





Fabritecture operates as a 'specialist design & construct contractor', internationally recognised for delivering a large variety of projects including modular fabric structures, tensile architecture, and bespoke "special projects".

The complexity and unique structures we deliver cater to a wide range of applications, including sports stadiums, shopping centre redevelopments, industrial & remediation projects, entertainment venues, car parks, mining, military and aviation industries.





Fabritecture delivers projects ranging from <500m<sup>2</sup> to over 3,000m<sup>2</sup>

### Benefits of working with fabric

Tensile structures offer a variety of benefits not found with traditional building materials. Fabric is light weight, flexible and highly translucent, which creates a structure that is lower in cost, low maintenance, rapidly installed, and often completely recyclable.









#### Structure Types

There are 3 main tensile structure types: barrel vault hypar, and conical designs.

**Barrel vault** arched structures typically provide shelter for outdoor spaces, such as sporting grounds. This design controls the run-off direction of debris and water, making it an aesthetic yet functional option.

**Hypar structures** are hyperbolic parabola, and are the simplest of all tension fabric structures. Diagonally opposed high and low points combine to give a twisted 3D form, resulting in excellent retention of shape & water run-off.

**Conical structures** are cone shaped. They are typically contemporary and eye-catching in design. These structures provide effective coverage of large surfaces with a single canopy. They are a popular choice for alfresco dining and open-plans.



### Structural Support

The main forms of structural support are: framed support, cable supported, and pneumatic.

When steel forms the main structural support of a structure, this is referred to as **framed support**.

**Cable supported** structures feature no structural steel. Instead, they are supported entirely by cables.

**Pneumatic** structures are supported completely by air. ETFE membrane often utilises pneumatic support due to its multi-layered capacity to produce 'cushions' using a plenum system.













### Materials Used

Fabritecture started out delivering bespoke architectural fabric structures using membranes such as PTFE, PVC and ETFE. Over time, our capability has expanded to include modular fabric structures, and even beyond tensile structures into our 'Special Projects' division which includes working with steel and aluminium framing, and specialised cladding.

**PVC membrane** is made from a Poly Vinyl Chloride coating over polyester base cloth. It is the most cost-effective option for a fabric structure, available as either translucent or Blockout (solid), and in a variety of colours. Fabritecture offers Serge Ferrari Precontraint PVC fabrics in 402, 502, 702, 802 & 902, and is 100% recyclable.

**PTFE fabric** is a popular choice for architectural structures, as it is a high-quality material for permanent applications. The Poly Tetra Fluoro Ethylene coats flexible glass fibres which have a low friction coefficient. PTFE has dimensional stability, and is highly reflective. Teflon coating creates a self-cleaning system that only requires maintenance after 2-5 years.

**ETFE**, or Ethylene Tetrafluoroethylene, is a transparent polymer that is a flexible alternative to glass. With a 50-year life span expectancy, ETFE is becoming increasingly popular due to its excellent properties and multi-layered potential. It is 30-40 times lighter than glass, and has a non-stick surface that is resistant to dirt.

Our **Special Projects** offer a solution to builders & architects who struggle to find contractors to complete design & construction works. We work with many different materials, including **steel**, **aluminium**, **woven mesh**, **cables** and **specialised cladding** to deliver ambitious & innovative architecture.

# Contact Us

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