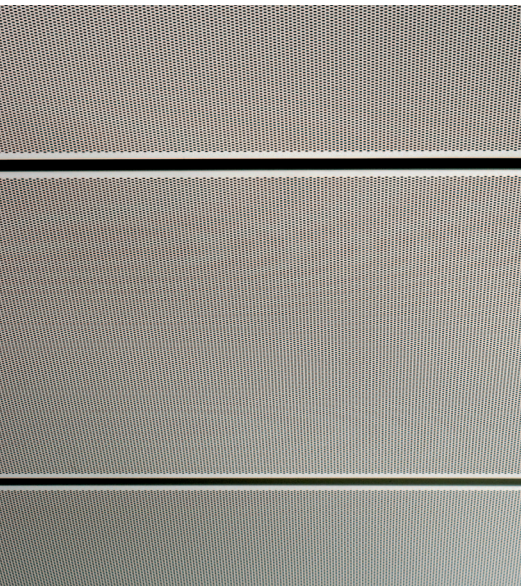


perforation patterns

square pitch perforations
diagonal pitch perforations
oblong and square perforations
designer pitch perforations
perforation integration



perforation overview

SAS metal ceiling tiles can be supplied either plain or perforated to accommodate the aesthetic and functional performance criteria of each application.

The range of SAS perforation options has been developed to provide specifiers with design solutions to significantly enhance the visual appearance of the ceiling.

Substantial investment in advanced plant machinery has created an unprecedented facility. This allows SAS to offer efficient production of high volume, for standard products and major projects, or short run bespoke requirements.

- Standard square and diagonal pitch
- Geometric designer patterns
- Plain zones
- Perimeter options
- Speaker perforations
- High acoustic performance

Borders

Panels with standard perforation patterns can be supplied with either overall perforations or with a plain border. The plain border is normally specified with a nominal 10mm width. Alternative border widths can be manufactured within the constraints of the perforation pattern and panel size.

Larger border sizes can be used to create a tartan effect or provide plain visual grid for partition layouts.

Apertures Within Plain Zones

Standard and designer perforated panels can be manufactured with factory formed apertures for the integration of luminaires, air grilles, smoke detectors, sprinklers and other services. The perforation pattern can be modified to include square and rectangular plain zones within the perforated area to provide a picture frame border around services. Plain zones are available in a wide range of sizes to suit individual requirements.

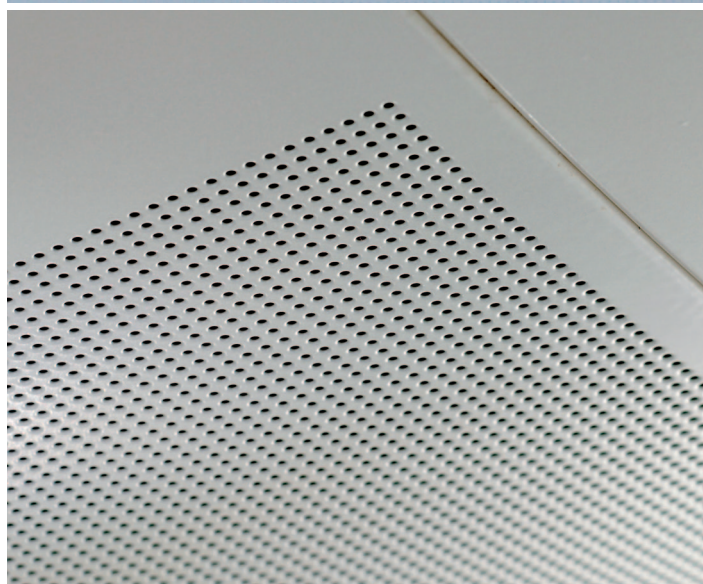
Standard Perforation Patterns

Within the range of perforations patterns, SAS offers three standard perforations that offer a performance up to 49dB.

Bespoke Perforations

Our in house tooling department is able to manufacture perforation tooling to meet any bespoke perforation requirements.

Further details on geometric patterns and designer pitch patterns can be found on page 110.



SAS Perforation Codes

To help understand the which perforations have been specified the SAS perforation codes break down into three easy to recognise sections.

For example:

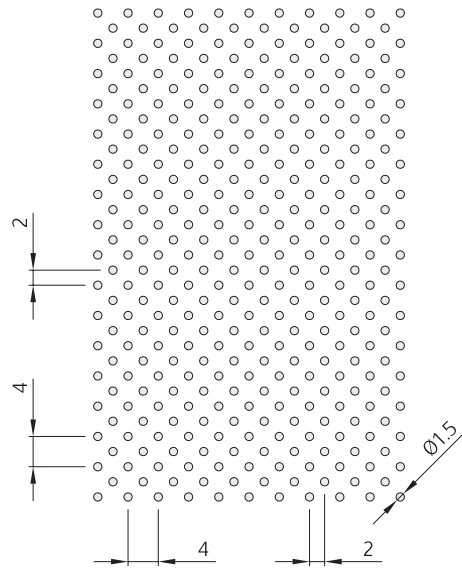
S.18|20

The first letter D. or S. indicates whether the pitch is square or diagonal to the edge of the tile.

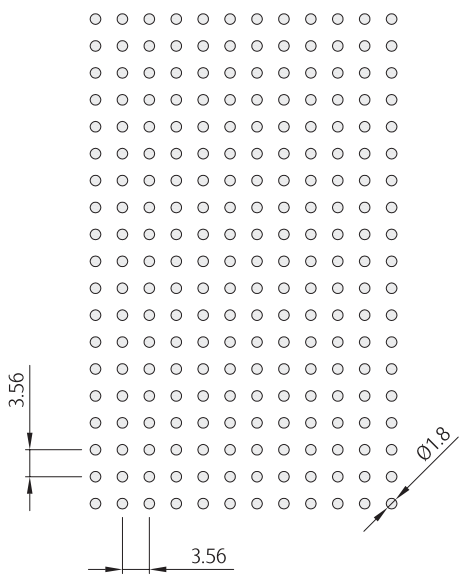
The first two numbers indicate the size of the punched hole. S.18□ indicates 1.8mm diameter.

The final two numbers indicate the percentage of free open area. S.□20 indicates a 20% open area.

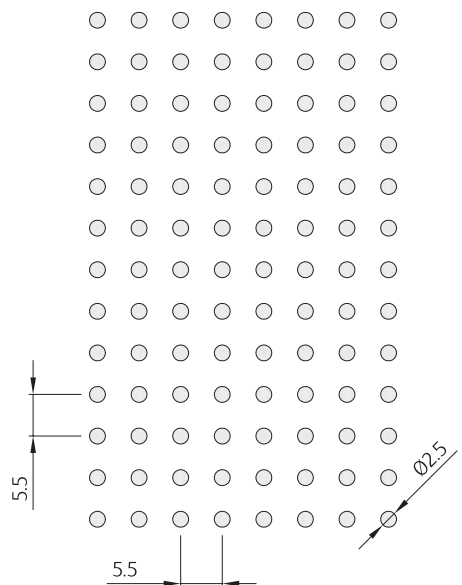
For example S.1820 has a square pitch with 1.8mm punched perforation and 20% open area.



D.1522
Ø1.5mm, 22% Open Area

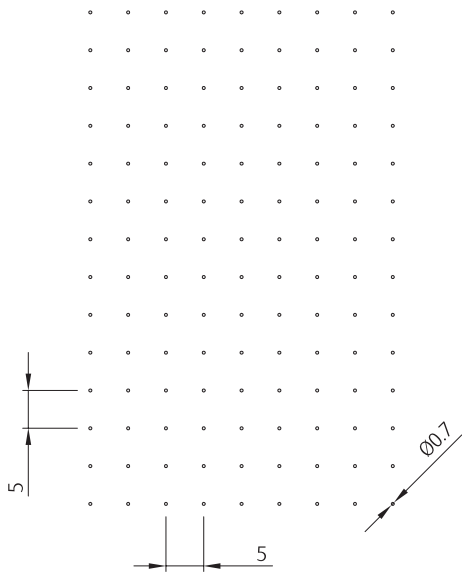


S.1820
Ø1.8mm, 20% Open Area

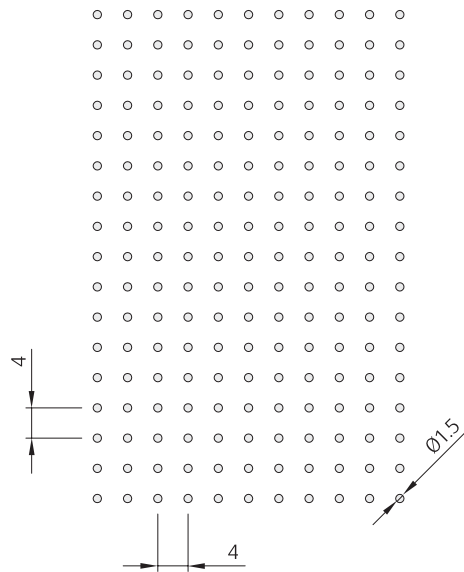


S.2516
Ø2.5mm, 16% Open Area

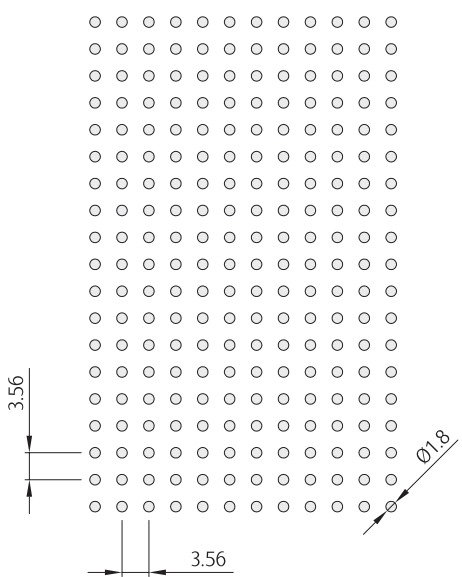
square pitch perforation patterns



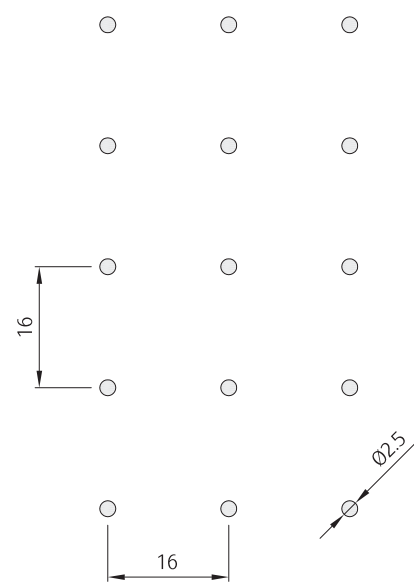
ULTRAMICRO (S.0701)
Ø0.7mm, 1% Open Area



S.1511
Ø1.5mm, 11% Open Area

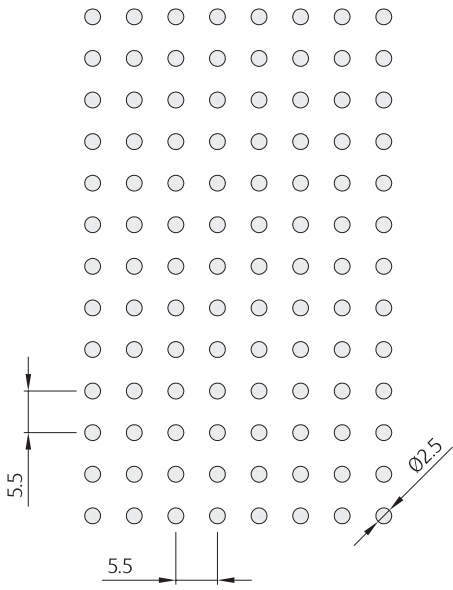


S.1820
Ø1.8mm, 20% Open Area

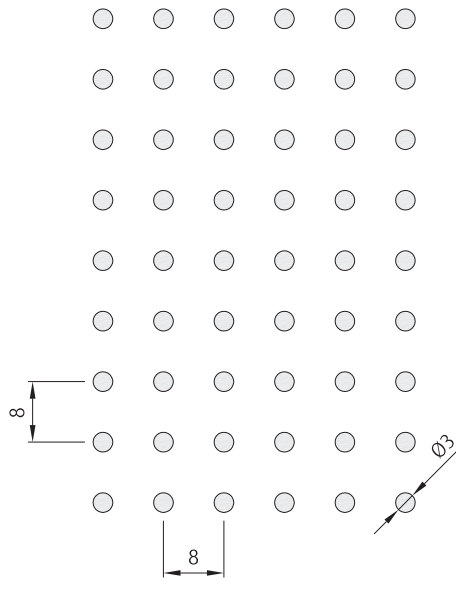


S.2502
Ø2.5mm, 2% Open Area

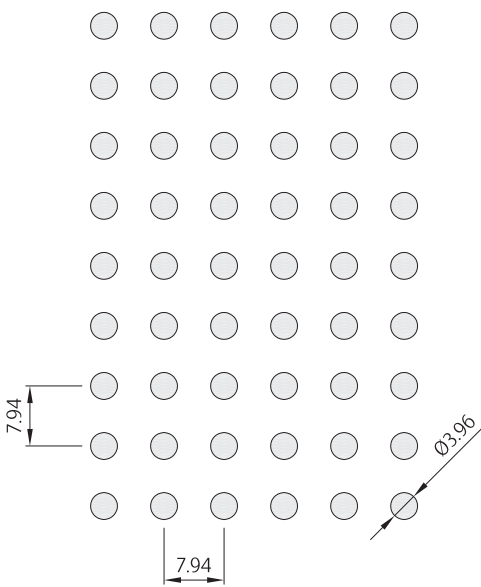
square pitch perforation patterns



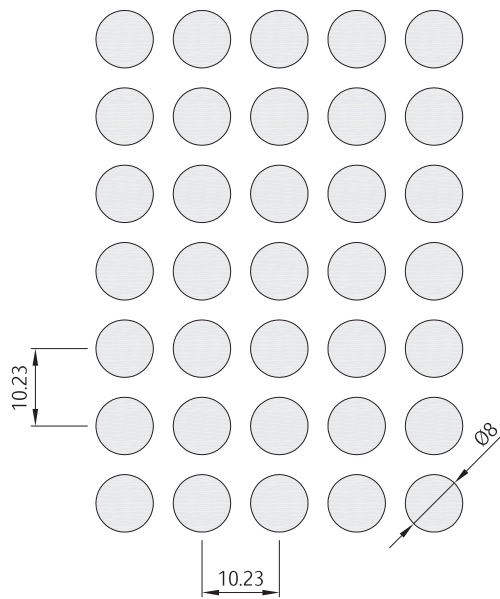
S.2516
Ø2.5mm, 16% Open Area



S.3011
Ø3.0mm, 11% Open Area

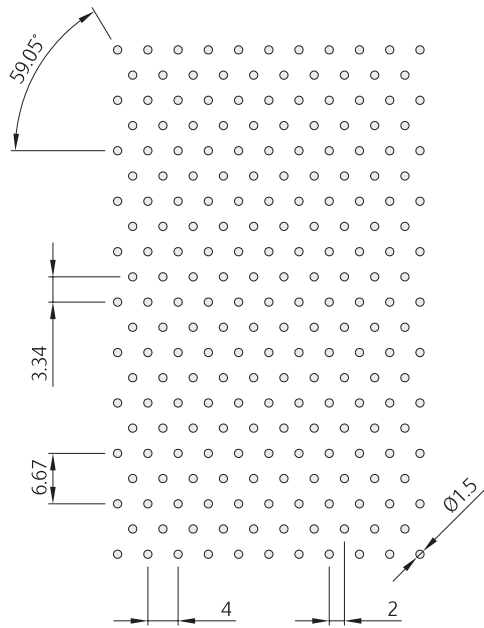


S.3919
Ø3.9mm, 19% Open Area

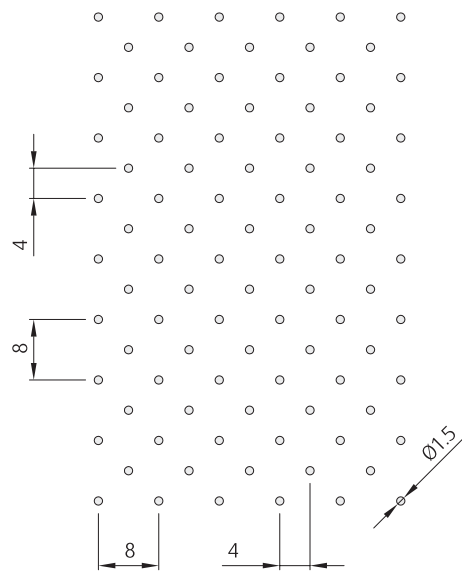


S.8040
Ø8.0mm, 40% Open Area

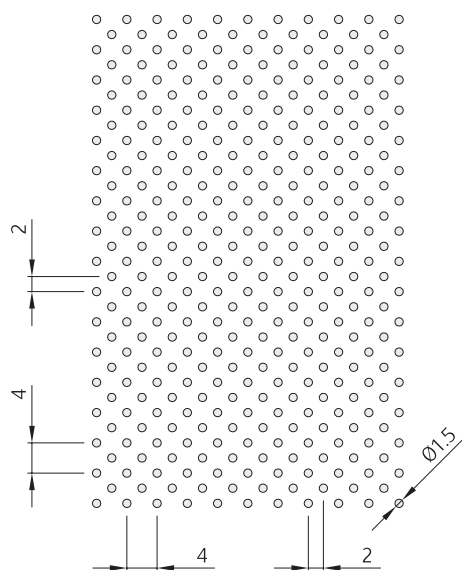
diagonal pitch perforation patterns



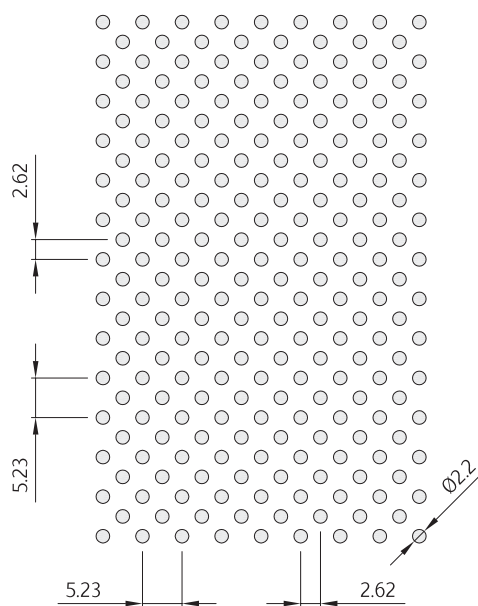
D.1514
 Ø1.5mm, 14% Open Area



D.1505
 Ø1.5mm, 5% Open Area

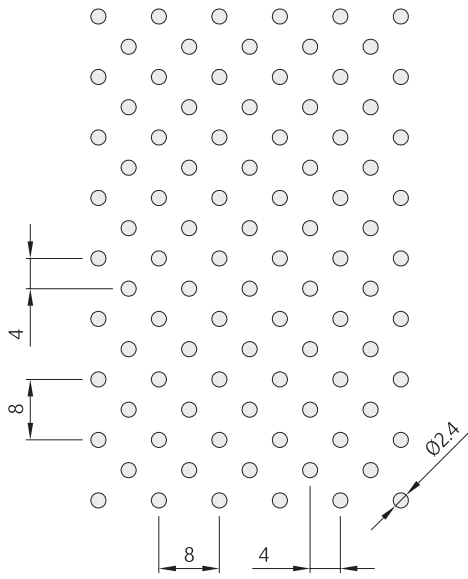


D.1522
 Ø1.5mm, 22% Open Area

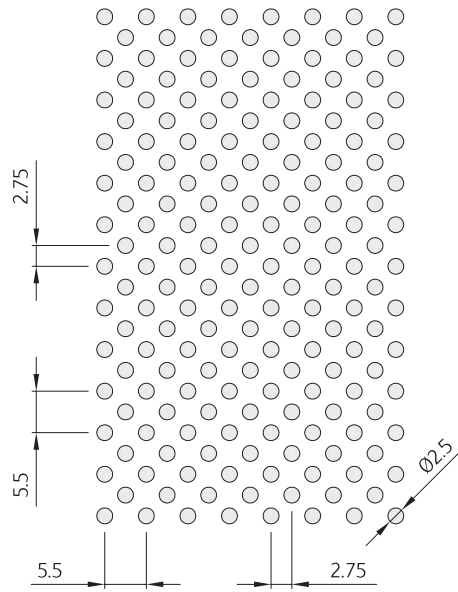


D.2225
 Ø2.2mm, 25% Open Area

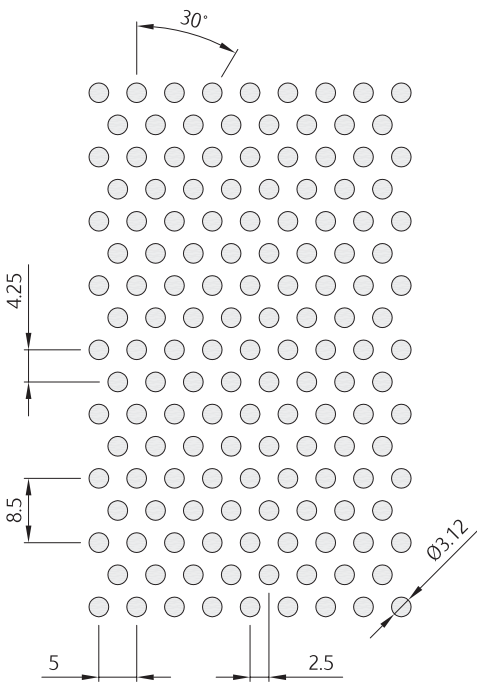
diagonal pitch perforation patterns



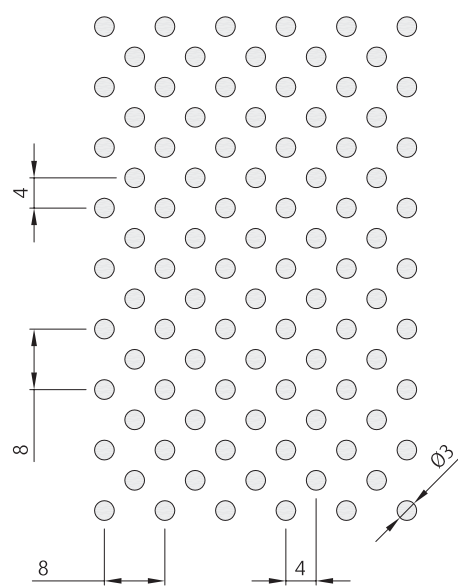
D.2414
Ø2.4mm, 14% Open Area



D.2532
Ø2.5mm, 32% Open Area

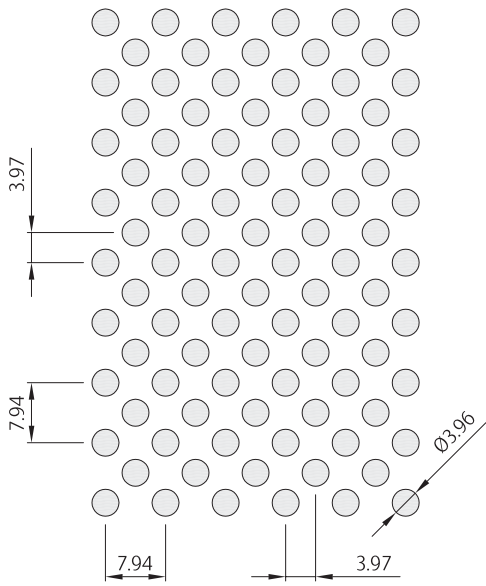


D.3136
Ø3.1mm, 36% Open Area

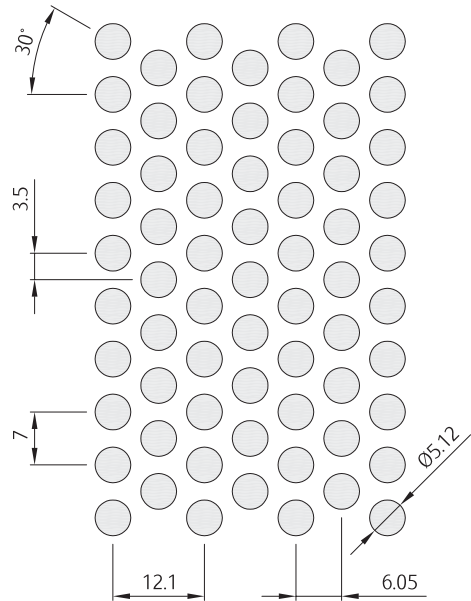


D.3022
Ø3.0mm, 22% Open Area

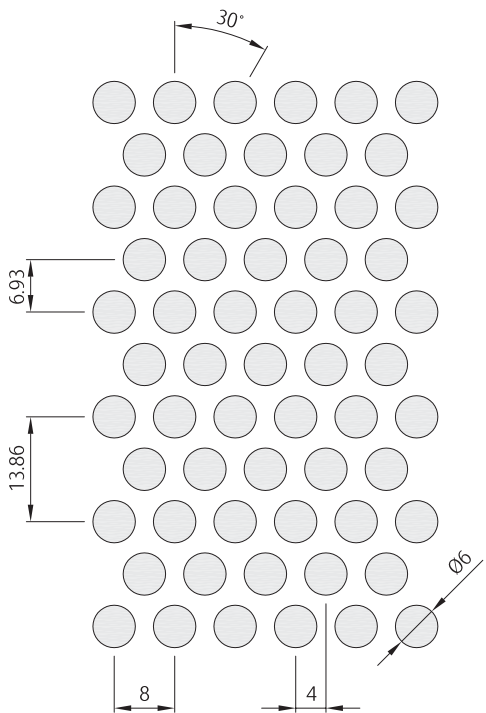
diagonal pitch perforation patterns



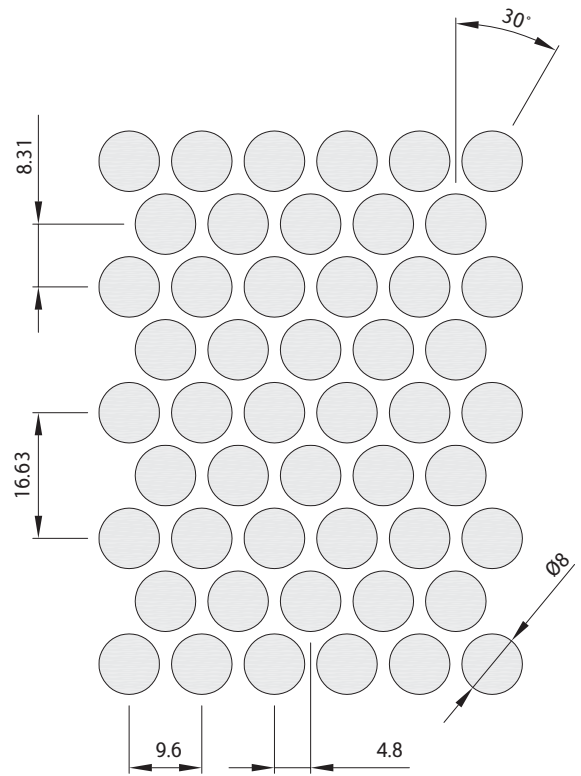
D.3939
Ø3.9mm, 39% Open Area



D.5149
Ø5.1mm, 49% Open Area

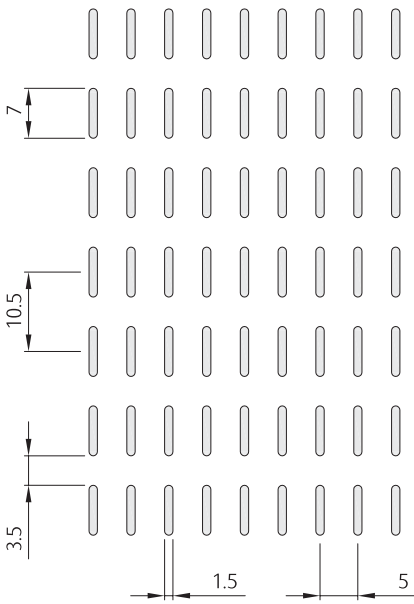


D.6050
Ø6.0mm, 50% Open Area

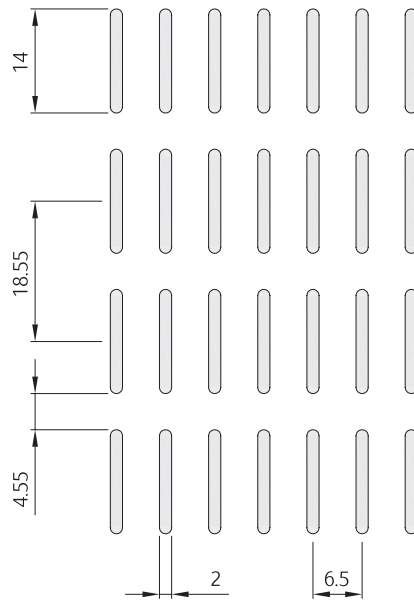


D.8063
Ø8.0mm, 63% Open Area

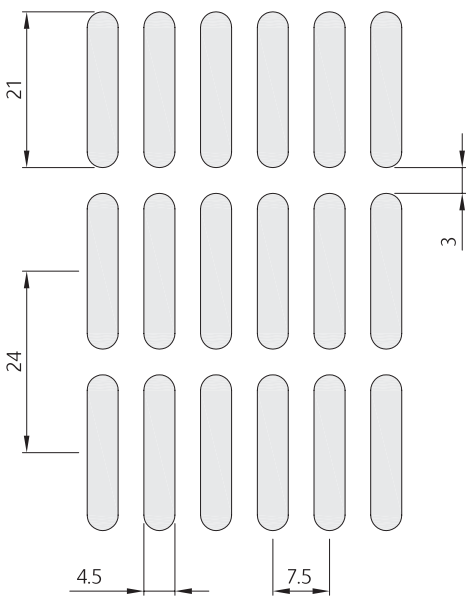
oblong and square perforation patterns



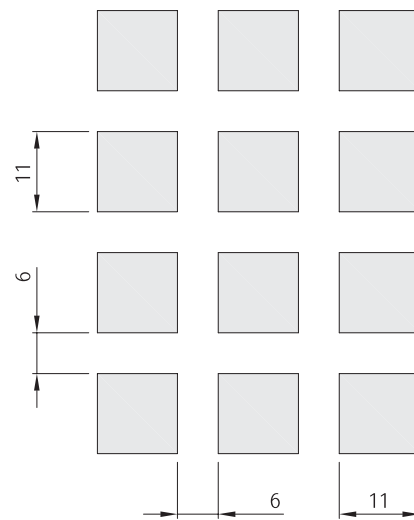
OB20
 $\text{\O}1.5 \times 7\text{mm}$, 20% Open Area



OB25
 $\text{\O}2.0 \times 14\text{mm}$, 25% Open Area

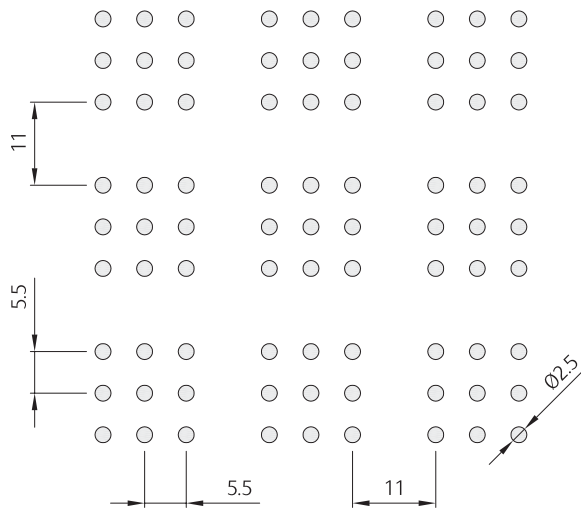


OB50
 $\text{\O}4.5 \times 21\text{mm}$, 50% Open Area

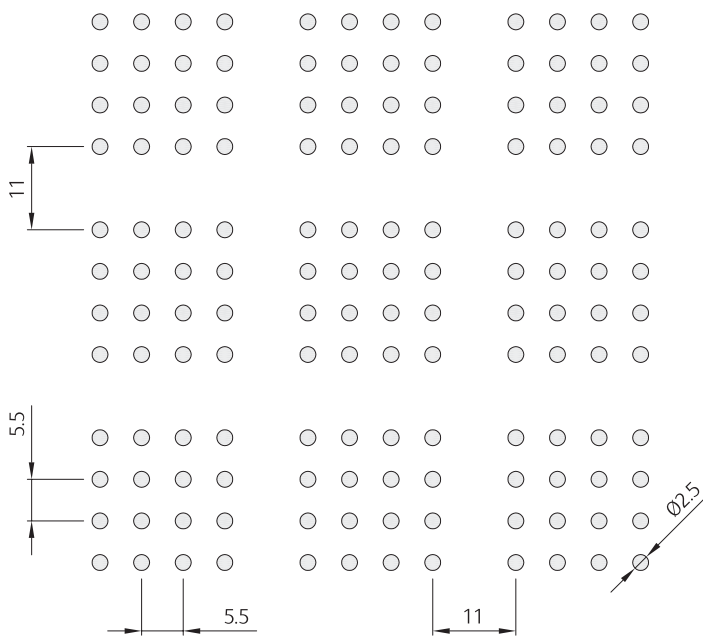


S.1147
 $\text{\O}11.0\text{mm}$, 47% Open Area

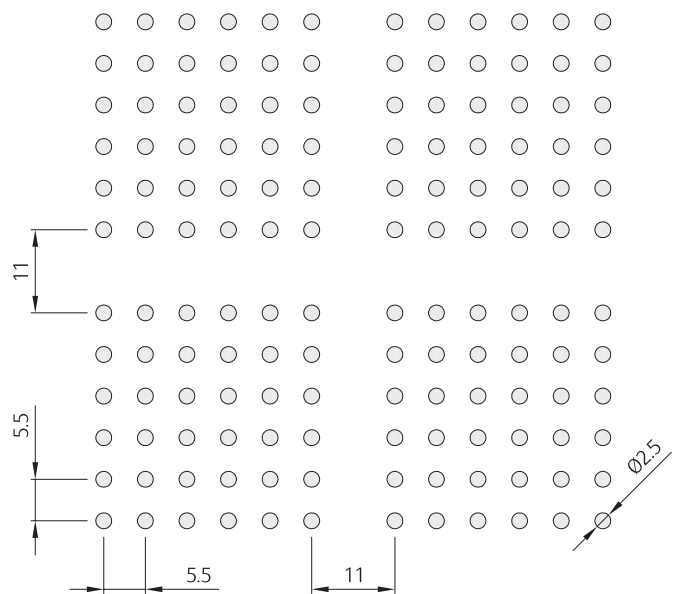
designer pitch perforation patterns



2509-G3
Ø2.5mm, 9% Open Area



2510-G4
Ø2.5mm, 10% Open Area



2512-G6
Ø2.5mm, 12% Open Area

Geometric Patterns / Designer Patterns

SAS are able to offer flexibility with the range of square pitch perforation patterns.

Based on the standard range of square pitch patterns, the perforations can be grouped into squares to create a distinctive geometric effect.

If you have a specific requirement please contact our technical department who will be able to advise you how to achieve your desired effect.

Open Area and Performance

When a designer pitch pattern is created from an existing square pitch pattern it adjusts the open area percentage.

When grouping a 2516 perforation in 6s, it changes the open area from 16% to 12%.

To show the change in perforation pattern the original perforation pattern open area is revised accordingly and the number is supplemented by a groupage number, for example G3 when the pattern is arranged in groups of 3.



Zonal Perforations

Zonal areas of perforations may be used to alter the visual appearance of a ceiling to achieve specific aesthetic effect.

Rectangular zones of perforations in square panels create a directional appearance whilst square zones within rectangular panels give a non-directional appearance.

Large panels can be manufactured with multiple zones of perforations giving the appearance of multiple smaller tiles.

Diffusers Perforations

Perforated panels can be used to accommodate a range of airflow requirements including air conditioning and displacement ventilation.

When air diffusers are specified SAS are able to integrate them into the ceiling plane with a change of perforation to the appropriate ceiling tile.

Multi Service Panels

It is possible to install multiple M&E services with a single tile or tiles. We are able to manufacture and perforate openings in multi service panels for luminaires, smoke detection and control, diffusers and other M&E services.

Expanded Metal / Mesh

SAS ceiling panels can be formed from expanded metal in a wide range of patterns to provide a distinctive visual appearance. This solution is particularly suited to retail and leisure where a large free area is required for smoke extraction or air movement. Please contact our technical departments for further information.

Chilled Beams

SAS Chilled Beams can be installed above a perforated metal ceiling with an open area of approximately 50%.

Chilled Ceilings

Metal ceiling tiles for Chilled Ceilings can be supplied plain or perforated to an open area of up to 25% to provide acoustic absorption.



