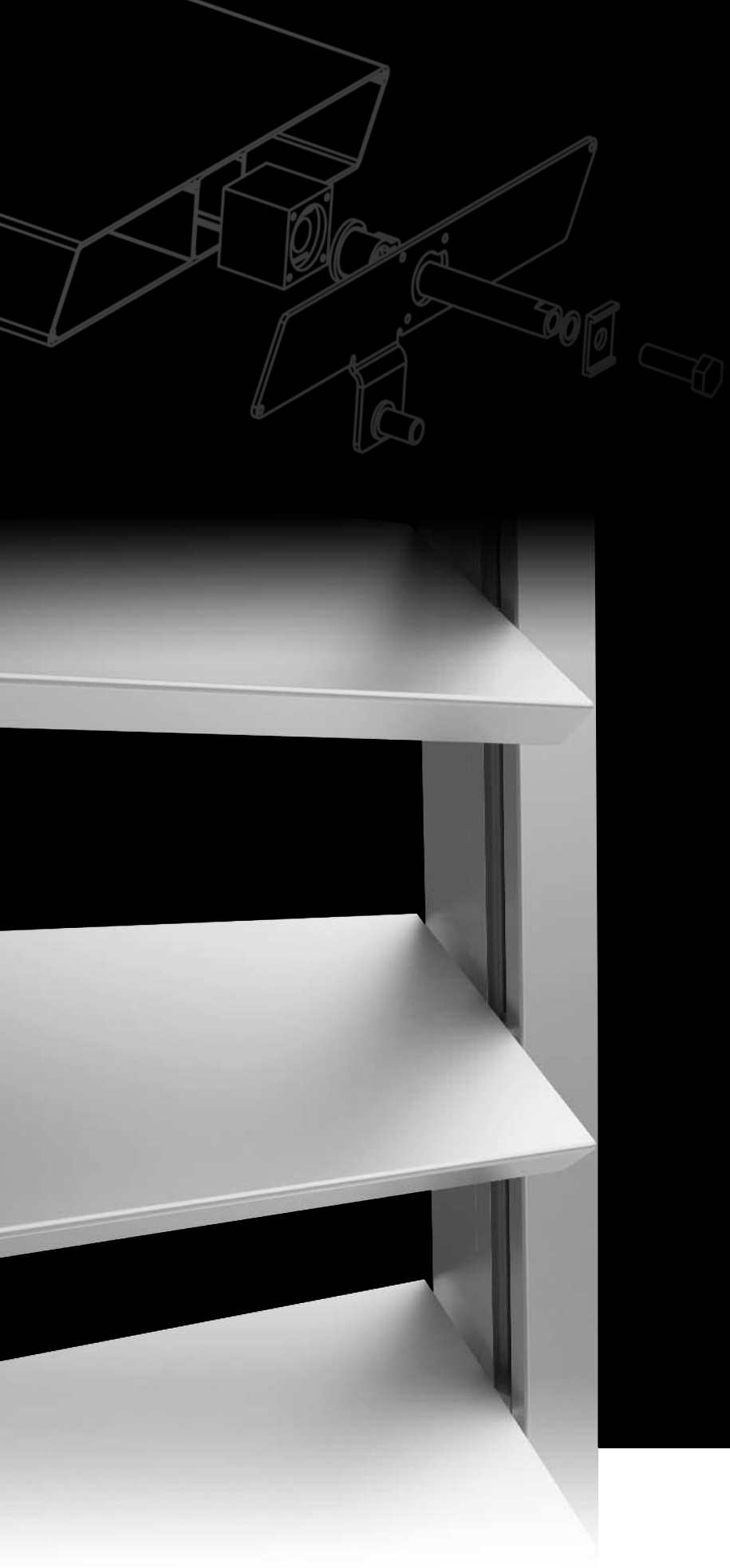


Dynamic Sun Control

HunterDouglas® Dynamic Sun Control provides outstanding performance and flexibility for interior comfort. The unique **patented Tilt'nStack technology** provides precise shading control for large louvre spans. From clear view to a **fully adjustable** spectrum of aperture openings that withstand the toughest weather conditions, Dynamic Sun Control offers a durable and high performance shading solution.

HunterDouglas

SUN CONTROL

MAXIMUM FUNCTIONALITY

The revolutionary HunterDouglas® Dynamic Sun Control offers a unique highly durable solution for fully motorized architectural Sun Control. Excellent flexibility with precise positioning of the system from fully closed, tilted or clear view to ensure optimal Sun Control.

The Dynamic Sun Control system is vertically mounted to the façade by lateral guides. The infill consists of horizontal stylish extruded aluminium louvres which can be tilted from fully opened to fully closed. The sophisticated Dynamic Sun Control system works with many standard HunterDouglas louvre fins and the louvre infill is able to carry large spans.
The sytem is a highly effective solution for shading any size or multiples of windows, as well as entire screen walls.

IN CONTROL OF COMFORT

Regardless of geographical location, the HunterDouglas® Dynamic Sun Control provides outstanding shading performance for a building and its occupants. Fully adjustable openings enable optimized daylight entry and interior comfort levels. The system can operate as an individually controlled unit or integrated in a building management system, centrally controlled by sun and wind detector input. The system will make a considerable contribution to meeting energy conservation requirements for a building.

ADAPTABLE DESIGN

Applying the Dynamic Sun Control system onto the building's exterior instantly transforms its appearance. Control over the aperture openings provides maximum impact with the compact and stylish design of the lateral guide, absence of head and bottom rail and the large louvre spans.

Closed

CONTENT

PATENTED TECHNOLOGY

The Tilt'nStack technology used for Dynamic Sun Control is unequalled in functionality and performance. The unique patented technology enables the combined tilting of matching louvres into any desired position, and the stacking of the louvres into a compact package when needed.

QUALITY

All components of the Dynamic system are designed and manufactured meeting the highest standards in product durability, reliability and safety. Tested in the toughest conditions, Dynamic Sun Control provides a fully adjustable high performance and low maintenance Sun Control system.

Innovative Products Make Innovative Projects

alu

HunterDouglas

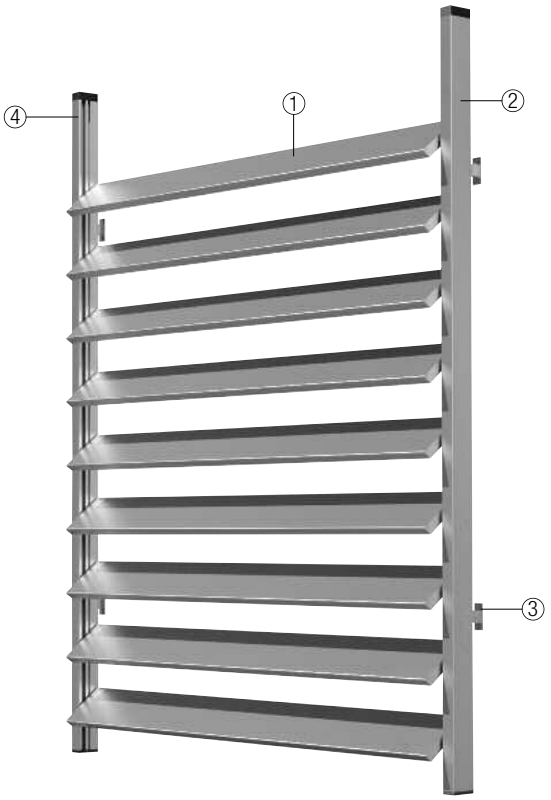
Dynamic Sun Control

The HunterDouglas® Dynamic Sun Control system consists of horizontal parallel positioned louvre fins which are supported at the ends by vertical lateral guides, without using head or bottom rails.

The patented Tilt'nStack technology, used for Dynamic Sun Control, enables the louver fins to move in two sequential steps:

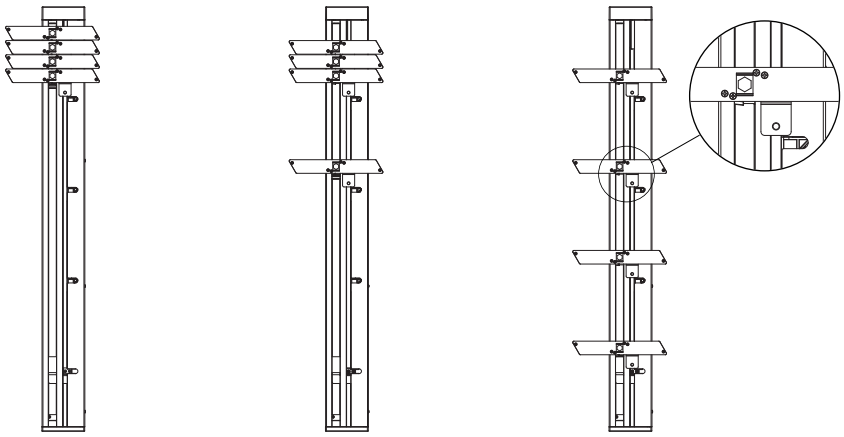
- Stacking
- Tilting

1 = louvre fins
2 = lateral guide
3 = mounting bracket
4 = motor



STACKING

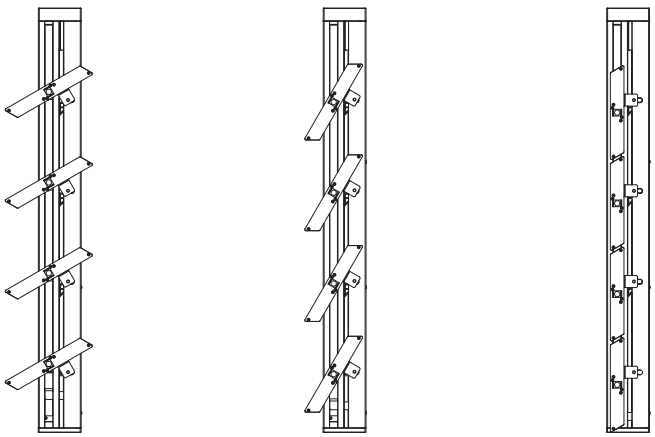
At the starting position the louvre fins are collected at the top of the lateral guides. In this position the flat side of the stacked louver fin is in horizontal position with an approximate 2 mm distance to the next stacked louver fin (1). When lowering (unstacking), the louvre fins (2), will sequentially move downward into final unstacked position (3). The distance between the louvre fins equals the defined width of the louver fin.



1 2 3

TILTING

After reaching the final unstacked position the louver fins can be tilted (4 and 5) from initial horizontal position into a vertical position (6), closing the plane of the system. The tilting angle is fully controlled with a motorised system to set individual shading requirements. The excellent control over shutting and shading, by a fully adjustable spectrum of aperture openings, makes HunterDouglas® Dynamic Sun Control system an optimal shading solution.



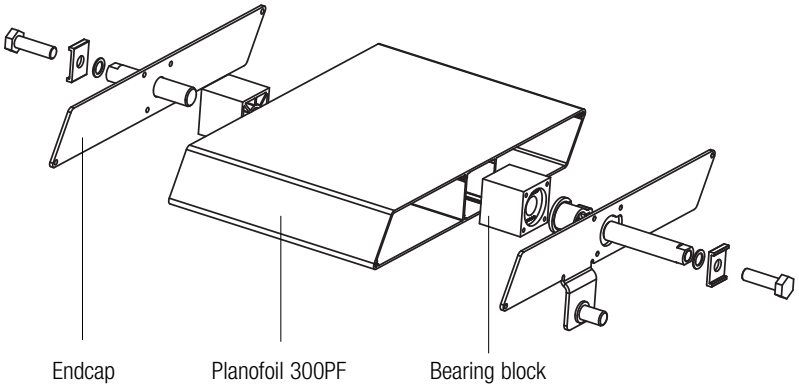
4 5 6

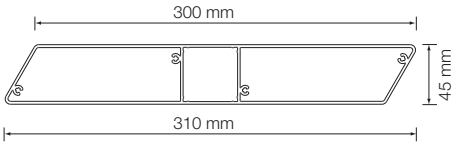
Dynamic Sun Control

LOUVRE FINS

The HunterDouglas® Dynamic Sun Control is available with a special designed louvre fin: the HunterDouglas® Planofoil 300PF. This extruded aluminium louvre fin is optimised for application into the Dynamic Sun Control system:
- creating maximum span
- flat closed plane in maximum tilted position
- fitting into the straight and stylish design of the lateral guide.

In addition many HunterDouglas® Aerofins can be applied, please contact Hunter Douglas for details.



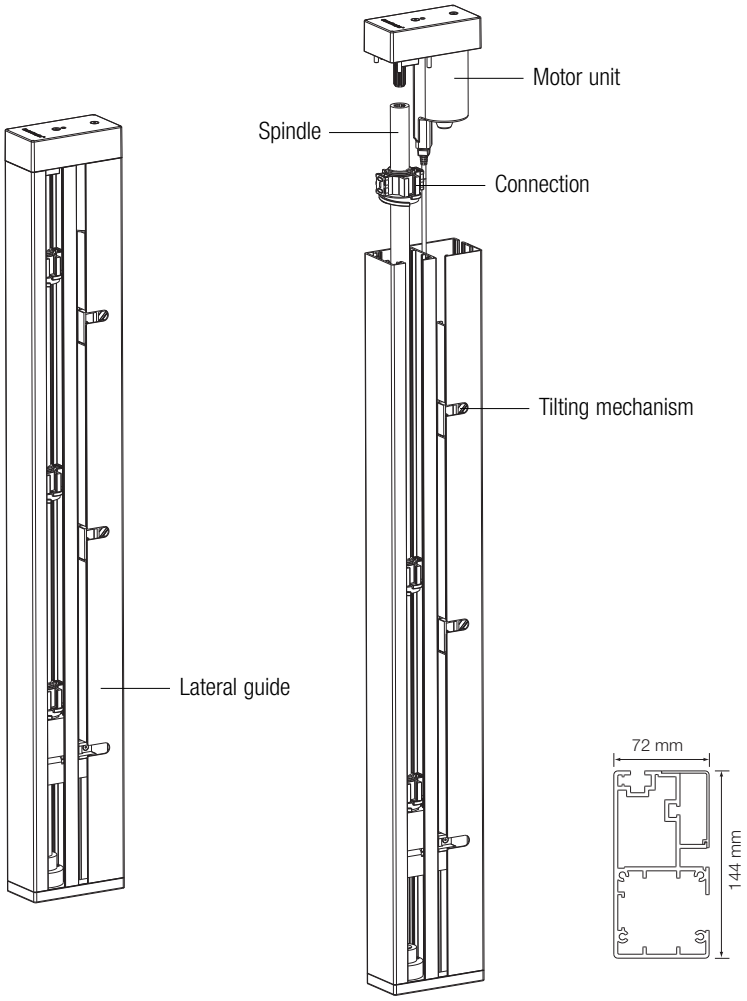


LATERAL GUIDES

The louvre fins are supported at the ends by vertical positioned lateral guides, which are mounted onto the substructure using mounting brackets. Integrated into both lateral guides is a concealed driving mechanism which enables the louvre fins to stack. This driving mechanism is controlled by a separate integrated motor, which also controls the tilting of the louvre fin. The tilting of the louvre fin is only driven from one of the two lateral guides, whereas the stacking is driven from both lateral guides.

The motor unit at the end of the lateral guide drives a spindle which holds the connection points of the louvre fins.
By turning the spindle the louvre fin will be moved over the length of the lateral guide. Reaching the final stacking position in the top of the lateral guide, the raised louvre fins is slowed down and stopped, forming a composed pack of fins.

In final unstacked position, further movement of the spindle will introduce the tilting movement. The louvre fins will tilt simultaneously until their final vertical position has been reached.

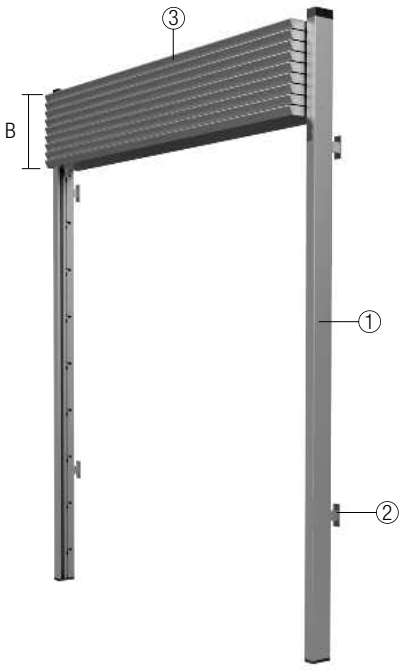


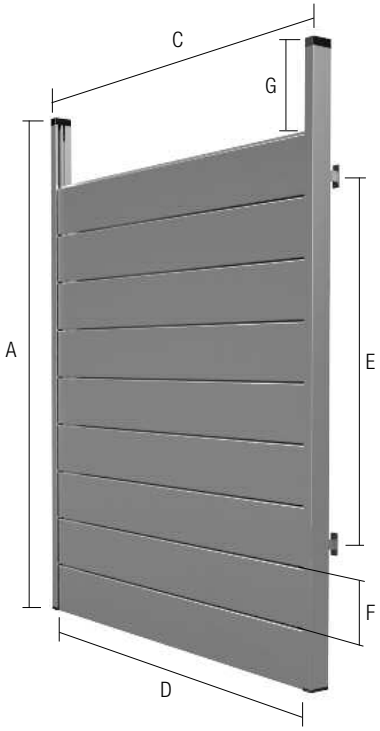
Dimensions

The height of the Dynamic Sun Control system is limited to a maximum length of the lateral guides of 3,5 meter, including the stacking height.

In width the dimensions are limited to the maximum span of the louvre fin, depending on the maximum allowed deflection of the louvre fin under occuring (wind)loads.

The HunterDouglas® Dynamic Sun Control is designed to withstand and to operate at windloads of 1000 N/m², for typical dimensions of 3 x 3 meter. With the louvre fins stacked the system resists up to 3000 N/m².





1 = lateral guide
2 = mounting bracket
3 = louvre fins

A = length lateral guide
B = stacking height
C = system width
D = span louvre fin
E = support span mounting brackets
F = width louvre fin
G = remaining open space

A: Total length of lateral guide = (width of the louver fin x number of louvre fins used) + total stacking height + 15 mm

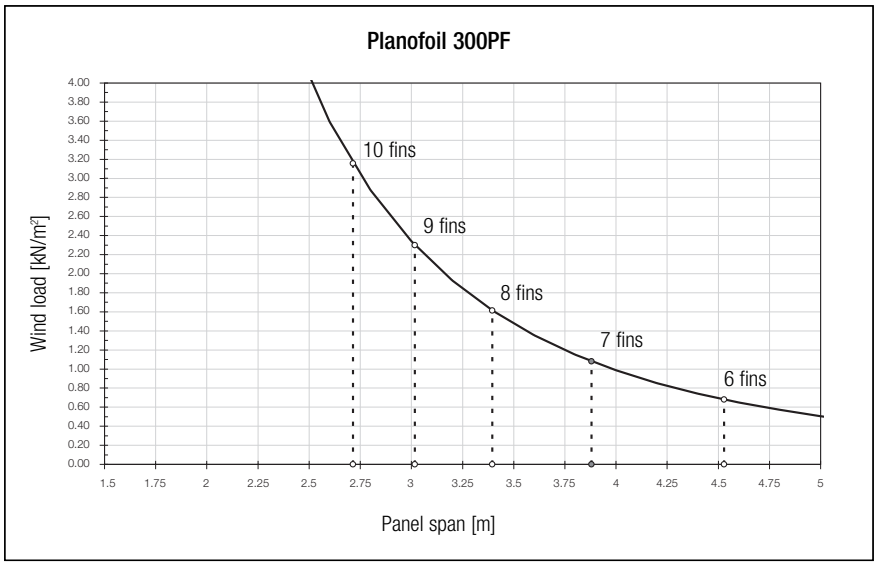
B: Total Stacking height = (height of the louvre fin + 2 mm) x number of louvre fins used.

C: System width = span louvre fin + 2x width lateral guide (2 x 72 mm) + 2x clear area (2 x 8-12 mm)

MAXIMUM SPAN

The louvre fin span in relation to the windload (pressure or suction), can be read from the graph. The maximum number of fins shown in the graph refers to the maximum motor capacity for that span.

Note: calculating the value of the local windload is the responsibility of the installer who must take into account the regulations of local authorities. For corners, roof edges or special designs wind pressure/suction shall be determined with due consideration of the relevant local country's Standard Code of Building Practice. For snowloads consult your local building regulations.



Installation & Maintenance

INSTALLATION

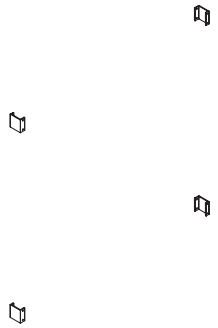
The HunterDouglas® Dynamic Sun Control system is designed for quick and easy installation with low maintenance.

The system arrives at the building site in 3 parts:

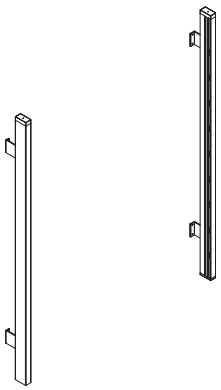
- two preassembled lateral guides,
- preassembled louvre fins
- control unit

Limited infrastructure preparation is needed to mount the preassembled lateral guides with wall brackets onto the building's facade. The cable wires, connected to the lateral guides, are placed through the building skin, to connect the motors to the control unit which is installed inside the building. With the lateral guides fitted in place, the preassembled louvres can be installed, one by one.

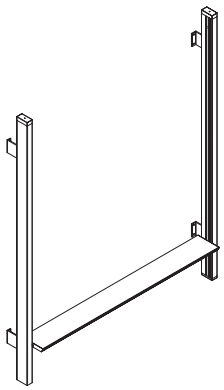
The controlling unit, fitted with sophisticated electronic system drivers, enables the system to operate easily and quickly. In only a few simple steps the two motors are synchronised and the system is perfectly aligned.



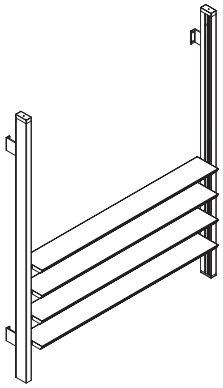
Installation of wall brackets.



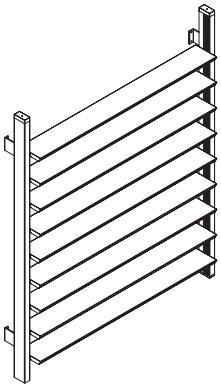
Mounting of pre-assembled lateral guides onto the wall brackets. Alignment of the guides.



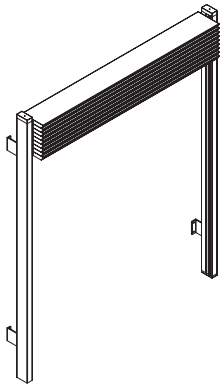
Installation of pre-assembled louvre fins.



Installation of pre-assembled louvre fins.



Installation of final pre-assembled louvre fins.The cable wires for the motors will be put through the building skin and connected to the controlling unit, inside the building.



Electronical synchronisation of the system and stacking of the louvre fins in fully stacked position

MAINTENANCE & DURABILITY

All components of the Dynamic Sun Control system are designed and manufactured to meet the highest standards in product durability, reliability and safety. Tested in the toughest conditions, the Dynamic Sun Control system is highly durable and reliable.

Extreme Operation Conditions		
temperature		-20°C / +60°C
wind load	*unstacked*	1000 N/m²*
	stacked	3000 N/m²*
humidity		20-100% RH

**Results for 3 x 3 m² setup*

Design Options

The innovative design of the HunterDouglas® Dynamic Sun Control system enables a wide variety of design options, mounting positions and applications. The stylish look and position of lateral guides, the fill-in with the large louvre spans and the full control over aperture openings create unmatched design possibilities.

LOUVRE FINS

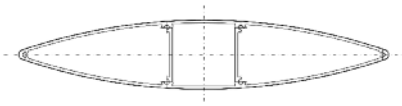
Since the design of the lateral guide is very compact, the appearance of the Dynamic Sun Control system is largely influenced by the infill of louvre fins. The flexibility of the system enables the application of different louvre sizes in various shapes and materials. The louvre fins are available in a full range of powder coatings and anodised finishes.

FASCIAS

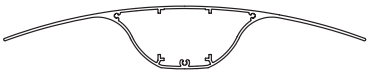
The Dynamic Sun Control system is also suitable for fascia application. The fascia conceals the stack and provides extra protection. The fascia is also a feature that can enhance the architecture look of the façade.

SUPPORT STRUCTURE

The lateral guides can be easily mounted onto the building structure using wall brackets.



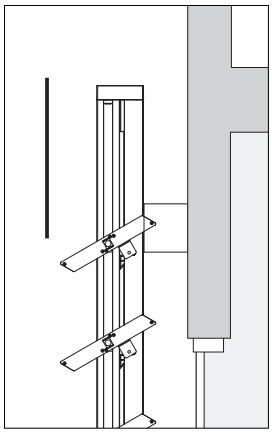
300AF - width = 300 mm, height = 56 mm



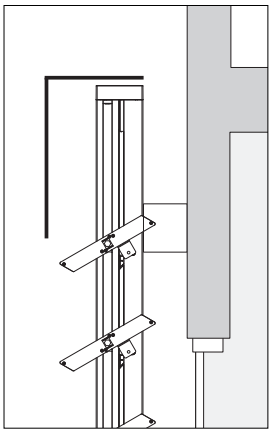
300AW - width = 300 mm, height = 52 mm

The application of different louvre sizes in various shapes possibly requires small adjustments to the system. Consult Hunter Douglas for details.

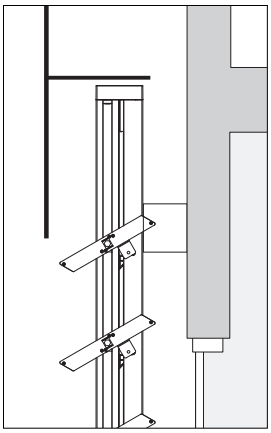
300AS - width = 300 mm, height = 56 mm



Front cover fascia



Outside cover fascia



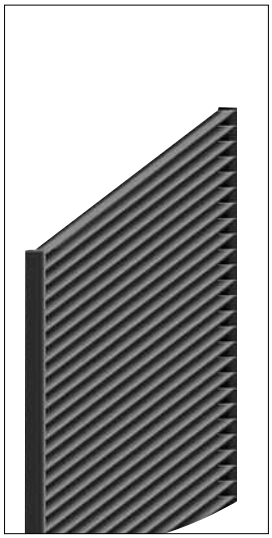
Facade panel cover

MOUNTING POSITIONS

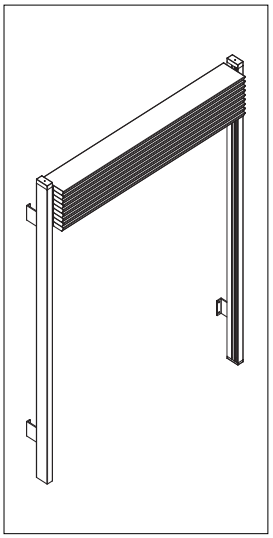
Only a very limited building surface is needed to mount the Dynamic Sun Control system. It is possible to mount the system in several directions:

VERTICAL PROJECTED SYSTEM:

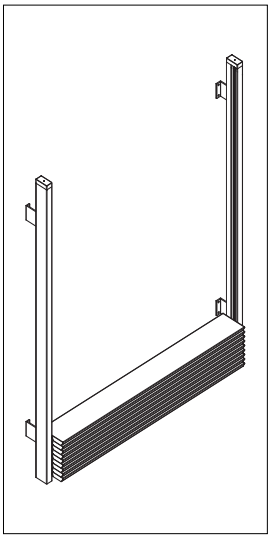
For lower sun angles, the vertical application allows a reliable sun control system with good visibility to the outside



Vertical



Stacked (top)



Stacked (bottom)

Applications

The application of the Dynamic Sun Control system has clear benefits to the performance and functionality of the building and its exterior aesthetic.

VISUAL COMFORT

Motorised adjustment of the angle of the louvre fins reduces high levels of light intensity close to the window to acceptable levels. This adjustment also improves light levels reaching darker recesses of a space by reflecting the incoming light to the ceiling. The unique combination of tilting and stacking enables sufficient view through and ensures the visual connection with the outside remains. The sophisticated design of the engineering ensures that Dynamic Sun Control can operate in tough weather conditions and assures full daylight control to suit individual requirements.

THERMAL COMFORT

HunterDouglas® Dynamic Sun Control will effectively reduce the amount of solar radiation entering the building, providing comfortable working conditions and allowing a considerable reduction of air conditioning equipment and costs.
Also potential heat storage is managed more effectively with the application of HunterDouglas® Dynamic Sun Control.
The full closing of the louvre fins during winter nights reduces the loss of building heat and in open or fully stacked position the system will enable night cooling during summer.

NATURAL VENTILATION

The control over aperture openings allows maximum control of air flow. Variation in opening can reduce the wind impact onto the façade and act as a wind regulator, to enable natural ventilation and air circulation in front of the façade.

AESTHETIC APPEARANCE

The stylish and compact design of the lateral guide and the absence of head and bottom rail gives maximum design impact. The application of HunterDouglas® Dynamic Sun Control can instantly transform the appearance of the building's exterior design and create seamless integration of façade and sun shading.

SAFETY

When the louvre fins are fully shut the building has the appearance of being closed. This appearance should discourage force entry and enhancing the building's security.

CLEANING AND MAINTENANCE

The stacking of the HunterDouglas® Dynamic Sun Control system will ease the cleaning and maintenance of the façade, without the need of expensive equipment. The robust and low maintenance required Dynamic Sun Control system is an ideal solution for out of the way spaces. The functionality in tough weather conditions let Dynamic Sun Control to operate where other outside stackable sun control systems cannot be applied.

Impression

Material

LATERAL GUIDE

The lateral guide profiles are extruded aluminium profiles.

NUT

Injection moulded plastic with extreme wear resistance. The bearing is lubrication free and resistant to dirt and dust.

SPINDLE

The spindle is an extruded aluminium profile with a special, highly durable finish.

FINS

The PlanoFoil, as all HunterDouglas® Aerofins is an extruded aluminium profile. Other materials as louvre fin infill are available upon request.

SURFACE TREATMENT

The louvre fins can be finished in two different surface treatments: Anodising or Powdercoating.

ANODISATION

All aluminium profiles are anodised according to European standard code EN 12373. Standard we use the natural anodising colour with a layer of 15-20 micron. On request we can supply all kinds of different colours, surfaces and thicknesses.

POWDER COATING

All aluminium profiles are coated with a polyester powder coating (PPC) with an average layer thickness of 60 micron and a gloss of 70%. Powdercoating is applied according to the Qualicoat standard. We distinguish three different colour ranges: standard RAL colours, metallic RAL colours and pearl RAL colours. On request other colour standards like NCS and Pantone are possible.

ENVIRONMENT

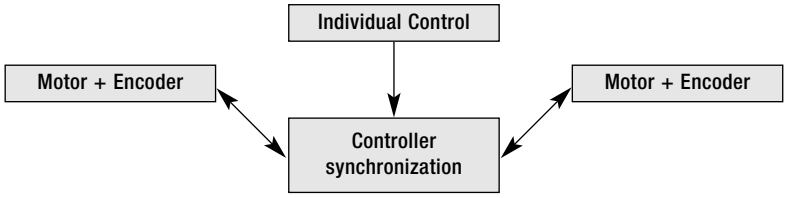
All aluminium products can be recycled for the full 100% requiring very little energy.

Motorisation

The HunterDouglas® Dynamic system consists of two vertical positioned lateral guides, with a horizontal infill of extruded aluminium louvre fins. Both sides of each louvre fin will be driven with exactly the same speed and same amount of revs. The driving mechanism is actuated by an electronically synchronized motor, placed in a concealed position at the end of the lateral guide. For controlling the motorised system a specially developed controller is required.

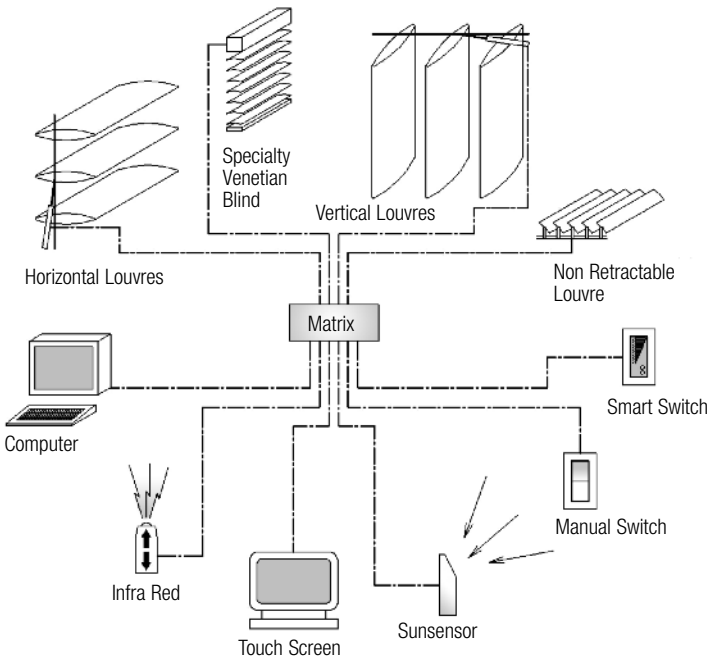
The large louvre fins are operated with fast and quiet (<55 dB) IP44 motor which is able to operate under extreme weather conditions. Uncontrolled movements of the louvre fins are prevented by the torque resistance of the driving mechanism.

The two synchronized motors of the Dynamic system will automatically be switched off if one of the sides fails or jams, to prevent structural damage to the system.



CONTROL SYSTEMS

The Dynamic Sun Control system can be controlled by various control systems, from a simple individual switch to a fully automated central control system working on time, sun position and weather conditions. Hunter Douglas can offer you a proprietary automated project control system, specially designed to work with any combination of sun control products.
In addition, it is possible to provide Dynamic Sun Control with actors that can be integrated in an EIB or KNX based building management system, allowing it to work together with HVAC and lighting systems in the building. This most advanced way of controlling all building installations together will result in the optimum energy conservation. Consult Hunter Douglas for details.



Energy and Light Tool

Using the right Sun Control System can greatly influence the thermal and visual indoor climate. Effective reduction of the amount of solar radiation entering the building immediately decreases the amount of energy needed to cool the building. Blocking, transmitting, or reflecting direct sunlight and daylight enables HunterDouglas Sun Control Systems to optimize the interior brightness and glare levels and to maintain the visual contact with the outdoors. Providing good thermal and visual comfort at a minimum energy cost calls for a careful matching of façade walls, glazing, sun control, lighting and HVAC equipment. This is a distinctly non-trivial exercise. Choices made in the early design phases can have a huge impact on the energy use of a building.

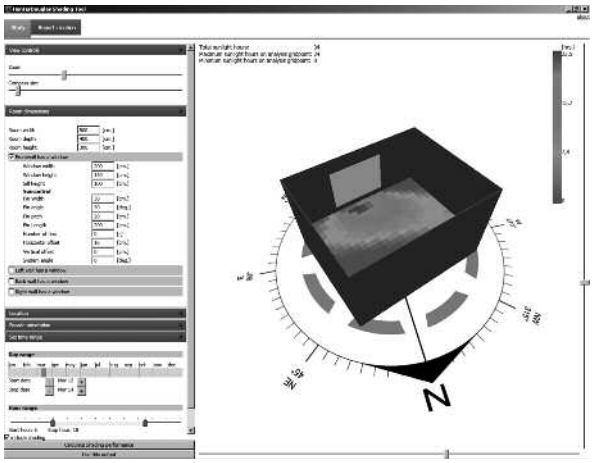
ENERGY TOOL

The Hunter Douglas thermal simulation package, the Energy Tool, can calculate how much cooling and heating energy can be saved when using a Sun Control System, compared to a scenario without such an application. The Energy Tool helps make thermal comfort tangible by calculating solar energy transmittance for a model office with and without Sun Control Systems and with different types of glass. It takes into account factors such as geographic location, façade orientation and time of day. Our specialists can assist in modeling various product scenarios.

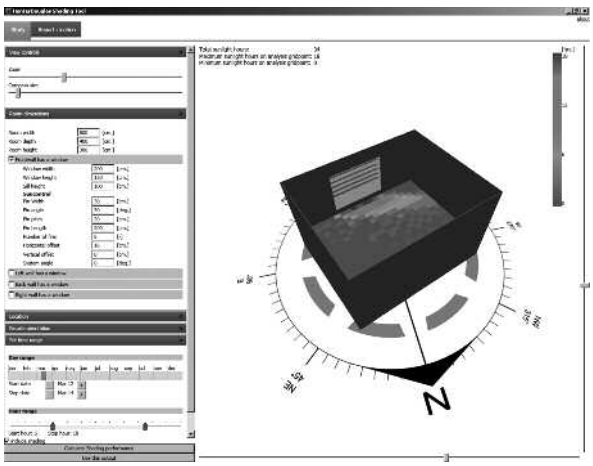
Representative output of Energy Tool

LIGHT TOOL

When designing an office space the question often arises what measures do we have to take to guarantee good visual comfort?
The Hunter Douglas Light Tool makes visual comfort tangible by calculating luminance levels for a model office with and without sun control. The amount of glass, the orientation of the facade, the location on earth, weather, season and time of day are all taken into account.
The images and analysis produced by the Light Tool give a good indication of the luminance ratios that can be expected with a particular solar shading system on varying times of the day and under varying circumstances.
Calculating visual comfort is a key element in developing a sun control strategy.
The Hunter Douglas Light Tool helps clients choose the sun control product that provides visual comfort under their particular circumstances.



Luminance level output by the Light Tool, situation without Sun Control System



Luminance level output by the Light Tool, situation with Sun Control System

HUNTER DOUGLAS ARCHITECTURAL PROJECTS

For 50 years, Hunter Douglas has been dedicated to innovation. As the field of Sun Control grows, we pride ourselves on leading the way as pioneers in the area.

We're working alongside architects and designers throughout the globe, discovering new, inventive methods of managing heat, light and energy. We've committed ourselves to crafting products that meet the highest standards of materials, construction and performance because we believe that you need the right tools to create projects that inspire.

PEFC

Promoting sustainable forest management
www.pefc.org

keen on green

Hunter Douglas products and solutions are designed to improve indoor environmental quality and conserve energy, supporting built environments that are comfortable, healthy, productive, and sustainable.

alu

Our paint and aluminium melting processes are considered to be one of the industry standards in terms of clean production processes. All aluminium products are 100% recyclable at the end of their lifecycle.

HunterDouglas

SUN CONTROL

ARCHITECTURAL SERVICES

We support our business partners with a wide range of technical consulting and support services for architects, developers, and installers. We assist architects and developers with recommendations regarding materials, shapes and dimensions, colours and finishes. We also help creating design proposals, visualisations, and installation drawings. Our services to installers range from providing detailed installation drawings and instructions to training installers and advising on the building site.

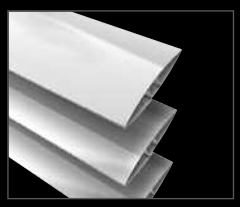
Innovative Products
Make Innovative Projects

Dutch Green Building Council

PARTICIPANT

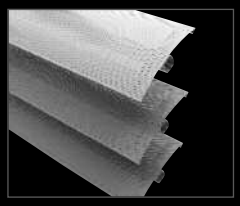
Learn More

- Contact our Sales Office
- www.hunterdouglascontract.com



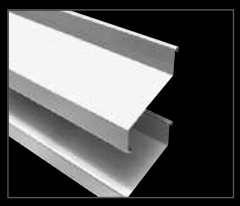
Aerofoils

Aerowing



Aeroscreen

84R/100R



70S/132S

110HC

Shutters

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