SOLARFLEX

WINDOW SHADE AUTOMATION FOR TOTAL LIGHT CONTROL

DRAPER®

Solar Control Shading Systems

www.draperinc.com/go/SolarFlex.htm

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SolarFlex is a dynamic automated shading system designed to maximize natural light within commercial buildings while providing maximum comfort for building occupants. SolarFlex's sun tracking software in combination with exterior mounted sun sensors help control inside temperatures and maintain outside views while protecting against brightness and glare by continuously monitoring sky conditions. Shade positioning is determined based on the time of day, time of year, and the building's geographical location. On cloudy days the shades remain in the up position allowing natural light to enter the space, preserving outside views.

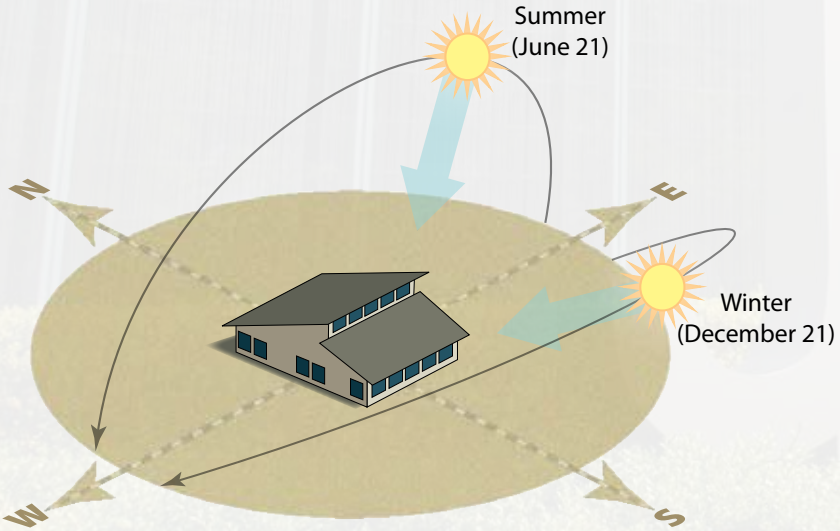
Why SolarFlex?

The primary function of SolarFlex is to maintain a comfortable environment within a building by shielding occupants from unwanted glare and solar heat gain. Other benefits include:

- The reduction of HVAC costs
- Increase in natural daylight

An increase in natural daylight is achieved because the SolarFlex sun tracking algorithm positions solar shading to block unwanted glare and heat gain based on several geographical and end user defined variables, which include:

- Location of building
- Time of year
- Time of day
- Light penetration variable



SolarFlex monitors solar position based on both the sun angle (time of day) and azimuth (season).

Energy Savings

SolarFlex can have a significant impact on building energy costs. During warmer months SolarFlex positions window coverings to best block heat and harmful UV rays, keep interior spaces cooler and lower air conditioning loads. In winter months SolarFlex can be programmed to better harvest the sunlight to help heat interior spaces and lower heating loads.

Numerous studies have shown the proven energy saving benefits of window shades. To not only realize but maximize energy savings from window shade products however there are several important factors to consider.

- ***Color of shade fabric:*** Lighter colors reflect sunlight better than darker colors and thus tend to be better for reducing heat. Esthetic concerns have promoted development of darker colors that better reflect light, such as Mermet's KOOLBLACK™ fabrics. A recent study by Mermet showed how this patented technology enabled dark KOOLBLACK fabrics to perform similarly to many lighter fabric colors without it.
- ***Openness of shade fabric:*** The less "open" a shade fabric is the less light it allows to pass through into interior spaces. Shade fabrics typically range from 0% to 14% openness.
- ***Efficiency of operation or programming:*** Shades should always be in their optimum position, relative to the sun, to maximize energy savings. SolarFlex ensures that shades are automatically positioned optimally throughout the day.

SolarFlex Benefits & Features

- Sun tracking allows positioning of shades based on outside conditions as well as user parameters, ensuring sunlight enters the space just enough that it does not interfere with occupants and workstations
- SolarFlex reduces the need for artificial lighting providing significant energy savings
- Reduces HVAC costs in summer and winter months
- Manually override the automatic movements for an individual shade or an entire zone with either wall switches or computer generated graphical user interfaces (GUI's)
- Impacts LEED credits

System Integration

SolarFlex is versatile, and easily integrated into Building Management and Lighting Control Systems. For example, it is compatible with BACnet, a data communication protocol for building automation and control networks.

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John E. Jaqua Center for Student Athletes shown in this brochure is an academic facility located on the campus of the University of Oregon in Eugene, Oregon. The facility is named for the late UO alumnus and founding board member of Nike. The Jaqua Center utilizes a Draper Digital Network with SolarFlex technology to maximize energy savings and control sunlight throughout each day.

Additional information available at:
www.draperinc.com/go/SolarFlex.htm

Established in 1902 as a manufacturer of window shades for schools, Draper now offers three major product lines in addition to our FlexShade Systems: projection screens and related audio-visual equipment (CSI section 11 52 13); lifts for video projectors and flat panel displays (CSI section 11 52 00); and gymnasium equipment, featuring the EZ Fold basketball backstop (CSI section 11 66 00).

Please visit us at ***www.draperinc.com*** to download specifications, CAD details, submittals and installation instructions. To receive additional printed or electronic literature, contact Draper by calling, faxing or e-mailing.

U.S. GREEN BUILDING COUNCIL MEMBER℠

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