fire detection system. Consult a fire protection engineer, NFPA 13, and local codes for guidance on the proper installation techniques where fire detection or suppression systems are present.

ASTM E1264 Classification

Type XII, Form 2, Pattern E

Acoustical Performance

1.49 Sabins per square foot or 66% more sound absorption than the same square footage of NRC 0.90 continuous ceilings. Color shapes have slightly reduced acoustical performance. See page 4 for more information.

Seismic Restraint*

The International Building Code allows architectural components to swing freely as long as they will not be damaged or cause damage. Shapes suspended individually with aircraft cable will swing no more than 18" in any direction for each panel. Shapes directly attached to drywall or suspended in group systems have been engineered for application in all seismic areas.

* Pendulum reaction information is based on full-scale testing and computer modeling conducted at the Structural Engineering Earthquake Simulation Lab located at the State University of New York at Buffalo.

Recommended Suspension Systems

SoundScapes Shapes are pre-assembled with metal extrusions in the back of the panels. Standard accessory kits facilitate quick and easy installation from the deck, through a ceiling, or directly attached to drywall. See Installation Instructions LA-297302 for installation details.

Panel Weight

0.63 lbs/SF

Warranty

One (1) year limited warranty. Details: armstrong.com/warranty

Accessory Kits – Applications always require more than one kit.

ITEM # KIT CONTENTS

5450 – Deck Hanging Kit

Allows for suspending individual shapes or grouping frames from deck and bottom end adjustment of height at panel or frame level.

- (2) gripper structure anchors
- (2) gripper structure caps
- (2) 8' aircraft cables
- (2) bottom end cable adjusters
- (2) nuts with washers



5438 – Angled Hanging Kit (10° maximum angle)

For use when hanging panels at different angles. Extends from the end of Deck Hanging Kit (5450).

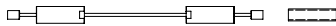
- (2) angled hanging cables



7121 – Angled Hanging Kit (60° maximum angle)

For use when hanging panels at different angles. Extends from the end of Deck Hanging Kit (5450).

- (2) angled hanging cables



625530 – Extended Hanging Cables

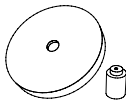
For use with deck hanging kit when longer cables are needed.

- (4) 30' aircraft cables

7006 – Escutcheon Kit

Used when hanging panels below an existing ceiling.

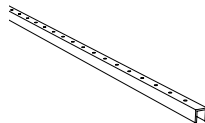
- (2) collars with set screws
- (2) 2" escutcheons



5451 _ _ * – Grouping Frames Kit

Suspension frames used to group panels together.

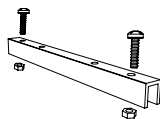
- (4) suspension frames, 12' long, Black (BL) or White (WH)



5452 _ _ * – Frame Splice Kit

Connects group suspension frames for longer runs (> 12 feet).

- (2) group frame connectors, 10" long, Black (BL) or White (WH)
- (4) bolts with washers
- (4) nuts



NOTE: Accessory kit hardware is attached to panels via the metal extrusion or corner brackets on the back of each panel. The diagram on the right shows the location of extrusions and corner brackets in the back of a nominal 4' x 4' panel. See installation instructions LA-297302 for more details.

If you need assistance identifying what and how many accessory kits are needed for your project, please contact TechLine at 1 877 ARMSTRONG.

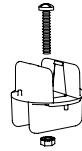
* Indicate desired color using two digit color code when ordering;
BL = Black; WH = White

ITEM # KIT CONTENTS

5453 – Frame Alignment Kit

For use with group suspension frames.

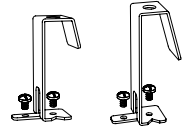
- (4) frame alignment spacers, clear plastic
- (4) bolts
- (4) nuts with washers



5454 _ _ * – Panel Hook Kit

For use with group frames, (one kit per all panels except item 5449, Large Rectangle, which requires 2 kits)

- (2) 4-1/2" high panel hooks, Black (BL) or White (WH)
- (2) 3-1/2" high panel hooks, Black (BL) or White (WH)
- (8) bolts

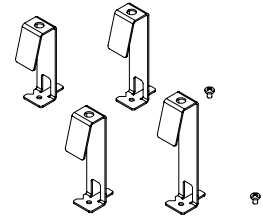


Multi-plane Hanging Kits

For use when hanging panels at heights below Panel Hook Kit (5454).

5629 – 1" Drop Hook Kit

- (2) 4-1/2" hooks
- (2) 5-1/2" hooks
- (8) screws



5630 – 2" Drop Hook Kit

- (2) 5-1/2" hooks
- (2) 6-1/2" hooks
- (8) screws

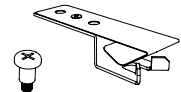
5631 – 3" Drop Hook Kit

- (2) 6-1/2" hooks
- (2) 7-1/2" hooks
- (8) screws

5455 – Drywall Ceiling Hanging Kit

For individual panel attachment to drywall.

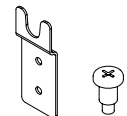
- (2) drywall clip assemblies
- (2) shoulder bolts



5588 – Wall Hanging Kit

For individual panel attachment to a wall.

- (4) clip assemblies
- (4) shoulder bolts



5632 – Grid Hook Kit

For hanging individual panels from a standard suspension system.

- (4) hooks
- (8) screws

