

CEILING SYSTEMS

Between us, ideas become reality®



SOUNDSCAPES® Shapes
Acoustical Clouds





Create, Accentuate, Define

SOUNSCAPES Shapes – Acoustical Clouds, is a designer acoustic panel, pre-formed into a convex, concave, square, circle, hexagon, trapezoid, or parallelogram shape.

SoundScapes Shapes improves the overall comfort of an individuals working environment, offering excellent sound absorption and light reflectance. SoundScapes Shapes can be used to provide a striking design for a new space or be used to refresh or renovate an existing area. SoundScapes Shapes can retrofit to most ceiling systems in minutes and are the ideal solution for an area that suffers from background noise and reverberation.

No special tools are required for installation and you can easily adjust and fit the SoundScapes Shapes to a variety of heights and angles.

Hospitality, retail

Offices

Reception areas, atriums

Open plenum areas

Transportation, airports

Exhibitions

Restructure and Retrofit the Space

Available Shapes



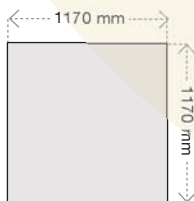
All Optima Canopies are flat panels.

SoundScapes Shapes are flat, 22 mm thick, glass fibre panel available in 10 different shapes. The face and edges are finished with an abrasion resistant paint on a glass fibre face scrim providing a white and strong surface.

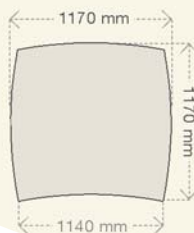
SoundScapes Shapes are very quick and easy to install, requiring no special tools and can easily be adapted to a variety of heights and angles.

A variety of colours are available on request.

Nominal 1200 x 1200 mm shapes



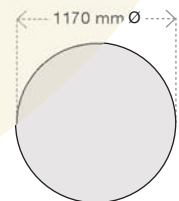
Square



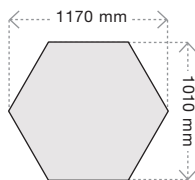
Convex



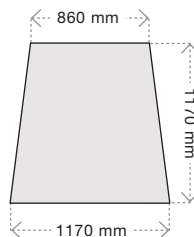
Concave



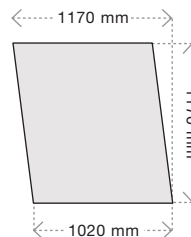
Circle



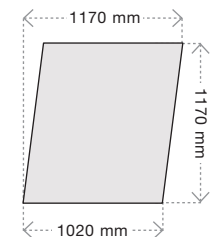
Hexagon



Trapezoid



Left Parallelogram



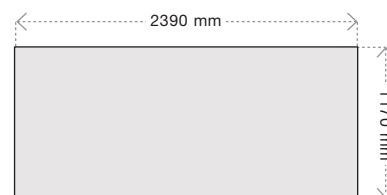
Right Parallelogram

Nominal 1200 x 1800 mm shapes



Small Rectangle

Nominal 1200 x 2400 mm shapes



Large Rectangle





Enhanced Acoustical Benefits

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

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.

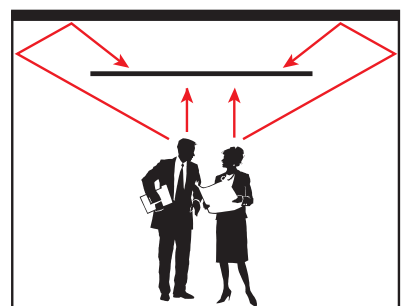
Depending on its size, each SoundScapes Shapes provides between 1.5 and 5.25 Sabin of sound absorption per piece, calculated as an average of 500 – 4000 Hz (EN ISO 354).

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

Which means one SoundScapes Shapes can absorb up to 88% more sound than the same visible surface area of a traditional wall to wall Optima high acoustic ceiling.

A number of factors may affect the installed acoustical performance including:

- Size and shape of cloud
- Number of clouds and their layout and suspension height





For SOUNDSCAPES Shapes Convex

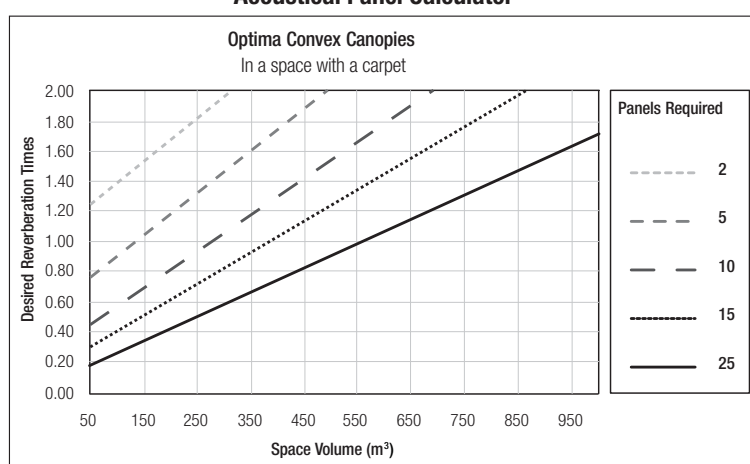
Meeting Room with:

- a volume of 100 m³
- only with a carpet
- a soffit at 3.5 metre height
- a required Rt of 0.4 – 0.6 sec
- Will need 7 Concave and 8 Convex canopies
- See graph below

Sound absorption – Sabin (metric)

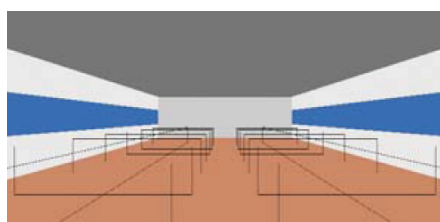
| Item nr. | Shape | Sabin* per item |
|----------|---------------------|-----------------|
| BPCS5440 | Square | 2.45 |
| BPCS5441 | Convex | 2.35 |
| BPCS5442 | Concave | 1.85 |
| BPCS5443 | Circle | 2.00 |
| BPCS5444 | Hexagon | 1.50 |
| BPCS5445 | Trapezoid | 2.05 |
| BPCS5446 | Left Parallelogram | 2.05 |
| BPCS5447 | Right Parallelogram | 2.05 |
| BPCS5448 | Small Rectangle | 3.85 |
| BPCS5449 | Large Rectangle | 5.25 |

Acoustical Panel Calculator

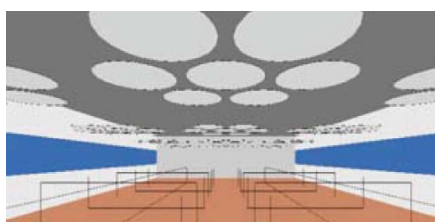


* Average of 500 – 4000Hz, laboratory measurements with 1 unit suspended at 1 metre, in accordance with EN ISO 354-2003. These values may vary depending on the No. of units, spacing and suspended distance of units.

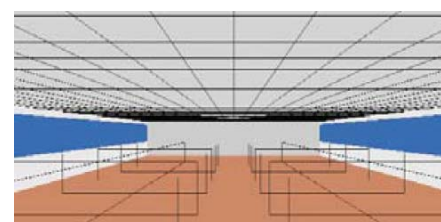
EXPOSED STRUCTURE



SOUNDSCAPES Shapes



FULL ULTIMA CEILING



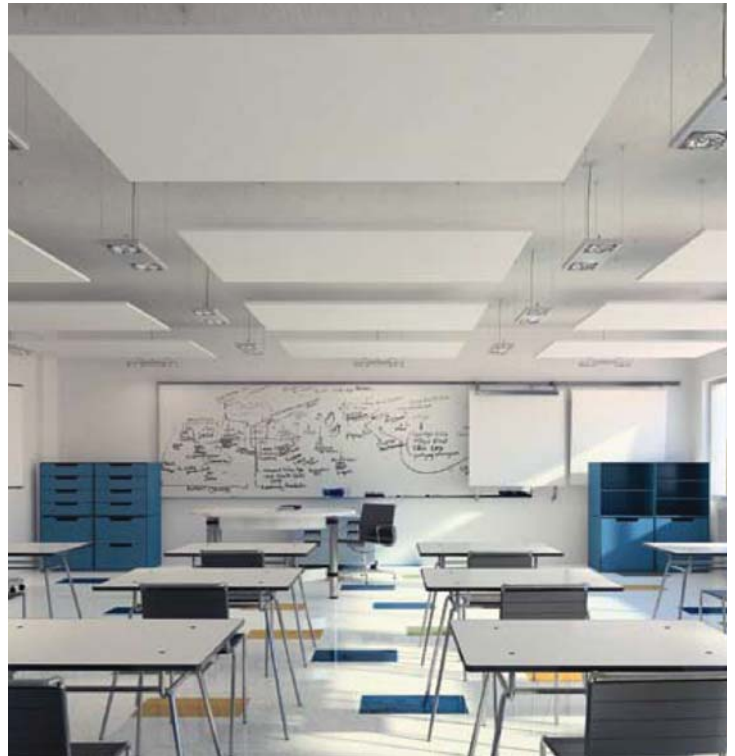
500 square metres Exposed Structure (15 metres x 30 metres), 4.5 metres to deck, drywall with windows two sides, commercial carpet

| Ceiling | No Ceiling Exposed Structure | SoundScapes (25% of ceiling) | SoundScapes (50% of ceiling) | Full Ultima Ceiling (suspended 1 metre below deck) |
|---|---------------------------------|---|---|--|
| | | 105 SoundScapes Shapes – Circles | 217 SoundScapes Shapes – Circles | |
| Reverberation Time(s) | 3.4s | 1.4s | 0.9s | 0.5s |
| RT Improvement | ref | +58% | +74% | +85% |
| Background Noise Reduction | ref | -2.0 dB | -3.0 dB | -5.0 dB |
| Total metric Sabin for Coverage Area | none | 113 m ² x 1.49* = 168 Sabin | 233 m ² x 1.49* = 347 Sabin | 450 m ² x 0.84 = 378 Sabin |
| * 1.49 is based on measured Sabin / m ² for multiple units | | | | |

Note: Sound absorption values used represent an average of 500-4000 Hz. These values vary depending on the number of units, spacing between units, and suspended distance. The values used are appropriate for the purposes of this comparison and may reflect a difference from the per unit values.

Individual Suspension

SoundScapes Shapes are extremely versatile and can be positioned individually or in a group. Thanks to the flexibility of the product and installation it is possible to create your own personal designs and layouts.

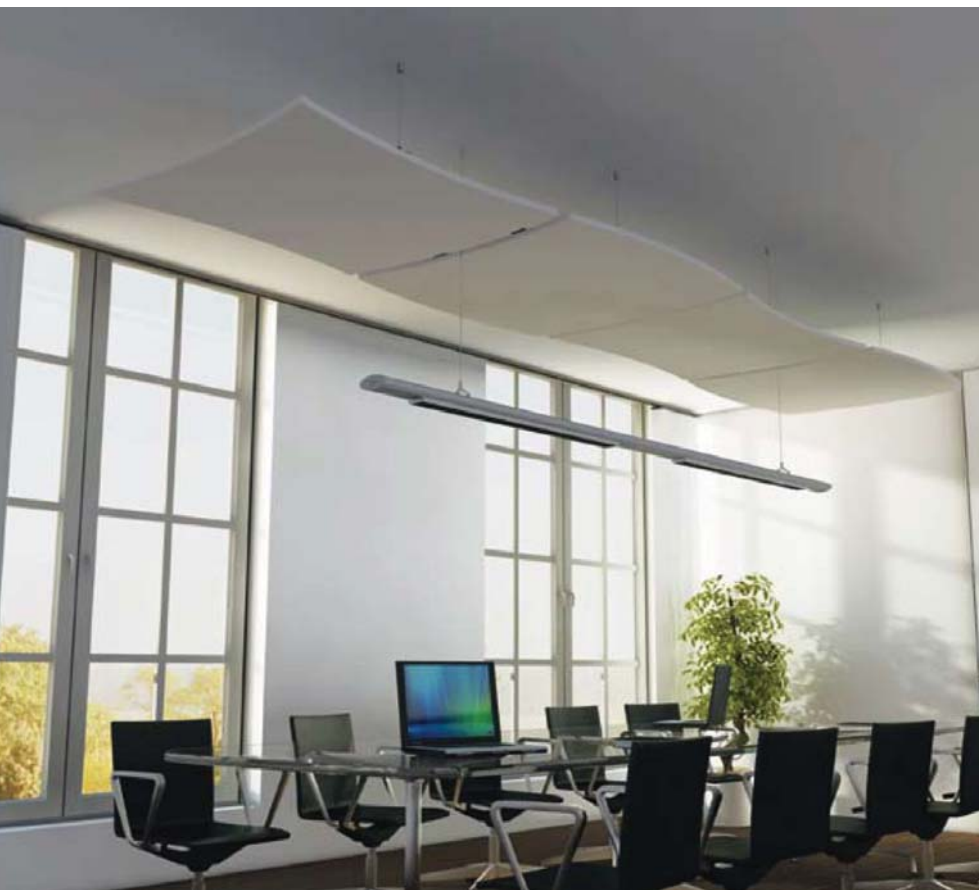


Group Configuration

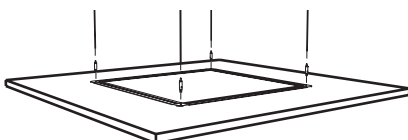
Using a grouping frame allows a perfect alignment of multiple Canopies close to each other.

You can group shapes in unlimited combinations. Grouping layout ideas are suggested in the SoundScapes Shapes technical brochure. It is also possible to create your own personal designs and layouts.

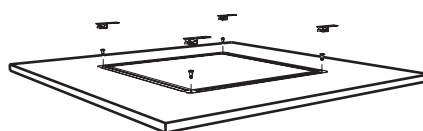
Thanks to the flexibility of the grouping system, you can make your ideas become reality.



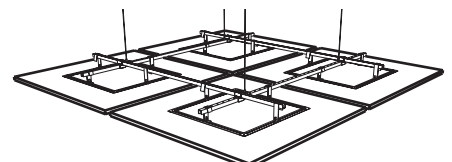
1. Individual Suspension



2. Individual Attachment to Drywall



3. Group Suspension

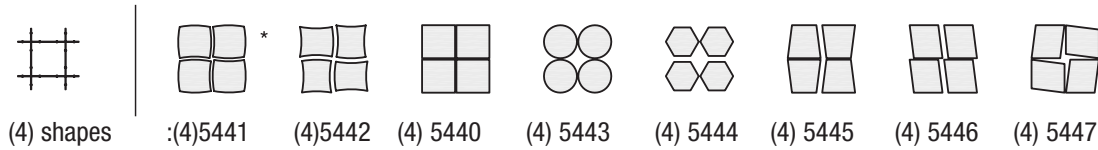


Ways You Can Suspend SoundScapes Shapes in Groups

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

4-Panel Square Group Layouts

To create these kinds of groups with a minimum of 50mm spacing between shapes, you need to order:



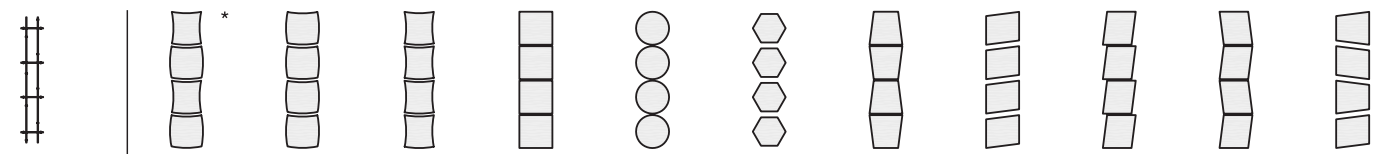
(4) shapes : (4) 5441 (4) 5442 (4) 5440 (4) 5443 (4) 5444 (4) 5445 (4) 5446 (4) 5447

+

(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 50mm spacing between shapes, you need to order:



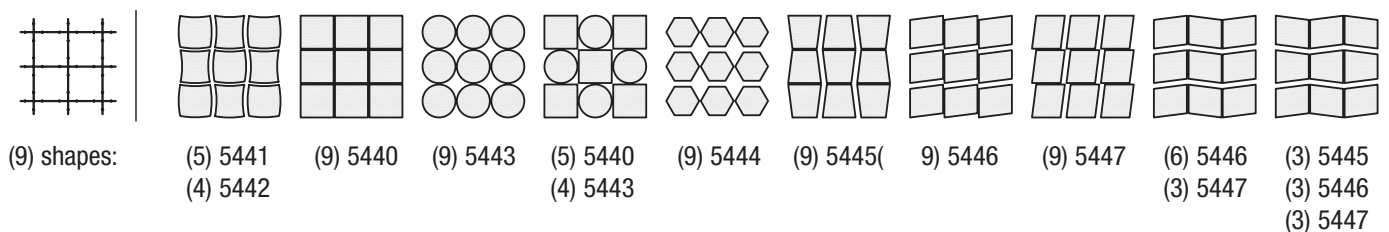
(4) shapes: (2) 5441 (4) 5441 (4) 5442 (4) 5440 (4) 5443 (4) 5444 (4) 5445 (4) 5447 (4) 5446 (2) 5446 (2) 5445
2) 5442 (2) 5447 (1) 5446
(1) 5447

+

(3) 5450 Deck Hanging Kits (1) 5452 Frame Splice Kit (2) 5453 Frame Alignment Kits
(2) 5451 Grouping Frame Kits (4) 5454 Panel Hook Kits

9-Panel Square Group Layouts

To create these kinds of groups with a minimum of 50mm spacing between shapes, you need to order:



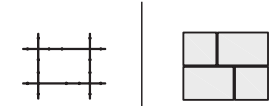
(9) shapes: (5) 5441 (9) 5440 (9) 5443 (5) 5440 (9) 5444 (9) 5445 (9) 5446 (9) 5447 (6) 5446 (3) 5445
(4) 5442 (4) 5443 (4) 5443 (3) 5447 (3) 5446
(3) 5447

+

(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 these kinds of groups with a minimum of 50mm spacing between shapes, you need to order:



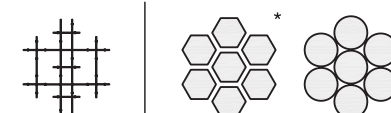
(4) shapes: (2) 5440 & (2) 5448

+

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

7-Panel Group Layouts

To create these kinds of groups with a minimum of 50mm spacing between shapes, you need to order:



(7) shapes: (7) 5444 or (7) 5443

+

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

Design Consideration: SoundScapes Shapes maintain a natural sag that may be noticeable when installed 150mm or less apart. Deflection up to 3mm 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 www.armstrongceilings.com.au. 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 your Armstrong outlet.

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Physical Data

| | |
|---------------------|---|
| Colour | White |
| Edge | Paint on edges |
| Edge detail | Board |
| Humidity resistance | 90% RH |
| Light reflectance | 90% |
| Scratch resistance | Yes |
| Material | 22mm thick glass fibre substrate |
| Surface Finish | Durabrite scrim with factory-applied paint on face and sides |
| Panel Weight | 3kg/sm or 4.3kg for 1220 x 1220mm square panel |
| Recycled content | 75% |
| Weight | Nominal 1200 x 1200 = 2kg Nominal 1200 x 2400 = 4kg |
| Cleaning | Use a clean, dry, soft white cloth to wipe off any dirt or fingerprints. Regular light dusting of the back side of the canopy is recommended. |

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