



CEILING SYSTEMS

Between us, ideas become reality™

SOUNDSCAPES® Shapes
Acoustical Clouds

Armstrong®

SOUNDSCAPES® Shapes

Acoustical Clouds



SoundScapes® Shapes Convex, Concave and Circle panels in White

Key Selection Attributes

- Enhance acoustics in open areas
- Improve sound absorption and reduce reverberation time
- Aesthetically define spaces
- 10 flat fiberglass panels in multiple sizes and shapes
- Install individually or in groups, create your own unique design
- Exclusive DuraBrite® finish on sides and edges
- Full line of hanging kits and accessories
- Adjustable to special heights
- Quick and easy to install from a deck, through a ceiling or directly attached to drywall
- Engineered for use in seismic areas

Typical Applications

- Exposed structure areas
- Healthcare
- Office
- Education
- Retail
- Hospitality and retail

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



White (WH)



Shell (SH)



Pale Lemon (LM)



Pecan (PC)



Sky (SK)



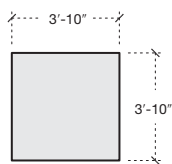
Moss (MS)



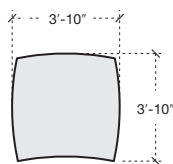
Stone (SE)

Panel Selection Shown in finish view from below ceiling

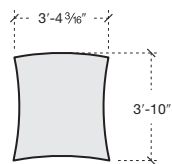
Nominal 4' x 4' Shapes



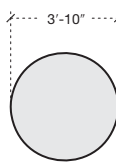
Item #5440 Square



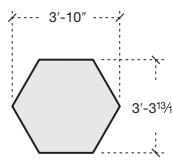
Item #5441 Convex



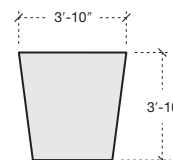
Item #5442 Concave



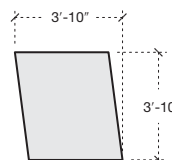
Item #5443 Circle



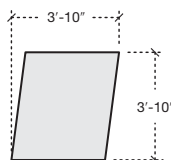
Item #5444 Hexagon



Item #5445 Trapezoid

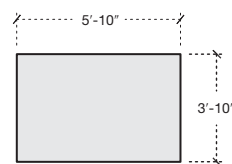


Item #5446 Left Parallelogram



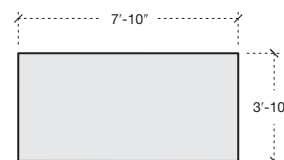
Item #5447 Right Parallelogram

Nominal 4' x 6' Shape



Item #5448 Small Rectangle

Nominal 4' x 8' Shape



Item #5449 Large Rectangle

NOTE: Special care in installation and handling must be taken with color shapes to avoid surface damage to the post-production paint finish.

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 and Canopies 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.

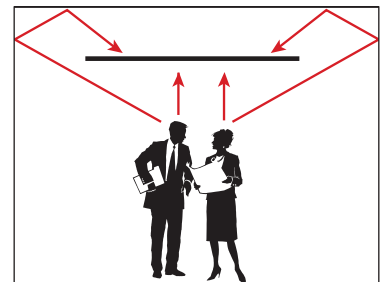
The installation of clouds and canopies in a reverberant space can significantly reduce the background noise and reverberation time, enhancing speech intelligibility.

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

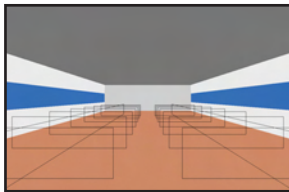
- Size and shape of cloud
- Number of clouds and their layout
- Suspension distance below exposed deck or finished ceiling
- Location and vertical or horizontal layering of clouds
- Material selection (fiberglass clouds or mineral fiber canopies)



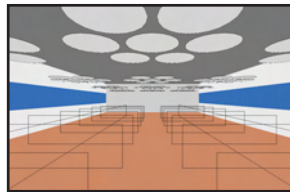
SoundScapes® Shapes Convex and Concave panels in White



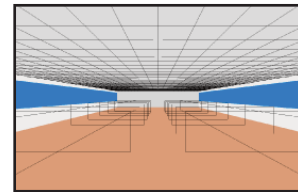
EXPOSED STRUCTURE



SOUNDSCAPES SHAPES



FULL ULTIMA® CEILING



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

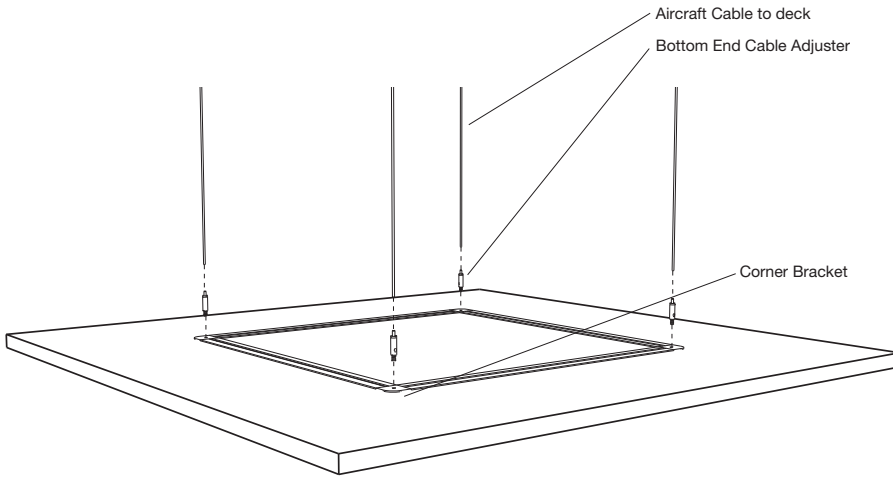
Ceiling	No Ceiling Exposed Structure	SoundScapes (25% of ceiling)		SoundScapes (50% of ceiling)		Full Ultima Ceiling
		52 SoundScapes Canopies*	105 SoundScapes Shapes-Circles	100 SoundScapes Canopies*	217 SoundScapes Shapes-Circles	
Reverberation Time (RT)	3.4s	1.6s	1.4s	1.0s	0.9s	0.5s
RT Improvement	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/soundscapes. 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



Installation View



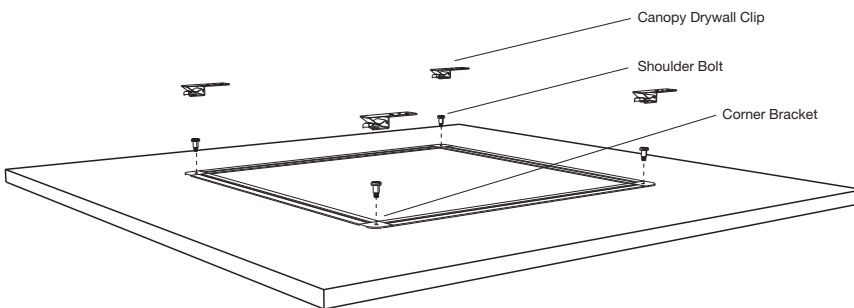
(3) 5443 in White

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

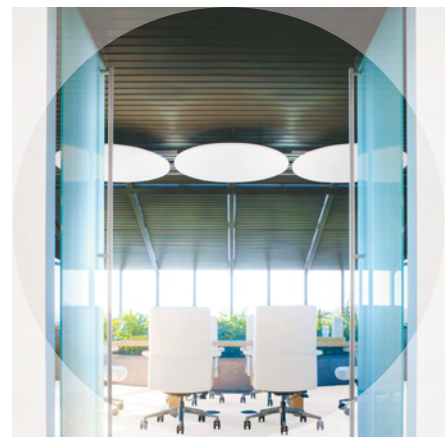
- Nominal 4' x 4' and 4' x 6' Shapes:
(1) Shape (Items 5440 through 5448)
(2) 5450 Deck Hanging Kits

- Nominal 4' x 8' Shape:
(1) Item 5449, Large Rectangle
(3) 5450 Deck Hanging Kits

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



Installation View



(3) 5443 in White

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

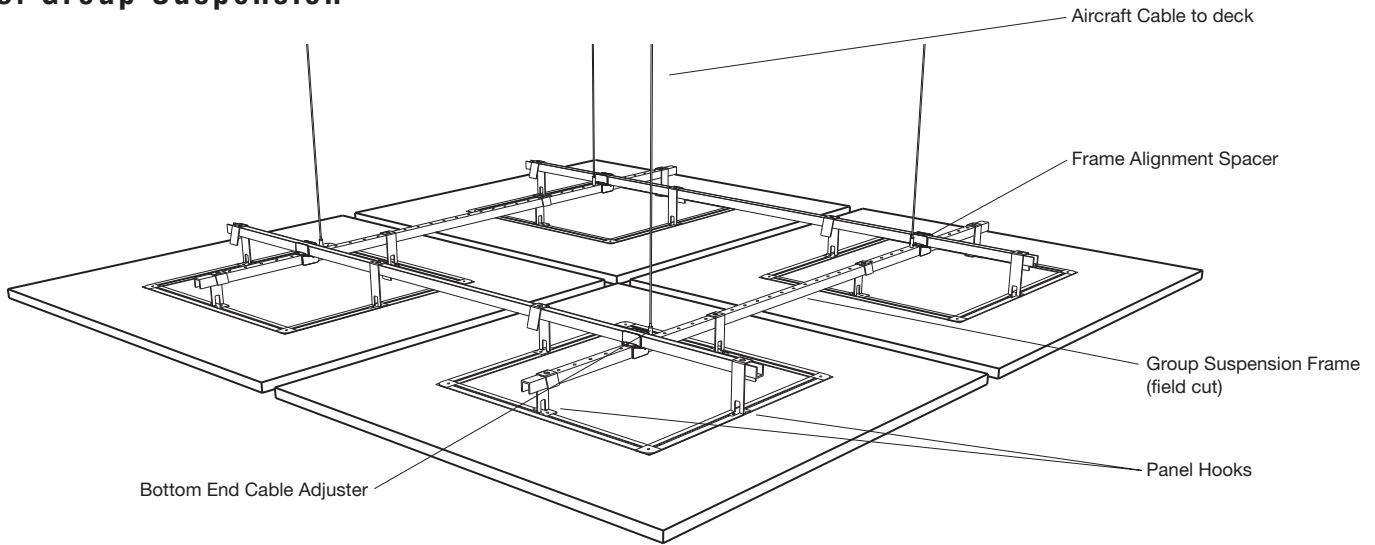
- Nominal 4' x 4' and 4' x 6' Shapes:
(1) Shape (Items 5440 through 5448)
(2) 5455 Drywall Hanging Kits

- Nominal 4' x 8' Shape:
(1) Item 5449, Large Rectangle
(3) 5455 Drywall Hanging Kits

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 TechLine at 1 877 ARMSTRONG.

Installation Options

3. Group Suspension



SoundScapes Shapes can also be installed together using a variety of group-related accessory kits. Group assemblies have been engineered for use in all seismic areas.

As an example, to install the design layout above with a minimum of 2" spacing between shapes, you would need to order:

- Nominal 4' x 4' Shapes:
- (4) Shapes (items 5440 through 5447)
- (2) 5450 – Deck Hanging Kits
- (1) 5451 – Grouping Frames Kit
- (1) 5453 – Frame Alignment Kit
- (4) 5454 – Panel Hook Kits

Design Consideration: 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.

Installation Views



(4) 5440 in White



(8) 5443 in Pale Lemon



(7) 5444 in White

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 TechLine at 1 877 ARMSTRONG.

Ways You Can Suspend SoundScapes Shapes in Groups

Grouping Ideas – You can group shapes in unlimited combinations. Below are a few ideas made possible with standard accessory kits. Group applications always require more than one kit.

4-Panel Square Group Layouts

To create these kinds of groups with a minimum of 2" spacing between shapes, you need to order:

(4) shapes: (4) 5441 (4) 5442 (4) 5440 (4) 5443 (4) 5444 (4) 5445 (4) 5446 (4) 5447
 +
 (2) 5450 Deck Hanging Kits (1) 5453 Frame Alignment Kit
 (1) 5451 Grouping Frames Kit (4) 5454 Panel Hook Kits

4-Panel Linear Group Layouts

To create these kinds of groups with a minimum of 2" spacing between shapes, you need to order:

(4) shapes: (2) 5441 (2) 5442 (4) 5441 (4) 5442 (4) 5440 (4) 5443 (4) 5444 (4) 5445 (4) 5447 (4) 5446 (2) 5446 (2) 5447 (2) 5445 (1) 5446 (1) 5447
 +
 (4) 5450 Deck Hanging Kits (1) 5452 Frame Splice Kit
 (1) 5451 Grouping Frame Kits (4) 5454 Panel Hook Kits
 (2) 5453 Frame Alignment Kits

9-Panel Square Group Layouts

To create these kinds of groups with a minimum of 2" spacing between shapes, you need to order:

(9) shapes: (5) 5441 (4) 5442 (9) 5440 (9) 5443 (5) 5440 (4) 5443 (9) 5444 (9) 5445 (9) 5446 (9) 5447 (6) 5446 (3) 5447 (3) 5445 (3) 5446 (3) 5447
 +
 (5) 5450 Deck Hanging Kits (3) 5453 Frame Alignment Kits
 (2) 5451 Grouping Frame Kits (9) 5454 Panel Hook Kits

4-Panel Rectangular Layout

To create this group with a minimum of 2" spacing between shapes, you need to order:

(4) shapes: (2) 5440 & (2) 5448
 +
 (3) 5450 Deck Hanging Kits
 (1) 5451 Grouping Frame Kit
 (1) 5453 Frame Alignment Kit
 (4) 5454 Panel Hook Kits

7-Panel Group Layouts

To create these groups with a minimum of 2" spacing between shapes, you need to order:

(7) shapes: (7) 5444 or (7) 5443
 +
 (5) 5450 Deck Hanging Kits
 (2) 5451 Grouping Frame Kits
 (3) 5453 Frame Alignment Kits
 (7) 5454 Panel Hook Kits

* See pages 3 and 4 for installation photos.

Design Consideration: 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.

NOTE: See Installation Instructions LA-297302 for details on typical group configurations. CAD details showing various spacing options depending on panel shape are also available on the web at armstrong.com/shapes. Installation will require field cutting of the grouping frames. 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 TechLine at 1 877 ARMSTRONG.

Accessory Kits – Applications always require more than one kit. Please review your needs carefully.

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.

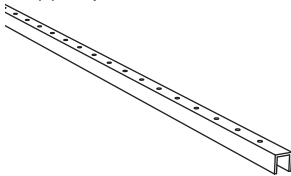
- (2) gripper structure anchors
- (2) gripper structure caps
- (2) 8' aircraft cables
- (2) bottom end cable adjusters
- (2) nuts with washers



5451 – Grouping Frames

Suspension frames used to group panels together

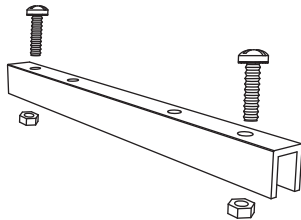
- (4) suspension frames, 12' long, black



5452 – Frame Splice Kit

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

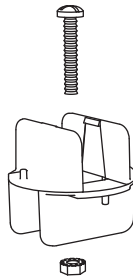
- (2) group frame connectors, 10" long, black
- (4) bolts with washers
- (4) nuts



5453 – Frame Alignment Kit

For use with group suspension frames

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

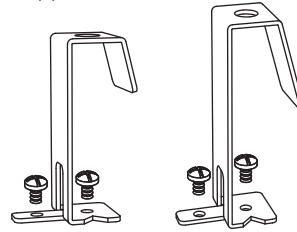


ITEM # KIT CONTENTS

5454 – Panel Hook Kit

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

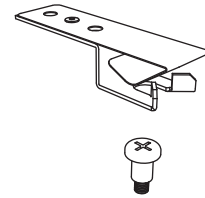
- (2) 4-1/2" high panel hooks, black
- (2) 3-1/2" high panel hooks, black
- (8) bolts



5455 – Drywall Hanging Kit

For individual panel attachment to drywall

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



625530 – Extended Hanging Cables

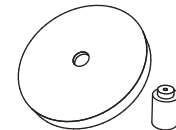
For use with deck hanging kit when longer cables are needed

- (4) 30' aircraft cables

7006 – Escutcheon Kit

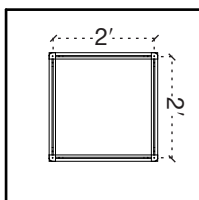
Used when hanging panels below an existing ceiling

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

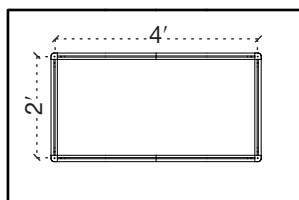


NOTE: If you need assistance identifying what and how many accessory kits are needed for your project, please contact TechLine at 1 877 ARMSTRONG.

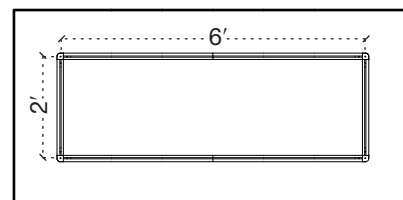
Accessory kit hardware is attached to panels via the metal extrusion or corner brackets on the back of each panel. These diagrams show the location of extrusions and corner brackets in the back of each size panel. See Installation Instructions LA-297302 for more details.



Nominal 4' x 4'
Shapes



Nominal 4' x 6'
Shape



Nominal 4' x 8'
Shape

SOUNDSCAPES® Shapes

Acoustical Clouds

Recycled Content: **82%**

armstrong.com/greengenie

LEED® Credits

Energy	Waste Mgmt	Recycled Content	Local Materials	Renewable Materials	Daylight & Views	Acoustics	Low Emitting or CHPS
✓	✓	✓	✓		✓	✓	✓
Location Dependent							

LEED for Schools

Colors

White (WH)	Pecan (PC)	Moss (MS)
Shell (SH)	Sky (SK)	Stone (SE)
Pale Lemon (LM)		

Visual Selection

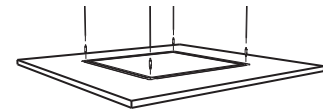
Item Number*	Description	Dimensions*
SOUNDSCAPES Shapes		
5440__	Square	Nominal 4' x 4' x 7/8"
5441__	Convex	Nominal 4' x 4' x 7/8"
5442__	Concave	Nominal 4' x 4' x 7/8"
5443__	Circle	Nominal 4' x 4' x 7/8"
5444__	Hexagon	Nominal 4' x 4' x 7/8"
5445__	Trapezoid	Nominal 4' x 4' x 7/8"
5446__	Left Parallelogram	Nominal 4' x 4' x 7/8"
5447__	Right Parallelogram	Nominal 4' x 4' x 7/8"
5448__	Small Rectangle	Nominal 4' x 6' x 7/8"
5449__	Large Rectangle	Nominal 4' x 8' x 7/8"

* Add 2-letter color suffix to item number when specifying or ordering. Panel item number ex: 5440WH for White.

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

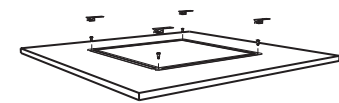
Suspension Options

1. Individual Suspension



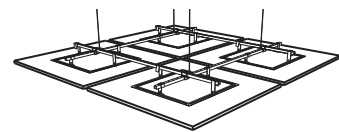
(See page 3 inside)

2. Individual Attachment to Drywall



(See page 3 inside)

3. Group Suspension



(See page 4 inside)

Physical Data

Material

7/8" thick Fiberglass with DuraBrite scrim on face and sides

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.

Panel Weight

0.63 lbs/SF

Design Consideration

SoundScapes Shapes maintain a natural sag that may not be noticeable when installed 6" or less apart. Deflection up to 1/8" has been documented in some cases.

SoundScapes Shapes should be installed on no more than a 5° slope

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

SoundScapes Shapes offer excellent sound absorption. They provide greater sound absorption than a continuous ceiling of the same area because sound is absorbed from front and back surfaces. Color shapes have slightly reduced acoustical performance. See data page CS-3867 for details.

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 direct 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.

Warranty

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