
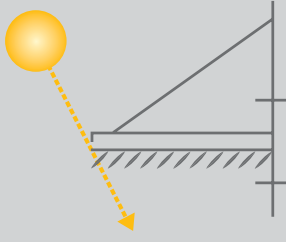

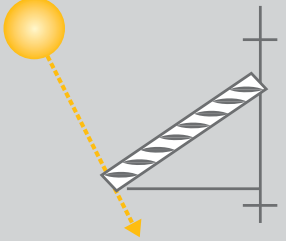

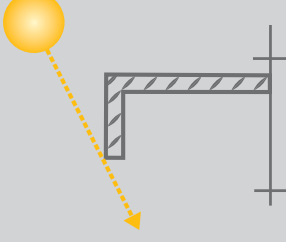

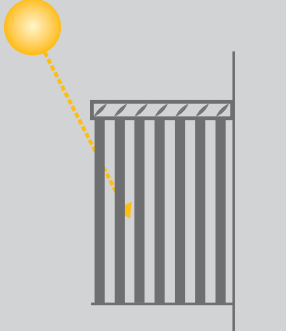

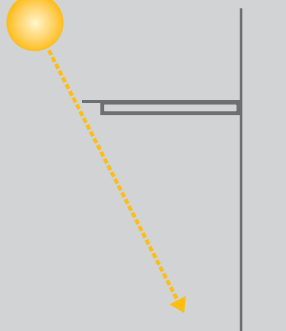




Solar Shading Systems


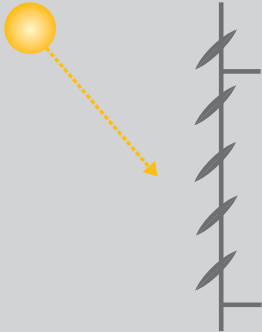

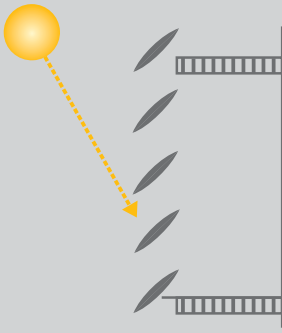

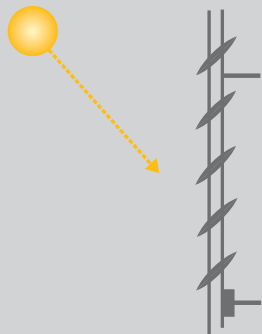

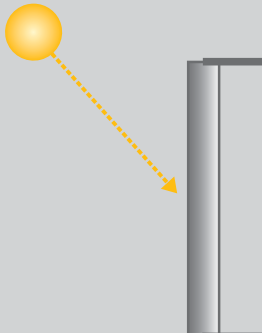

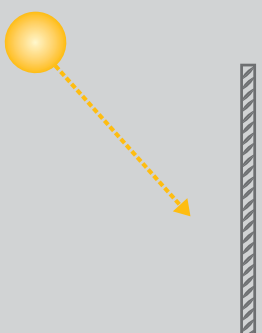
PRODUCT SELECTOR

Par specialises in providing standard and bespoke solar shading systems for commercial and industrial buildings. We design, manufacture, deliver and install a wide range of louvre based solar shading configurations made of a variety of materials to suit the needs of building designers and contractors. We commit to guide and advise our customers through each of the building stages, from conceptual design through to fixing options. The purpose of this Product Selector is to provide general information about the many types of external solar shading configurations that are available. It provides 'indicative' relative costs of each system and a general idea of how good each system is at preventing solar heat gain. It also shows the relative merits, features and benefits of each system. For more information or help in specifying these products, please contact us on the numbers provided. *(Please note that comparisons are 'indicative' only and can radically change depending on engineering design)*

| | DESCRIPTION | FEATURES & BENEFITS | ARRANGEMENT | PERFORMANCE |
|--------------------|---|--|--|---|
| P/BS/OH |  <p>Overhang's, or 'Brise Soleil' as this type of Solar Shading System is referred to, is the most affordable and commonly used external shading solution. These systems work best when the sun is high in the sky in peak summer months. They afford limited effect on the East and West elevations. They will not provide any benefits other than aesthetic value during the winter months, as the sun will always be below the overhang.</p> | <ul style="list-style-type: none"> Cost effective Aluminium or other materials Ease of fixing Good for south elevation Good outward views Variable configurations Variable materials Low maintenance Optimised daylight Can be face, or through façade fixed |  | <p>EFFECTIVENESS</p> <p>E ●●●●</p> <p>S ●●●●●</p> <p>W ●●●</p> <p>COST COMPARISON</p> <p>●●</p> |
| P/BS/inc/OH |  <p>As described above, but covering more of the window area, thereby casting a longer shadow down the building. With an inclined shading configuration care must be taken to maintain the optimum outward view from the building for the occupants.</p> | <ul style="list-style-type: none"> Benefits as above |  | <p>EFFECTIVENESS</p> <p>E ●●●●</p> <p>S ●●●●●</p> <p>W ●●●</p> <p>COST COMPARISON</p> <p>●●</p> |
| P/BS/ver/OH |  <p>Performing the same function as previous two configurations, but creating a more prominent visual affect.</p> | <ul style="list-style-type: none"> Benefits as above |  | <p>EFFECTIVENESS</p> <p>E ●●●●</p> <p>S ●●●●●</p> <p>W ●●●</p> <p>COST COMPARISON</p> <p>●●●</p> |
| P/COV/OH |  <p>The Par combined Overhang/ Vertical Shading System combines the benefits of a normal 'Brise Soleil' overhang with a vertical louvre element to produce a greater shading effect at lower sun angles.</p> | <ul style="list-style-type: none"> Benefits as above plus greater shading potential during the latter part of the day. |  | <p>EFFECTIVENESS</p> <p>E ●●●●●</p> <p>S ●●●●●</p> <p>W ●●●●●</p> <p>COST COMPARISON</p> <p>●●●</p> |
| P/GO/C |  <p>The Par Glass Overhang Canopy is available in a variety of shapes and configurations. This system is commonly fitted to prevent solar penetration. A range of colours and bracket arrangements are available.</p> | <ul style="list-style-type: none"> Benefits as above plus the canopy provides added protection against rain. |  | <p>EFFECTIVENESS</p> <p>E ●●●●</p> <p>S ●●●●●</p> <p>W ●●●</p> <p>COST COMPARISON</p> <p>●●●●</p> |

KEY:
EFFECTIVENESS ●● Good ●●● Very good ●●●● Excellent
COST COMPARISON ●● Cost effective ●●● Low cost ●●●● Medium cost ●●●●● Medium to high cost



| | DESCRIPTION | FEATURES & BENEFITS | ARRANGEMENT | PERFORMANCE |
|--|---|---|---|--|
| P/HFLA  | <p>The Horizontal Fixed Louvre Array is potentially the most effective external solar shading system available. It affords excellent shading to east, south & west elevations. Louvre blades are normally an aluminium aerofoil shaped design. These relatively heavy systems require careful structural design consideration. These systems usually dominate the architectural look of a building and they are a popular choice for prestigious buildings.</p> | <p>Excellent shading qualities Effective on all three elevations Dominant building feature Outward view considerations</p> |  | <p>EFFECTIVENESS E ●●●● S ●●●● W ●●●●</p> <p>COST COMPARISON ●●●</p> |
| P/HFLAW  | <p>As above, but incorporating an integral walkway system for ease of building maintenance and window cleaning. This type of solar shading system also provides a degree of weather protection to the building.</p> | <p>Excellent shading qualities Effective on all three elevations Dominant building feature Outward view considerations Ease of window cleaning Ease of general maintenance Weather protection qualities</p> |  | <p>EFFECTIVENESS E ●●●● S ●●●● W ●●●●</p> <p>COST COMPARISON ●●●●●</p> |
| P/HCLA  | <p>The Horizontal Controllable Louvre Array improves on the solar shading effectiveness of the P/HFLA system. The Louvre blades can be continuously adjusted by motorised control in order to optimise the shading effect. The blades can be set horizontally in the winter to optimise daylight and act as a light shelf.</p> | <p>Excellent shading qualities Effective on all three elevations Dominant building feature Outward view considerations Controllable Affords weathering protection Some insulation value in winter Glass option Cedar wood option Photovoltaic option</p> |  | <p>EFFECTIVENESS E ●●●● S ●●●● W ●●●●</p> <p>COST COMPARISON ●●●●●</p> |
| P/VCLA  | <p>The Vertical Controllable Louvre Array provides a continuous shading facility. The louvres track the sun around the sky to provide optimum performance. Louvre blades are normally an aluminium aerofoil shaped design, but can be made of various materials and shapes to suit architectural requirements.</p> | <p>Excellent shading qualities Effective on all three elevations Dominant building feature Outward view considerations Ease of window cleaning Ease of general maintenance Weather protection qualities Controllable Some insulation value in winter</p> |  | <p>EFFECTIVENESS E ●●●● S ●●●● W ●●●●</p> <p>COST COMPARISON ●●●●</p> |
| P/MLS  | <p>Par Micro Louvre Screening is in effect a miniature version of the P/HFLA, having all of the excellent characteristics of the larger system. The MLS is an easy to fit, cost effective solution for solar shading and is very suitable for retro-fit and refurbishment applications. The system is highly adaptable and can be shaped into many configurations.</p> | <p>Excellent shading qualities Effective on all three elevations Dominant building feature Excellent outward vision Ease of installation Cost effective Can be shaped Low maintenance Provides privacy Insect protection</p> |  | <p>EFFECTIVENESS E ●●●● S ●●●● W ●●●●</p> <p>COST COMPARISON ●●●●</p> |

WHY DO WE NEED SOLAR SHADING?

Over the past few decades, the application of external solar shading systems on commercial buildings in the UK has become an increasingly important issue. Twenty five years ago static external shading systems were almost unheard of on any building in Britain. It was only in continental Europe that these strange bolt-on additions to the building façade were seen. They have gone in this time from being a comfort issue, to a fashion accessory and finally to a conservation issue. They have played a significant role in changing the look of office blocks, shopping centres and other structures right across the country.

So why do we need external solar shading systems? The fact is, that the reason they have become so important is because they can fulfil so many roles that add benefits to building occupants, building owners and for the need to conserve energy.

The original function of these systems was to help create comfort conditions within a building for the occupants. As a rule, the system would compose of aluminium louvre blades configured in such a way as to block out the sun and create shade across the window, but at the same time allowing daylight to penetrate. In so doing, the internal air temperature would reduce and in a building that is not air-conditioned people would feel cooler and be more productive. This has many knock-on benefits, not least of which would be less absenteeism and less people leaving to find jobs in a more pleasant working environment.

During the eighties and nineties, architects were drawn by the aesthetic appeal of hi-tech precision made louvres, adorning their buildings. This is still true today and many variations and configurations on the original theme can be seen. In fact virtually every project that is undertaken by Par Louvres has a significant bespoke element to it. As external solar shading tends to cover the whole façade, or at least where there are windows, they determine the look of a building from day one.

In 2002, Part L2 was introduced into the building regulations in the UK, which has further enhanced the attractiveness and importance of these systems. Following the Kyoto Agreement on climate change, many countries have agreed to reduce their carbon emissions with a view to helping reduce the overall affects of greenhouse emissions on the environment. Part L2 provides guidance and direction for building designers in terms of recommending passive measures such as external solar shading to prevent the overheating of internal building areas, which in modern structures are normally air-conditioned. In simple terms, by reducing the heat gain, the air-conditioning is not using as much electricity. Part L2 also limits the amount of glazing that can be used on any one façade, unless measures are taken to reduce solar heat gain. The striking appearance of glass façades will be a popular feature on new buildings for a long time and the need for solar shading will remain a key requirement when designing a building.

Par Louvre Systems offers a comprehensive range of external shading systems to suit any architectural need. They range from small scale aluminium Brise Soleil to large scale aerofoil blades in virtually any configuration. The Company can also supply shading louvre in western red cedar, glass, and other materials.



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