

# MicroLouvre® Solar Shading Systems

Sustainable shading with unrivalled performance



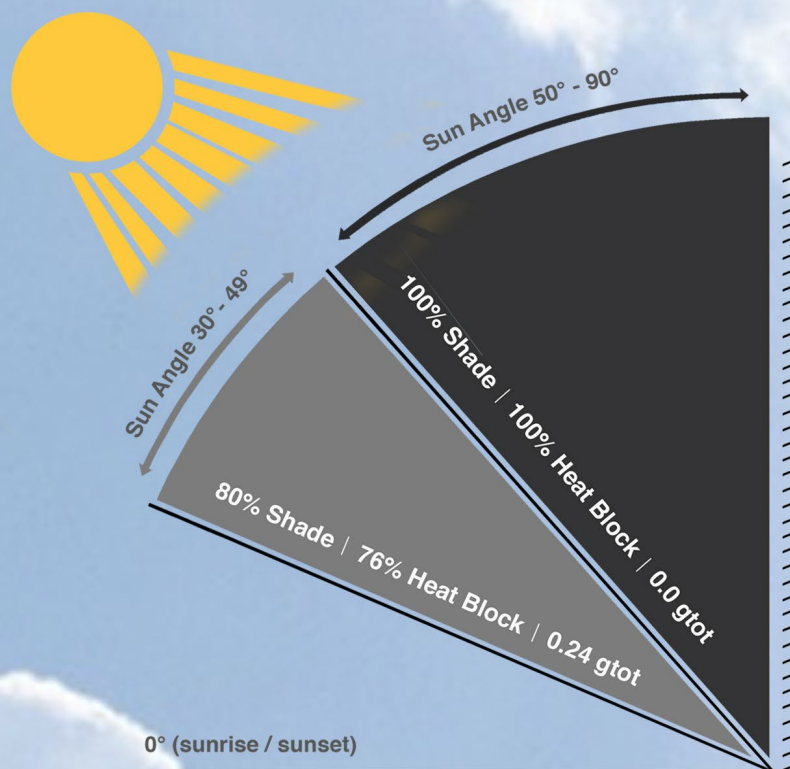


# Angular selective technology

MicroLouvre® solar screens are the result of decades of extensive and exhaustive international research and development. It is probably the most efficient modern method of solar shading in the world.

The fabric was invented in the late 1930s by John J. Grebe who was then Director of Nuclear Research at The Dow Chemical Company. The totally unique weaving machines were developed in co-operation with BorgWarner and the Koolshade product, now known as MicroLouvre® Koolshade, was born.

The unique system of angled miniature bronze louvres dissipate the sun's heat, stopping it from ever reaching the window, but at the same time permits full natural daylight and outward vision for occupants. It has been used all over the world on every type of building as a solution to overheating and provides unrivalled visual comfort.



Each louvre angle is at 17° which ensures optimum light in, ventilation and visibility out, whilst blocking heat and glare.

The louvres allow fresh air to pass through, and being angled, provide an air flow that has a distinct upwards trend, supporting room cooling strategies.

**With its passive, angle selective, maintenance free technology, MicroLouvre® supports all today's energy saving, fire resistant and sustainable building performance requirements.**



# Uninterrupted views to the outside





# Providing comfort and saving energy

## Tested Performance - MicroLouvre® is proven to:

- Stop up to 100% of total solar heat gain
- Allow 51% light transmittance through fabric
- Absorb up to 97% of the sun's radiation
- Allow 100% unfiltered daylight



### Blocks solar heat gain

The unique system of angled miniature bronze louvres stops the sun's heat from ever reaching the window



### Privacy

Providing directional privacy to block view into the building



### Uninterrupted views out

The micro fine louvres disappear from your eye, allowing full vision out throughout the day



### Reduces AC requirements

Tests show the reduction in energy usage for air conditioning post install has been up to 68%



### 100% Shading

Provides 100% shade during peak sun hours (when the sun is at 45° angles or higher)



### Balanced natural daylighting

The angle of the louvres (17°) allows the optimum unfiltered daylight in



### Allows fresh air flow

The 80% open area between the angled louvres provides a fresh air flow with a distinct upwards trend



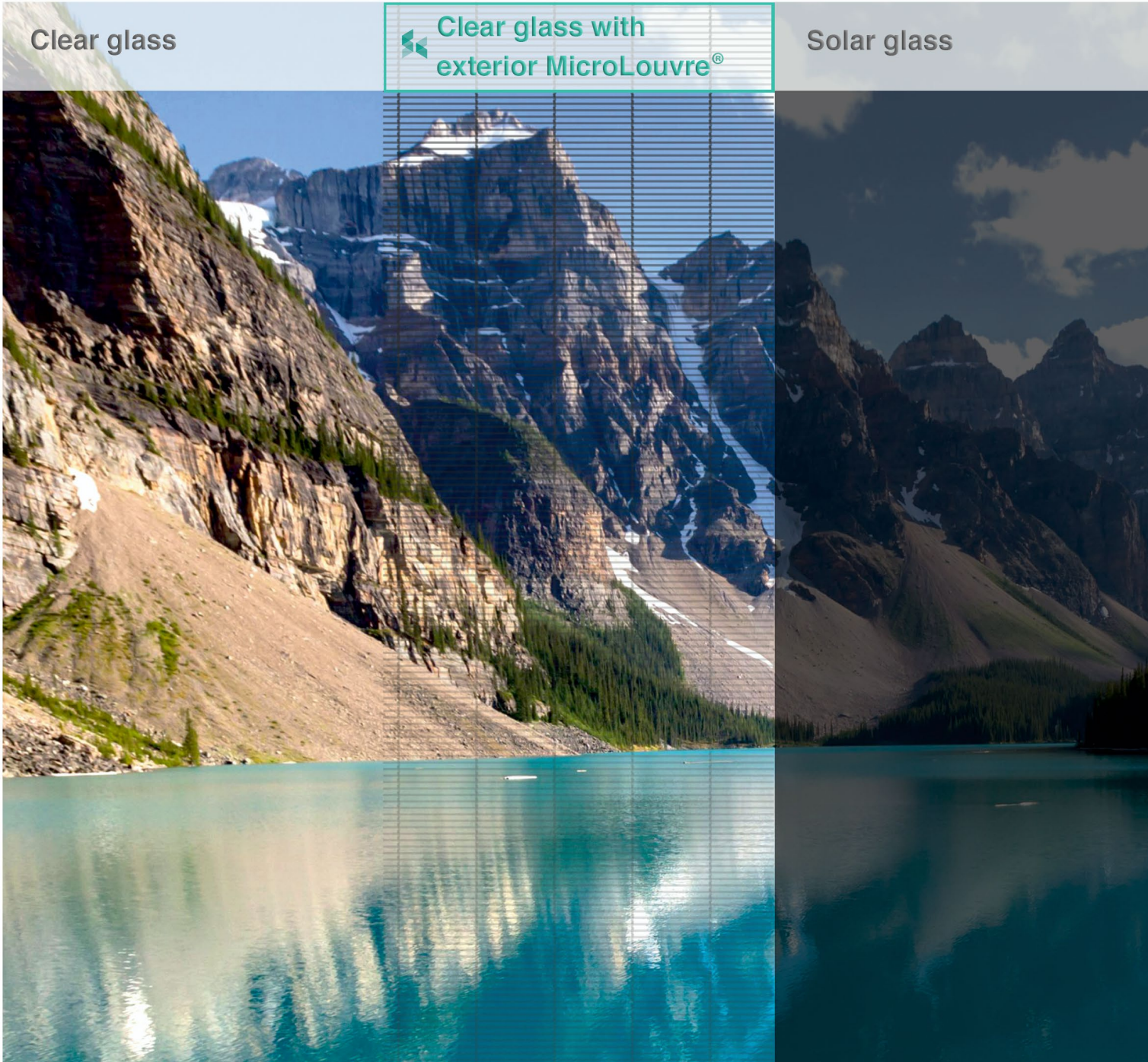
### Fully non-combustible

Our screens conform to A1/A2 Fire Performance rating



# Unrivalled shading performance

MicroLouvre® has achieved top Class 4 classification for Thermal Comfort, Daylight Utilisation and Contact with the Outside, with 100% daylight quality Colour Rendering Index (\*AST)



Clear glass

Clear glass with exterior MicroLouvre®

Solar glass

Typical Thermal & Visual Comfort comparisons as defined by BSEN 14501

N/A openness factor

0.87 g-value (glass only)

85% light transmittance

68% openness factor

0.00 gtot\*

43% light transmittance

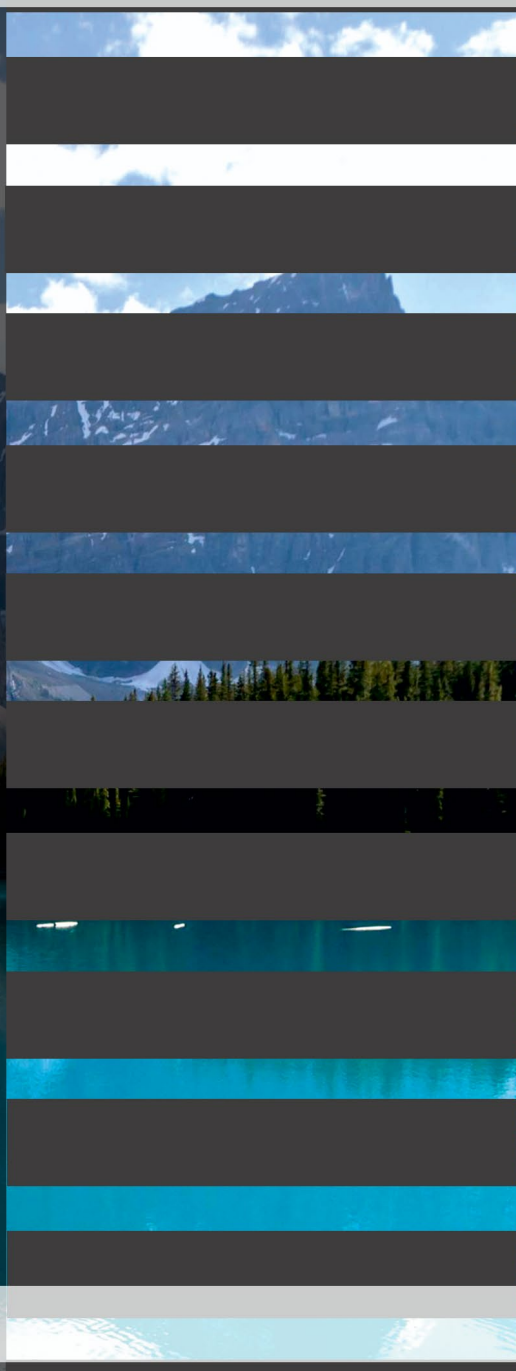
N/A openness factor (for glass)

0.22 g-value (glass only)

20% light transmittance



Clear glass with interior venetian blind

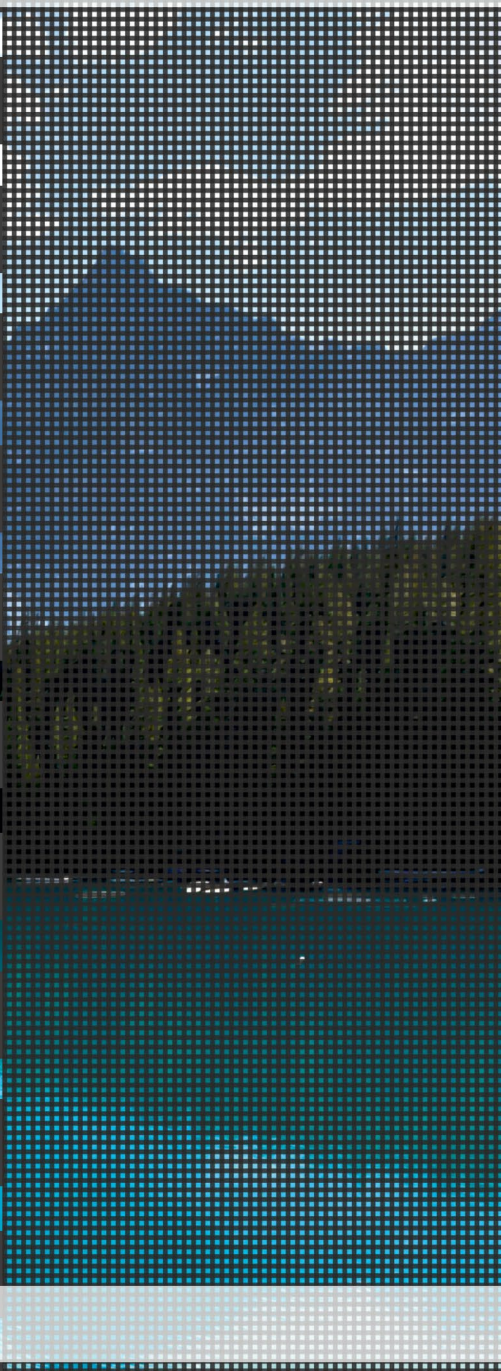


45% openness factor

0.45 gtot

40% light transmittance

Clear glass with exterior roller blind

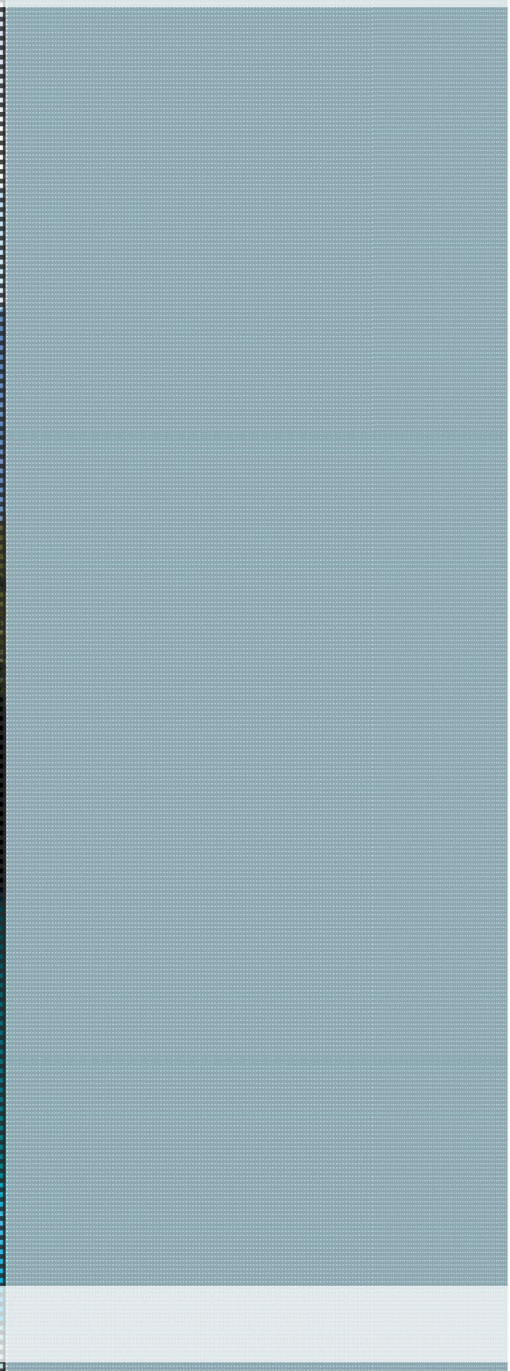


25% openness factor

0.22 gtot

32% light transmittance

Clear glass with interior vertical blind



0% openness factor

0.53 gtot

0% light transmittance



## A passive, maintenance free solution

Light, quick and easy to install

Dynamic and moveable where required

Minimal structural loading

Wind resistant up to 100+mph/160+kph

Can be fixed to façades, windows, mullions or direct to glass

Glass can be cleaned through screens (by simple pressure wash)





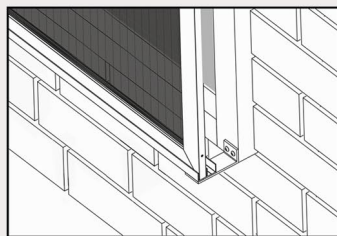
MicroLouvre® screens are designed to be passively installed to the building. They fix seamlessly to the façade, or to existing windows or mullions, to complement the original window array. We have standard fix options to suit most buildings but can also work with your designers to accommodate bespoke requirements.

Successfully installed worldwide for over 50 years MicroLouvre® screens rejuvenate buildings with a uniform finish, whilst the occupants enjoy unobstructed views out.

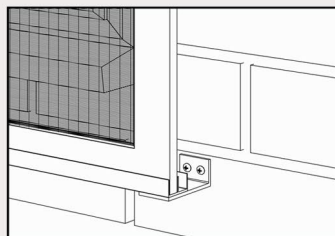
### How do the screens fix to the building?



Frame Fix



Mullion Fix



Masonry Fix



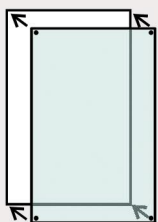
Glass Fix

Fixings depend on the façade or window frame materials. The preferred option is to use mechanical fixings but due to the lightweight nature of the screens, adhesive solutions such as 3M VHB Dual Lock or Foam Tape can also be used.

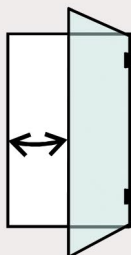
### What if I need access to the windows?

The micro fine louvres protect the building and windows from debris and dust. They are simply fixed to the building and do not need to be removed for maintenance. Project examples exist that are directly fixed and have been in place for over 50 years, across the globe. Cleaning of the glass can be performed without removal of the screen through simple pressure washing when required.

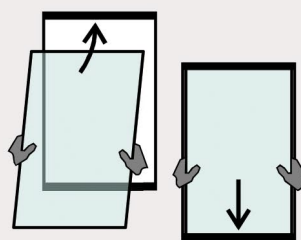
Some buildings simply prefer the option of moveable/removeable screens and for these, we can offer engineered solutions as follows:



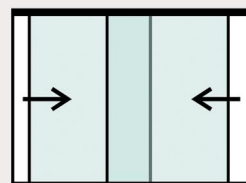
Snap on/off



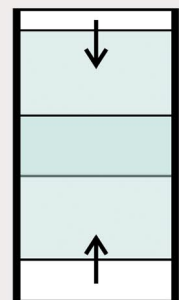
Hinged



Lift in / Lift out  
(in channels)



Horizontal sliding  
(in channels)



Vertical sliding  
(in channels)



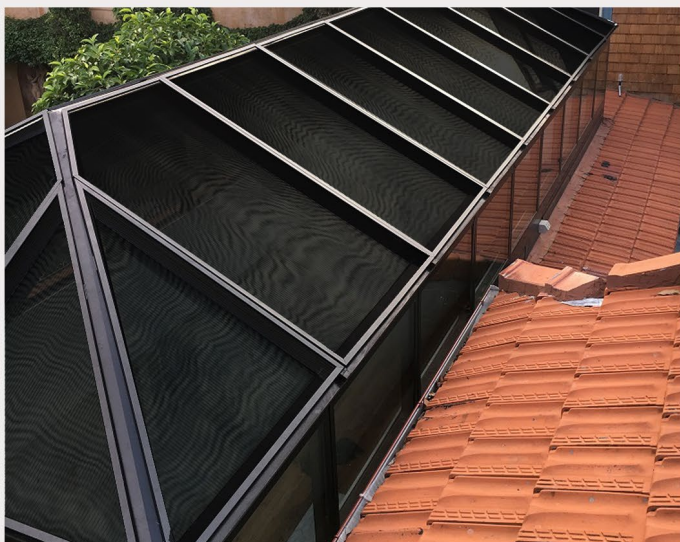
## A sustainable solution for any home

Screens can be configured to discretely replicate or complement the style and colour of your home's exterior. They are custom made from a wide range of materials to suit any shape or size of window, including curved glazing. We are proud to have sensitively restored heritage homes and listed buildings around the world.





Looking in...



Looking out...







### Blocks solar heat gain

The unique system of angled miniature bronze louvres stops the sun's heat from ever reaching the window



### Balanced natural daylighting

The angle of the louvres (17°) allows the optimum unfiltered daylight in, with full CRI



### Allows fresh air flow

The 80% open area between the louvres provides an air flow with a distinct upwards trend



### Longevity

A proven lifetime of installed screens exceeding 50 years



### Fully non-combustible

Our screens conform to A1/A2 Fire Performance rating



### Hurricane proof

BRE tested, proven to withstand 100+mph/160+kph winds from multiple angles



### Lightweight & easy to fit

Simple to install or retrofit with arrangements to suit any window type



### Zero maintenance

A simple pressure wash is recommended once a year



### Security

Protects against window damage and flying debris



### Privacy

Providing directional privacy to block view into the building



### Bespoke configuration

Screens are available in almost any colour, shape or window style



### Insect & pest protection

The miniature louvres provide greater protection than insect mesh

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