# COMMERCIAL SOLUTIONS

Redefining Architecture with Glass











SANDS CAPITAL MANAGEMENT | ARLINGTON, VA
G3 Folding Glass Walls



WHEATON COLLEGE | NORTON, MA
Inverted Straight Eave Double Pitch Greenhouse



LUDLOW HOUSE | NEW YORK, NY
Straight Eave Double Pitch Retractable Skylight

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As an industry leader for more than 20 years, Solar Innovations® has a long history that is rooted in the heart of manufacturing with a deep passion for the American dream. As a single source provider of custom glass structures, skylights, windows, doors, and more, Solar Innovations® strives to endlessly innovate and design custom products throughout the world. Our products continue to develop and grow as a direct result of our dedication to the industry and the creativity of our customers.

By investing in our team and customers, we are proud to turn dreams into reality. All of our American made products are designed and manufactured at our campus in Pine Grove, PA, allowing for more flexibility to provide superior products and services. In addition, most of our engineering, product testing, and product

designing take place within our facility. By producing as many components as possible in-house, we have greater control over quality, lead times, and cost, which ultimately achieves better results for our customers.

Although Solar Innovations® comes from small and humble beginnings, we now reside in a 400,000-square-foot corporate and manufacturing space. With a three-building campus located on over 36 acres of land, our company continues to develop and grow by creating innovative designs and engineering new product lines. The Solar Innovations® team strives to forge its path into the future by promoting a strong spirit of unity, with the desire to be better today than yesterday.



### **INNOVATIVE**

Solar Innovations® – it's in the name. By constantly introducing new ideas with creative ways of thinking, our decisions take standard products to the next level. No project is too big or too small for us to handle.



### **DURABLE**

The strength and durability of our products are a promise.

The majority of our applications are impact tested in-house, ensuring that every project can withstand the test of time in any environment.



### **HIGH-PERFORMING**

At Solar Innovations®, we are about superior results. Our company currently offers the largest, impact rated folding glass walls on the market and constantly strives to create the highest quality product possible.



### **EASY TO OPERATE**

All of our applications are userfriendly and straightforward. No matter the shape, size, or type of project you may have, our products remain practical and manageable for the ultimate customer experience.

# Why Solar Innovations®?

### SINGLE SOURCE PROVIDER

We are a single source supplier of aluminum and wood glazing systems which all help to create consistency throughout your project. Solar Innovations® provides all fasteners, silicone, sill flashings, and project specific shop drawings (unless stated otherwise on our proposal).

### **IN-HOUSE TESTING**

With two in-house test labs, the quality of our products is second to none and includes some of the highest ratings in class. Solar Innovations® offers a vast line of tested products that meet various certifications, including NFRC, AAMA, Florida Impact, Miami Dade, and TDI. Our products can be specifically designed and engineered to your project location.

### **ECO-FRIENDLY PRODUCTS**

We are proud that our materials are sourced from local suppliers; not only does this help boost our local economy, but it also reduces transportation times and fuel emissions to help lower the impact on the environment. Our products are designed for high thermal performance, making them an energy efficient option for homes and commercial spaces. Even more, our systems include recycled content and are LEED friendly. Possible LEED credits are available in the following categories: Materials & Resources (recycled content), Indoor Environmental Quality (daylight), Energy & Atmosphere (performance), and Regional Priority (within 500 miles of our facility). Depending on the application, other credits may also apply. Solar Innovations® is proud to be a LEED Gold certified manufacturing facility.

### **COASTAL APPLICATIONS**

Our systems have the ability to meet coastal requirements, limiting visible wear and tear. We have advanced aluminum finishes and stainless steel components in our hardware, making our materials durable against the corrosive effects of the elements in coastal regions.

### **INSTALLATION**

Whether a product is purchased directly from our manufacturing facility or through our dealer network, Solar Innovations® can provide installation and service for all of our products within a six-hour radius of Pine Grove, PA. Our expertly trained team is registered to complete installation and service work in an ever increasing number of states (consult our sales department for a current listing).

### **REPAIR & REPLACEMENT SERVICES**

Our team has the technical skill and experience to evaluate your situation and determine the most effective options for the repair, service, or replacement that is needed for your project. All drawings and information are saved for each project, so a site visit will not always be required.



SAVINGS BANK OF WALPOLE | KEENE, NH Slide & Stack Clear Glass Walls



ST. IGNATIUS RETIREMENT CENTER | PHILADELPHIA, PA
Irregular Straight Eave Double Pitch Conservatory

# Our Products & Materials





EPHRATA HOSPITAL | EPHRATA, PA Pyramid Skylight

### **DOORS & WINDOWS**

We offer a complete variety of folding, stacking, sliding, and pivoting operable door and window systems that have incredible performance and superior quality.

G2 Folding Glass Walls

- Folding Glass Walls
- · Slide & Stack Glass Walls
- · Clear Glass Walls
- Sliding Glass Doors
- · Lift Slide Doors
- Swing Doors
- Pivot Doors
- Casement Windows

- Awning Windows
- Tilt Turn Windows
- Hopper Windows
- Fixed Windows
- Mulled Window Systems
- Sliding Windows
- · Folding Windows
- · Curtain Walls

### **GLASS STRUCTURES**

As one of the premier structure providers in the country, we can build any type of custom structure for commercial applications.

- Greenhouses
- Conservatories
- Sunrooms
- Canopies
- Pool Enclosures
- Pool Houses
- Walkways
- Custom
- Structures

### **SKYLIGHT SYSTEMS**

Skylights are a staple product at Solar Innovations®. With our superior structure knowledge, we are able to create some of the best products in the market.

- Fixed
- · Curb Mount
- Barrel Vault
- · Double Pitch
- Straight Eave
- Lean-to · Dome
- · Single Slope
- Pyramid

- Walkable
- Retractable
- · 90° Operable
- · Operable Ridge Vents



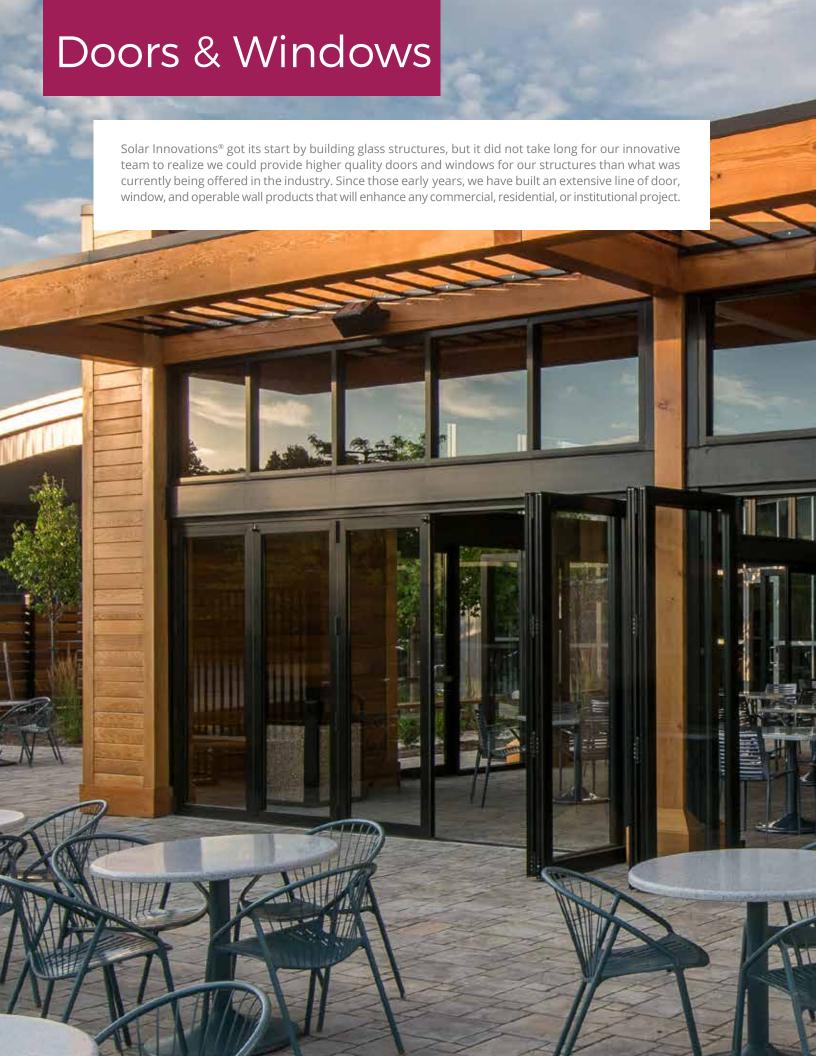
### **ALUMINUM**

Aluminum is the primary material used by Solar Innovations® because it provides durability and strength at approximately a third of the density of steel. Aluminum products require minimum maintenance and will not rot, rust, warp, expand with heat, or require constant finishing. As a malleable material that takes well to machining, aluminum enables us to continue to provide the most extensive custom product lines in the industry.



### **SOLID WOOD**

The warmth and natural beauty of solid wood are unmatched in any other building material. Doors and windows, glass structures, and skylights can all feature solid wood framing. Thermal efficiency tends to be higher with a wooden system because wood has a naturally low U-value, meaning the room will maintain a more even temperature in both hot and cold weather.







# Unfold the Possibilities

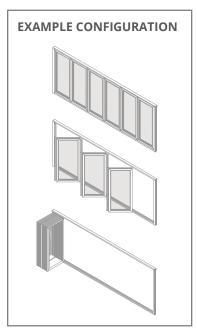
Folding glass walls have been a signature product of Solar Innovations® for over 15 years. Also known as bifold doors or accordion-style doors, folding glass walls can accommodate an unlimited number of panels and configurations. These systems offer a flexible and customizable opening that can be incorporated into any commercial project including restaurants, hotels, car dealerships, offices, and stadiums. Swing doors can be integrated into folding glass walls, allowing your client to easily enter and exit a room without opening all of the panels. The endless possibilities—including custom color finishes, custom hardware, and highest impact rating—make folding glass walls the perfect opening for any application.



Heighten a customer's experience and increase revenue by bringing the outdoors in. Folding glass walls, along with our window systems, provide minimal sightlines and offer unmatched views.

### RETAIL

Retail spaces have always used sliding storefront systems to minimize sightlines and attract consumers. This option presents their merchandise in a more open and inviting fashion which, in turn, has the ability to increases sales.





### PATENTED MARINE STOP GLAZED SYSTEM

Our G3 Extra Narrow Marine Glazed Folding Glass Wall System uses a patented design to combine vertical marine glazing with horizontal stop glazing in order to create a much narrower vertical frame than conventional stop glazed doors. The G3 Extra Narrow Marine Glazed System is one of the narrowest four-sided thermally-broken glazed bifold doors in the market.



# Details

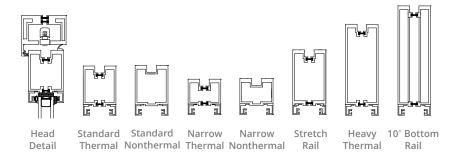
# NFRC National Fenestration Rating Council®

CERTIFIED

### **G2 SYSTEM**

G2 Aluminum Folding Glass Wall Systems are a great way to open your environment. The frame uses a thermal strut system that separates the interior metal from the exterior metal. By including a thermal break, the temperature transfer between the outdoors and indoors is minimized. The frames are available in two vertical

stile widths: narrow and standard. The widths can be combined over multiple units for a unique style or kept consistent throughout. Standard, narrow, and wide mullions are also available.





RIVERPOINT TOWER | CHICAGO, IL G3 Center Pivot Folding Glass Walls



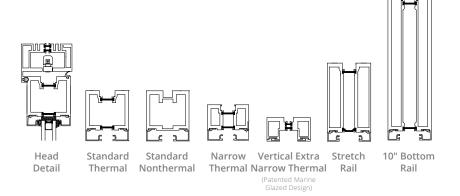
NIKE THE GROVE | LOS ANGELES, CA G3 Folding Glass Walls



MARRIOT HOTEL | COLUMBUS, OH G2 Nonthermal Folding Glass Walls

### **G3 SYSTEM**

G3 Aluminum Folding Glass Wall Systems are designed for commercial and residential applications that require higher design pressures. This system has been designed to support larger sizes with ease of operation and offers exceptional air, water, structural, and thermal performance. The G3 Nonthermal System is ideal for applications that do not require thermal performance, including mild climates and indoor uses—this system is popular for interior entryways and room dividers. Standard, narrow, and wide mullions are also available. The G3 Thermal System achieves both exceptional structural and thermal performance.



# Hardware

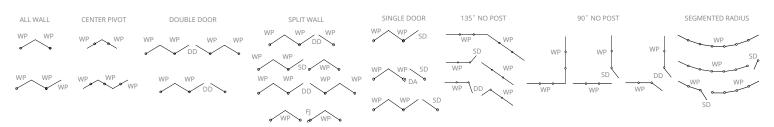


Additional hardware options including closers, door catches, and limiters are available on page 29.

# Configurations

Custom configurations are available upon request.

Thermal ADA Surface Mount

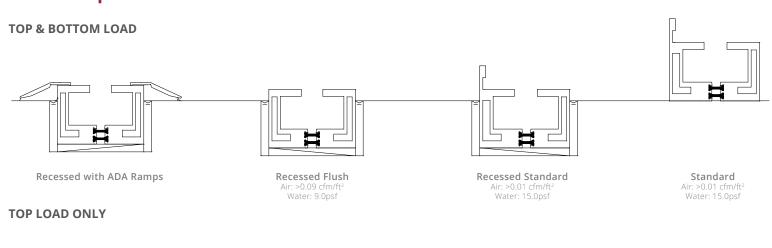


WP = Wall Panel SD = Single Door DD = Double Door DA = Door Adapter FJ = Floating Jamb

# Sill Options

Surface

Mount



Flush Hat To download more details and dimensions, visit solarinnovations.com/information/downloads.

**ADA Surface Mount** 

Recessed

# Folding Glass Wall Systems

Comparison







MATERIAL	G2 ALUMINUM	G3 & G3 LITE ALUMINUM	ALUMINUM WITH WOOD CLAD	WOOD
MAXIMUM PANEL SIZE*	3' x 10'	3' x 15'	3' x 15'	3' x 10'
NFRC APPROVED	YES	PENDING	PENDING	PENDING
ENERGY EFFICIENCY	BETTER	BETTER	BEST	BEST
ACOUSTICAL	Varies with Options Selected	Varies with Options Selected	Varies with Options Selected	Varies with Options Selected
IMPACT RATED	YES	YES	YES	NO
SYSTEM WALL DEPTH	2 1/4"	3"	Varies with Options Selected	3"
TOP OR BOTTOM LOAD	ВОТН	ВОТН	ВОТН	ВОТН
STOCK FINISHES	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White Oak, Red Oak, Hard Maple, White Ash
SIMULATED DIVIDED LITES (SDLS) OR INTERNAL MUNTINS	YES	YES	YES	YES
GLAZING INFILL	3/16" - 1 1/4"	1/4" - 1 1/2"	³⁄ <sub>16</sub> " - 1 ½"	³⁄ <sub>16</sub> " - 1 ½"
MAXIMUM # OF PANELS	20	20	20	15
HINGE COLOR OPTIONS	Clear & Dark Bronze Anodized, Bronze & White Powder Coated			

<sup>\*</sup>Custom configurations, oversized panels, and variations are available with engineering approval. Please contact a Solar Innovations® sales designer to discuss options.

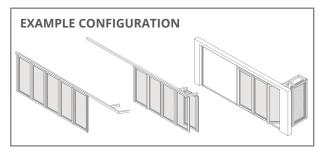
\*\*AAMA 2603-04-05 custom options are also available.

<sup>\*\*\*</sup>Can also be laminated, veneered, or custom painted.



# Optimize Square Footage

Slide and stack glass wall systems feature individual panels that slide along a top hung track and stack to a remote location or into a pocketed space within a business. This system is designed to accommodate a large number of panels that open to provide unobstructed views. Slide and stack glass walls offer an incredibly flexible and customizable opening that can be incorporated into any commercial project, including stadiums, restaurants, hotels, schools, and retail stores.

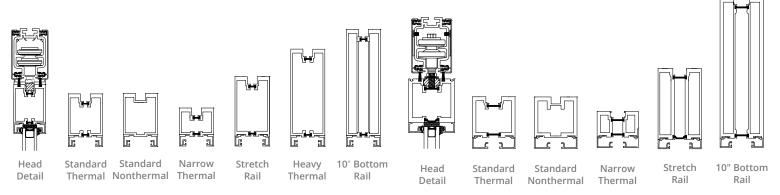


### **G2 SYSTEM**

Our G2 system provides greater performance and flexibility when compared to our original system, which features a thermally enhanced strut system. The G2 is available in thermal or nonthermal systems. Standard, narrow, and wide mullions are also available.

### **G3 SYSTEM**

The G3 system have been designed to provide matching sightlines to the G2 system, but also feature a 3 inch deep aluminum system to provide stability of larger doors without affecting sightlines. Standard, nonthermal, heavy duty, and G3 rails are available to ensure designs fit perfectly to your application. Standard, narrow, and wide mullions are also available.

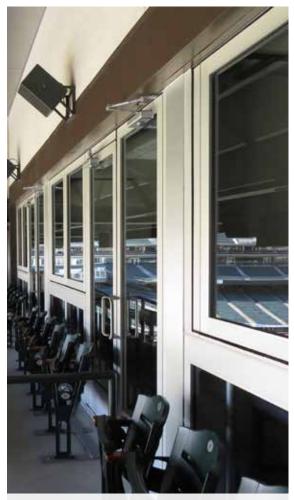




GRAND BOHEMIAN HOTEL | BIRMINGHAM, AL
G2 Slide & Stack Glass Walls



COORS STADIUM | DENVER, CO G2 Slide & Stack Glass Walls & Windows



COORS STADIUM | DENVER, CO G2 Slide & Stack Glass Walls & Windows



SAN DIEGO FERTILITY CENTER | OCEANSIDE, CA G2 Slide & Stack Glass Walls

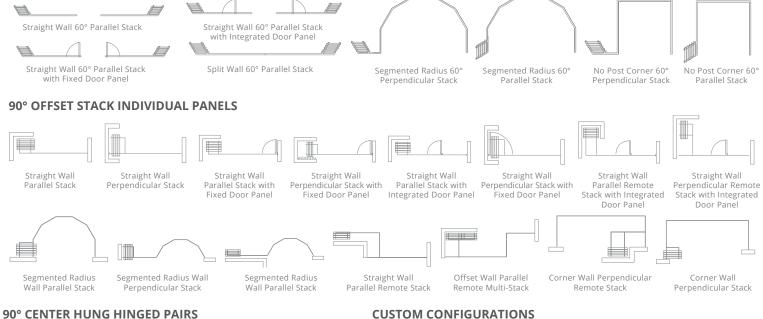
# Hardware

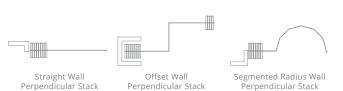


Additional hardware options including closers, door catches, and limiters are available on page 29.

# Configurations

### **60° OFFSET STACK INDIVIDUAL PANELS**







Slide & Stack Glass

Wall Systems Comparison







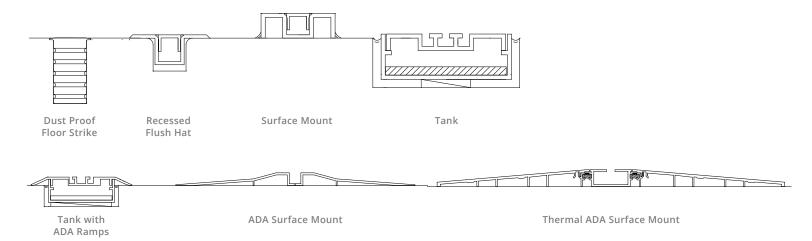


MATERIAL	G2 ALUMINUM	G3 & G3 LITE ALUMINUM	ALUMINUM WITH WOOD CLAD	WOOD
MAXIMUM PANEL SIZE*	3' x 10'	4' x 16'	3' x 10' or 4' x 16'	3 ½' x 9 ½'
SYSTEM WALL DEPTH	2 1/4"	3"	Varies with Options Selected	3"
TOP OR BOTTOM LOAD	ТОР	ТОР	ТОР	ТОР
STOCK FINISHES	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White Oak, Red Oak, Hard Maple, White Ash
SIMULATED DIVIDED LITES (SDLS) OR INTERNAL MUNTINS	YES	YES	YES	YES
GLAZING INFILL	³⁄ <sub>16</sub> " - 1 ¼"	1/4" - 1 1/2"	1" - 1 ½"	1" - 1 ½"
MAXIMUM # OF PANELS	UNLIMITED***	UNLIMITED***	UNLIMITED***	UNLIMITED***

<sup>\*</sup>Custom configurations, oversized panels, and variations are available with engineering approval. Please contact a Solar Innovations® sales designer to discuss options.

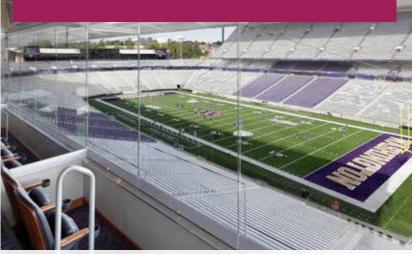
\*\*AAMA 2603-04-05 custom options are also available.

# Sill Options



<sup>\*\*\*</sup>Based on engineering requirements.

# Clear Glass Walls



HUSKY STADIUM | SEATTLE, WA Slide & Stack Clear Glass Walls



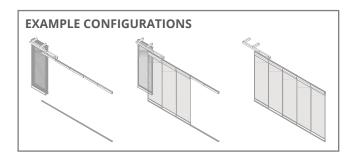
SHARPE BUILDING AT THE FOUNDRY | PROVIDENCE, RI Slide & Stack Clear Glass Walls with Pivot Door



GREAT AMERICAN BALLPARK | CINCINNATI, OH Sliding Clear Glass Walls

# Uninterrupted Views

Clear glass walls eliminate vertical stiles, allowing for maximum transparency, natural daylighting, open views, and a sleek, modern appearance for any application. The systems' nonthermal designs make them a great choice for interior room dividers and exterior applications with overhead protection. We offer several clear glass wall systems that include slide and stack clear glass walls, sliding clear glass walls, and folding clear glass walls, each with virtually an unlimited number of panels and configurations.



**FOLDING SLIDE & STACK** 

**SLIDING** 

# Hardware



**Swing Door Handles** For Integrated Doors in Slide & Stack and Folding Systems







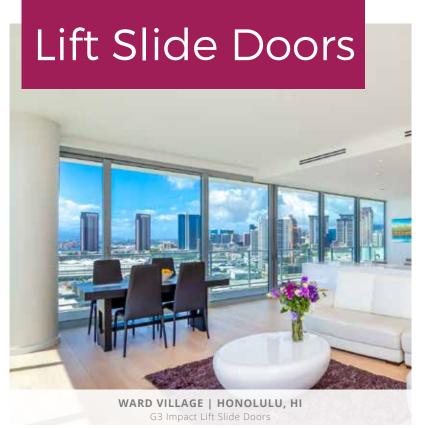
Glass-Mounted Pull Handle For Sliding Systems

Clear FGW Hinge For Folding Systems

Thumbturn **Bottom Lock** 

**Keyed Bottom** Lock

Additional hardware options including closers, door catches, and limiters are available on page 29. Custom hardware options are also available with engineering approval.





# **Doors That Transcend Boundaries**

Solar Innovations® Lift Slide Door Systems are a high-performance alternative to traditional sliding glass doors. Controlled with a simple turn of the wrist, the handle lifts the panels off the track to allow easy operation. This door can be opened with one hand and closed with even less resistance. Once the panels are in place, turning the handle reseals the door to provide security and superior air, water, and thermal performance.



### **BUILT TO PERFORM**

The G3 Lift Slide Door System is NFRC certified, meeting the highest standards for energy efficiency, security, and durability. All air, water, and structural tests on the lift slide door system outperform the traditional sliding glass door system.

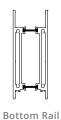
### **CONFIGURATIONS**

Lift slide doors are available in dual and multi-track configurations and can feature pockets or 90° no post corners. Custom configurations are also available; contact a Solar Innovations® sales designer for more information.

Hardware options and configurations are available on page 20.

# EXAMPLE CONFIGURATIONS

### **VERTICAL & HORIZONTAL RAIL OPTIONS**









il Hurricane Flush Rail

Handle Rail



# Slide Open the Possibilities

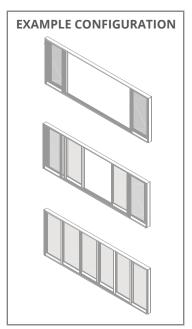
Sliding glass door systems expand the view of any commercial space and can be used as external entryways or transitions between two interior spaces. Motorization options, pocketing possibilities, expansive panel sizes, and countless custom configurations make our sliding glass doors a flexible design element that complements any space. Where engineering allows, a pocket system can be added so the doors are completely hidden from view while open, creating an unobstructed view.

### **RESTAURANTS**

Heighten a customer's experience and increase revenue by bringing the outdoors in. Multi-track sliding glass doors, along with our window systems, provide minimal sightlines. Enhanced glass options give your space the protection that it needs from the elements, while having the strength and durability to withstand almost any weather.

### **EDUCATIONAL FACILITIES**

An ever growing trend in educational facilities is the increase in natural daylighting and larger, more flexible spaces. Our operable door systems allow for multiple room configurations, open campus centers, and better learning environments.





### **HURRICANE IMPACT TESTED**

The G2 and G3 Impact Multi-Track Sliding Glass Door Systems are a thermally enhanced, high performance hurricane impact rated doors. With all of the options of the G2/G3 Systems, this option is simply for conditions that require a high performance fenestration system.

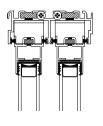


# **Details**



### **G2 SYSTEM**

The G2 Multi-Track Sliding Glass Door System is a thermally enhanced door ideal for any commercial entryway. The frame uses a thermal strut system that separates the interior metal from the exterior metal. By including a thermal break, the temperature transfer between the outdoors and indoors is minimized.



**Head Detail** 

Standard

**Bottom Rail** 



Hook

Rail





Thermal

Hurricane Hook Rail Hurricane Flush Rail

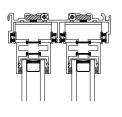


HOPCAT BAR & RESTAURANT | SYRACUSE, NY G3 Multi-Track Sliding Glass Doors



### **G3 SYSTEM**

The G3 Multi-Track Sliding Glass Door System is a thermally enhanced door ideal for any commercial entryway. The G3 system also has an impact rated option for conditions that require a highperformance fenestration system. Also available is the G3 STC Rated system, which combines enhanced acoustical performance, superior thermal performance, and outstanding functionality.

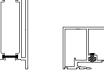


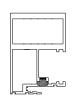
**Head Detail** 



Standard

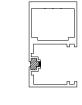
**Bottom Rail** 





Hurricane

Hook Rail



Hurricane Flush Rail

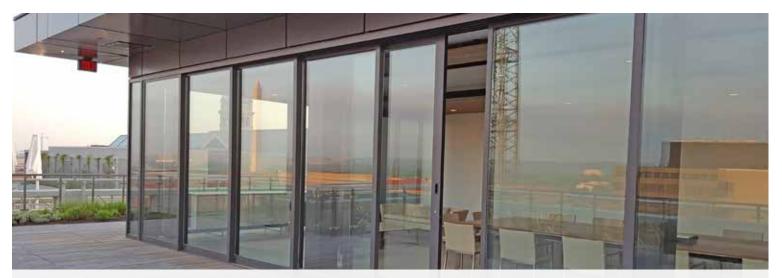
To download more details and dimensions, visit solarinnovations.com/information/downloads.

Hook

Rail



LINKEDIN HEADQUARTERS | SAN FRANCISCO, CA 20ft Motorized Dual Track Sliding Glass Doors



HOGAN LOVELLS OFFICES | WASHINGTON D.C.

G3 Multi-Track Sliding Glass Doors

# Hardware

### **SLIDING GLASS DOOR**











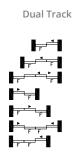
Finger Grip

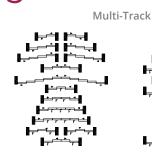


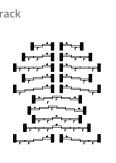
Ergonomic

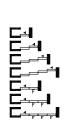
Pull handle options are also available for sliding doors. See page 29 for additional hardware options.

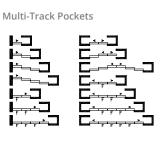
# Configurations

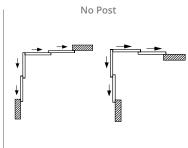












# Sill Options

### **G2 SLIDING GLASS DOOR**











High-Performance Thermal Sill

Extra High-Performance Thermal Sill

Low Profile Thermal Sill with Ramps

Low Profile Thermal Sill Nonthermal Tile Sill

### **G3 SLIDING GLASS DOOR**











High-Performance Thermal Sill

Extra High-Performance Thermal Sill

Low Profile Thermal Sill with Ramps

Low Profile Thermal Sill

Nonthermal Tile Sill

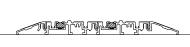
**LIFT SLIDE DOOR** 













High-Performance Thermal Sill

Extra High-Performance Thermal Sill

Low Profile Thermal Sill with Ramps

Low Profile Thermal Sill

# Sliding Glass & Lift Slide Door Systems Comparison

MATERIAL	G2 SLIDING GLASS DOOR	G3 SLIDING GLASS DOOR	LIFT SLIDE
MAXIMUM PANEL SIZE*	5' x 10'	5' x 15'	5' x 15'
NFRC APPROVED	YES	YES	YES
ENERGY EFFICIENCY	BETTER	BEST	BEST
ACOUSTICAL	Varies with Options Selected	Varies with Options Selected	Varies with Options Selected
IMPACT RATED	YES	YES	YES
SYSTEM WALL DEPTH	VARIES	VARIES	VARIES
TOP OR BOTTOM LOAD	воттом	воттом	воттом
STOCK FINISHES	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White, Bronze, Clear Anodized, Dark Bronze Anodized**
SIMULATED DIVIDED LITES (SDLS) OR INTERNAL MUNTINS	YES	YES	YES
GLAZING INFILL	3/ <sub>16</sub> " - 1 1/ <sub>16</sub> "	1 ¼" - 1 ¾"	1 1/4" - 1 3/8"
MAXIMUM # OF PANELS  10 Manual Recommended (Motorized Available)		10 Manual Recommended (Motorized Available)	10 Manual Recommended (Motorized Available)
WATER PERFORMANCE***	6.0psf - 12.0psf	6.0psf - 12.0psf	12.0psf or higher

<sup>\*</sup>Custom configurations, oversized panels, and variations are available with engineering approval. Please contact a Solar Innovations® sales designer to discuss options.

<sup>\*\*</sup>AAMA 2603-04-05 custom options are also available.

<sup>\*\*\*</sup>Dependent on sill selection.

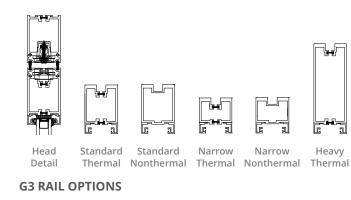
<sup>\*\*\*\*</sup>Can also be laminated, veneered, or custom painted.

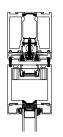


# Grand, Versatile Entryways

The search for oversized doors can be difficult, but Solar Innovations® offers the perfect solution. Pivot doors are ideal for oversized openings in interior and light exterior applications. Each door's pivot point is custom located, with center and off-center pivot locations available. Pivot doors are equally suitable for commercial and residential applications and range from smaller scale doors to garage door sized openings. The large size openings and minimal floor space interruption allow for sizable items to pass through the framework that may be hindered by a traditional entrance.

### **G2 RAIL OPTIONS**









Thermal

Standard



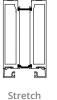
Standard

Nonthermal

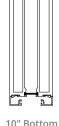
Narrow

Thermal





Rail



10" Bottom

10" Bottom Rail



**ODETTE WINERY | NAPA, CA** G3 Center Pivot Door

# Hardware

# Finish Options Matte Black White Satin Nickel Toronto Allegro

(Keyed Option Available)

Additional hardware options including closers, door catches, and limiters

Keyed

# Pivot Door Systems Comparison

MATERIAL	G2 PIVOT DOOR	G3 PIVOT DOOR
MAXIMUM PANEL SIZE*	5' x 10'	6' x 12'
SYSTEM WALL DEPTH	2 1/4"	3"
STOCK FINISHES	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White, Bronze, Clear Anodized, Dark Bronze Anodized**
SIMULATED DIVIDED LITES (SDLS) OR INTERNAL MUNTINS	YES	YES
GLAZING INFILL	3/ <sub>16</sub> " - 1 1/4"	14" - 1 1⁄2"
MAXIMUM # OF PANELS	UNLIMITED***	UNLIMITED***
CLOSER OPTIONS	Floor & Head Closers	Floor & Head Closers

\*Custom configurations, oversized panels, and variations are available with engineering approval. Please contact a Solar Innovations® sales designer to discuss options.

\*\*AAMA 2603-04-05 custom options are also available.

\*\*\*Based on engineering requirements.

# Sill Options\*

Thumbturn

Lock

Two Point

Locking Handle

are available on page 29.

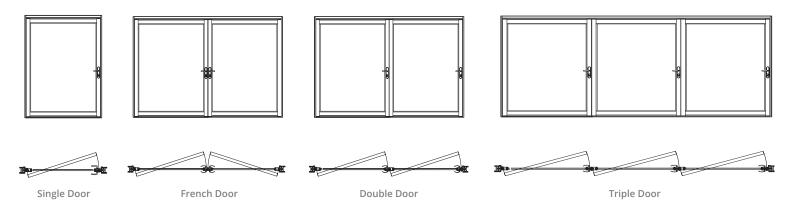


<sup>\*</sup>No sill option is also available. Please contact a Solar Innovations® sales designer for more information.

Adjustable

Door Catch

# Configurations





G2 Outswing French Doors & Aluminum Curtain Wall

ALTA STRADA RESTAURANT | FAIRFAX, VA

G2 Outswing French Doors

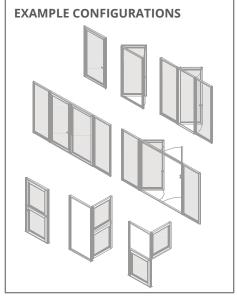
# Timeless Entrances with Limitless Design

While swing doors may be one of the simplest and most common door systems, they should not be overlooked when designing and planning a commercial space. Choose from a large offering of side hinged swing door options, including terrace, and French doors. With numerous custom decorative glazing options, finishes, matching sightlines, and transom options, these swing doors can fit any need. Depending on your client's preference, the doors can blend in with the aesthetics of a surrounding structure, act as utilitarian entrances, or can be the star of the show with the grandeur of a true entry door. Swing doors feature panel and hardware designs similar to Solar Innovations®¹ operable walls and structures, creating a consistent appearance throughout your project.

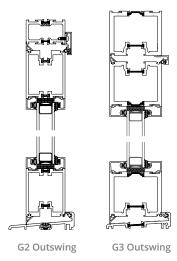


### **TERRACE & FRENCH DOORS**

Terrace doors, or single swing doors, are a single panel opening used in both internal and external applications. French doors, also known as dual swing doors or double swing doors, consist of two panels that close in the center. French doors do not require framing between the two panels, which provide an unobstructed opening. The unique mulling capabilities allow modular construction, as well as the seamless integration of transoms and sidelites into designs. Terrace and French doors can be either inswing or outswing. These systems can be integrated into our folding glass walls and slide and stack glass wall systems.



### **HEAD & SILL DETAILS**



To download more details and dimensions, visit solarinnovations.com/information/downloads.

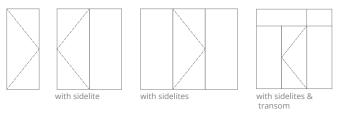
# Hardware

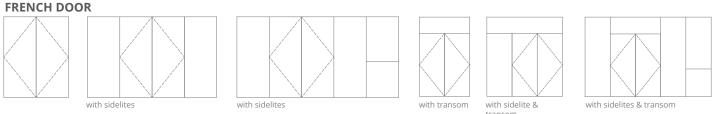


Additional hardware options including closers, door catches, and limiters are available on page 44.

# Configurations

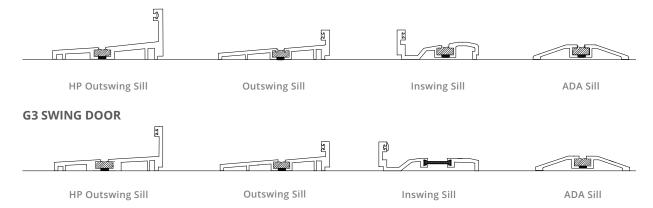
### **TERRACE DOOR**





# Sill Options

### **G2 SWING DOOR**



25

# Swing Door Systems Comparison









MATERIAL	G2 ALUMINUM	G3 & G3 LITE ALUMINUM	ALUMINUM WITH WOOD CLAD	WOOD
MAXIMUM PANEL SIZE*	3 ½' x 10'	5' x 15'	5' x 12'	5' x 10'
NFRC APPROVED	YES	YES	_	_
ENERGY EFFICIENCY	BETTER	BEST	BEST	BEST
ACOUSTICAL	Varies with Options Selected	Varies with Options Selected	Varies with Options Selected	Varies with Options Selected
IMPACT RATED	YES	YES	_	_
SYSTEM WALL DEPTH	2 1/4"	3"	3"	Varies with Options Selected
STOCK FINISHES	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White, Bronze, Clear Anodized, Dark Bronze Anodized**	White Oak, Red Oak, Hard Maple, White Ash
SIMULATED DIVIDED LITES (SDLS) OR INTERNAL MUNTINS	YES	YES	YES	YES
GLAZING INFILL	3⁄ <sub>16</sub> " - 1 ¼"	14"- 1 ½"	3⁄ <sub>16</sub> " - 1 ½"	1"
WATER PERFORMANCE	6.0psf Up to 12psf with High-Performance Sill	6.0psf Up to 12psf with High-Performance Sill	6.0psf	6.0psf

<sup>\*</sup>Custom configurations, oversized panels, and variations are available with engineering approval. Please contact a Solar Innovations® sales designer to discuss options.

\*\*AAMA 2603-04-05 custom options are also available.

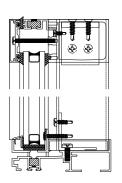
\*\*\*Can also be laminated, veneered, or custom painted.

# Aluminum Curtain Walls

# **Crystal Clear Views**

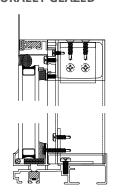
Curtain walls are an excellent way to bring natural light into a room while still remaining protected from the elements. Many providers often shy away from unique curtain wall projects that integrate canopies, doors, windows, and sloped glazing, but unique applications are where Solar Innovations® excels. We will work with you and your client to identify the right concept for the location. With the best thermally enhanced system for custom curtain walls and window wall applications, we are one of the most experienced manufacturers.

### **REGULAR GLAZING BAR CURTAIN WALL CAP GLAZED**

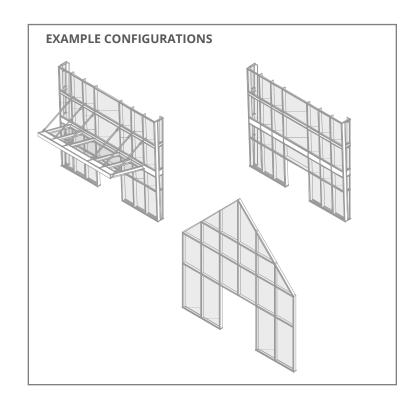


Head & Sill Detail

### REGULAR GLAZING BAR CUR-**TAIN WALL 4-SIDED STRUC-TURALLY GLAZED**



Head & Sill Detail





NATHAN KLINE RESEARCH INSTITUTE | ORANGEBURG, NY Segmented Aluminum Curtain Wall



Aluminum Curtain Wall & G2 Folding Glass Walls



# Natural Wood Interior, Durable Aluminum Exterior

Wood curtain walls, or timber walls, innovatively combine the warmth and beauty of a natural wood interior with the durability and longevity of an aluminum exterior to create the perfect solution for those seeking a high-performing, sustainable building system. An exterior aluminum system creates a superior barrier from the elements, limiting the wood's exposure to any type of precipitation or wind, and dependably maintains a high level of performance through positive drainage principles. Our wood curtain wall is a pressure equalized system which is achieved by overlapping the horizontal profiles with the vertical profiles. The lack of obstruction from horizontal to vertical is the key component to pressure equalization.

### Wood/Glulam Standard Type







Hard Maple





Wood/Glulam Designer Type







Cherry

Douglas Fir Sapele Mahogany

Additional wood types, including Eastern White Pine, are also available.

### **DESIGN OPTIONS**

In addition to our wood interior/aluminum exterior system, we also offer a variety of design options for a truly custom wood curtain wall. For an all wood style, a wood cover cap can be used for the exterior.



Wood Facade System (Standard Option)



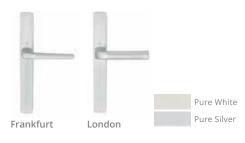
2-Sided Structurally Glazed Wood Facade

# Additional Hardware Options

### Handles



### **ALUMINUM - INLAND APPLICATIONS**



### **CONTEMPORARY**





### **SOLID BRASS - COASTAL APPLICATIONS**











## Locks



Two Point Two Point Keyed Lock Locking Handle



Standard Flush Bolt



Thumbturn Lock



Keyed

# Hinges



Semi-Concealed Hinge



Surface Mount Hinge

# Closers, Catches, & Limiters



D Series 7414 D Series TS93 Door Closer Door Closer



C Series PR82 Door Closer



D Series BTS80 Floor Closer



R Series H28S Floor Closer







Adjustable Door Limiter Door Catch

# Commercial Hardware



**Exterior Entry Trim** 











Toronto

Please Note: All hardware is subject to vendor availability. Custom finishes may be available upon request at reserves the right to option at any time. Please visit solarinnovations. com for additional product



# **Expand Horizons**

With a broad range in window operations — from fixed to tilt turn — Solar Innovations® window systems offer countless custom configurations to enhance any commercial space. The thermally-broken aluminum profiles have exceptional thermal performance, creating a comfortable environment in all temperature extremes. In addition, aluminum windows will not rust, rot, warp, or need constant finish maintenance.

### **CASEMENT WINDOWS**

Casement windows are one of the most popular styles in the world. They are hinged at the side and swing outward when opened. Casement windows are excellent for natural ventilation strategies, especially in hot climates. Inswing casement windows are also available.



### **AWNING WINDOWS**

Awning windows hinge at the top of the frame, allowing the bottom to open outward. There is usually a cam lock on the interior, which can be unlocked, and the window will open. They are a popular choice for in-system windows in greenhouses, conservatories, sunrooms, and other glass structures. When the windows are open, rain water will flow off and away from the structure.



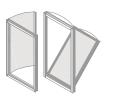
### **HOPPER WINDOWS**

Hopper windows are hinged at the bottom and tilt in to offer increased ventilation. They are often paired with other fixed or operable windows and doors or incorporated into transoms. These window systems are typically used in basements for light and ventilation where there is limited space.



### **TILT TURN WINDOWS**

Tilt turn windows offer dual action with the turn of a handle. Turning the handle upward allows the window to open like a hopper, offering increased security. Turning the handle to the side opens it like an inswing casement, allowing for easy cleaning. Returning the handle downward engages the lock.



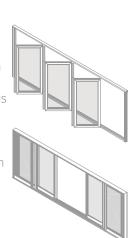
### **FIXED WINDOWS**

Fixed windows are non-operable, meaning they cannot be opened. This type of window is often found in conjunction with the other types of windows in a Mulled Window System or in areas where natural light is needed without the need for ventilation.



### FOLDING GLASS WINDOWS

Folding windows consist of individual window panes, which slide along a track and then fold accordion style against a wall. When the windows are closed, an unobstructed view is presented.



### **SLIDING WINDOWS**

A sliding window consists of individual window panes which slide along a track and stack at the end of the track. The panels slide left, right, or both directions based on design.



CANAL PARK | AKRON, OH Sliding Glass Windows



FOULKEWAYS COMMUNITY CENTER | GWYNEDD,PA



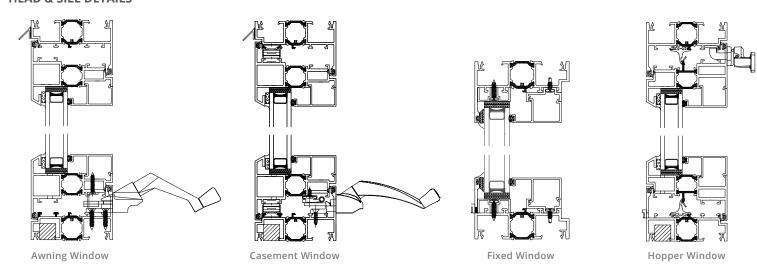
GLASS HOUSE WINERY | FREE UNION, VA



# Mulled Window Systems

The mulled window system can be a combination of fixed panels and operable windows in one unit. The Solar Innovations® Mulled Window System can be composed of any number of fixed, awning, hopper, and casement windows. Unlike the systems of many other manufacturers, our mulled window system can include both inswing and outswing windows within one system, creating a truly unique and customizable system.

### **HEAD & SILL DETAILS**



### PERFORMANCE

- Water performance up to 15psf (fixed), depending on configuration, and water column
- · Higher design pressure ratings available with engineering approval
- · Test results available upon request

### **PANEL SIZES**

- Minimum panel size: 2' x 2' operable, 1' x 1' fixed; smaller panels may be available upon engineering approval
- Maximum panel size up to 4' x 8' subject to hardware limitations; larger panel options may be available depending on application

To download more details and dimensions, visit solarinnovations.com/information/downloads.

# G1, G2, G3 International Systems

### **G1 INTERNATIONAL SYSTEM**

The G1 International Window System is a smaller version of our existing Mulled Window System. The G1 Window System utilizes thermal strut technology to maximize thermal performance. Beveled exterior edges provide a more traditional look compared to the G2 and G3 Window Systems' modern sightlines. This system is the best for use with traditional grid systems and two tone applications.

### **G2 INTERNATIONAL SYSTEM**



With the ability to mull different operable or fixed windows together, the G2 International Window Systems can provide a solution to almost any type of configuration imaginable while providing superior thermal and structural performance. This system utilizes fill and debridge technology. Casements, awnings, fixed, and hopper windows are all able to be incorporated into the same unit without

requiring additional framing in this system. The G2 HP System is used for creating large high-performance tilt turn windows.

### **G3 INTERNATIONAL SYSTEM**

G3 International Window Systems provide superior thermal offerings and capabilities by utilizing thermal strut. This technology allows for a dual color unit by separating the profiles into two individual pieces. It also provides a wide range of glazing thicknesses to conform to any application. This system can incorporate awning, hopper, casement, fixed, and tilt turn windows.

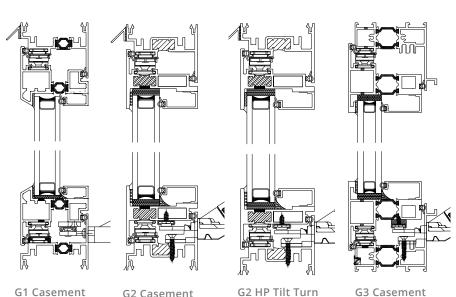




FRIDAY HARBOR BEACH CLUB | INNISFIL, CANADA

G2 International Fixed Windows

Configurations are shown on page 31.





ENSIGNER OFFICES | GRENLOCH, NJ G1 International Fixed & Hopper Windows

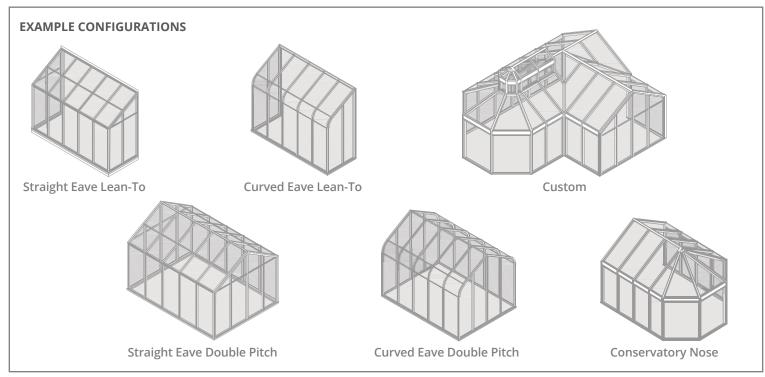






# Create the Perfect Environment

At Solar Innovations®, we understand that the needs of each business are as unique as the customers they serve and the products and services they provide. Every Solar Innovations®' greenhouse, conservatory, and sunroom is custom built by our skilled team of designers; tailor-made structures help ensure a seamless architectural blend and provide solutions optimal to the particular challenges of any environment. Even after installation is completed, we will continue to provide you with quality customer service.



# Living, Breathing Environment

Greenhouses can be designed to any specification—no two products are the same. Every greenhouse that leaves Solar Innovations® is completely custom. If your client is looking for a small scale lean-to greenhouse or a large passive solar greenhouse, we will create the perfect greenhouse for you. Our design team will work with you on your client's wants and needs and recommend suggestions to help ensure your client has a properly functioning greenhouse.

Commercial greenhouses are ideal for coffee shops, greenhouses, floral shops, grocery stores, restaurants, retirement homes, schools, and garden centers. Each Solar Innovations® commercial greenhouse is customized to the business's individual requirements. All sizes, shapes, materials, and work areas can be customized to virtually any request.

#### **EDUCATIONAL GREENHOUSES**

Greenhouses provide students with a unique opportunity to study horticulture firsthand. Universities often conduct studies on plant growth, pesticides, and genetics, while vocational schools may propagate plants for landscaping course work. Elementary schools utilize greenhouses to expose students to starting seeds and raising butterflies. Most schools choose to implement an environmental control system so that plants can receive proper care through automated processes, which saves time and energy.

#### **FLORAL SHOPS & GARDEN CENTERS**

Two of the most common commercial greenhouse applications are floral shops and garden centers. Solar Innovations® can design the greenhouse with different zones and areas for specific needs. The floral center will need display space, refrigeration areas, large work sinks, and benches, along with space for the desk. All of these items can be included when designing the greenhouse, along with any additional areas your client would like.

#### **INSTITUTIONAL GREENHOUSES**

An institutional greenhouse is any greenhouse designed for an organization. The primary focus of the greenhouse is simply to grow plants and enjoy horticulture. Although scientific research can be performed, most institutional greenhouses are designed for pleasure gardening. Many senior living communities utilize greenhouses as a method of therapy and relaxation for residents. The greenhouse can be designed around ADA restrictions, making it a sound choice for any institutional application.



NET ENERGY SCHOOL | STATEN ISLAND, NY
Straight Eave Lean-To Greenhouse



SHARON INFORMATION CENTER | SHARON, VT 8-Sided Polygonal Greenhouse



GLASSHOUSE WINERY | FREE UNION, VA Straight Eave Double Pitch Greenhouse

# Greenhouse Accessories



#### **BENCHES**

Benches greatly increase the amount of growing space in a greenhouse. Benches come in standard sizes from most manufacturers, but Solar Innovations® creates custom benches to fit any configuration, including fixed, tiered, rolling, and more.



#### **GROWLIGHTS**

Supplemental lighting creates the potential for additional plant growth by providing the necessary hours of light when it is not naturally available.

Most year-round greenhouses require lighting during the winter so that plants receive the necessary amount of light.



## ENVIRONMENTAL CONTROL SYSTEMS

To ease the burden of greenhouse maintenance, an environmental control system can be installed. This system can automate accessories within the greenhouse, including heating, cooling, watering, lighting, shading, and more.



#### **IRRIGATION SYSTEMS**

An automatic watering system can regulate the flow of water and nutrients to plants without the gardener being on-site. A Solar Innovations® sales designer can determine if misting and/or drip systems are correct for the greenhouse.



#### **CIRCULATION FANS**

Circulation fans constantly move air within the greenhouse and are essential to the health of plants. These fans keep the temperature and humidity uniform while destratifying the air and reducing condensation.



#### **HEATING SYSTEMS**

Our team can evaluate the structure's location, size, shape, design, and plant types to provide the best heating solution for each project, including which fuel source to use. An optional vibration kit is also available.



#### **HUMIDIFIERS**

Humidifiers are utilized to control moisture levels in the air for optimal plant growth. When humidity drops below a predetermined level, a sensor triggers the humidifier to activate. For more advanced applications, high pressure foggers are available.



#### **SHELVES**

A greenhouse's growing area can be increased by installing shelving. We offer several variations of support brackets and shelf tops.



#### **PLANT HANGERS**

With our stationary and operable plant hanger options, plants can be grown year-round in baskets within the greenhouse or outdoor baskets can be brought inside during colder months.



#### **TRELLISES**

A trellis allows gardeners to utilize vertical space within the greenhouse for growing climbing plants. Solar Innovations® manufactures aluminium single and stacking trellises that will not rot like their wooden counterparts.

# Decorative Elements



#### **APPLIQUÉS**

Decorative appliqués are elements that can add character to structures. Each cast aluminium appliqué features one of two main motifs: the rosette or the fleur-de-lis.



#### **FINIALS**

A finial, also known as a spire, is typically located at the highest peak of a greenhouse's roof. Dormers, lanterns, ridges, and entryways can all utilize finials.



#### **RIDGE CRESTING**

Ridge cresting is used to enhance the ridge line of a greenhouse, especially in classic English designs. Several styles of ridge cresting are available.



#### **GABLE PEDIMENTS**

Gable pediments, commonly referred to as Palladian arches, are added to the triangular gable in a greenhouse. Grid work can be used to simulate true pediments or mullions.



#### **EAVE SPANDRELS**

Eave spandrels, or decorative corners, can be considered one of the oldest forms of decorative architecture. While eave spandrels are primarily decorative, they can also be used for shelf supports.



#### **TRIMS**

Solar Innovations® offers extruded decorative trims in durable aluminium, which will not warp, rot, rust, or require finish maintenance like traditional wooden trim



#### **BASE PANELS**

Decorative base panels follow the Elizabethan form of raised grid design. We offer two standard models: a raised panel, and a smooth panel.



#### **RING & COLLARS**

Decorative ring and collar supports are decorative trusses that link two opposite rafters to provide additional support to maintain roof shape and structural integrity while adding unique architectural appeal.



#### **GUTTERS**

Decorative gutters add an aesthetically appealing, functional element to any structure. Gutters are available in several styles and finishes, including traditional copper.



#### **KING POST**

King posts, similar to finials, are typically placed at the end of a structure's ridge cresting. The king post is made up of a hub with finials on the top and bottom to create a dramatic decorative finale to the roof line.



#### **CORNER COLUMNS**

Decorative and structural corner columns are one of the most classic forms of architecture, and Solar Innovations® can create custom designed columns to fit your client's structure.



#### **GRIDS**

Decorative grids enhance the look of any structure, and are available in five standard types: Low Profile, Ogee, Colonial, Traditional, and Large Traditional. We offer two types of grids: interior muntins and exterior grids combined with simulated divided lites (SDLs).



# Indoor Comfort with Breathtaking Views

Conservatories and sunrooms are functionally very similar, but are differentiated by the level of stylistic decor present in the structure's design. Conservatories by nature are highly decorative and period specific, featuring window grids, finials, crown molding, Palladian arches, ridge cresting, and other decorative elements.

Conservatories are glazed structures that feature a glass roof and/or glass walls. These structures can be attached to existing construction or be designed as standalone units. The term "conservatory" is more commonly used in Europe, especially in England. However, "sunroom" is a term most commonly used in the United States, Australia, New Zealand, and Canada. The room can be added to a building or a preexisting room can be modified to become a sunroom by replacing the roof with a glass roof or walls into windows.

#### **RESTAURANTS**

Solar Innovations® conservatories and sunrooms will allow your client's restaurant to be a unique space when compared to the competition while providing a business with an unparalleled view of the outdoors. Restaurants often use these structures for a dining room, where patrons can enjoy a view while enjoying their meal.

#### **OFFICE SPACES**

A glass structure can provide unique office space for many businesses. A business can add a structure for their employees to house desks, or even use it as a conference space. Regardless, the space will provide the added benefit of natural views and additional daylight proven to increase employee morale.

#### **RESORTS**

When incorporating a Solar Innovations® glass structure into a hotel or resort, businesses will get that "wow" factor that will set them apart from the competition. Whether the entryway or pool needs a glass structure, or even a light and inviting sitting area, the options for creativity remain virtually endless.

#### **SENIOR LIVING & MEDICAL FACILITIES**

Personal care facilities—such as continuing care senior living communities and hospitals—utilize structures as an area for residents and patients to complete therapy. Group sessions and recreational activities can easily be performed in the space. Patients in a hospital can recuperate and enjoy the outdoors without risking the onset of a new illness from extreme weather conditions.



SHAKE SHACK | BROOKLYN, NY Straight Eave Lean-To Sunroom



CHAPEL POINTE RETIREMENT | CARLISLE, PA Polygon Nose Sunroom



RARE650 RESTAURANT | SYOSSET, NY
Straight Eave Double Pitch Conservatory with Folding Windows



BLUEGREEN VACATION CLUB | HERSHEY, PA
Straight Eave Double Pitch Pool Enclosure



**ONE SPRING STREET CONDOS | NEW BRUNSWICK, NJ**Straight Eave Double Pitch Pool Enclosure with Sliding Glass Doors

# Soak Up the Sun All Year Round

Businesses sacrifice countless hours of potential customer use with the time it takes to open, close, and clean a pool or spa. Get the most out of these amenities and guarantee patrons year-long access and enjoyment with the addition of a Solar Innovations® enclosure to your pool or spa.

The variety of glazing options we offer allows the charm and beauty of nature to enter, while keeping out the snow, wind, rain, leaves, and insects. We use a non-corrosive aluminum framework and stainless steel fasteners that will withstand the elements in the high humidity, chemical filled environment of a pool or spa enclosure.

#### **WATER PARK & RESORT**

Water parks offer a variety of attractions and gathering areas, all of which must be able to withstand constant wet or damp conditions without rotting, warping, or requiring frequent finish maintenance. Our high quality aluminum products, from glass structures to folding glass walls, stand up to this environmental challenge. High performance sills are available in many products for increased water protection.

#### HOTEL

Pool and spa enclosures are a unique and attractive addition to hotels around the world. Allow guests to enjoy the pool and spa year-round and during any weather conditions. Having an indoor pool can also increase revenue and drastically reduce operating costs.

#### **APARTMENT & CONDO**

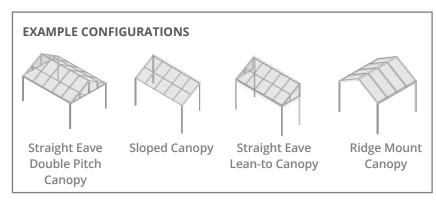
Pool and spa environments can be a deciding factor for many tenants looking for their next apartment or condo. High-quality pool houses or pool enclosures offer a luxury experience that give a building or complex an advantage over the competition.

# Canopies & Walkways

## **Unmatched Shelter**

#### **CANOPIES**

Canopies typically consist of an overhead aluminum awning with supporting posts and exposed sides, or completely free span. If your client is considering improving their commercial building with a glass canopy, Solar Innovations® can provide cost effective options. Common uses for commercial aluminum canopies are entrance canopies to a business, ambulance entrance canopies for hospitals and senior living communities, and airport canopies. Our glass canopies are ideal for shading guests on restaurant patios, along with increasing the aesthetics of the building.



#### **WALKWAYS**

Glass walkways are typically pathways enclosed on all four sides, which connect two buildings or provide a sheltered walking area directly from the street. Glass walkways can range from a simple lean-to attachment to a free standing decorative thoroughfare. Our walkways can be used for both commercial and residential applications.

Common uses for commercial aluminum walkways are healthcare facilities, schools, hotels, and businesses. All of these applications provide shade and protection from the weather as people pass from one location to another, while enjoying the view around them.



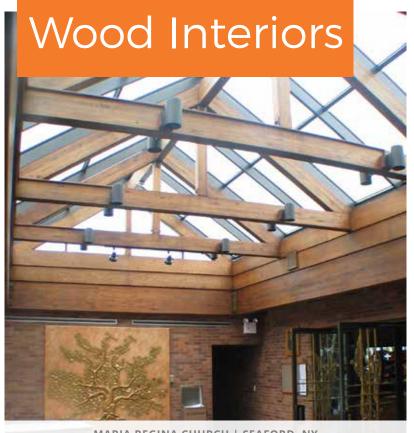
SAMPSON COMMUNITY COLLEGE | CLINTON, NC
Barrel Vault Walkway



EDEN RESORT | LANCASTER, PA Segmented Barrel Vault Canopy



HARPER'S LANDING | ONTARIO, CANADA
Straight Eave Lean-To Canopy







TENACRE FOUNDATION | PRINCETON, NJ Douglas Fir Straight Eave Double Pitch Sunroom

## **Timeless Natural Wood**

Solar Innovations® offers several elegantly designed products in custom wood systems. Thermal efficiency tends to be higher with a wooden structure as it allows for lower U-values. A lower U-value allows the room to maintain an even temperature throughout the year. When implemented correctly, a wooden interior can provide a structure with a traditional feel. A wood conservatory can be highly decorative and include traditional elements reminiscent of classic conservatories. Moldings and trims featured in the structure can be manufactured to mimic existing architectural elements within your business, and the same is true for wood interior panels, which can be customized to fit virtually any design.

We do not recommend using wood in structures that have high moisture, such as greenhouses or pool enclosures—due to warping and aging of the wood—but for a conservatory or sunroom, this can be the perfect solution.

#### **FINISH OPTIONS**



Please Note: Depending upon color selection, extra cost and lead times may apply for all finishes other than Solar Innovations® stock standards. Color illustrations are shown as accurate as standard photography and printing processes allow. Final finish selection should be made from a physical sample; please contact Solar Innovations® to receive samples. All product and finish options are subject to vendor availability. Solar Innovations® reserves the right to discontinue any option at any time without notice. Additional options, including custom color matches, are available; contact a Solar Innovations® sales designer for details.

# Traditional vs. Contemporary

#### **HISTORIC CHARM**

Classically designed English structures are the epitome of style and tradition. Solar Innovations® offers glass structures constructed of aluminum framing that will not require constant maintenance or suffer termite damage. Cast aluminum profiled rafters, wood grids, raised base panels, Palladian arches, finials, and ridge cresting can be added to complete the traditional appeal. English structures feature strong architectural styling and light interior design. The structures showcase

layered, muted fabrics in a variety of pastel colors. Floral patterns and small print fabric are commonly combined with wicker or rattan furniture to add airiness to the conservatory. Pinoleum blinds, which consist of small strips of wood, are often used on the ceiling and windows to help reduce glares and heat gain.

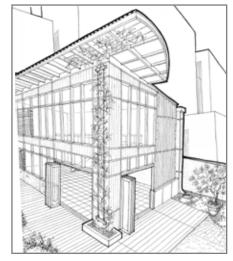


BLITHEWOLD PLANT HOUSE | BRISTOL, RI
Straight Eave Double Pitch Greenhouse

#### **MODERN INNOVATIONS**

Modern style structures are often characterized by the simple forms and clean lines used to create their facades. These structures generally create

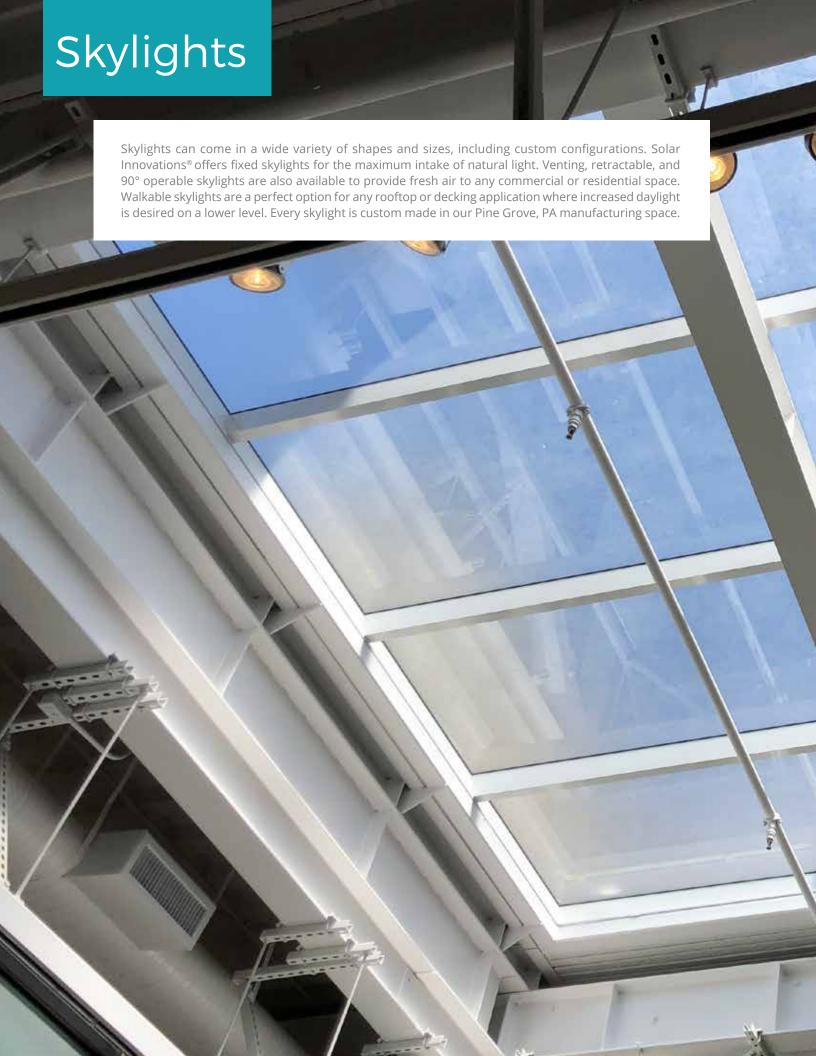
a solid vs. void relationship by combining a variety of materials such as glass, concrete, and aluminum. The interior of a modern conservatory is usually minimalistic, clean, unadorned, and bold in color choice. Simple colors such as white, black, and gray are used throughout a modern space. Accents of bright colors such as red, blue, and yellow are used, but in moderation. Modern glass structures typically feature interior finishes that consist of natural looking materials like concrete, stainless steel, and

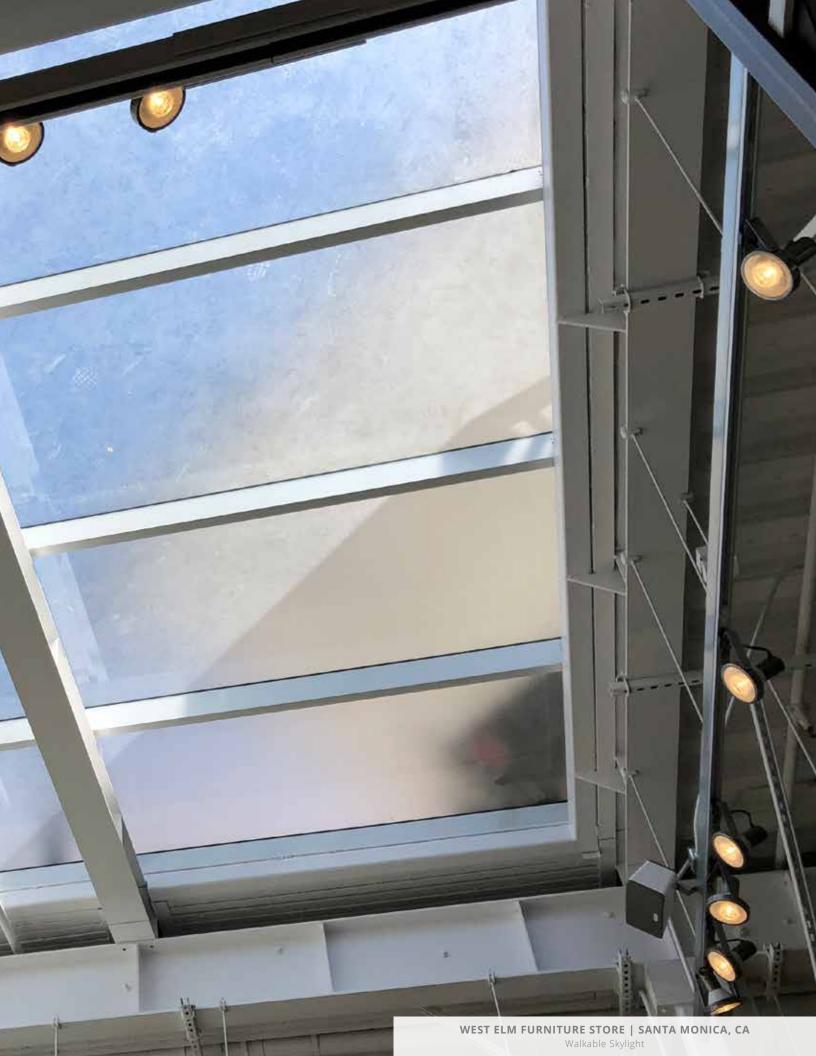


wood. Sustainability is often a key factor in the selection of materials for modern styling.



FRIENDS SCHOOL | BALTIMORE, MD Four-Sided Structurally Glazed Inverted Lean-To



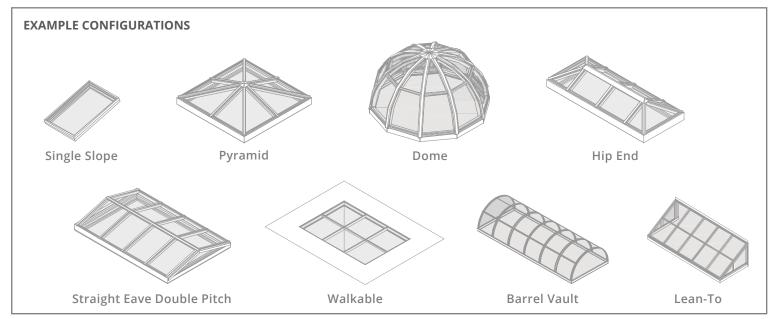




# Sunshine Made Simple

Solar Innovations® offers fixed skylights in virtually any size and can accommodate a wide range of design requirements, including impact certified options and Florida Product Approved options. Because Solar Innovations® has designed several different style tube skylight systems, virtually any roof glazing need can be met. Attaching to almost any substrate, our structures are suited for both commercial and residential applications without size or design limitations.

Every skylight produced by Solar Innovations® is created custom for your client's project; there are no standard sizes. Our in-house engineering and drafting teams can help create a custom skylight to act as the focal piece on their project.

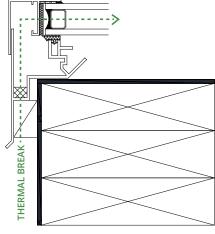


PA ACADEMY OF MUSIC | LANCASTER, PA Irregular Pyramid Skylight

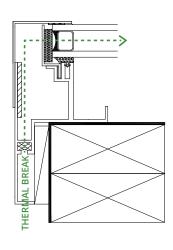
# **Daylighting Solutions**

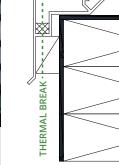
Natural daylight creates a more productive work environment, making skylights a popular choice for businesses of all kinds. Customers are also more attracted to brighter, naturally-lit environments. Restaurants and retail stores with skylights create a relaxing and enjoyable customer experience. Skylights are also commonly found in institutional settings such as senior living communities, hospitals, and religious buildings as a source of natural light.

#### **G2 WELDED CURB**



#### **G3 WELDED CURB**

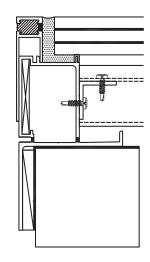




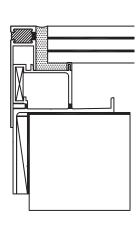
#### WALKABLE SKYLIGHTS

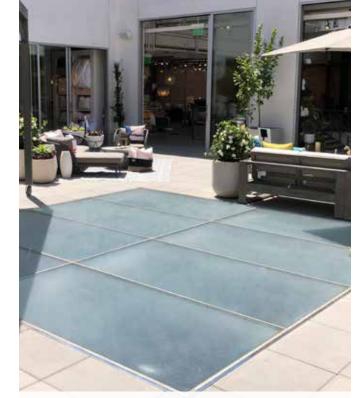
Solar Innovations®' walkable skylights are the ideal natural lighting solution when space is limited or travel cannot be prohibited. Light can travel between multiple floors or into dark basements without surrendering the ability to freely travel. We recommend a slip resistant walkable frit pattern glass for walkable skylights where there will be foot traffic.

#### **WALKABLE HIGH FRAME**



#### WALKABLE STANDARD FRAME

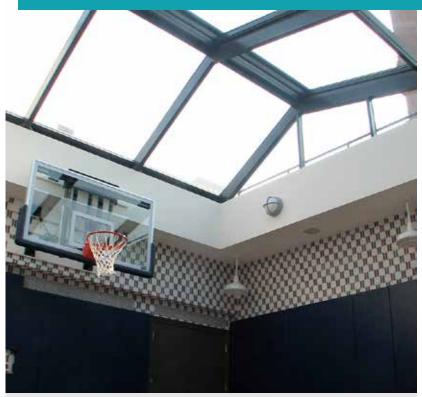




WEST ELM FURNITURE STORE | SANTA MONICA, CA Walkable Skylight

To download more details and for dimensions, visit solarinnovations.com/information/ downloads.

# Operable Skylights



HABER | LONG ISLAND, NY
Straight Eave Double Pitch Retractable Skylight



# Natural Light & Fresh Air

Through our skylight evolution, Solar Innovations® is now able to provide fully operable skylights in glass options to meet the specifications of the customer. Retractable skylights provide clear, unobstructed views and increased airflow for any commercial structure, while the 90° series allows ample levels of daylight and increased ventilation.

#### **RETRACTABLE SKYLIGHTS**

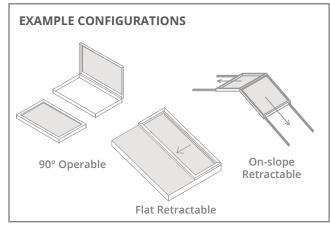
Retractable skylights can benefit any commercial environment by providing a unique customer experience. Natural daylight, fresh air, and circulation are all beneficial to occupants, providing a more positive environment. Offices with natural light show increased productivity and well-being of employees. Retail stores can use skylights to highlight products in a clean, bright setting.

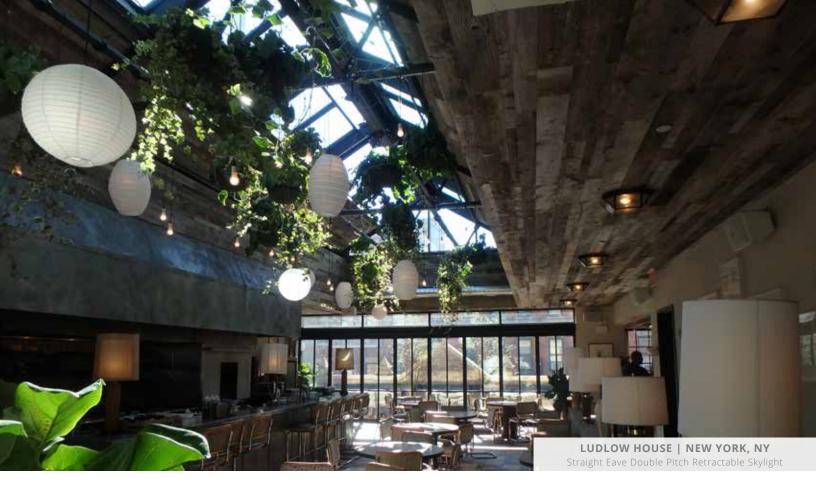
#### 90° OPERABLE SKYLIGHTS

A 90° operable skylight lifts the glazed unit, or "lid," 90 degrees from the plane of the curb. This type of skylight offers several applications and functions, the main being ventilation. At times, large equipment may need to be moved into a room, but the building doors are not large enough, or a building's may require easy access to the rooftop. In either of these situations, a 90° operable skylight is an ideal solution.

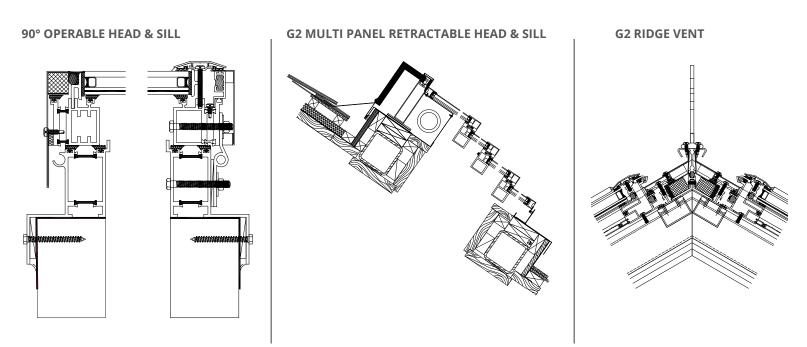
#### **RIDGE VENTS & VENTING SKYLIGHTS**

Operable ridge vents are used to bring fresh air and circulation into a room and operate with the use of a continuous hinge. A venting skylight has a higher profile than that of a ridge vent and offers better air and water performance along with a higher thermal value. These can be motorized or manually operated. Both ridge vents and venting skylights can be utilized in any glass structure, such as greenhouses and sunrooms.





# Details



# Complete Glazing Packages

# **Superior Solutions**

Doors and windows are often purchased at the same time, but from different manufacturers. This can create a disparity in sightlines, finishes, and the overall aesthetics of the structure. Solar Innovations® can provide you with a door and window package that will ensure consistent sightlines, finish colors, and warranties.

Our products are manufactured with aluminum framing that will not rot, rust, warp, or require constant finish maintenance. Utilizing the same framing by the same manufacturer will ensure your doors and windows all have a similar lifespan.



TAYLOR'S LANDING | TORONTO CANADA
Aluminum Curtain Wall, G2 French Doors, & G2 Folding Glass Wall

#### **DOOR & WINDOW OPTIONS:**

- Awning Windows
- Casement Windows (Inswing & Outswing)
- Hopper Windows
- · Fixed Windows
- · Tilt Turn Windows
- Terrace & French Doors
- · Sliding Glass Doors & Windows
- Folding Glass Walls & Windows
- Stacking Glass Walls & Windows
- Pivot Doors & Windows
- · Lift Slide Doors
- Curtain Walls (Aluminum & Wood)
- Window Walls
- Skylights
- Unique Custom Systems to Fulfill Your Client's Dreams



G2 Folding Glass Walls, Sliding Glass Windows & Aluminum Curtain Wall

# Residential Applications

# **Custom Tailored Living**

#### **DOORS & WINDOWS**

Solar Innovations® offers a massive selection of operable walls, doors, and windows. Indoor/outdoor living has never been easier with the various types of systems we offer. Our ability to build complete glazing packages for all your client's door and window needs make us a great choice for residential spaces. From folding, to sliding, to stacking, our operable doors and windows create a one of a kind atmosphere that will join together the outdoors and indoors.

#### **CURTAIN WALLS**

Curtain walls are an excellent way to bring natural light into a room while remaining protected from the elements. In residential applications, curtain walls can be constructed for exterior walls that showcase a beautiful view, interior partitions between rooms, as well as secondary structures, such as pool houses or garden sheds.

#### **GLASS STRUCTURES**

Experience the natural beauty of the outdoors through all four seasons from the interior of your structure. Whether your client chooses a sunroom, conservatory, or greenhouse, or one of our other products, we combine their expectations and our technology to create the ultimate environment. Our commitment is to design, develop, and manufacture the best environmentally specific glass enclosures. Large or small, complex or simple, our products are designed to fulfill your needs. Integrate an operable door and/or windows for a truly one of a kind structure.

#### **SKYLIGHTS**

The addition of a Solar Innovations® skylight to a home can completely change the atmosphere of a room. Natural daylight can enter the space and illuminate an area. When properly positioned, daylight can span into all corners of the space and remove dark, harsh shadows. Each residential skylight can be customized to fit your client's home needs, whether it be a brand new skylight or repairing and/or retrofitting operable vents into an existing one.



RESIDENCE | ROYERSFORD, PA G2 Folding Glass Wall



**RESIDENCE | BRISTOL, RI**Straight Eave Double Pitch Greenhouse



# Shade Options







Pleated Shades

#### **MANUAL ROLLER SHADES**

Manual roller shades are designed to be pulled by hand against the eave line. When pulled taut, the shade will click and hold in place. Effective for greenhouses and other applications that are used less frequently, the tension shade system is less expensive and easy to install.

#### **GRAVITY FED SHADES**

Gravity fed shades, also known as Roman fold shades, are typically used on sloped roofs, but can also be utilized in vertical wall applications. These shades are individually sized to fit between the rafters of an interior glass roof and are operated with a motor or manual pull cord in a Roman fold style. Numerous materials and colors are available. Wide span–covering two to four bays– may be available depending on fabric, layout, and design. Gravity fed shades are operable in rectangular sections and fixed in angled corners. They are also mounted at the ridge, and roll down to the eave. Gravity fed shades can be used in moist environments and typically require a minimum  $^2/_{12}$  roof slope.

#### **WIDE SPAN SHADES**

Wide span shades extend from eave to eave or follow the slope of a glass structure. The blinds are designed in a Roman fold style with various fabric, color, and texture options. When extended, the shades trap heat above them, allowing your living space to remain cooler. On cool days, the shades can be retracted to trap heat below the eave line of the structure.

#### **PLEATED SHADES**

Pleated shades can be used in the roof and vertical walls of a glass structure. The pleats provide a visual pattern and soften daylight for interior spaces. These shades can be operated with manual pulls or motorized options, and each shade is operated independently.

#### **PINOLEUM BLINDS**

Pinoleum blinds are traditionally used in conservatories, sunrooms, and skylights. The blinds are comprised of individual wooden reeds that are woven together to diffuse light. This shade system lets light in while still reducing heat and glare.

#### **SOLAR R BLINDS**

Solar R Blinds are typically used to increase energy efficiency and control temperature inside a space. The smooth shades have an aluminum backing which reflects solar rays away from the structure to limit solar heat gain. When operated, the shades move on a roller into a cassette via a pulley system. Motorized options are also available. Solar R Blinds are suitable for sloped and vertical applications.

For additional information refer to our shades brochure or visit solarinnovations.com/shades.

# Screen Options

#### **FOLDING SCREENS**

Folding screens are hinged and fold in an accordion-style, mimicking the operation of folding glass walls. Folding screens can be used to create an outdoor screen room to enjoy nature without bothersome insects.

#### **SLIDING SCREENS**

Sliding screens are generally used on large openings, most commonly on the exterior of sliding glass doors. The panels of this system can be pocketed into a wall cavity with either a center split, or stack to the left or right when fully open.

#### **SCREEN SWING DOORS**

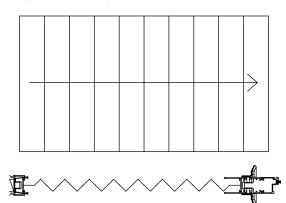
Screen swing doors are available for both terrace and French doors. The screen swing door is constructed from an aluminum frame that mimics the sightlines of our glazed swing doors.

#### **FIXED SCREENS**

Fixed screens are used on casement, awning, hopper, tilt turn, and sliding glass windows. Fixed screens can easily be removed for cleaning.

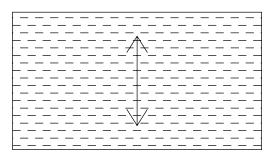
#### **B SERIES RETRACTABLE SCREENS**

B Series Screens are suited for large openings when a pleated screen option is preferred. These retractable screens can meet at a 90° corner to enclose a space with only one visible vertical division. This screen can be paired with folding glass walls, sliding glass doors, lift slide doors, French doors, screen rooms, and more.



#### S SERIES RETRACTABLE SCREENS

S Series Screens are vertically retractable screens that provide the ability to enjoy the outdoors while being protected from pests. S Series Screens feature a specialty zipper system which guides the fabric within the track and prevents insects from entering. This system can prevent sunlight from entering the room with the selection of black out fabric.



For additional information refer to our screens brochure or visit solarinnovations.com/screens.





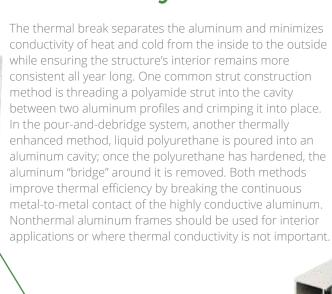
Sliding Screens



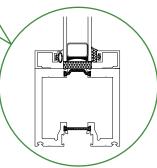
B Series Retractable Screens

# Performance

# Thermally Enhanced







Thermal Break

## **Certified Products**



#### **TESTING**

We are dedicated to providing safe, quality products to customers. Our in-house test labs offer the unique opportunity to execute tests quickly and efficiently with certification by nationally-recognized third parties.

#### NFRC Approved

- G2 Folding Glass Walls
- · G2 Sliding Glass Door
- · G3 Sliding Glass Door
- · G3 Lift Slide Door
- · G2 International Windows

(Fixed, Casement, Awning, Tilt Turn)

- · Pan Flushing Skylight
- · Welded Curb Skylight



- G2 Terrace Door
- · G3 Terrace Door
- · G2 Folding Glass Walls
- · G3 Folding Glass Walls
- G2 Sliding Glass Door
- · G3 Sliding Glass Door
- · G3 Lift Slide Door

#### HURRICANE IMPACT TESTED

We currently offer one of the largest selection of products tested for Florida ratings. They can withstand even the most extreme weather conditions.

- G2 Aluminum Curtain Wall
- · Wood Curtain Wall
- G2 International Windows (Fixed, Casement, Awning, Tilt Turn, Hopper)
- Fixed Skylights
- 90° Operable Skylight

# Finishing Touches

## **Glazing Options**



#### **LOW-E GLASS**

Low-E glass includes microscopically thin transparent layers on the glass surfaces that reflect heat back to its source, keeping heat out in the summer, and warmth in during the winter. We offer several variations of tint intensity for the perfect selection in any climate.

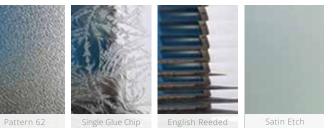
- LoE 272: Our most common glazing, allows for clear views with the thermal benefits of Low-E glass. 72% VISIBLE LIGHT TRANSMITTANCE 0.41 SOLAR HEAT GAIN COEFFICIENT
- LoE 366: Increased performance with a slight tint, provides a comfortable space for both plants and people. 65% VISIBLE LIGHT TRANSMITTANCE 0.27 SOLAR HEAT GAIN COEFFICIENT
- LoE 340: Reduces solar heat gain drastically while allowing daylight to enter. 39% VISIBLE LIGHT TRANSMITTANCE 0.18 SOLAR HEAT GAIN COEFFICIENT

Other Low-E options are available from Guardian, PPG, and Viracon.









#### **DECORATIVE GLAZING**

Decorative glazing is a broad category consisting of art glass and other unique glazing options. Additional custom decorative options are also available.

- Pattern 62: Pattern 62 offers an attractive appearance, obscurity, and light transmission capabilities.
- Single Glue Chip: Single glue chip or glue chip is a texture that resembles frost on a window pane during the winter
- English Reeded: English Reeded glass is a ribbed glass. The ribs of the glass typically run horizontally.
- Satin/Acid Etch: Satin etched adds the appearance of a 3-dimensional texture. It should be used on an unexposed surface in an IG unit.



#### **POLYCARBONATE**

Polycarbonate is a popular alternative to glass; it is lightweight, sustainable, incredibly strong, and easily transported.

• Lumira® aerogel can be used to fill the polycarbonate for increased thermal ratings, and greatly reducing sound transmission differences. Another benefit of incorporating Lumira® aerogel is glare reduction — the diffused daylight offered by polycarbonate creates bright, even lighting in any space. Sustainable purchasing, optimum energy efficiency, occupant comfort, low emissions, and daylighting are all possible points that Lumira® aerogel can assist with for LEED certification.



#### **DYNAMIC GLASS**

Dynamic glass can change automatically at specific temperatures, lighting conditions, or on demand. This allows for heat, light, and glare control any time of day.

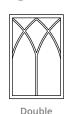
- Electrochromic is highly energy efficient glass switches between clear and tinted states on demand. In its tinted state, it blocks solar heat while controlling glare. In its clear state, it transmits more solar heat than typical Low-E glass.
- Thermochromic glazing darkens gradually and dynamically when heated by direct sunlight. The glass interlayer changes in reaction to ambient temperature and sunlight, managing a building's varied needs for passive solar heat gain, solar control, and natural daylight transmittance throughout the day.

## **Grid Options**

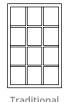
Grids are placed on the exterior and also on the interior of the window. This type of grid can be applied to monolithic or insulated glass. For additional grid options and grid dimensions, visit solarinnovations.com.







Gothic Grid





Cross Grid

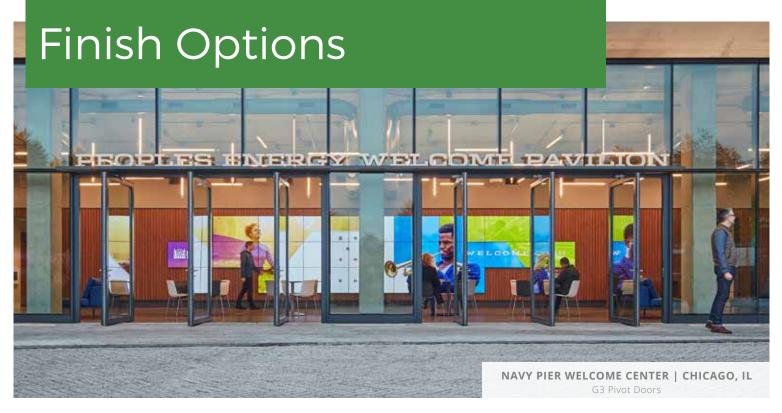


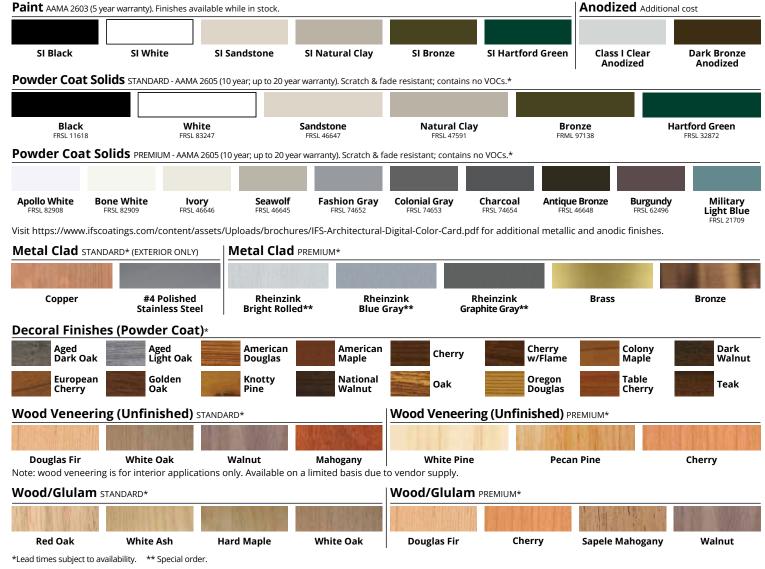
Arched Grid

Gothic Grid

Traditional Grid

English Grid





Note: Depending upon color selection, additional charges and increased lead times may apply. Extended warranties and service plans are available for an additional charge. Examples are shown as accurate as photography and printing processes allow. Final finish selection should be made from a physical sample; contact Solar Innovations® for samples. Product and finish options are subject to vendor availability. Solar Innovations® reserves the right to discontinue any option at any time without notice. Additional options, including custom color match, are available; contact Solar Innovations® for details.

# Our Process



HARRIET TUBMAN VISITOR CENTER | CHURCH CREEK, MA Wood Curtain Wall

## Contact Us

There are three convenient ways to work with Solar Innovations®. If you aren't quite sure where to start, call us directly at (800) 618-0669.

#### **OUR DEALER NETWORK**

Our extensive network of dealers throughout the United States have experience in the glazing industry and with our products. Dealers are frequently able to visit the job site and work one-on-one possible. Specifications, with the customer, aiding in design, local permits, and installation.

#### ARCHITECTS, GLAZIERS OR **CONTRACTORS**

Your architect, glazier, or contractor can work with our inside sales designer to ensure you receive the best product information and communication experience quotes, and drawings can be directed to you to review.

#### **INSIDE SALES DESIGNER**

Contact our inside sales designers directly to help plan and specify your project.

## Planning & Quoting

There are various stages of planning due to the large variety of products, configurations, and options Solar Innovations® provides. Our in-house sales team can help coach you through the process and educate you on the differences between options. Whether you're a dealer, architect, business, or homeowner, we will help you achieve the best product results.

You can call us directly at (800) 618-0669 or complete an online quote form at solarinnovations.com. Our quotes have a guick turnaround time and we will work hard to give the most competitive pricing when quoting your project.

### Place an Order

Our ordering process is streamlined and efficient, giving you all the requirements for your project, shop drawings, lead times, and shipment dates. Once your order is placed, you will be paired with a dedicated project manager to guide you throughout the process.

## 4 Installation

We can provide installation and service for all of our products within a six-hour radius of Pine Grove, PA. Our expertly trained team is registered to complete installation in over 16 states. When utilizing our installation services, an experienced team will be scheduled to install the project upon completion of shop fabrication. Our team is trained in the correct protocols to ensure safe, efficient, and accurate system installation.

# COMMERCIAL & RESIDENTIAL DOORS & WINDOWS | GLASS STRUCTURES | SKYLIGHTS

Folding Glass Walls Slide & Stack Glass Walls Clear Glass Walls Sliding Glass Doors Lift Slide Doors Swing Doors Pivot Doors Casement Windows Awning Windows Tilt Turn Windows Mulled Windows Hopper Windows Fixed Windows Sliding Glass Windows Folding Glass Windows Curtain Walls Wood Curtain Walls Greenhouses Conservatories Sunrooms Canopies Pool Enclosures
Pool Houses
Walkways
Fixed Skylights
Curb Mount Skylights
Barrel Vault Skylights

Double Pitch Skylights Dome Skylights Single Slope Skylights Pyramid Skylights Walkable Skylights Retractable Skylights 90° Operable Skylights











