



## ORION BARREL VAULT Fabric Canopies

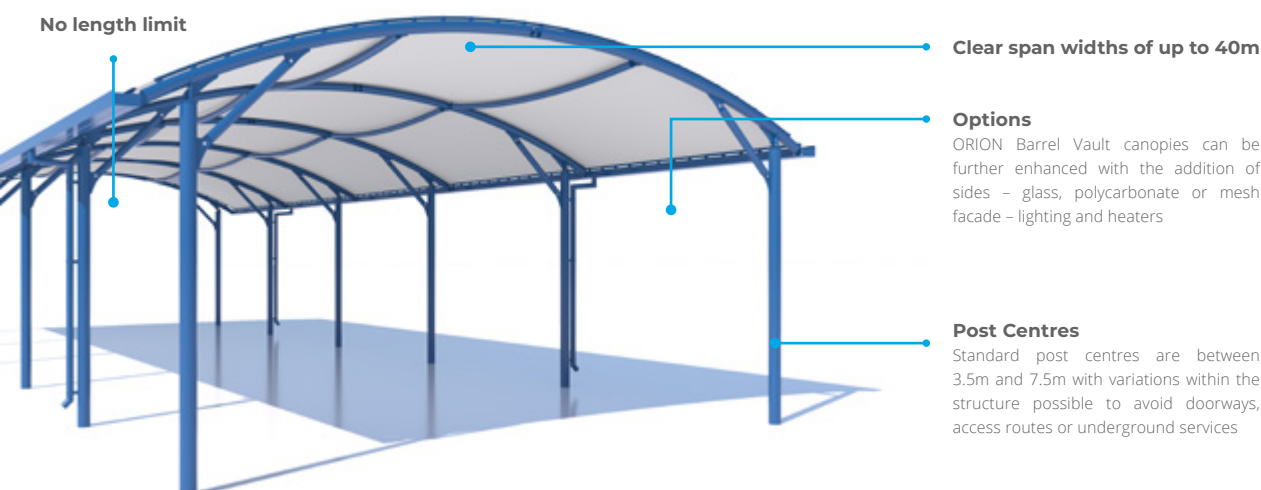
ORION Barrel Vault tensile membrane canopies use clever engineering to create clear span covered space suitable for a wide variety of uses. The tall centre line creates a spacious feel under the canopy, and the soft membrane provides an ambient environment as well as absorbing the sound of rain, voices and echo to a greater extent than a hard roof covering such as polycarbonate or steel.

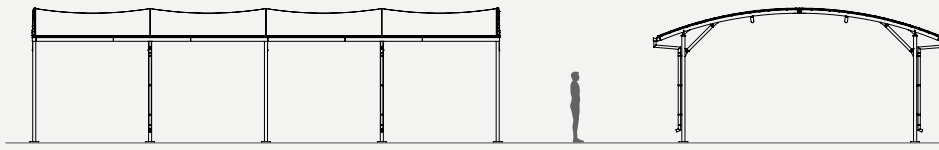
The flexible design aesthetic and distinctive elegant form of a tensile fabric canopy results from the characteristics unique to membrane tension. In daylight, fabric membrane translucency provides diffused, naturally lit spaces, while at night, artificial lighting can be used to create an ambient exterior luminescence. The lightweight nature of tensile membrane design requires less structural steel compared with conventional roof coverings, enabling clear spans of column-free space.

The durability and longevity of tensile membranes is well proven with fabric structures installed in widely varying climates. Tensile membranes comply with all relevant national regulations for fire resistance.

ORION Barrel Vault structures can be specified in both symmetric or asymmetric forms to suit all types of sites. Asymmetric structures are particularly suited for locations against existing buildings. The canopies are available with both single or double rows of columns. In structures with a single row of columns these can be positioned centrally or offset for a more cantilevered structure. Clear span widths of up to 40m and greater are available with no length limit. Standard post centres are between 3.5m and 7.5m with variations within the structure possible to avoid doorways, access routes or underground services.

The versatility of ORION Barrel Vault canopies can be further enhanced with the addition of sides – glass, polycarbonate or mesh facade – lighting and heaters providing opportunities to increase covered outdoor dining capacity and social areas, often doing double duty as outdoor classrooms and learning space.





## Design Features



### High Sunlight Reflectivity

High sun reflectivity results in a lower energy requirement to maintain room temperatures of adjacent buildings.



### All Weather Protection

Shade and inclement weather protection is increased with the hipped roof option providing a continuous eaves height to ends.



### Sound Absorption Qualities

Soft membrane fabrics absorb echo, the sound of rain and voices to a much greater extent than a hard roof.



### One-Piece Fabric Membrane

No joins to trap dirt or moisture and advanced fabric coatings provide a smooth, low maintenance surface.



### Tall Centreline

Free from lattice beam obstructions, the clear span rafter design is ideal for sport and creates a spacious feel.



### Positive Light Transmission

The combination of 'no-glare' ambience with excellent light transmission eliminates the need for lighting during the day.

## Product Specification

ORION Barrel Vault fabric canopies can be designed in different forms, with multiple support options available. The opportunity for flexibility of design with tensile membrane structures means irregular shapes can be accommodated.

### Canopy Form

ORION Barrel Vault canopies can be specified in both symmetric or asymmetric forms to suit all types of sites. Asymmetric structures are particularly suited for locations against existing buildings.

### Canopy Support

ORION Barrel Vault fabric canopies are available with both single or double rows of columns. In structures with a single row of columns these can be positioned centrally or offset for a more cantilevered structure.

### Canopy Dimensions

ORION Barrel Vault fabric canopies can be constructed in widths of 3.5m - 7.5m, there is no limit on the length.

## Additional Options

### Post Protector Pads

Foam protector pads with heavy duty PVC covers can be fitted to canopy posts for structures situated in play areas.

### Lighting

Various lighting solutions are available to extend safe use of your covered space or walkway outside of daylight hours.

### IR Heaters

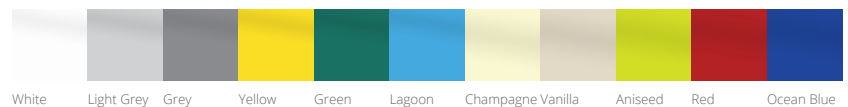
External grade radiant electric heaters can be fitted to ORION canopies to provide warmth to users in colder weather.

### Rainwater Systems

ORION canopies can be specified with integral steel guttering, powder-coated to match the steel frame for durability and easy maintenance. Custom aluminium downpipes with integral connections ensure maximum durability, with matching powder-coated finishes.

## PVC Fabric Colours

Specified with the FTO Series Architectural PVC Fabric which is an advanced, high quality and hard wearing product, with a smooth PVDF surface coating that stops dirt getting ingrained in the fabric, reducing the level of maintenance required to keep the roof clean.



## Frame Finishes

Highly durable polyester powder coatings are applied as the standard finish on steel frame with colours selected from a basic range or from the RAL colour selector. Steelwork is cold grit-blasted to SA2.5, with a zinc coating and anti-corrosive primer, followed by the high gloss polyester colour powder coat finish. Alternatively, hot-dip galvanised coatings can be specified for the harshest environments where a decorative finish is not required.

