

Design
Fabrication
MODULAR SHADE STRUCTURES
Installation
Service



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MODULAR SHADE STRUCTURES



ADAPTABLE
DESIGN



PRE-
DESIGNED



ALL WEATHER
PROTECTION



RANGE OF
ACCESSORIES

The Birdair range of modular shade structures are pre-designed and engineered to be easily adapted for almost any shade structure application. Permanent, durable and aesthetically unique, these tensile membrane modular shade structures are an easy way of incorporating an architectural shade feature into your school campus, outdoor dining precinct, sporting facility or public space.

ADAPTABLE BY DESIGN, ADAPTABLE BY NATURE

Adaptable by design, our range of modular structures offer shade solutions with a choice of shapes, sizes and layout options. Multiple units can be joined together to create larger shade areas.

PRE-DESIGNED

Pre-designed structures mean we can offer clients short turnaround from concept to completion.

ALL WEATHER PROTECTION

From a shady picnic spot to sheltered bus stop or protected playground, our high-quality PVC-covered shade structures offer permanent shade and weather protection elements for the outdoor environment.

RANGE OF ACCESSORIES

The Birdair modular range can be integrated with a range of accessories, such as lighting, heating, gutters and blinds for year-round use.

ENGINEERED SHADE STRUCTURES VS. SHADE SAILS

While common shade sails offer a lightweight solution (usually using HDPE mesh fabrics), they often rely on single-point sewn connections and lack structural rigidity.

Engineered shade structures, like those offered by Birdair, offer more durable and long-life shade protection. The key difference lies in their construction: Birdair engineered shade structures utilise durable, corrosion-resistant steel frames that allow for strong, multi-point tensioning systems. Corner connections feature membrane plates and use cables for edge tension.

The steel frame and multi-point connections allow for precise tensioning of high-tech membranes such as PVC and PTFE, ensuring optimal performance in blocking harmful UV rays and withstanding varying weather conditions.

By contrast, shade sails, with their simpler, lighter materials, are cheaper and easier to install, but are often more vulnerable to wind loads and typically offer less durability and much shorter design life.

THE BIRDAIR ADVANTAGE

The Birdair range of engineered shade, comprising Architectural Umbrellas and Modular Shade Structures; offer several advantages over common shade sails:

- » **Durability:** The steel frame construction ensures that Birdair structures can endure long-term exposure to the elements, far outlasting the typical lifespan of lighter-grade shade sails.
- » **Strength:** The robust support allows for double-curvature membranes, creating a more stable structure, capable of withstanding wind and weather extremes.
- » **Precision Tensioning:** Unlike shade sails, which can sag or lose tension over time, Birdair structures are tensioned using stainless steel cables and hardware to maintain shape and structural integrity.
- » **Flexible Design:** Available in a variety of shapes, sizes, and colors, these structures can be adapted to suit any outdoor environment, adding both functional and aesthetic value.
- » **Low Maintenance:** The architectural-grade fabrics are easy to clean, UV-stabilised, and resistant to fungi and microbial damage, making them a long-lasting and low-maintenance option.

MODEL SELECTOR

The Birdair range of modular shade structures are pre-designed and engineered to be easily adaptable for almost any shade structure application. Permanent, durable and aesthetically unique, these tensile membrane modular shade structures are an easy way of incorporating an architectural shade feature to your location.

Choose from our range of pre-designed options below, and then speak to Birdair about customising the structure to suit your desired function, location and budget.

								
		MONACO	PAVILION	QUASAR	ST TROPEZ	ORBIS	HELIOS	HELENA
CANOPY SHAPE	NOMINAL CANOPY SIZE (ft)	Central column umbrella-style structure.	Corner column conical structure.	Central column Hypar structure.	Central column inverted-conical structure.	Cantilever circular shade structure.	Perimeter column circular shade structure.	Large saddle-shaped structure.
 Square Canopy	10' x 10'	MS30 / MS30L						
	14' x 14'	MS40 / MS40L	PS40	QS40				
	16' x 16'	MS50 / MS50L	PS50	QS50				
	20' x 20'	MS60 / MS60L	PS60 / PS60L	QS60	ST60			
	24' x 24'	MS70 / MS70L	PS70 / PS70L	QS70	ST70			
	27' x 27'	MS80 / MS80L	PS80	QS80	ST80			
	30' x 30'	MS90 / MS90L	PS90	QS90	ST90			
	34' x 34'	MS100 / MS100L	PS100	QS100	ST100			
	40' x 40'	MS120 / MS120L	PS120	QS120	ST120			
 Round Canopy	Ø10'					ORB30		
	Ø13'					ORB40	HC40	
	Ø17'					ORB50	HC50	
	Ø20'						HC60	
	Ø24'						HC70	
	Ø36'							HE110
	Ø46'							HE140
	Ø52'							HE160

MONACO



PAVILION



QUASAR



ST TROPEZ



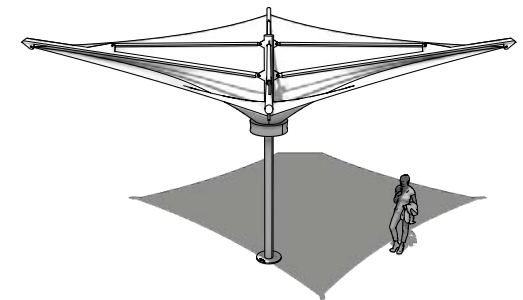
ORBIS



HELIOS



HELENA



MONACO MODULAR UMBRELLA

Our most popular and versatile modular shade structure, Monaco Modulares are umbrella-style shade structures and are ideal for tourism and hospitality applications, as well as community shade projects in public parks, recreation spaces and pedestrian areas.

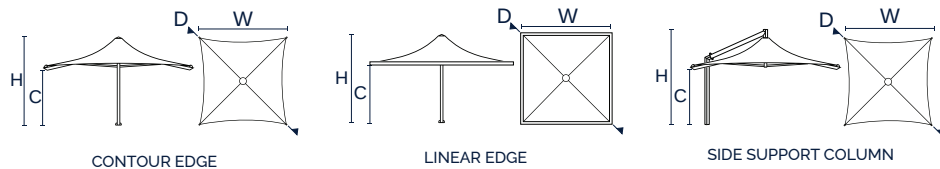
Square as standard, the Monaco canopy can be supported by either a central column or external cantilever column.

Designed as a permanent, non-collapsible umbrella-style shade structure, Monaco are engineered to be well suited to higher wind speeds.

Completely weather-proof, Monaco Modulares include galvanised steel cables with stainless steel fittings and a UV stabilised membrane.

CUSTOMIZATION

- » Multiple Monaco units can be linked together to increase the shade and weather protected area.
- » Column height design can be adapted to suit your location.
- » Square as standard, increasing the number of arms can create other geometric shapes; pentagonal, hexagonal or octagonal.
- » Available in Contour Edge and Linear Edge.
- » Available with a range of accessories, such as LED lighting and heating.
- » Roll-down blinds and gutters can also be fitted to Monaco Linear Edge models.



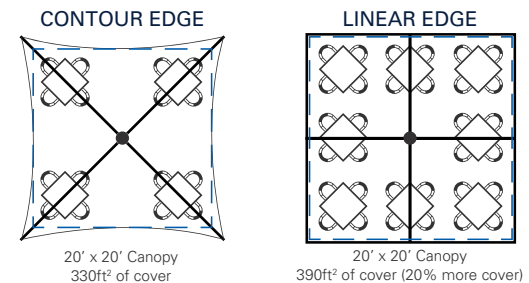
	MODEL NUMBER	CANOPY AREA	STRUCTURE WIDTH	STRUCTURE HEIGHT	CLEARANCE	DIAGONAL
	(L=Linear Edge)	ft²	(W) ft. in.	(H) ft. in.	(C) ft. in.	(D) ft. in.
CENTER COLUMN	MS30	84	10' 2"	10' 10"	7' 10"	14' 3"
	MS40 / MS40L	150 / 172	13' 8" / 13' 9"	11' 6"	7' 10"	19' 1" / 19' 5"
	MS50 / MS50L	234 / 269	16' 11" / 17' 0"	12' 4"	7' 10"	23' 9" / 24' 0"
	MS60 / MS60L	337 / 388	20' 3" / 20' 4"	14' 5"	8' 10"	28' 5" / 28' 9"
	MS70 / MS70L	459 / 527	23' 7" / 23' 7"	15' 1"	8' 10"	33' 2" / 34' 6"
	MS80 / MS80L	598 / 689	26' 11" / 26' 11"	15' 11"	8' 10"	37' 10" / 38' 3"
	MS100 / MS100L	939 / 1076	33' 9" / 33' 6"	18' 7"	9' 10"	47' 5" / 48' 3"
	MS120 / MS120L	1350 / 1302	40' 7" / 40' 1"	20' 3"	9' 10"	57' 1" / 57' 1"
SIDE SUPPORT COLUMN	MSS40	150	13' 7"	12' 8"	7' 10"	19' 2"
	MSS50	234	16' 11"	13' 5"	7' 10"	23' 9"
	MSS60	337	20' 2"	15' 9"	8' 10"	28' 5"

Dimensions are a guide-only. A minimum of 4" clearance to any building, poles or other structures is recommended.

LINEAR EDGE

Increase your usable space with a Monaco Linear Edge model. Ideal for alfresco dining, a straight edge means more seating under the canopy.

A fixed, straight-edge also adds the ability to attach guttering or roll-down blinds, making the structure even more versatile.



PAVILION MODULAR SHADE STRUCTURE

The Pavilion Modular Structure has perimeter columns in each corner, providing clear access under the full canopy area.

The perimeter columns have a lower foundation load compared to the Monaco and other central column structures, making it easier to install on existing slabs and ideal for integrating guttering and blinds.

Pavilion is perfect for outdoor dining areas, function spaces, and wedding venues. The Pavilion is also well suited to school assembly areas and playground shade, and multiple units can be joined together to create sheltered walkways.

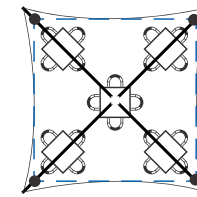
Completely weather-proof, Pavilion Modulares include galvanised steel cables with stainless steel fittings and UV stabilised membrane.

CUSTOMIZATION

- » Multiple units can be linked together to increase the shade and weather protected area.
- » Available in Contour Edge and Linear Edge.
- » Square as standard, increasing the number of arms/columns can create other geometric shapes; pentagonal, hexagonal or octagonal.
- » Available with a range of accessories, such as LED lighting and heating.
- » Roll-down blinds and gutters can also be fitted to Pavilion Linear Edge models.

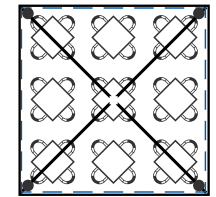


CONTOUR EDGE

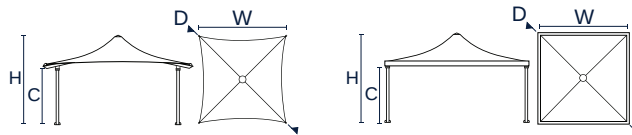


20' x 20' Canopy
330ft² of cover

LINEAR EDGE



20' x 20' Canopy
390ft² of cover (20% more cover)



CONTOUR EDGE

LINEAR EDGE

MODEL NUMBER	CANOPY AREA	STRUCTURE WIDTH	STRUCTURE HEIGHT	CLEARANCE	DIAGONAL
(L-Linear Edge)	ft²	(W) ft. in	(H) ft. in.	(C) ft. in.	(D) ft. in.
PS40	150	13' 8"	11' 6"	7' 10"	19' 1"
PS50	234	16' 11"	12' 4"	7' 10"	23' 9"
PS60 / PS60L	337 / 388	20' 3" / 20' 3"	14' 5"	8' 10"	28' 6" / 28' 9"
PS70 / PS70L	459 / 527	23' 7" / 23' 9"	15' 1"	8' 10"	33' 1" / 33' 8"
PS80	598	27' 0"	15' 11"	8' 10"	38' 0"
PS90	757	30' 3"	17' 10"	9' 10"	42' 9"
PS100	939	33' 9"	18' 7"	9' 10"	48' 1"
PS120	1350	40' 7"	20' 3"	9' 10"	57' 1"

Dimensions are a guide-only. A minimum of 4" clearance to any building, poles or other structures is recommended.



QUASAR MODULAR SHADE STRUCTURE

When you want shade with style, the Quasar Modular Structure utilises a 'hypar' design to create an aesthetically pleasing shade solution.

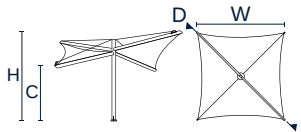
Popular with resorts, shopping centers, swimming pools and leisure centers, as well as community shade projects for parks and playgrounds, the Quasar comes in a range of sizes to suit the required shade protection.

The unique geometry of the Quasar is also attractive and eye catching when multiple units are installed in the same area.

Completely weather-proof, Quasar Modulares include galvanised steel cables with stainless steel fittings and a UV stabilised membrane.

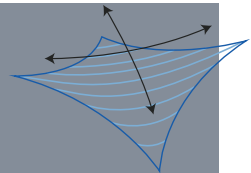
CUSTOMIZATION

- » Multiple units can be linked together to increase the shade and weather protected area.
- » Column height design can be adapted to suit your location.
- » Side supported columns can create an unobstructed shade area beneath the canopy.
- » Lighting and electrical connectivity available.



The Hyperbolic Paraboloid, or 'hypar' shape is used frequently in membrane shade structures.

The opposing high and low connection points help to hold the membrane under tension and create a strong, stable structure.



MODEL NUMBER	CANOPY AREA	STRUCTURE WIDTH	STRUCTURE HEIGHT	CLEARANCE	DIAGONAL
	ft ²	(W) ft. in.	(H) ft. in.	(C) ft. in.	(D) ft. in.
QS40	149	13' 7"	11' 11"	7' 10"	19' 1"
QS50	231	16' 11"	12' 10"	7' 10"	23' 9"
QS60	333	20' 4"	15' 0"	8' 10"	28' 7"
QS70	436	23' 9"	15' 9"	8' 10"	33' 2"
QS80	592	27' 0"	16' 11"	8' 10"	38' 0"
QS90	759	30' 5"	18' 10"	9' 10"	42' 7"
QS100	922	34' 0"	19' 9"	9' 10"	47' 9"
QS120	1351	40' 7"	21' 10"	9' 10"	57' 0"

Dimensions are a guide-only. A minimum of 4" clearance to any building, poles or other structures is recommended.



ST TROPEZ MODULAR SHADE STRUCTURE

The St Tropez Modular Structure is a unique inverted-umbrella style design and offers maximum visual impact in a pedestrian area or public space.

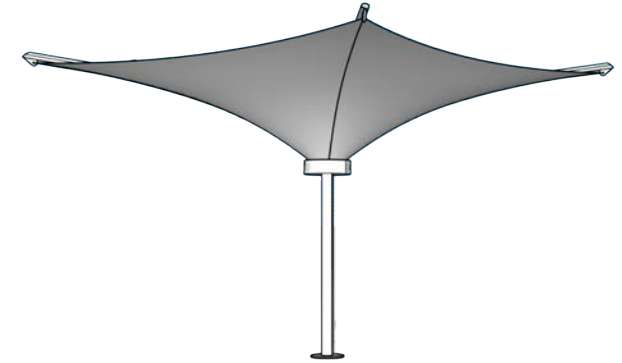
The inverted cone design enables rain water to be directed into hidden drainage in the center of the column.

A popular choice for local councils, transport hubs, airports, retail centers, sports and recreation facilities, and resorts and theme parks, the inverted canopy provides a higher shade covering, creating a light open air under-canopy feel.

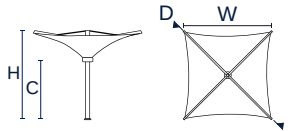
The raised edge height is great for overlapping adjacent structures or in area where high clearance is needed, such as transport infrastructure.

CUSTOMIZATION

- » Multiple units can be linked together to increase the shade and weather protected area.
- » Available in Contour Edge and Linear Edge.
- » Lighting and electrical connectivity available.



In addition to providing shade, the inverted cone of the St Tropez design collects storm water, which can then be plumbed into retention tanks, allowing redistribution of water for gardens or public amenities.



MODEL NUMBER	CANOPY AREA	STRUCTURE WIDTH	STRUCTURE HEIGHT	CLEARANCE	DIAGONAL
	ft ²	(W) ft. in.	(H) ft. in.	(C) ft. in.	(D) ft. in.
ST60	337	20' 3"	15' 0"	8' 10"	28' 5"
ST70	459	23' 7"	15' 3"	9' 6"	33' 2"
ST80	598	26' 11"	16' 1"	9' 6"	37' 10"
ST90	757	30' 5"	18' 0"	10' 6"	42' 10"
ST100	939	33' 9"	18' 10"	10' 6"	47' 5"
ST120	1350	40' 7"	20' 5"	10' 6"	57' 0"

Dimensions are a guide-only. A minimum of 4" clearance to any building, poles or other structures is recommended.



ORBIS MODULAR SHADE STRUCTURE

The Birdair Orbis Modular Shade Structure brings a vibrant, functional shade solution to any playground or park.

Specifically designed with a PVC mesh fabric infill, the Orbis offers shade in areas where full weather protection isn't necessary. PVC mesh is strong, durable, and built for longevity.

This side-supported cantilever structure provides sun protection without obstructing columns, making it ideal for:

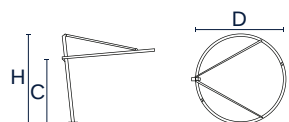
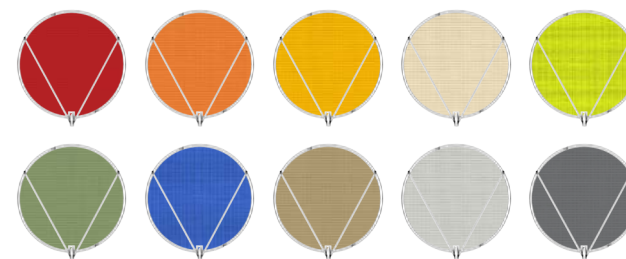
- » Shading playground equipment or sandpits.
- » Creating a shaded seating area over street furniture.
- » Covering picnic tables for a pleasant lunch spot.

CUSTOMIZATION

- » Engineered as a permanent shade structure, Orbis Modulares can be engineered for any wind speed.
- » PVC Mesh comes in a wide-range of colors from a number of preferred suppliers.
- » Choose to upgrade to a printed pattern on the underside for a bespoke shade structure.



SAMPLE COLORS (OTHER COLORS AVAILABLE).



MODEL NUMBER	CANOPY AREA	CANOPY DIAMETER	STRUCTURE HEIGHT	CLEARANCE
	ft ²	(D) ft. in.	(H) ft. in.	(C) ft. in.
ORB30	76	9' 10"	10' 10"	8' 0"
ORB40	135	13' 1"	13' 0"	9' 4"
ORB50	211	16' 5"	13' 9"	8' 10"

Dimensions are a guide-only. A minimum of 4" clearance to any building, poles or other structures is recommended.



HELIOS MODULAR SHADE STRUCTURE

The Birdair Helios Modular Shade Structure adds a vibrant and functional shade solution to any playground or park.

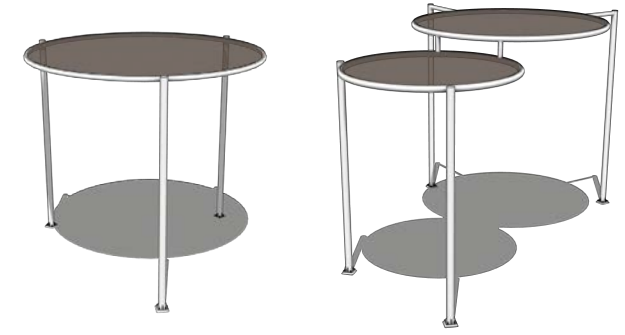
Designed with a durable PVC mesh fabric infill, the Helios provides shade while allowing airflow and natural light – ideal for areas where shade protection is the main requirement. The strong, long-lasting PVC mesh ensures reliable performance in outdoor environments and is available in a range of colors to enhance the architectural aesthetic.

Available in diameters from 4m to 7m as standard, multiple Helios structures can be overlapped and combined to create larger shaded areas. The perimeter supports can also be offset, maximising open space beneath the canopy for playground surfaces or equipment.

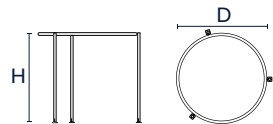
Engineered as a permanent shade structure, Helios Modulares can be designed for any wind speed.

CUSTOMIZATION

- » Two (or more) Helios units of the same or different size can be linked together at varying heights.
- » PVC Mesh comes in a wide-range of colors from a number of preferred suppliers.
- » Solid PVC also available for weather protection.
- » Choose to upgrade to a printed pattern on the underside for a bespoke shade structure.
- » Offset columns are possible for flexibility of installation.
- » Varying the column heights can create an angled shade structure.
- » Circular as standard, an ellipse shape is also possible.



SAMPLE COLORS (OTHER COLORS AVAILABLE).



MODEL NUMBER	CANOPY AREA	CANOPY DIAMETER	STRUCTURE HEIGHT
	ft²	(D) ft. in	(H) ft. in.
HC40	142	13' 5"	18' 4"
HC50	220	16' 9"	18' 4"
HC60	315	20' 0"	18' 4"
HC70	426	23' 4"	18' 4"

Dimensions are a guide-only. A minimum of 4" clearance to any building, poles or other structures is recommended.

HELENA MODULAR SHADE STRUCTURE

One of our most exciting designs, the Helena Modular Structure is a circular, anticlastic saddle-like structure.

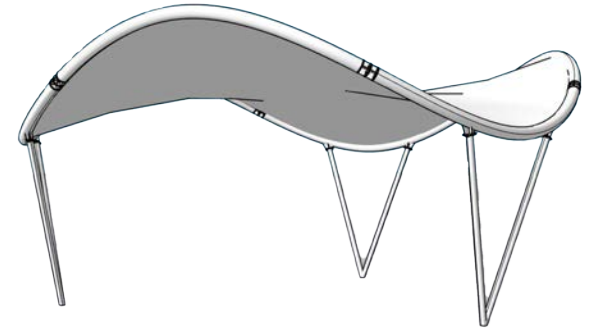
Supported by three lightweight V-shaped columns at the perimeter, Helena is a bright, open and airy structure, perfect for shading and weather proofing a school courtyard or covered outdoor learning area.

The wave-like upper curve can be positioned over the top of adjacent buildings.

Helena is also a star performer for outdoor stages and other public and community shade projects.

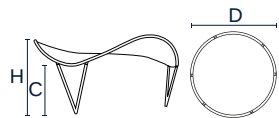
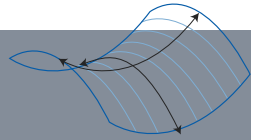
CUSTOMIZATION

- » Helena has three lightweight V-shaped columns as standard, but can be engineered with Y-shaped columns.
- » Rainwater sumps can be installed at the lower points, with downpipes painted to match the columns.
- » Lighting and electrical connectivity available.



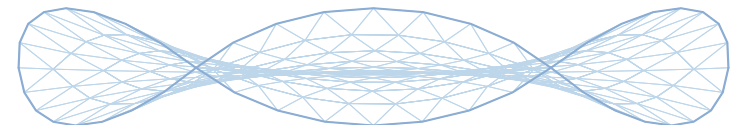
An anticlastic curved shape refers to a plane curved in opposite ways in two directions.

The most notable anticlastic forms are a Western-style saddle and a famous brand of snack food!



MODEL NUMBER	CANOPY AREA	CANOPY DIAMETER	STRUCTURE HEIGHT	CLEARANCE
	ft ²	(D) ft. in.	(H) ft. in.	(C) ft. in.
HE110	1060	36' 9"	14' 1"	8' 0"
HE140	1705	46' 7"	21' 9"	13' 1"
HE160	2220	53' 2"	16' 9"	7' 9"

Dimensions are a guide-only.





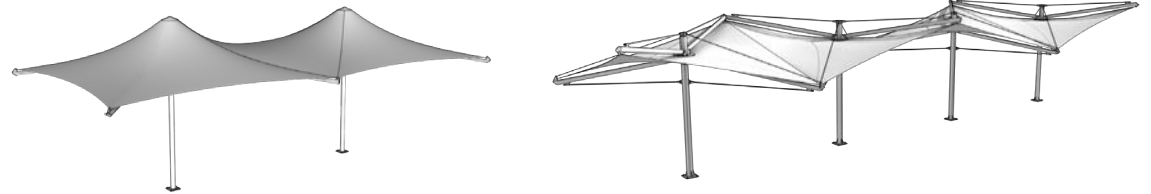
Linked St Tropez with Linear Edge

DESIGN FLEXIBILITY

While our standard range is pre-engineered and ready to fabricate, we are also able to adapt our modular range to almost any configuration.

Flexibility is a hallmark of the Birdair Modular Range.

- » We can adapt the size and shape of most of our designs.
- » We can link structures together to create a larger single canopy area.
- » Choice of membrane material; premium long-life PTFE or PVC for a value option.
- » Add color to your structure - both fabric and steel.
- » Include LED lighting, heating or roll down blinds.
- » Add or include gutters, downpipes and plumbing.
- » We can increase steel column widths for tropical weather regions or higher wind zones.



Linked Monaco with roll-down blinds & LED lighting



Linked Linear Monaco with Extra High Columns



Linked Quasar with side-support columns



Single Membrane with St Tropez Columns

Note: All linked modulares use continuous fabric.

SPECIFICATIONS

COMPONENT	TECHNICAL SPECIFICATIONS
Membrane	White PVC Structures - the most suitable architectural-grade, waterproof, satin-finished, PVC polyester fabric with PVDF lacquer (both surfaces) will be chosen for your project, sourced from Hiraoka, Mehler Technologies or Serge Ferrari — manufacturers recognised for quality, consistency and proven warranty standards. PVC Mesh Structures (Orbis and Helios) - a range of options available. Upgrade to durable, premium-quality PTFE membrane available for most structures.
Extended Color Range	Additional Serge Ferrari Solits 502 Colors and the Mehler Valmex FR580 Color range available as an upgrade (Modular Shade Structures 7m and smaller).
Steel Frame	Structural steelwork is designed and fabricated in accordance with the requirements AS4100. CHS steel is finished with multi-layer polyurethane premium architectural paint system (Choose from a wide range of steel colors).
Cables	Stainless steel cables with stainless steel terminations. Stainless Steel tension adjustment screws ensure membrane tension can be maintained over the life of the structure.
Hardware	All hardware inclusive of nuts, bolts, and washers are stainless steel. Arm end plugs are UV resistant nylon. Top Hats are spun aluminium with polyester powdercoat.
Wind Rating	All Modular Shade Structures are designed for basic wind-speed of 90mph. Extremely exposed locations, such as building rooftops and along with the coastal locations have higher winds and we can offer wind rating upgrades to most models. Contact us to discuss your project and the most appropriate model to suit your location.
Ground Snow Load	5 psf. <i>Note: Orbis and Helios structures are designed for shade-applications, and as such, are not suitable for locations that receive snow.</i> <i>Contact us to discuss your project and the most appropriate model to suit your location.</i>

The above specifications are general in nature, all modular shade structures are customized to suit the specific project requirements.



With nearly 70 years of experience, Birdair has worked with owners, architects, engineers and contractors to design and build architectural umbrellas, shade structures and custom tensile fabric structures used to create innovative roofing systems, canopies and skylights. As a turn-key specialty contractor, Birdair provides pre-construction assistance; including design assistance, budgeting, construction methodologies and project schedule development. Our in-house capabilities consist of design, engineering, fabrication, installation and maintenance of tensile structures.

SETTING THE STANDARD FOR TENSILE ARCHITECTURE

Birdair Inc.

1-800-622-2246 | sales@birdair.com | www.birdair.com

