

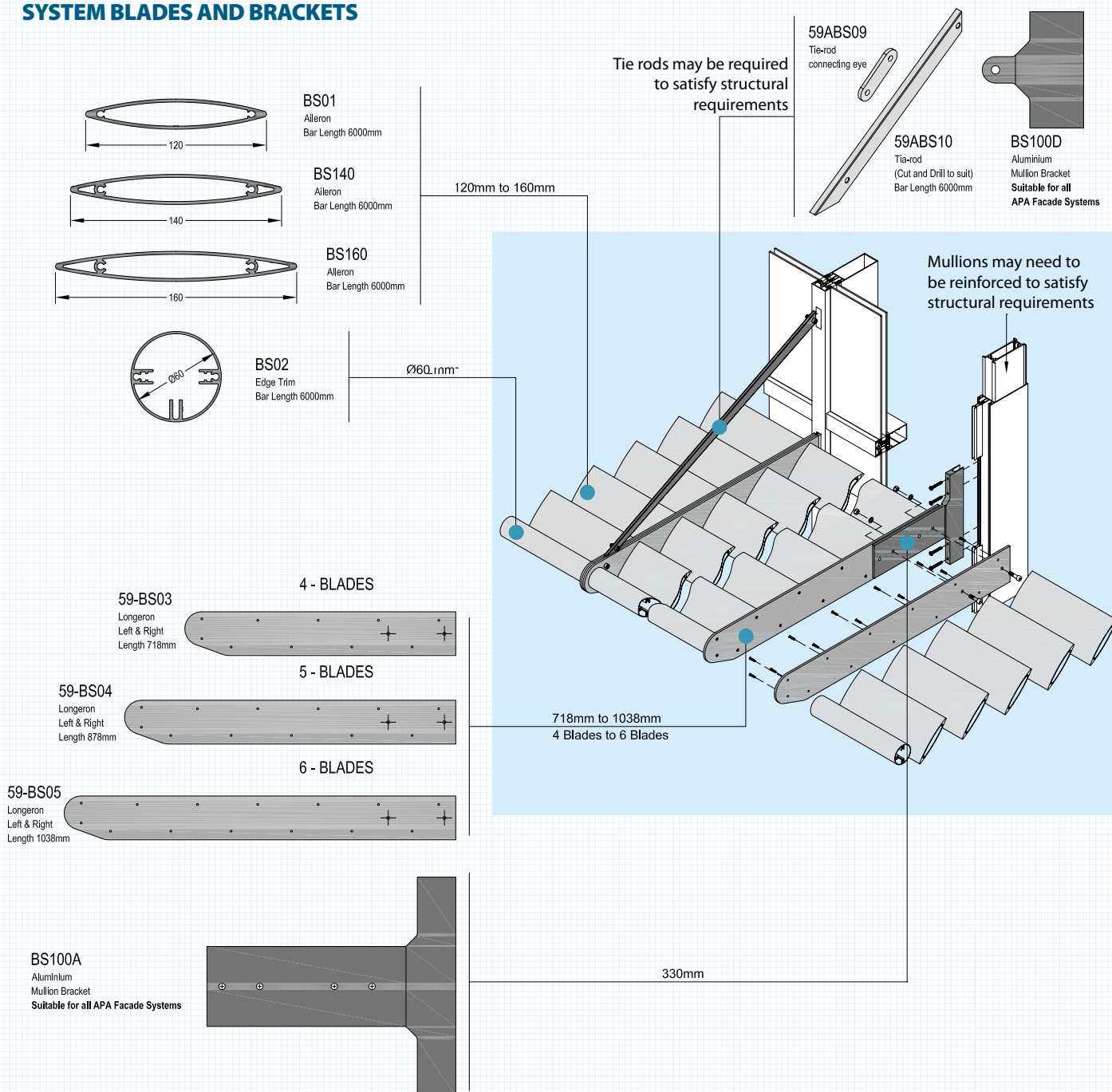
**APA**  
**SYSTEMS**



**FACADE BS**

SOLAR  
SHADING  
SYSTEMS

## SYSTEM BLADES AND BRACKETS



### MAX SPANS FOR BLADES

APA Item Number	Blade Size		Max. Blade Span in mm		
	Width	Height			45
<b>BS01</b>	120	20			2000
<b>BS140</b>	140	20			2100
<b>BS160</b>	160	20			2200

Max spans given are to be used for guidance only and are based on a combined snow and wind load of 0.75Kn/m<sup>2</sup>. An engineer should be consulted if the parameters of the design differ from this.

### Site Installation

The blades can be assembled onto side plates for connection to support arms - reducing site labour time.

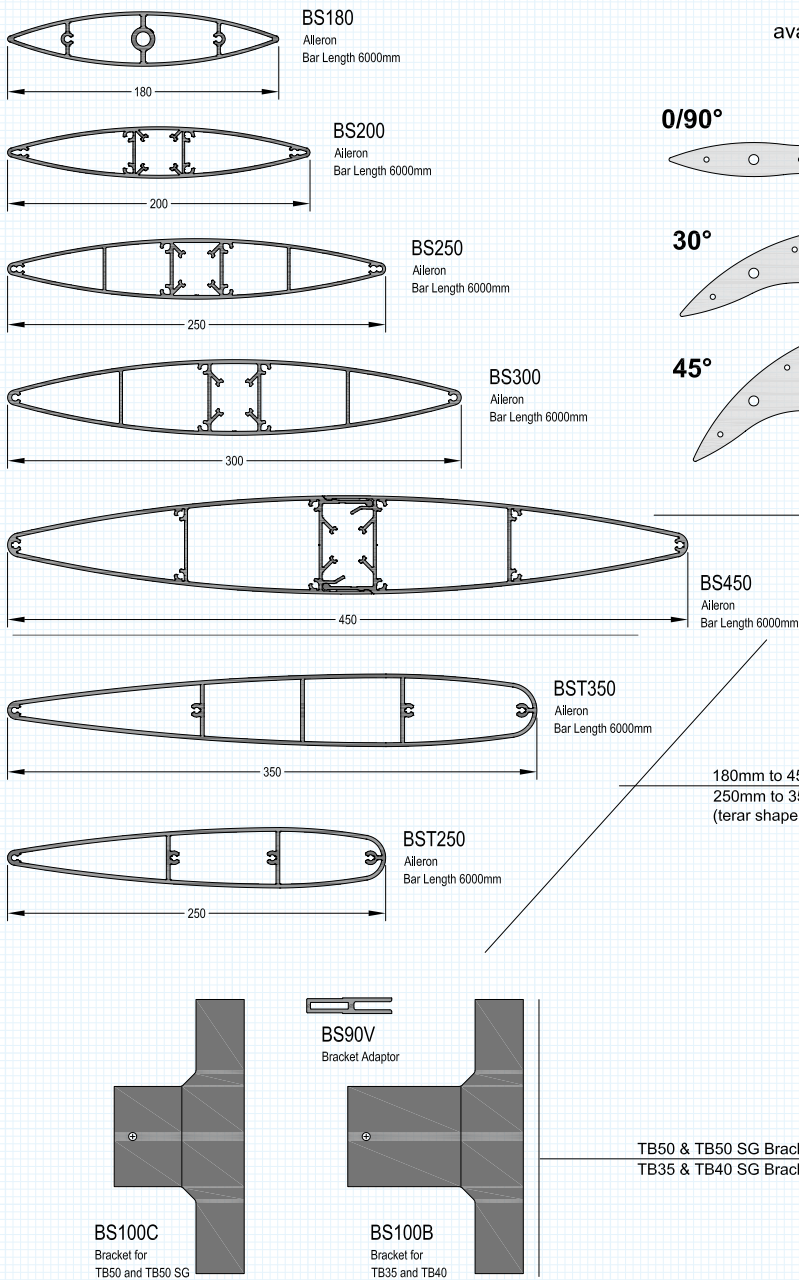




# FACADE BS - VERTICAL SYSTEM

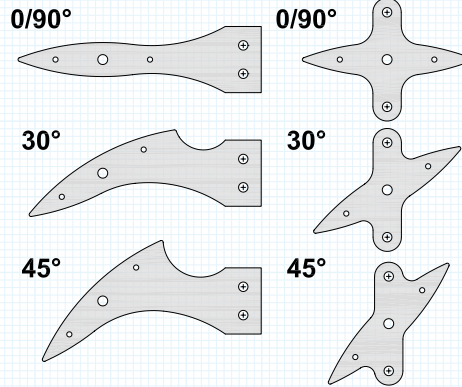
All vertical Brise Soleil panels are designed to suit the building's requirement and all are bespoke

## SYSTEM BLADES AND BRACKETS



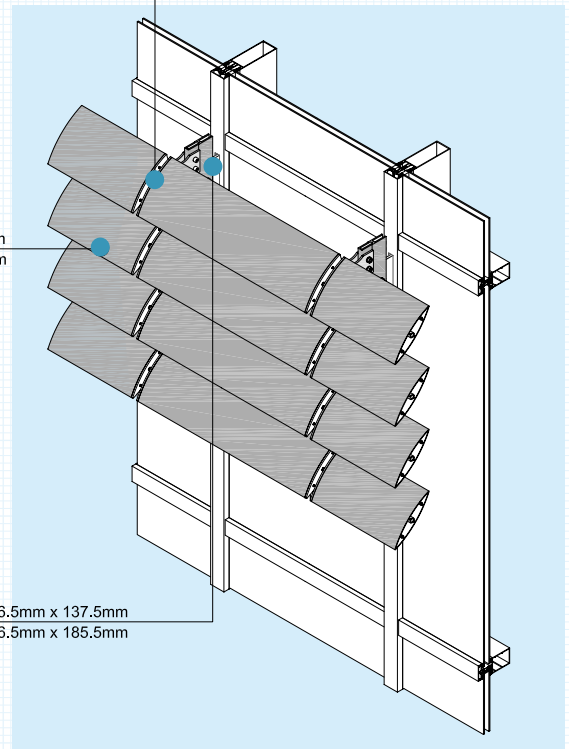
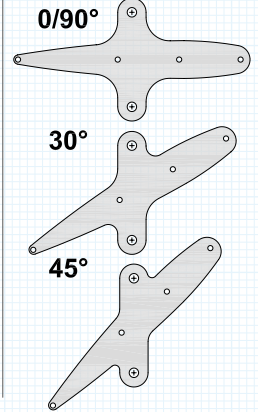
### BRACKETS

available for all Blades  
BS180 to BS450



### BRACKETS

available for all Blades  
BST250 & BST350



### MAX SPANS FOR BLADES IN A HORIZONTAL POSITION

APA Item Number	Blade Size		Max. Blade Span in mm		
	Width	Height	0/90	30	45
BS180	180	36	2750	2725	2675
BS200	200	34	3365	3325	3275
BS250	250	40	3825	3800	3725
BS300	300	50	4400	4380	4300
BS450	450	65	5500	5400	5100
BST250	250	40	3800	3775	3700
BST350	350	48	5000	4900	4875

Max spans given are to be used for guidance only and are based on a combined snow and wind load of 0.75Knm/m<sup>2</sup>. An engineer should be consulted if the parameters of the design differ from this.

#### Site Installation

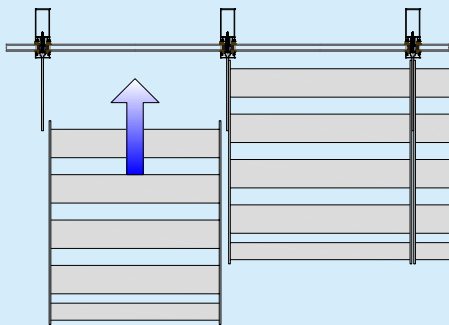
Horizontal or vertical positioning of the blades is limited only to the designer's imagination.



## DETAILS AND VIEWS

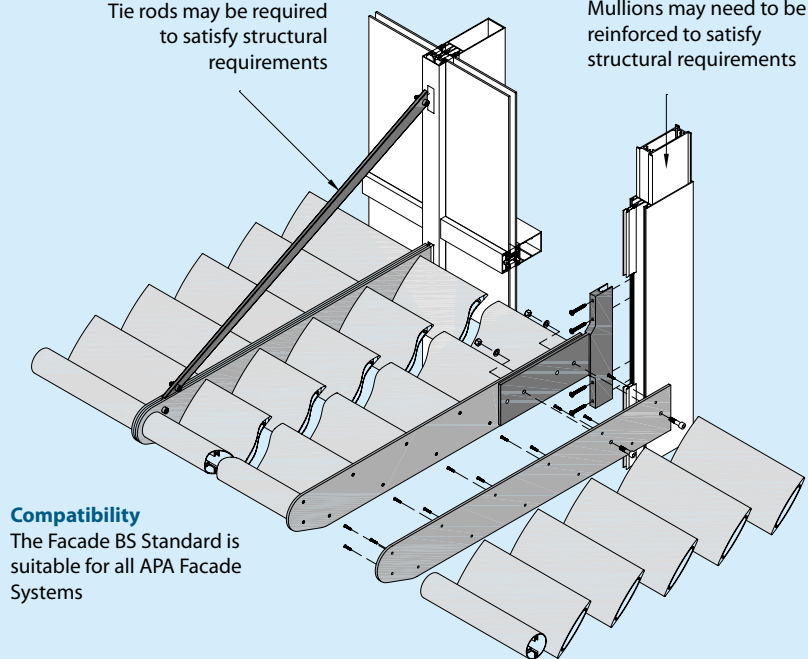
### Site Installation

The unit would normally be pre-assembled in the workshop and fixed as one piece on site as illustrated below



Tie rods may be required to satisfy structural requirements

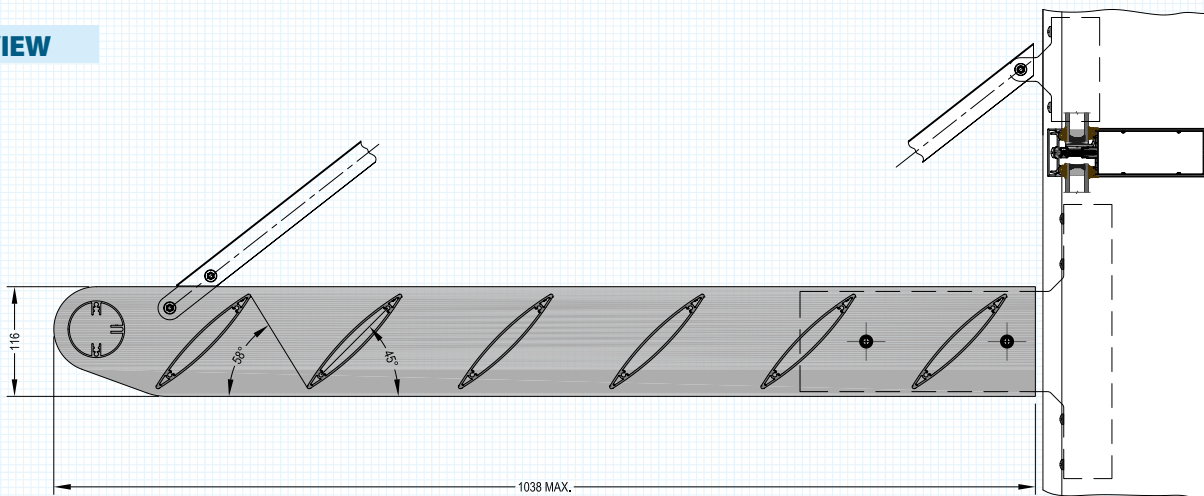
Mullions may need to be reinforced to satisfy structural requirements



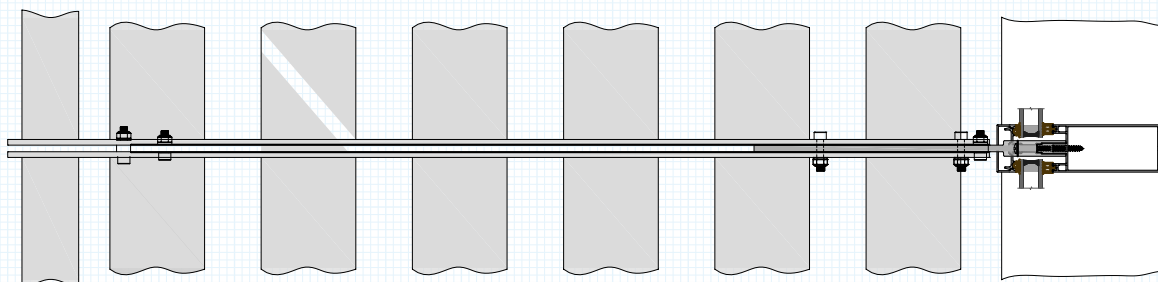
### Compatibility

The Facade BS Standard is suitable for all APA Facade Systems

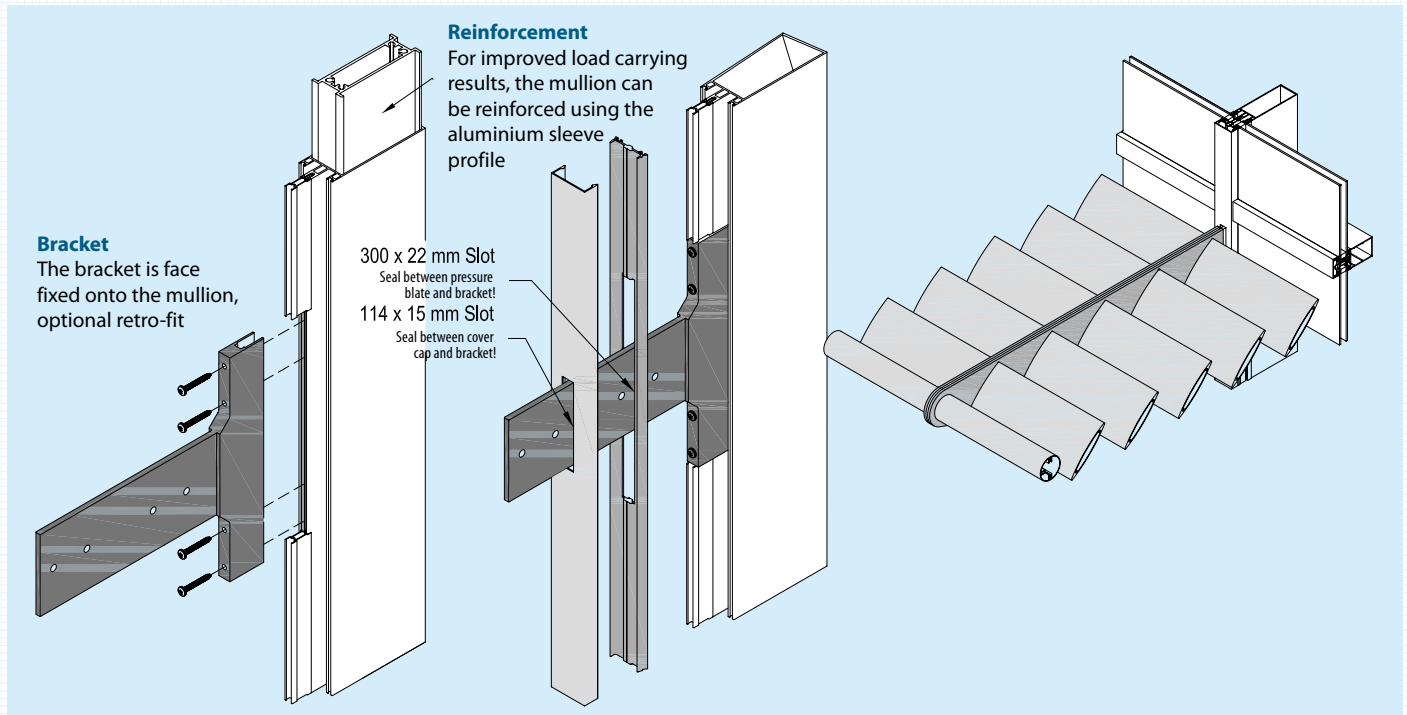
## SIDE VIEW



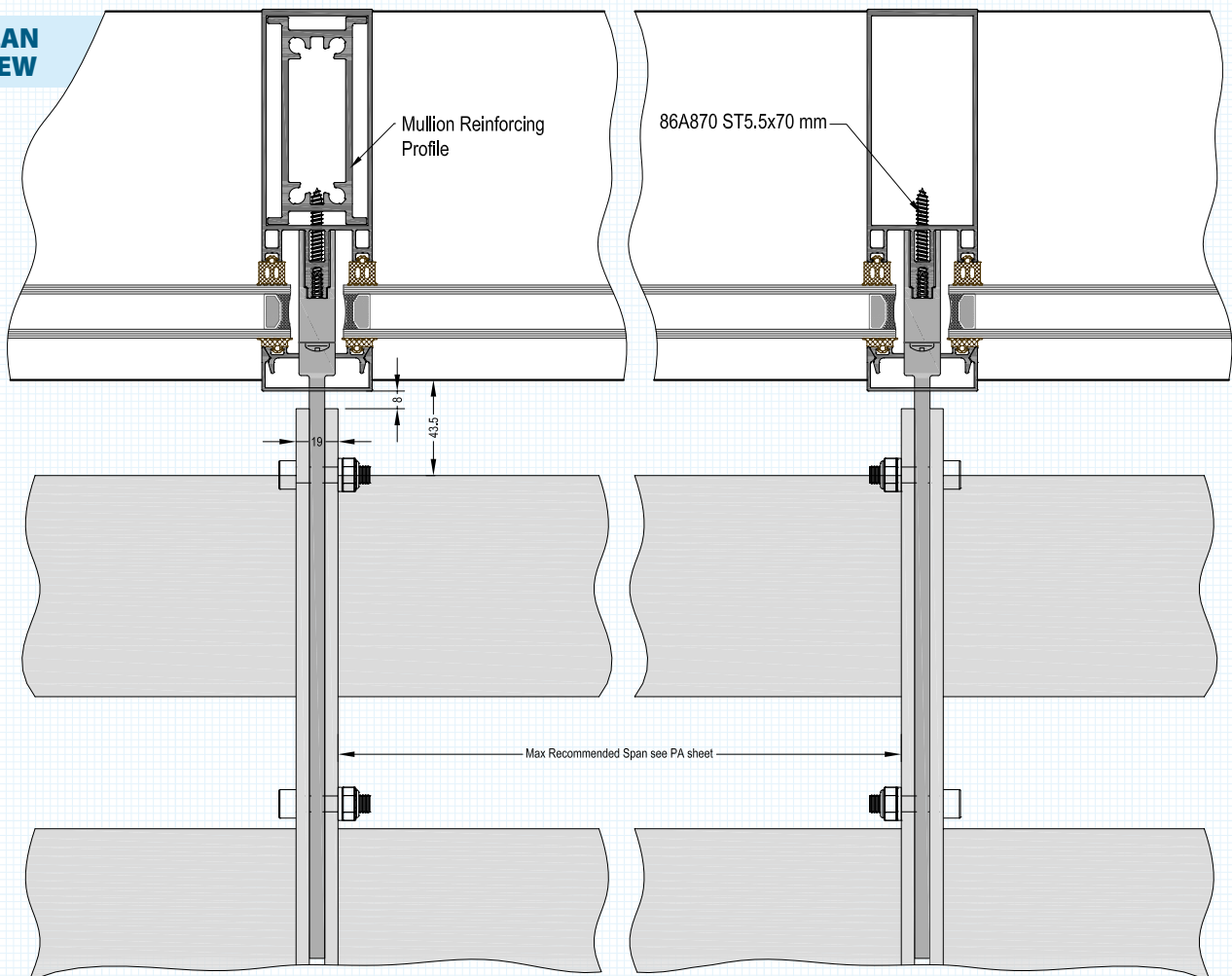
## PLAN VIEW



## DETAILS AND VIEWS



## PLAN VIEW



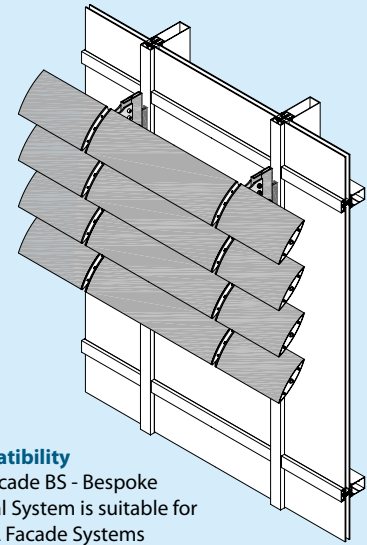
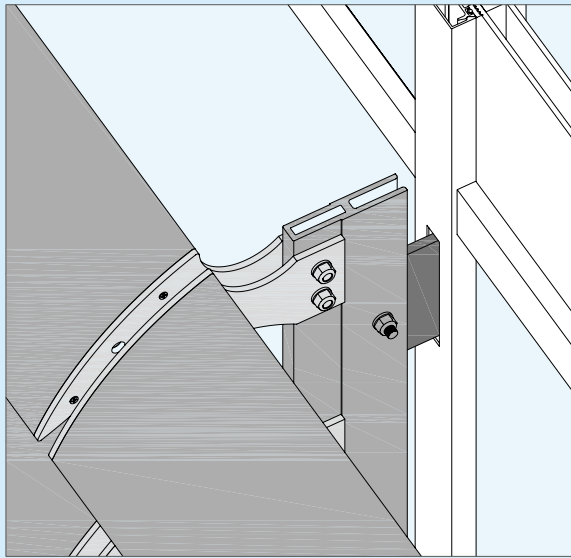
# FACADE BS - VERTICAL SYSTEM

All vertical Brise Soleil panels are designed to suit the building's requirement and all are bespoke

## DETAILS AND VIEWS

### Brackets and Blades

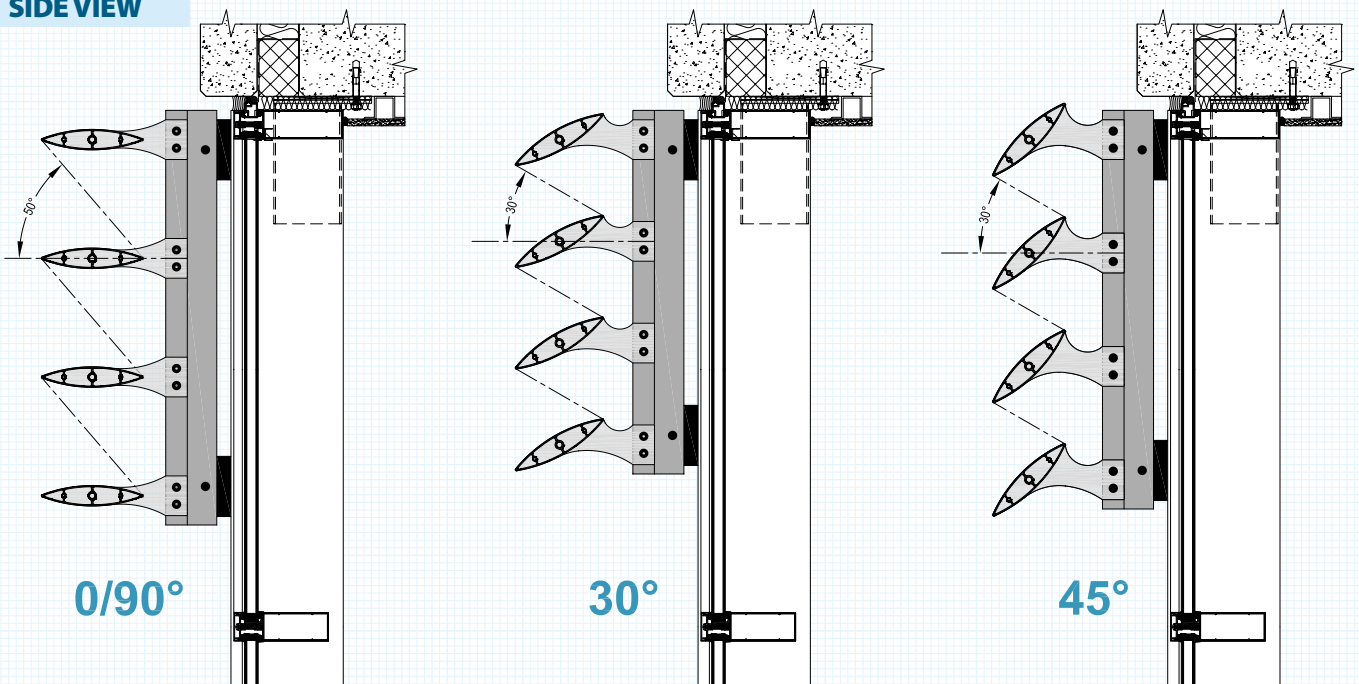
All blades have a variety of plate brackets pitched at different angles. These plates are fixed to the end of the blades by stainless steel screws (PanHead No.5.5x38mm) into extruded screw grooves in the blades. The vertical runner which connects the blades, can be fixed to curtain wall facades or different structures which surround punched open windows, such as brick or block walls, cladding, etc.



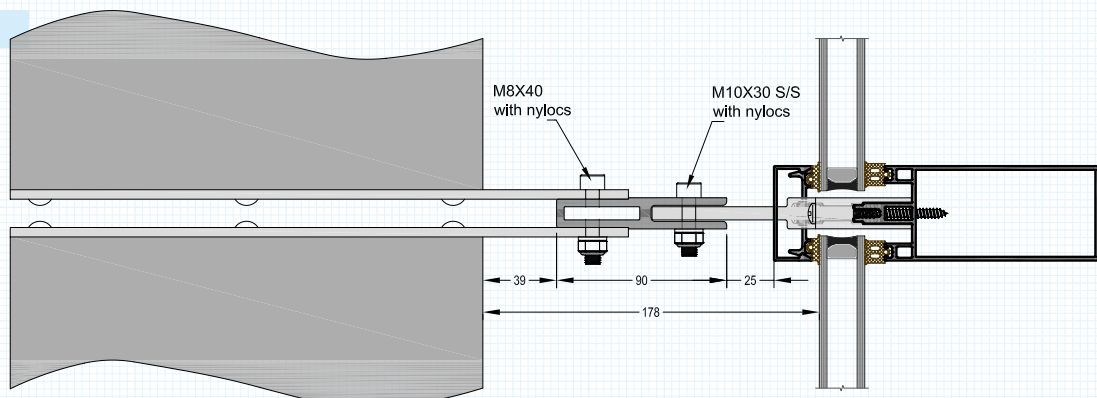
### Compatibility

The Facade BS - Bespoke Vertical System is suitable for all APA Facade Systems

## SIDE VIEW



## PLAN VIEW

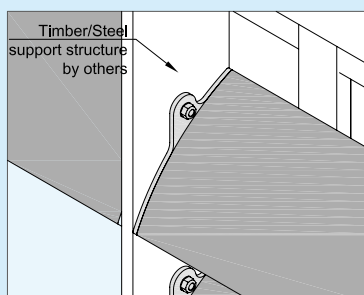
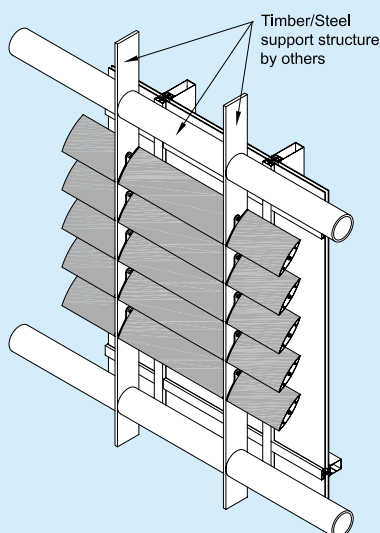




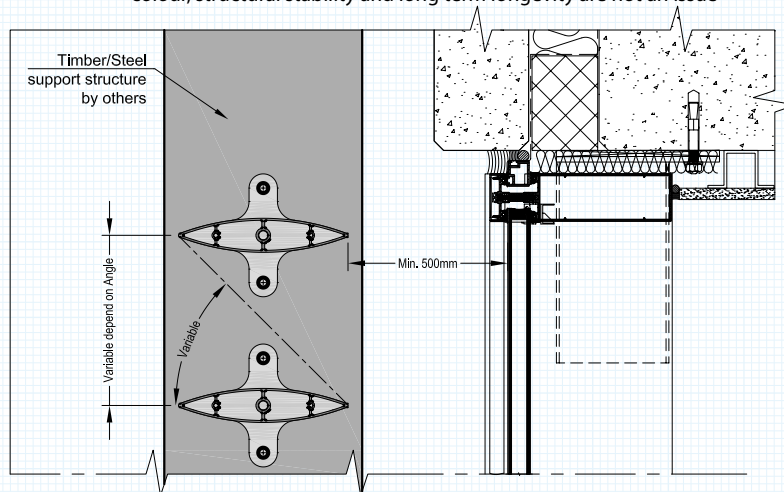
## DETAILS AND VIEWS

### Brackets and Blades

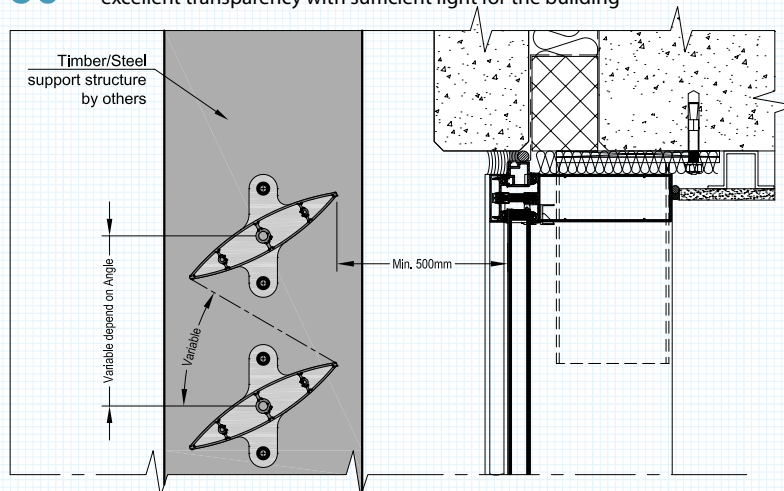
Various elliptical shaped blades ranging in size from 100mm up to 450mm, are available along with a huge variety of fixing brackets, to allow the design team flexibility. Horizontal and vertical positioning of the blades is only limited to the designer's imagination and the structural integrity of the chosen blades.



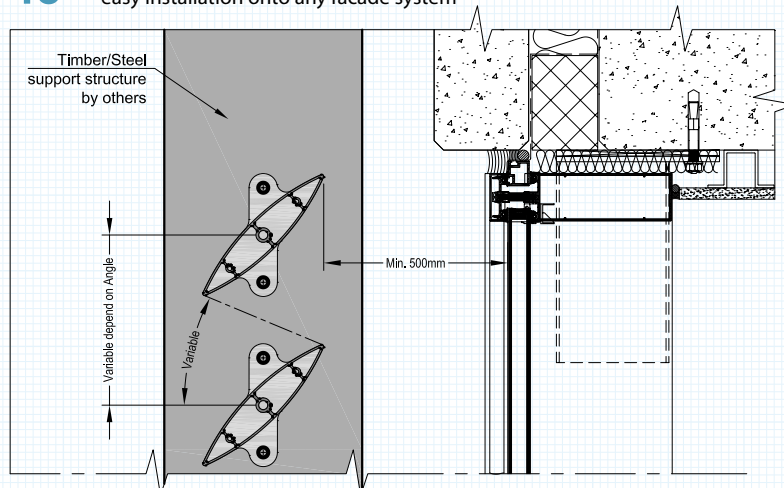
**0/90°** Being manufactured from polyester powder coated extruded aluminium, colour, structural stability and long term longevity are not an issue



**30°** Large blades allow for larger gaps between the blades, ensuring excellent transparency with sufficient light for the building



**45°** This Brise Soleil product range offers a system based solution enabling easy installation onto any facade system



## Introduction

The use of Brise Soleil or Sun Screens to reduce solar heat gain through glazed facades is now recognised as an important consideration in modern buildings.

Countries situated in northern latitudes such as Ireland, must deal with the sun's angle being lower, which results in more exposure through vertical glazing causing greater heat gains.

## Functions

The elliptical design of the blades reduces the susceptibility of the Brise Soleil to wind load, allowing it to be used on high rise buildings and in all weather conditions.

Both vertical and horizontal Brise Soleil provide highly effective shading in the summer with uninterrupted views, whilst minimising the effect on light transmission in the winter.

Most bespoke and traditional Brise Soleil or solar shading panels can be manufactured off-site, into modular or unitised forms, ensuring speedy installation.

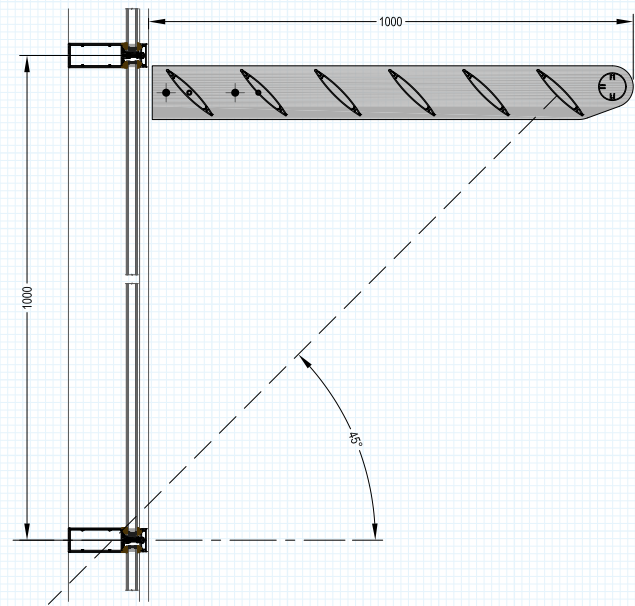
The system has an array of accessories allowing for cost effective project specific bespoke solar shading designs to be incorporated into the facade.

When designing horizontal solar shading the length, width and projected dimensions of horizontal sunscreens will depend on a number of factors, one being the time of year. For south facing elevations in Ireland the highest sun angle occurs at midday during the month of June. The angle of the sun rises during the months of April and May peaking in June then declining through the remainder of the year.

Approximate angle of the sun at midday in Ireland (based on 52° latitude)

April	50°
May	58°
June	62°
July	58°
August	50°
September	38°

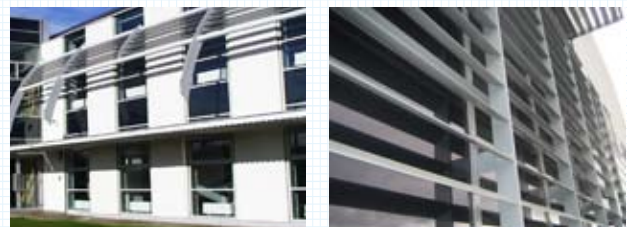
*Due to the design variations, which can be incorporated into the design of solar shading the information contained in this brochure, is to be used for guidance only. All static values for the blades along with bracket design and fixings must be evaluated on a project-by-project basis. In this brochure the photographs used do not always reflect the products illustrated.*



## Design

Horizontal or vertical positioning of blades is limited to the designer's imagination and the structural integrity of the chosen blades.

Various elliptical-shaped blades ranging in size from 100mm up to 450mm are available.



## TURNING ARCHITECTURAL DESIGN INTO REALITY

- Curtain wall systems
- Modular framed systems
- High performance window and door systems
- Structurally bonded framed systems
- Brise Soleil