



Aerofoils 200AF - 450AF

**HunterDouglas**

SUN CONTROL

## System Description

Luxalon® wing-shaped panel elements, or fins, combine optimum solar effectiveness with a firm and futuristic appearance.

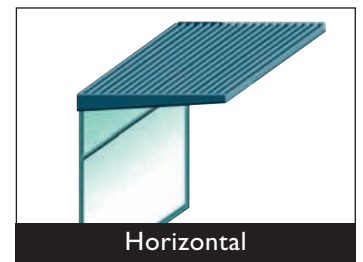
- Aluminium extruded wing-shaped profiles
- Available anodised, in RAL colours in polyester or PVDF coating or in wood tones
- Fin position horizontal or vertical
- System projected horizontally or positioned vertically
- 6 different standard profiles from 200 to 450 mm wide
- Fins fixed at a chosen angle between 0 and 180 degree in increments of 5 degrees
- Adjustable fins with motorised operation, suitable for Building Management Systems
- V-bracket fixtures, available in 0, 30 and 45 degree for the 200 - 300AF
- Cup bracket fixtures, available in 0, 30 and 45 degree for the 350 - 450AF
- Two standard supporting structures are available, tube or flat bar
- Corner solutions are available for fixed systems



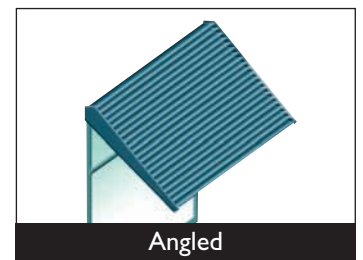
Material centre & Omegam, the Netherlands

## Practical Applications

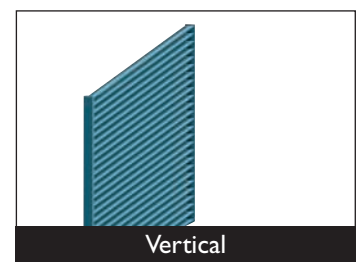
- *Horizontal projected Aerofoil system*  
For high sun angles, the horizontal application assures a constant and reliable sun control system during sunny periods.



- *Angled projection Aerofoil system*  
For high and medium sun angles, sloped applications give even more shade.



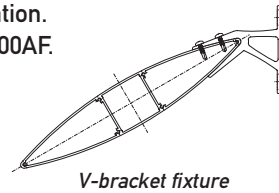
- *Vertical Aerofoil system*  
For lower sun angles, the vertical application allows a reliable sun control system with good visibility to the outside.



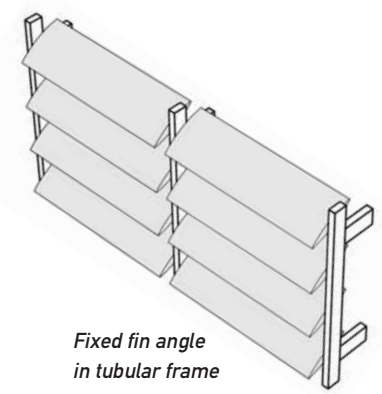


**- Fixed Fin Angle**

The Luxalon® fixed Aerofoil system in a sub-structure has been designed to accommodate any angle between 0° and 180° with increments of 5 degrees. The fin angle can be set during installation. V-bracket fixture, available in 0, 30 and 45 degree for the 200 - 300AF. Cup-bracket fixture, available in 0, 30 and 45 degree for the 350 - 450AF.



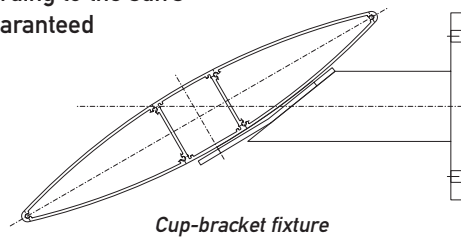
V-bracket fixture



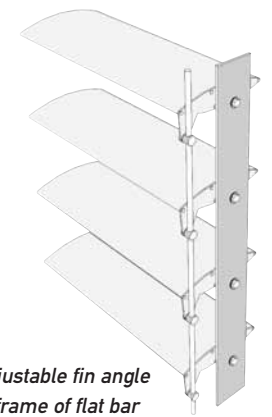
Fixed fin angle in tubular frame

**- Adjustable Fin Angle**

The Luxalon® adjustable Aerofoil system gives the user the option of setting the fins at any possible angle from 0 to a maximum of 120 degree at any time. With this motorised system, maximum convenience can be obtained with the optional intelligent control system, which automatically regulates the fins according to the sun's path. Due to the materials utilised this system is guaranteed to operate with a minimum of maintenance.



Cup-bracket fixture



Adjustable fin angle in frame of flat bar

**Possible Configurations**

As shown in the practical applications, a wide variety of configurations are possible. Two standard wall/façade mounts are available. Non standard mounts are usually designed and manufactured by the installers. There is also a choice in fin size each allowing a maximum span. The choice to be made is therefore related to aesthetics the structure of the building construction and the allowable span of the fin.

**- Support Structure**

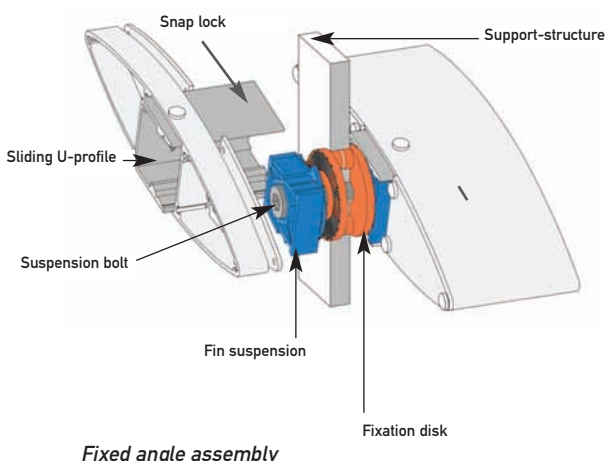
Two standard support structures are available, allowing you to choose the aesthetic look appropriate for the application. The structure is made of aluminium or optionally, galvanized steel, tube or flat bar.

**Installation**

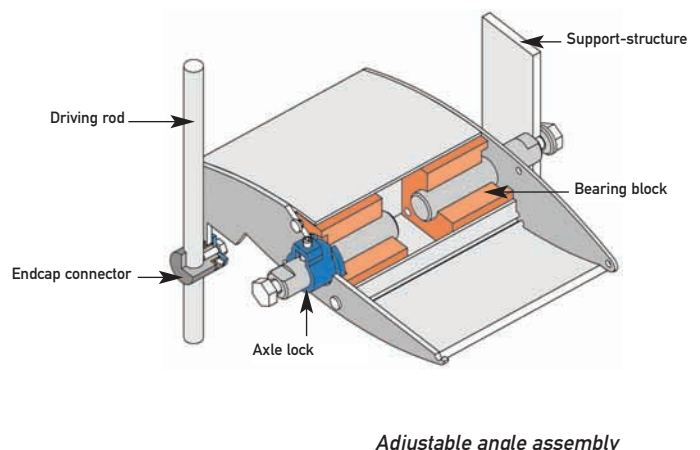
Fast and easy installation for both Luxalon® Aerofoil systems require a minimum of tools.

For the fixed fin system each fin is 'snapped' into position by sliding the U-profile section over the fin suspension.

For the adjustable system, two axles per fin are fitted to the frame. The fins are fixed to the axles and aligned with a setscrew. The driving rod is attached and adjusted. Finally the motor is installed and adjusted to provide the required angle of rotation of the fins.



Fixed angle assembly



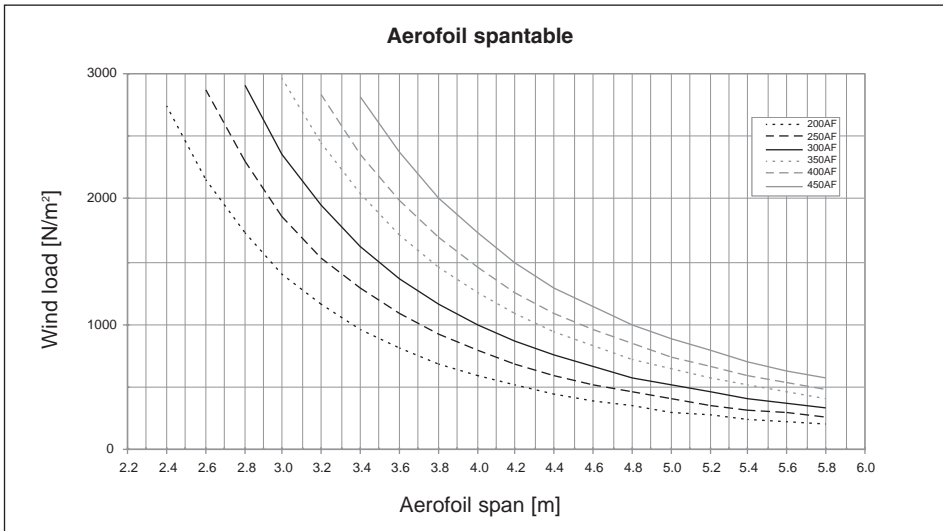
Adjustable angle assembly

## Maximum Span

### - Panel Span

The panel span in relation to the wind load (pressure or suction), can be calculated from the graph below.

Snow load calculations are identical to the calculation for wind load.



Note: Calculating the value of the local wind load is the responsibility of the installer who must take into account the regulations laid down by local authorities. For corners, roof edges or special designs wind pressure/suction will be determined with due consideration of the relevant local country's Standard Code of Building Practice.

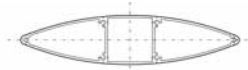
*Orion Cameracrane, Czech Republic*



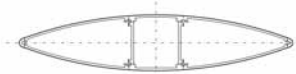
*Teleport office building, the Netherlands*



*Theatre Recklinghausen, Germany*



200AF - width=200, height=45



250AF - width=250, height=51



300AF - width=300, height=56



350AF - width=350, height=60

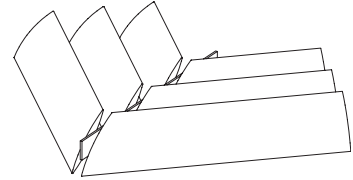


400AF - width=400, height=63

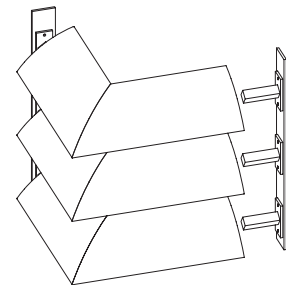


450AF - width=450, height=66

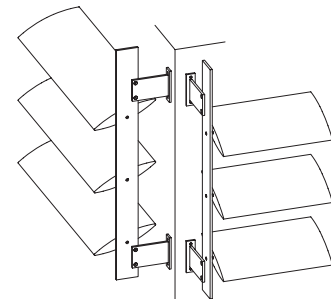
**- Corner Solutions**  
There is a solution for every corner angle with the fixed Aerofoil system, some standard configurations are shown.



**Mitre cut with bracket**



**Mitre cut welded**



**Open corner**







## Material Specifications

### - Base Material

Luxalon® Aerofoil fins are aluminium extrusions with a wall thickness  $\geq 1,8$  mm. The ends are closed with aluminium caps cut from  $\geq 1,5$  mm thick plate. All used screws and bolts are made from stainless steel. For the support structure you can choose either aluminium or steel.

For the fixed system the fixation disc and the fin suspension are made of Nylon (PA6.6) filled with fibre glass. The sliding U-profile is extruded aluminium.

For the adjustable system the bearing block is made of Poly Ethilene (HDPE) with a stainless steel axle and an axle lock made of Nylon (PA6.6) filled with fibre glass. The end cap connector material is stainless steel and for the driving rod there is a choice of aluminium or steel.

All aluminium products can be recycled for the full 100% requiring very little energy.

### - Finishes

Luxalon® Aerofoils can be supplied with an anodised finish or with a polyester powder coating.

### - Luxalon® Colour Range

RAL or NCS colours are available or you may request custom colour.

## Solar Protection Design Tool

In order to design the optimal Sun Control System for buildings Luxalon® has developed a Solar Protection Tool. This tool takes into consideration the orientation of the façade and the position of the building. It shows the sun and its shading during the day and throughout the year in and on the building. These calculations are made for projects by our project support team.

*For additional information contact the Luxalon® sales office.*

*Product specifications are available in digital format.*

## HunterDouglas®

Hunter Douglas is the world market leader in daylight regulation and solar heat control solutions with window covering and architectural products. The group, which origin goes back to 1919, is comprised over 150 companies with manufacturing and assembly organizations in more than 100 countries.

### HUNTER DOUGLAS EUROPE B.V.

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**LUXALON®**  
SUN CONTROL SYSTEMS