





SAS**900** Polynode



# Overview

SYSTEM GROUP		GRID
		
Suspended Ceiling		Concealed Grid SAS Torsion Spring Suspension
TILE		
		
Torison Spring		
ACOUSTICS		
<b>A-C</b>		
Absorption class		
ACCESS	SYSTEM WEIGHT	LIFE EXPECTANCY
	10 Kg/m <sup>2</sup>	<b>25yr</b>
Hinge down access		In excess of

# SAS900 Polynode



SAS900 Polynode is an adjustable nodal ceiling system used to create multi-faceted ceiling designs. This polynodal system meets the demand of increasingly varied and complex ceiling surfaces in modern building design.

Simple equilateral triangle tiles can create a near infinite variety of polyhedral ceiling forms. Our patent-pending nodal system can also be used to transition from ceiling to wall.

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## Access

SAS900 offers full access by way of hinge down tiles, suspended vertically from two nodes. Alternatively, tiles can be completely removed.

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## Grid System

- EMAC Grid suspension with threaded rod and node plate
- +/- 125mm adjustment from adjacent node (standard system)
- System allows for faceted horizontal to vertical transitions (ceiling to wall)

Highly complex geometrical surfaces can be installed using standard components, simply by adjusting the vertical position of the node. Corner anchor points suspend tiles which can be adjusted to create a free form ceiling. Our patent-pending nodal system can also be used to transition from ceiling to wall.

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## Perforation

SAS900 Polynode tiles can be supplied with any standard SAS perforation pattern. Bespoke patterns are also available on request.

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## Acoustic Treatment

16mm acoustic pad as standard (80kg density mineral-wool with black tissue face, foil back and sides). Other acoustic treatments are available, depending on project requirement. Please contact our technical department for more information.

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## Weights & Sizes

- 10kg / m<sup>2</sup>
- Standard modules are mounted on EMAC grid with 866mm centres
- Standard nodes are mounted every 1000mm
- Tiles are triangular as standard (980mm on all sides)
- Min/Max tile dimensions are 280mm / 1280mm

Just one tile size significantly reduces the design and manufacturing costs associated with this type of geometric ceiling. Whilst the system is drawn as standard with triangular tiles, any number of simple polygonal shapes can be manufactured. Please contact our technical design team for more details.

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## Integration

Ceiling tiles can be formed with apertures during manufacturing for integration with lights and other services. SAS900 panels may require stiffeners to support centrally mounted lighting.

Lighting and other mechanical and electrical services can add significant loads to a ceiling. Loads applied to SAS900 ceiling tiles must not exceed 2kg. For loads greater than 2kg, we would recommend using independent suspension.

If you have a concern over loads, please contact our technical team for advice.

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## Finishes

- RAL 9010, 9003 and 9016 (White) polyester powder coat (PPC) as standard
  - Available in full range of standard RAL colours
  - Anti-Microbial PPC coatings
- Other specialist finishes are available on request. For more information on non-standard finishes, please contact our technical services team.

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## Standard System

Simplest version using a single size tile. Minimal or no design input (unless deviating from tile size and perimeter detail). Standard flat grid.

Application Drawings: 0446, 0447, 0448.

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## Advanced System

Simple curved grid allowing for more complex installations. May use some different size tiles. Will require some design input.

Application Drawings: 0449, 0450.

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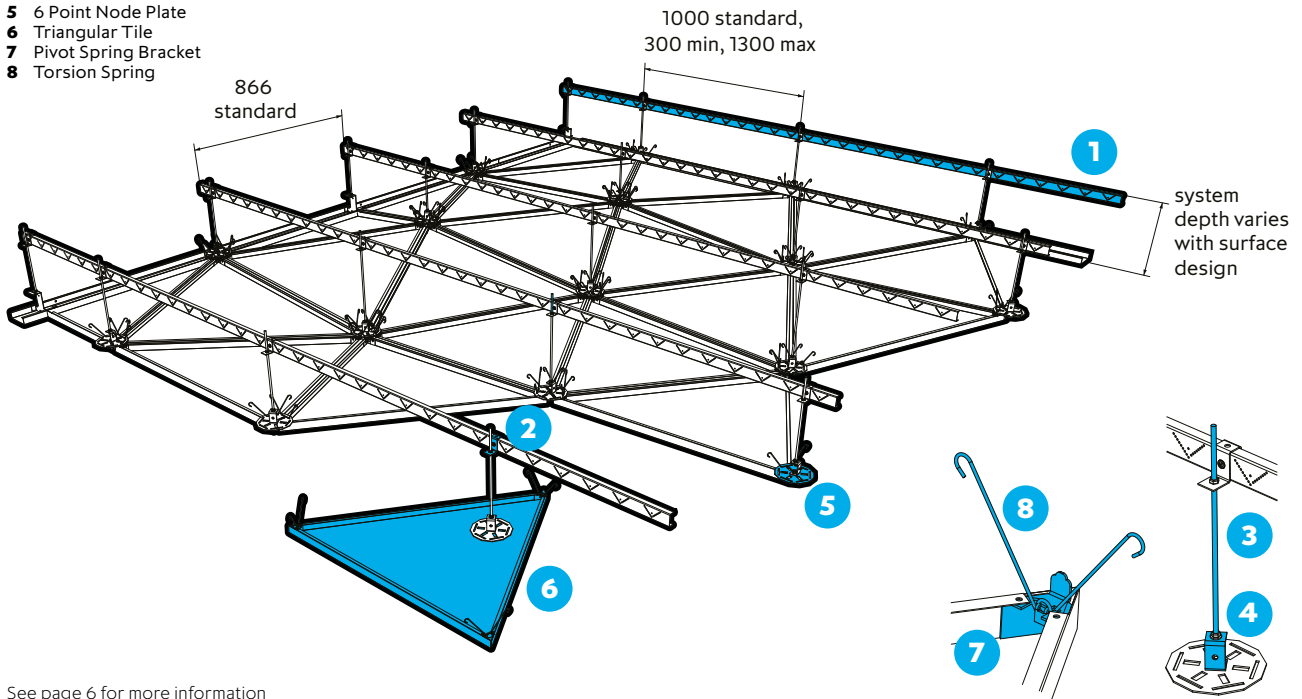
## Bespoke Designs

SAS900 Polynode can replicate almost any complex geometry. Page 9 details a surface analysis example. For fully bespoke designs, SAS Special Projects can assist you in realising highly complex designs from concept to completion. Please contact SAS Special Projects for further information on this design service.

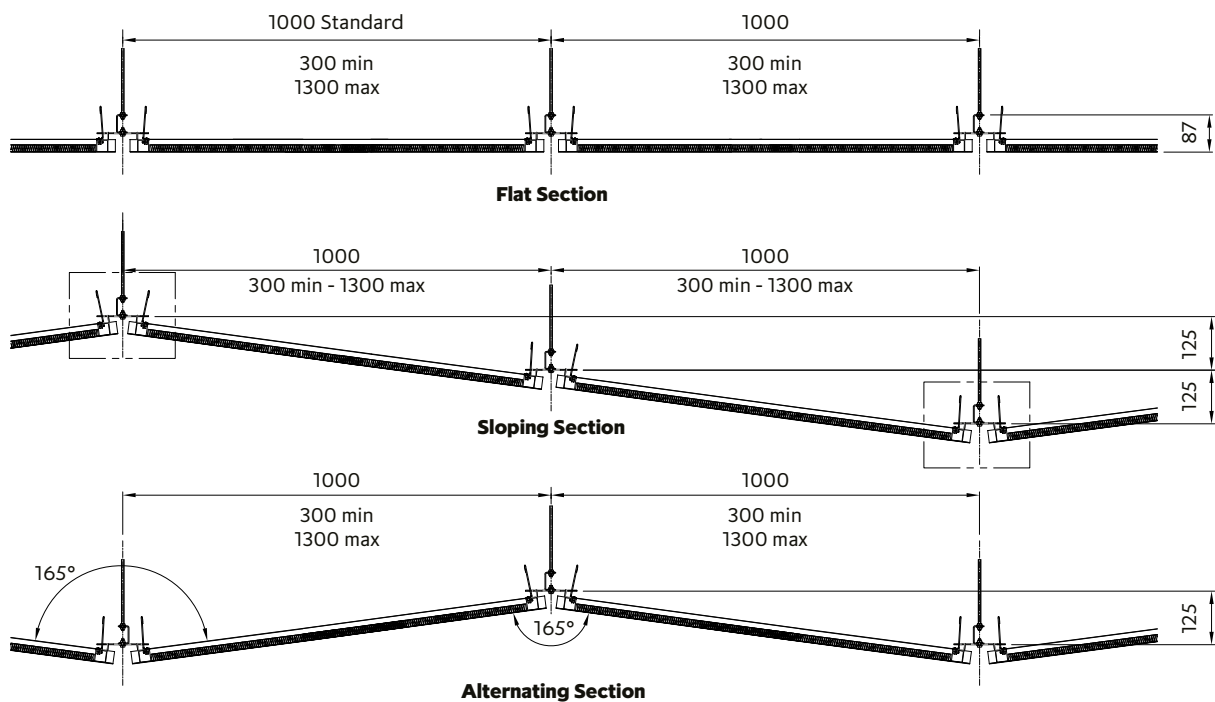
# SAS900 Polynode

## Perspective Drawing

- 1 Emac Grid
- 2 Emac Hook over Bracket
- 3 Threaded Rod
- 4 Basic Node Bracket
- 5 6 Point Node Plate
- 6 Triangular Tile
- 7 Pivot Spring Bracket
- 8 Torsion Spring



## Section Drawing

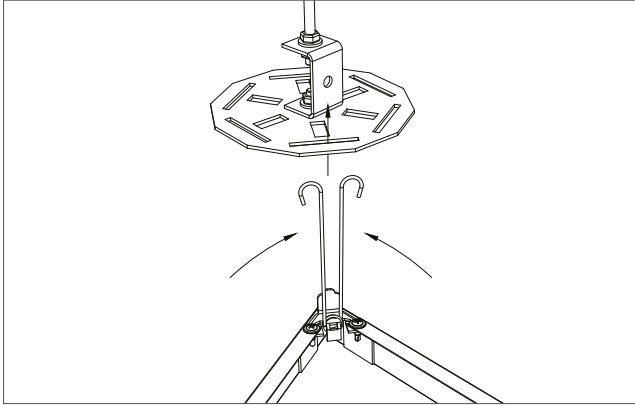


All dimensions are in mm.

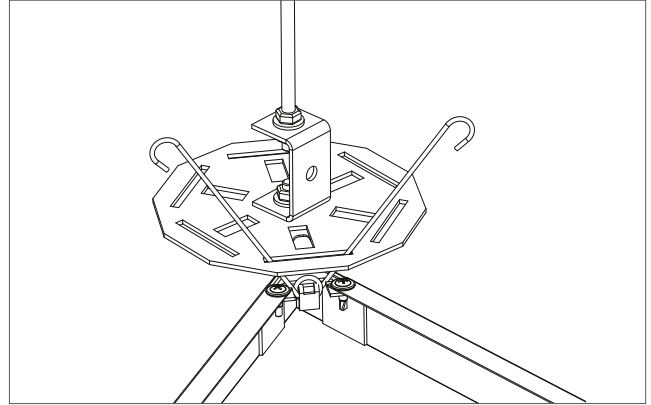
# SAS900 Polynode

## Features

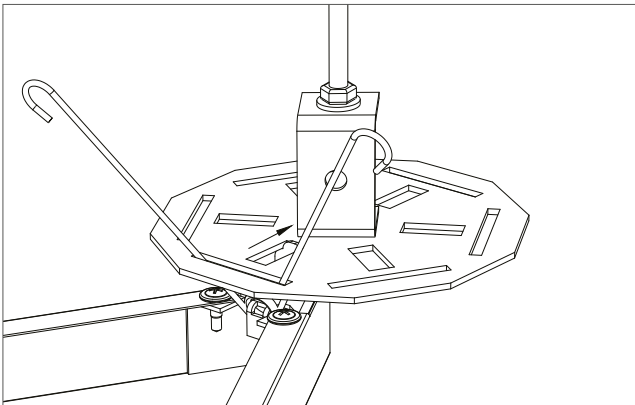
At the core of SAS900 Polynode is a flexible node interface which allows a single size tile to fit.



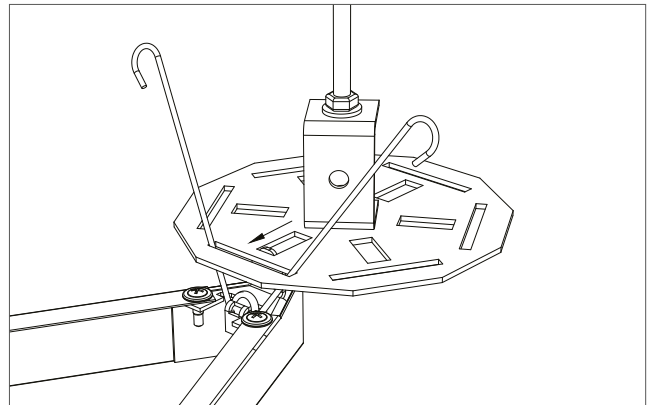
**Tile installation**



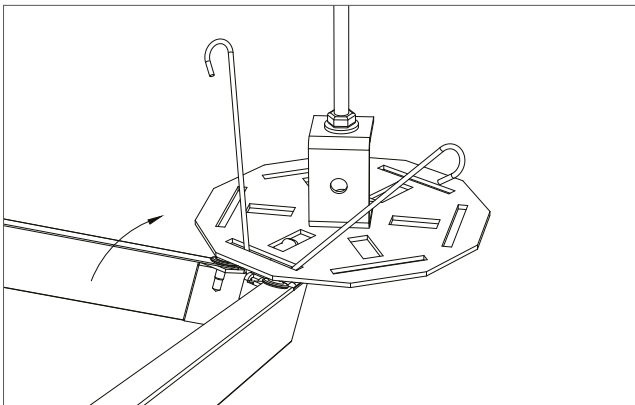
**Tile in default position**



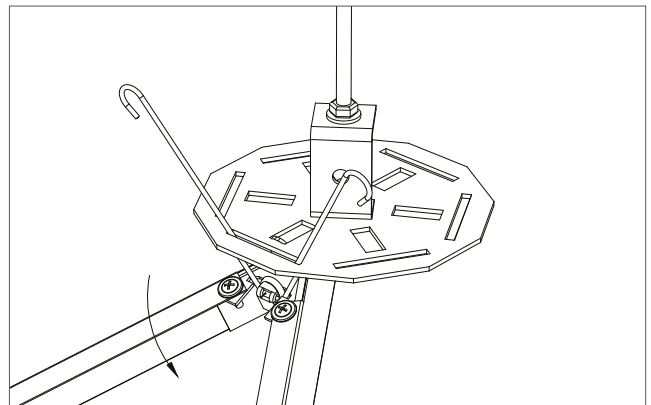
**"Compressed" tile**



**"Stretched" tile**



**Pivoting up**



**Pivoting down**

# SAS900 Polynode

**System**

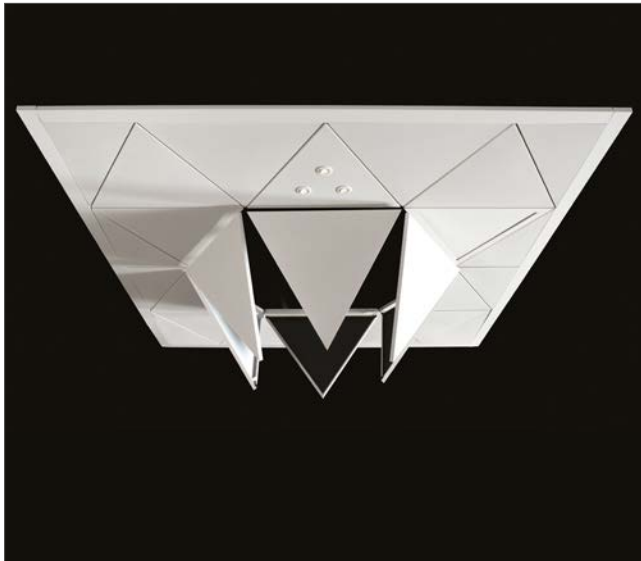
The Polynode system allows the same components to be installed in any number of arrangements by simply altering the node height.



# SAS900 Polynode

**Void Access**

Access is gained by lowering the tile and releasing a corner spring from the node. The tile will then hinge down on the two remaining springs.



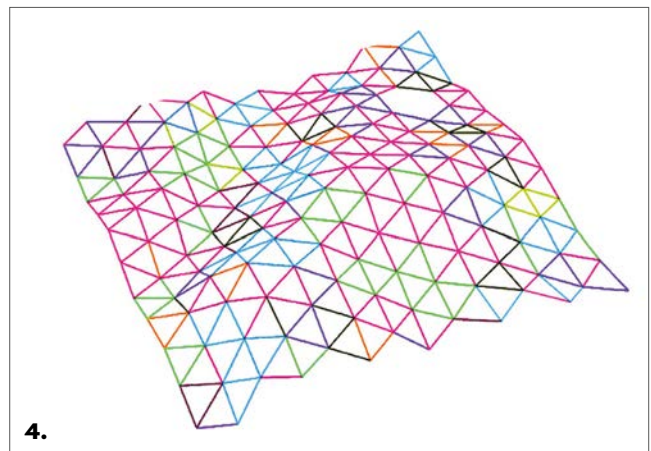
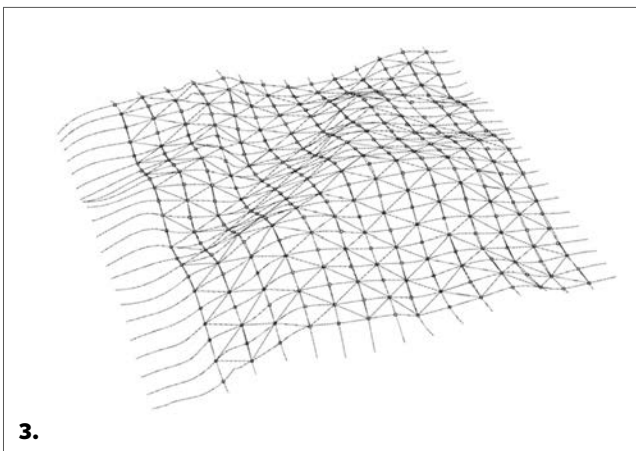
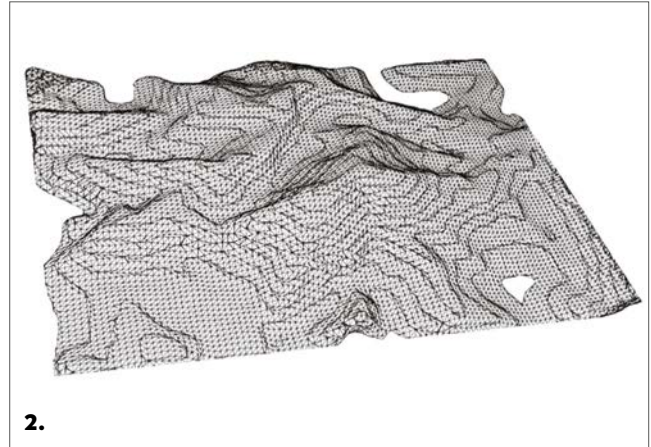
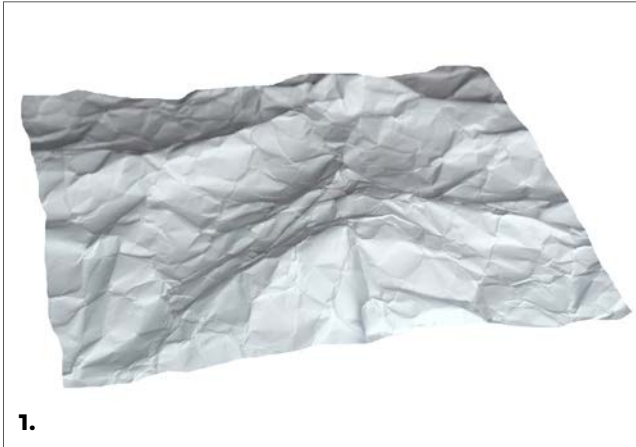
# SAS900 Polynode

## Surface Analysis

The Polynode system can be fully tailored to suit. The basic version of the system greatly simplifies the process of providing a multi-faceted ceiling within certain bounds.

At the opposite end of the spectrum SAS International offers a full design support service. Our approach analyses any complex surface and optimises the arrangement using SAS900.

Illustrated below, 3D scanning software is used to generate a refined nodal grid based on the existing, highly complex geometry. This detailed surface analysis enables us to replicate the desired form using the Polynode system.



This example illustrates the basis of our approach. We used a piece of crumpled paper but this could easily be a 3D model or set of co-ordinates of almost anything.

1. A complex form is digitally scanned
2. A mesh point cloud is generated based on the resulting scan data
3. The scan is mapped to a virtual surface with an overlaid grid
4. The geometry is simplified to reduce tile count and produce a basis for designing the ceiling



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# MBS

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Reach out to our team for support, samples and advice.  
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