

Every project begins with an innate desire to create something great.

# **History**

Founded in 1905, Loewen has earned a reputation for inspirational products, design leadership and custom capability. Our history helps describe our journey and foundation on which the Loewen brand of windows and doors is built.

Loewen is a manufacturer of wood windows and doors designed and built for premium residential new construction, renovation/ restoration and distinctive light commercial construction.

Select standard window and door configurations are represented in this Loewen Window & Door Technical Guide. Numerous custom opportunities exist. Please contact your Authorized Loewen Dealer.



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## **Cyprium Collection**

Refer to our Cyprium Guide for more information

# **StormForce™**

Refer to StormForce™ Technical Guide for our Impact certified products.

# Brand **Overview**

# Loewen is the premium window and door company focused exclusively on the architectural market.

Loewen crafts luxurious windows and doors that are the statement pieces of custom residential architecture. Elevate homes into distinctive havens with Loewen's seamless blend of authentic materials and obsessive engineering. Our spectrum of products are built with precision to match the sophisticated vision of the most creative and exacting architectural designs.



Open your imagination and realize your designs the way they were intended to be. With a growing scope of offerings that range from premium to ultra luxurious, Loewen is ready to support your creative freedom.

Custom configurations, curtain wall systems, exotic custom operating products, multiple wood species, and unique cladding are all available in your architectural arsenal.



# Clad Wood

# Excellence in Design and Performance

Loewen clad engineering creates extraordinary strength and durability, enabling dramatic design, innovation and inspiration. Loewen Clad fenestration products use coastal Douglas Fir or plantationgrown Mahogany in frames and sashes. Our low maintenance extruded aluminum ensures the ultimate in strength, performance and finish longevity.

Loewen uses only pre-finished extruded aluminum cladding to better protect window and door exteriors and eliminate the need for painting.

Robust design and engineering can achieve the ideal solution for any opening. Complete your vision with sharp design, customizable options, and the wide-open views that only Loewen can provide.

Available in many window and door configurations:

Windows Doors

Awning, Casement, Double Hung, Direct Set, Specialty shapes and Custom configurations Terrace Swing, Sliding Patio, Bifold, MultiSlide

and LiftSlide



# Wood Traditional Beauty, Endless Variety

Loewen Wood products feature Coastal Douglas Fir or plantation-grown Mahogany in our frames and sashes. These woods do more than just provide our windows a rich, warm texture - they're also naturally tough and resilient, yet remarkably workable, meaning they are ideal for precision milling and capable of holding the smallest, most intricate detailing.

Douglas Fir is North America's most plentiful softwood species, accounting for one-fifth of the continent's total softwood reserves. It is beautiful and durable, making it the ideal species for fenestration and a hallmark of the Loewen all wood offering.

To enhance our woods' high natural resistance to moisture absorption, decay and insect infestation, every Loewen wood component is treated with a water repellent, wood preservative before assembly.

Available in many window and door configurations:

Windows

Awning, Casement, Double Hung, Direct Set, Specialty shapes and Custom configurations Terrace Swing, Sliding Patio, and LiftSlide

Doors



# Timber **Curtain Wall**

# Stunning Panoramic Vistas are Here

The Loewen Timber Curtain Wall system embodies the spirit of contemporary architecture with minimal framing and cleaner sightlines, allowing for the most expansive views. Configuration options are limitless, including vertical walls, rake-heads, corner units, and integrated operable windows and doors.



# Cyprium Collection

# Living Finishes in Copper and Bronze

Loewen Cyprium features copper and bronze clad windows and doors unique in design and construction. The Cyprium collection is artisanal in detail, including hand-soldered exterior joints and rich, tactile depth of texture in the thick metal cladding and deep profiles.

These hand-wrought living surfaces develop distinctive patinas that adopt and define the individual aesthetic character of the homes to which they belong.

Available in many window and door configurations:

Awning, Casement, Double Hung, Direct Set, Specialty shapes and Custom configurations Doors Terrace Swing, Sliding Patio, Bifold, MultiSlide

and LiftSlide



# **Custom Wood**

# Dramatic Window and Door Design

Loewen introduces a true custom hand crafted wood product line of windows and doors. Countless options and features are available to tailor each unique opening in any style of home. Whether you are looking to retrofit an elegant, traditional-style home, or aiming for a highly contemporary look, Loewen Custom can create the ideal solution.

For your unique architectural vision investigate our alternative species:

- White Oak
- Walnut
- Mahogany
- Teak
- Cherry
- Accoya®

Available in many window and door configurations



# Architectural Services

Loewen's Architectural Services division was created with the imagination and passion of Architects in mind. This consultative service exists to collaborate Loewen's technical expertise and manufacturing experience with visionaries who live to design, create and inspire.

## Contact us by Email

architecture@loewen.com

### Contact us by phone

United States or Canada: 800,563,9367 Outside of North America: 204.326.6446

# **Dealer Network**

In addition to Loewen's Architectural Services, we also have a large dealer network including territory managers and sales professionals available throughout Canada and the United States to serve and assist the architectural community. These Loewen professionals are able to provide detailed information, service and pricing for all Loewen products.

Loewen representatives are available for informative product demonstrations, office/site visits. architectural luncheons (which may qualify for AIA Continuing Education Credits), or other functions that require fenestration expertise.

# **Product Samples & Displays**

Portable product samples and displays are available through Loewen Territory Managers and the dealer network. These tools aid in understanding product differences and features.

Loewen products are displayed at trade and home shows, including both large national conferences and local exhibitions.



# **Performance**

We take great pride in our windows and doors are among the highest performing in the industry. Performance keeps homes comfortable and energy efficient, and strength protects against the worst nature can deliver. We achieve this through a commitment to produce the highest quality products that we can, using only the highest quality materials. Loewen offers several solutions ideal for a variety of different environments, from the cold harsh northern climate, to the warm, sunny, south and tropical storm threatened regions.

Loewen products are engineered to comply with and exceed building codes in North America. Each test is conducted by an independent agency and is based on extreme conditions and varying product sizes. Code compliance is a fundamental aspect of our product design. Many of our products meet the performance requirements for Energy Star in all United States climate zones. The National Fenestration Rating Council empirically shows that Loewen products are among the industry's best in terms of thermal performance.

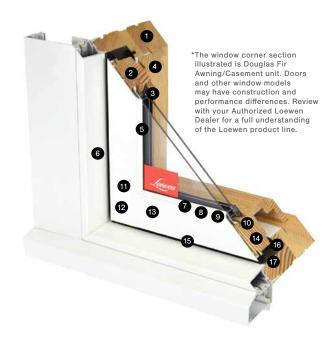


# Loewen **Basics**

Loewen windows are highly customizable. Whether you are looking to retrofit an elegant, traditional-style home, or aiming for a highly contemporary look, Loewen has the ideal solution.

Loewen engineering results in uncommon strength and durability, enabling dramatic design, innovation and inspiration.

- Coastal Douglas Fir for strength and rigidity (other species available).
- Laminated sash for enhanced structural 2 stability and a tight weather seal.
- Dual seal on glass units for long hermetic seal life.
- Natural clear wood interior, ideal for staining or painting.
- Profiled sash edge for a finished look and integration with Simulated Divided Lite (SDL) bars.
- Optional extruded aluminum cladding, for low maintenance, available in a wide range of colors. (Cyprium cladding available)
- Minimal use of exposed exterior caulking on glass surface.
- No metal-to-glass contact, ensures improved energy efficiency.
- Triple seal glazing system available on metal clad units to effectively block moisture infiltration.
- Hidden venting channel to allow built-up condensation to escape, increasing seal and sash life.
- Authentic stile and rail construction. No mitered sash corners.
- 12 Mortise and tenon sash corner joinery, for structural stability.
- Tall bottom rail available to create a custom architectural look reminiscent of traditional joinery and to enhance structural stability and strength.
- 14 Airspace between wood and window cladding, for air circulation and added insulation value.



- 15 Secondary weatherstrip to deflect wind-driven rain from primary seal.
- Continuous primary weather-stripping, for maximum protection against air and water in filtration.
- Polypropylene liner for added protection 17 from the weather.



# **Environmental Commitment**

Environmental stewardship is aligned with many of the core values that are present in Loewen. We understand our customers' commitment to environmental sensibility and our brand reflects our commitment to alleviating our environmental footprint.

We practice environmental stewardship in not only our manufacturing processes, but in our product offering as well. Nearly 100% of the wood fiber used in the production of Loewen products is derived from forests that are Stewardship certified, Canadian Standards Association (CSA) certified, or Programme for the Endorsement of Forest Certification (PEFC) certified.



Loewen's outstanding energy efficiency attributes and use of sustainable materials are ideal for use in structures designed under LEED (Leadership in Energy and Environmental Design).

Loewen is a socially responsible corporation, buying ethically manufactured products and recognized for our leadership in energy conservation and environmental protection. We prove the success of our brand through our environmental commitment.

Loewen was the recipient of the Tree Canada Foundation Eterne Award, honoring us for "environmental leadership and commitment to taking action on global climate change through the planting of trees."

We recycle virtually all of the wood waste created in the manufacturing process. For example, during our frigid Canadian winters, we even heat our plant with sawdust. We also recycle glass, aluminum, weatherstripping, solvents, motor oil and paper.

# Certifications & Associations

Loewen windows and doors are engineered to comply with - and exceed - building codes in North America and beyond. Each test is conducted by an independent agency, based on extreme conditions and varying product sizes. Code compliance is a fundamental aspect of Loewen design and engineering.



# National Fenestration Rating Council (NFRC)

Our products are empirically shown to be among the industry's best in terms of thermal performance.



## Texas Department Of Insurance (TDI)

The TDI is a dynamic leader in responsible state, national, and global regulation, consumer protection, and market viability.

\*Not all products meet every certification.



#### Window & Door Manufacturers Association (WDMA)

Hallmark Certification verifies that manufactured products are the same as tested products.



## Florida Building Code

The Florida Building Code is the strictest code in the United States for resistance to windborne debris and wind-loading for fenestration products. Many Loewen certified products meet high velocity wind zone 4 standards.



#### **Energy Star Partner**

Many Loewen windows and doors meet the performance requirements for Energy Star in all United States climate zones.



## **Efficient Windows Collaborative**

Loewen is a founding member of the U.S. Department of Energy's Efficient Windows Collaborative.

We actively seek to reduce-reuse-recycle. We understand the real world dynamics of downcycling and so we aggressively design systems that are optimally efficient in consumption and produce windows of the highest quality, as to assure long

To this end, our products are made to be repaired and can be removed and re-installed. Once again, product quality is at the crossroads of efficiency and responsible design.

By manufacturing wood windows and doors, we are using a renewable resource and an efficient natural insulator that consumes less energy than alternative materials in a home. And, because wood is the foundation of our business - everything that we do relies on this resource - we recognize that we must support re-forestation initiatives.

# Our Guarantee

# Support, Consideration and Service

Our solid warranty is the written proof of our commitment to quality. Loewen windows and doors are made to last, and we have always stood behind our product with unsurpassed support, followup, and service.

The strength of a warranty is based on the quality of the windows and doors and the confidence of the company behind them. When you have been building custom windows and doors for decades, you know that the first step in having a credible warranty is the integrity of your products.



# The Loewen Advantage

- Full 20-year warranty on glass, wood components, and paint finishes on clad product.
- We guarantee our products for the full length of our warranty, meaning our support does not reduce over time.
- Complete coverage for all color finishes on our aluminum clad exterior including protection against fading and chalking for 20 years.
- Full 10-year coastal warranty on painted finishes within one mile of the coastline.
- Fully supported warranty service with our network of Loewen experts and regional dealer inspections.
- Full 2 years labor warranty.

# Competition Warranties

- May promote a longer warranty even if it is limited or not inclusive for all parts.
- May be prorated warranties that reduce the manufacturer's liability as the product ages.
- · Vinyl and wood fiber clad exteriors may carry a color fade only warranty or none at all.
- Warranties on paint that extend past those of the paint specifications will not extend the life of the paint finish and are always limited.
- Warranties that cover various distances from the coast often do not consider the specific effects of coastal weather conditions.
- Confusing language for example: a lifetime warranty against corrosion for an exterior component that contains no metals really needs to cover against UV deterioration and chalking.





# Color and Cladding

# **Superior Aluminum Cladding**

Loewen uses only pre-finished extruded aluminum cladding to better protect window and door exteriors and eliminate the need for painting. Our thick extruded aluminum cladding retains its shape, resists denting and lasts longer than roll-formed aluminum. In addition, Loewen's window cladding is set away from the underlying wood, creating an airspace that improves thermal performance.

The broad variation in Loewen sizes, shapes and designs and the demanding environmental conditions that our product encounters require an alloy that has the ability to:

- Withstand serious impact without sustaining damage
- · Allow intricate extrusion detailing
- Provide the malleability necessary to clad many sizes and shapes
- Deliver unequaled environmental durability
- Provide a stable substrate that enhances colorfast paint performance



# AAMA 2605 / 70% Kynar Finishes

Loewen's finish palette provides the perfect finishing touch for fulfilling your vision, while also providing industry leading quality and performance. Loewen's paint formula includes 70% Kynar 500 PVDF (polyvinylidene fluoride) resin, which offers the greatest resistance to weathering, fading and chalking. This ensures a beautiful finish that will last when cared for properly. With excellent appearance and durability, these paints meet the specifications of the American Architectural Manufacturers Association (AAMA) 2605.

# **Metal Clad Painted Finishes**

We have worked with industry professionals and designers to define our palette of exterior metal clad colors and finishes. These paints meet the specifications of the American Architectural Manufacturers Association (AAMA) 2605. The qualities of this paint provide robust weathering, fade and chalk resistance and a beautiful finish that lasts for decades when cared for properly.

AAMA 2605 / 70% Kynar Finishes

#### **Color Palette**



# **Anodized**

For a durable alternative to paints and organic coatings, our Anodized Finishes offer a rich matte look that reduces sunlight glare and allows the aluminum to maintain its metallic appearance.

In addition to the aesthetically desirable etching, our Anodized Finishing also increases resistance to abrasion and corrosion on aluminum\*. This aluminum is 100% recyclable and uses a waterbased process with no volatile organic compounds for ecofriendliness.

For those projects that specify a truly unique look, with the superior performance of anodized. These select anodized finishes are available as part of the Architectural Finishes offering.

Meets AAMA 611 Specification

## **Anodized Finishes**



<sup>\*</sup>Anodized finishes are not recommended in coastal environments

# Custom **Color Cladding**

# **Additional Colors**

When personal style or design dictates a unique color solution, just tell us what your wish is. Our standard range of aluminum clad colors is enhanced with the choice of true custom color specification. The integral cross matching system and color approval process ensures that you get the exact color you want every time.

AAMA 2605 / 70% Kynar Finishes

## **Expanded Color Palette**



# **Durability** & Versatility

Versatility is one of the key elements in the Loewen product offering - there are more than ten trillion possible combinations of standard Loewen products.

In addition to this massive standard selection matrix, Loewen products are available in custom shapes, sizes and configurations.

Each Loewen product, whether standard or custom, may be further personalized by choosing the Loewen Cyprium™ Collection or through the use of Simulated Divided Lites, exterior casing options and metal clad paint selection in a variety of colors and finishes. An array of hardware finishes further expand the variety and customization of each window order.

# **Douglas Fir Durability**

## Douglas Fir outperforms Hemlock & Pine

Wood Species	Specific Gravity (density)	Impact Strength (height of drop causing complete failure)	Compression Strength (parallel to grain)	Compression Strength (perpendicular to grain)	Hardness (load perpendicular to grain)	Resistance to Decay USFS Grade	
	Weight Over Volume	Inch	psi	psi	lbs		
Douglas Fir	0.48	31.0	7,230	800	710	Moderate	
Mahogany	0.42	Untested	6,460	1,500	830	Slight	
Western Hemlock	0.45	23.0	7,200	550	540	Slightly to non-resistant	
Ponderosa Pine	0.40	19.0	5,320	580	420	Slightly to non-resistant	

# **Douglas Fir Fastener Retention**

## This chart shows the force required to remove fasteners

Wood Species	Nail	Screw	Hinge	
Douglas Fir	189 lbs	527 lbs	743 lbs	
Ponderosa Pine	98 lbs	392 lbs	486 lbs	

# Window Hardware

Selecting a style and finish that reflects your unique taste is a critical part of creating the right look.

But choosing hardware involves more than just appearance - function and operation are essential, which is why Loewen offers a wide range of handles, locking systems and other hardware choices - from the most traditional to the most contemporary. Hardware must also offer intelligent design and flexibility. This is why Loewen provides designs such as the foldaway handle, useful when drapes or blinds fit tight against a window or when access space is limited.

For hard-to-reach windows, optional motorized operators can be activated by a simple wall switch or battery operated remote control.



Contemporary Casement and Awning Handle and Cover (Black)



Tango Casement and Awning Handle and Cover



Contemporary Push Out Casement/Awning Multi Point Locking Handle (Satin Nickel)

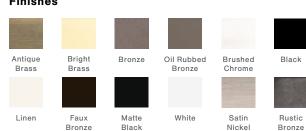


Push Out Casement/Awning Multi Point Locking Handle (Satin Nickel)



Provence Casement and Awning Handle and Cover (Oil Rubbed Bronze)

# **Finishes**



	Contemporary A/C Cover	Tango A/C Cover	Provence A/C Cover	Push Out Contemporary	Push Out Standard	Double Hung
Satin Nickel	•	•	•	•	•	•
Bright Brass		•	•	•	•	•
Bronze		•	•	•	•	•
Oil Rubbed Bronze		•	•	•	•	•
Black		•	•	•	•	•
Linen		•	•	•	•	•
Brushed Chrome		•	•		•	•
Antique Brass		•	•		•	•
White	•					
Faux Bronze	•					
Matte Black	•					
Rustic Bronze					•	
Unlacquered Brass					•	



Concealed Multipoint Lock Handler (Satin Nickel)







Push Out Casement/Awning Screen Knob (Brushed Chrome)



Double/Single Hung Sash Lock (Oil Rubbed Bronze)

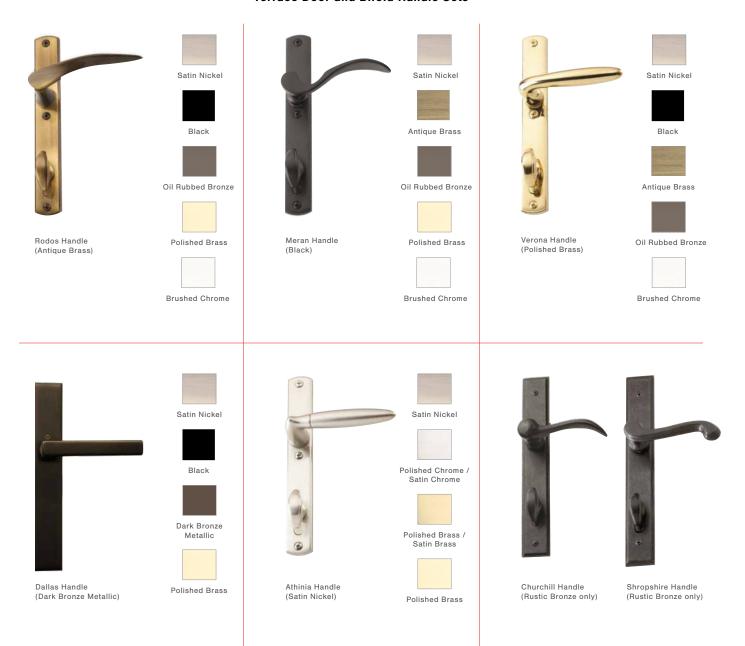


Double/Single Hung Sash Lift (Oil Rubbed Bronze)

# Door Hardware

Loewen doors are available with a wide range of hardware options. We constantly review our hardware selection and new options are regularly added. Consult your Authorized Loewen Dealer for the most current information.

## **Terrace Door and Bifold Handle Sets**







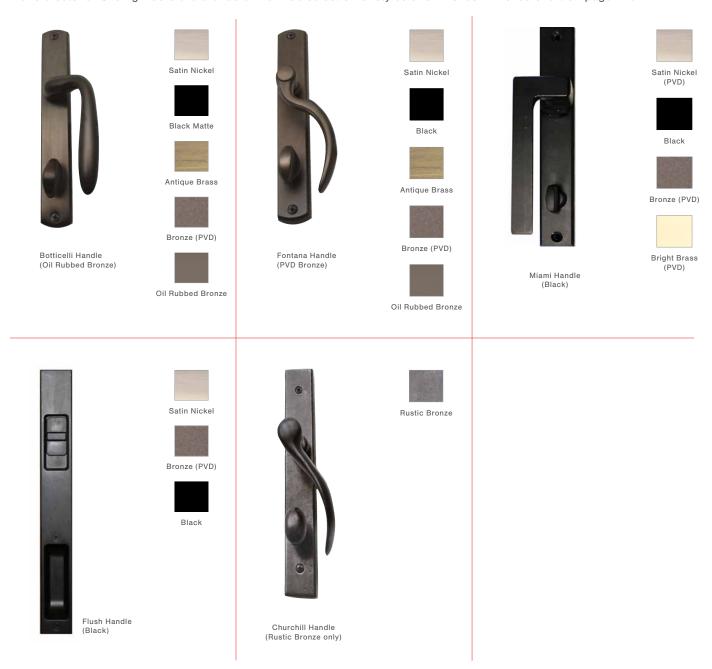
Meran	Rodos	Verona	Dallas	Athinia	Shropshire	Churchill
•*	•*	•*	•*	•*		
•*	•*	•*	•*	•*		
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<sup>\*</sup>Selected handles are available in Resista(R) or PVD finish coatings. These are extremely durable finishes that are suitable for harsh environments such as coastal locations. Oil Rubbed Bronze finishes are living finishes that wear and change over time and with use. This is an expected and desired effect with ORB finishes.

# Patio Door & MultiSlide Handle Sets

Selected handles are available in Resista or PVD finish coatings. Theses are extremely durable finishes that are suitable for harsh environments such as coastal locations. Oil Rubbed Bronze finishes are living finishes that wear and change over time and with use. This is an expected and desired effect with ORB finishes.

Handle sets for Sliding Doors are available in a wide selection of styles and finishes. Finishes chart on page A15.



MultiSlide & Patio Door Hardware	Fontana	Botticelli	Miami	Flush Handle MultiSlide	Churchill
Satin Nickel	•**	•**	•**	•**	
Black	•	•	•	•	
Oil Rubbed Bronze	•	•	•		
Bronze	•**	•**	•**	•**	
Antique Brass	•	•			
Rustic Bronze					•

<sup>\*\*</sup>Available in PVD finishes

# LiftSlide Door Handle Sets







# **BiFold Door Twin-Point** Lockset



Twin Point Lockset (Black)

# Glazing **Options**

Loewen Sealed Units offer ideal solutions for any environment. With countless glazing configurations and LowE coating options, we ensure that you can choose the perfect blend of protection and comfort - no matter where you live.

# **LowE Window Systems**

LowE Window Systems offer varying levels of thermal protection. They also protect furnishings by screening out much of the damaging ultraviolet radiation that causes fading and related damage. The charts on the next page show the comparative performance of each Loewen Window System. LowE is a high-performance glazing system that offers great thermal value in a variety of climate zones.



# LowE Double

Double glazed, with one or more layers of LowE coating and on 1/2" (13mm) airspace filled with Argon gas and stainless steel thermal spacer bar.

- Loewen standard 1/8" (3 mm) double strength glass offers greater strength and clarity over thinner glass, making our products more insulative, more soundproof, more resistant to impact and considerably more resistant to stresses caused by fluctuations in temperature.
- Loewen standard sealed units contain Argon gas and machine applied primary and secondary sealants reducing the chance of seal failure, improving Argon gas retention, and increasing strength.



More than 40 years ago Loewen Windows and Doors introduced our sealed triple-pane to the marketplace. This longevity and concentration on performance glazing means our products accommodate a triple glazing within standard options. It is not an afterthought, it is part of our core identity.

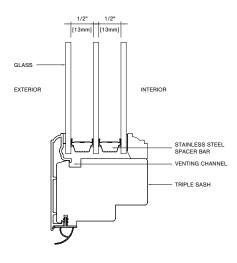
# **True Triple Sealed Units**

#### with LowE surface coatings for maximum performance

Triple glazed, with multiple layers of LowE coatings and two 1/2" airspaces filled with Argon gas and stainless steel thermal spacer bars. Unlike other window systems we offer sealed units with the optimum 1/2" cavities between panes to maximize energy efficiency.

- Loewen standard 1/8" (3mm) double strength glass offers greater strength and clarity over thinner glass, making our products more insulative, more soundproof, more resistant to impact and considerably more resistant to stresses caused by fluctuations in temperature
- Loewen standard sealed units contain Argon gas and machine applied primary and secondary sealants, reducing the chance of seal failure, improving Argon gas retention and increasing strength
- Argon gas in all air-spaces
- Venting channel built into the sash under every sealed unit to allow for a weeping system in the event moisture or condensation ever were to be present.
- Stainless steel spacer bar is less conductive than aluminum and structurally superior to silicone foam type spacers
- Sash cladding does not touch the glass which reduces the opportunity for thermal conduction
- Available across all window and door products categories
- Airspace between wood and window cladding
- Spacer bars available in all airspaces with SDL muntins

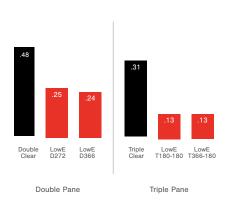




# LowE Compared With Clear Double & Triple Pane Glass Units

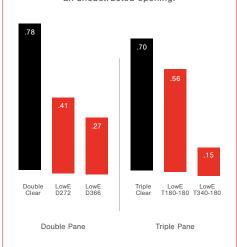
#### **U-Value\***

This chart illustrates the resistance of heat transfer through the glass. Lower U-Value indicates greater insulating capabilities. U-Value measured at center of glass.



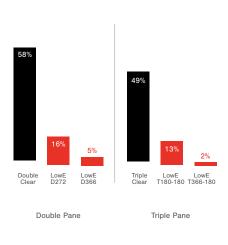
#### Solar Heat Gain (SHGC)\*

This chart measures the ratio of solar heat gain through a glazing system compared to an unobstructed opening.



#### **UV Transmittance\***

This chart measures the percentage of ultraviolet radiated wavelengths allowed to be transmitted through the glazing system.



<sup>\*</sup>Ashrae calculated values Window 5.2 | 1/2" airspace (13 mm) | Does not apply to sealed units with capillary tubes installed

Note: Information in these charts compares the center of glass performance levels of the sealed unit only when manufactured with different glazing options. They are not representative of overall window performance, which depends on many factors including grille options, such as simulated divided lites, grilles between glass, product size and configuration. This information cannot be used to calculate energy performance, to determine resistance to condensation or to develop assumptions about suitability for use or compliance with energy codes. For overall performance of specific windows or doors, refer to "NFRC U-factor and SHGC/VT" information.

# **LowE Coating Options**

We offer as many glazing configurations and LowE coatings as there are climates so our window performance can be built to provide comfort in any environment.

# LoE<sup>3</sup> - 366 **Ultimate Performance**

- Highest level of year-round comfort for every climate
- Better insulator (low u-value) and solar heat blockage (low SHGC)
- Three layers of silver (LoE<sup>3</sup> 366)

## LoE3 - 340 **Ultimate Solar Control**

- Greatly reduces oppressive solar heat gain & glare
- Best insulator (low u-value)
- Three layers of silver (LoE<sup>3</sup> 340)

## LoE<sup>2</sup> - 272 **All-Climate**

- Year-round, well balanced performance and comfort
- Better insulator (low u-value) and moderate solar heat blockage
- Two layers of silver (LoE<sup>2</sup> 272)

## LoE - 180 **Passive Solar Gain**

- Ideal for passive solar applications
- Good insulator (low u-value) and high solar heat gain
- One layer of silver

## LoE - i89 Roomside LoE

- Indoor lite, surface #4 (double) or #6 (triple) reflecting more heat back into the room
- Enhanced insulation (lowers u-value)
- Iridium Tin Oxide coating

# Specialty Glazing

# Neat® Glass or Preserve™ Protective Film

#### Added Value Solutions

Neat® Glass is an ultra smooth surface made from silicon dioxide that harnesses UV rays to loosen dirt. Neat® Glass helps leave windows spotless with a quick rinse of water and preserves their cleanliness longer. Neat® Glass also comes with Preserve™ as a standard to protect the Neat® Glass surface.

Loewen windows may also be equipped with added value solutions, such as Preserve™ protective film. Preserve is made from a low-density polyethylene and water-based adhesive that helps reduce cleanup costs and masking off for painting and staining. Available for the exterior or interior of your windows, Preserve™ peels off quickly and easily.

# **Tranquility®**

## **Solutions To Traffic & Other Urban Noise**

Loewen's heavy frames, thick glass and superior fit and finish result in above-average sound attenuation. For problem applications, we've developed an upgraded glazing system that offers even better resistance to sound transmission.

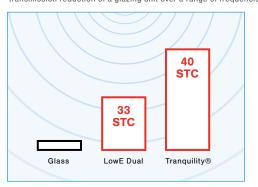
## Tranquility® Glazing Systems Greatly Reduce Sound Transmission

- Tranquility® Glazing Systems consist of a 1/4" (6 mm) glass on the exterior, a 13/16" (21 mm) Argon filled space, and a 9/32" (7 mm) laminate pane of glass on the interior.
- Operating casement units test out at STC40

- (no storm panel is required to achieve this rating). Visit www.loewen.com for details.
- Laminated glass used in the sealed unit provides increased security and helps to filter out damaging ultraviolet rays.

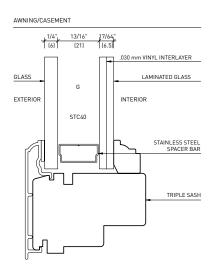
# Tranquility® Sound Transmission Class (STC)

Using a single number, the STC rating identifies the sound transmission reduction of a glazing unit over a range of frequencies

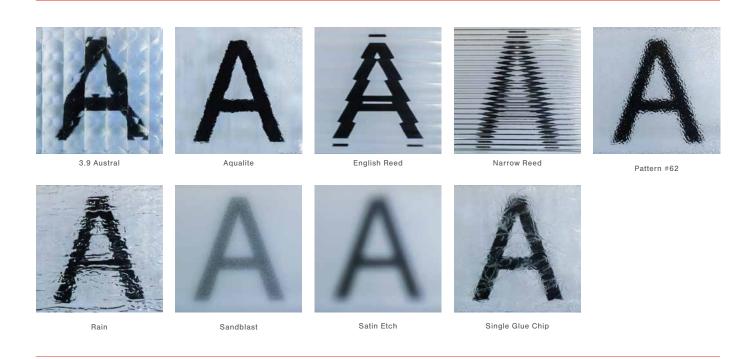


Tranquility® available on product configured for triple pane only

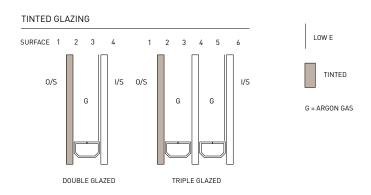
## Tranquility® Glazing



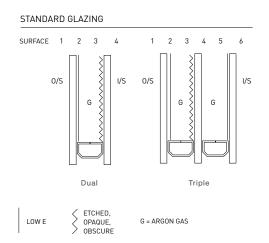
Additional options include a wide variety of novelty glass treatments. These images are a sample of the offerings that can be added to selected Loewen windows and doors. Please contact your local dealer for the full range of options and applications.



# **Glazing Fabrication**



# LowE® Glazing Fabrication



# **Divided Lites** and Grilles

Simulated Divided Lite (SDL) bars add a distinctive design feature to full-size panes of glass. Wood or metal bars securely bonded to the outer surfaces of the sealed glass unit simulate the appearance of traditional true divided lites.

Available with straight or radius bars.

Additional airspace bars (between the glass) complete a convincing reproduction of a multi-paned window or door. Our spacer bars function among the best in the industry and provide an intriguing aesthetic appearance in stainless steel or black color options. Wide shadow bars fill more of the airspace replicating the look of True Divided Lites. Narrow shadow bars also provide a similar appearance while allowing for improved sealed unit performance.

# **Exterior Bar Options**



# Simulated Divided Lite (SDL) Standard Patterns

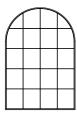


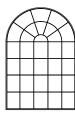


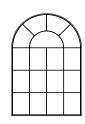


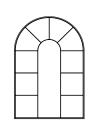
Craftsman

**Extended Half Round** 









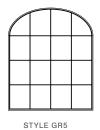
STYLE GR1

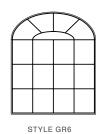
STYLE GR2

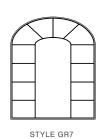
STYLE GR3

STYLE GR4

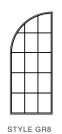
# **Extended Half Ellipse**

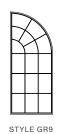




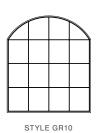


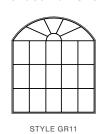
**Extended Quarter Round** 

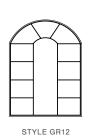




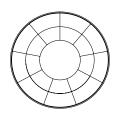
**Extended Full Chord** 







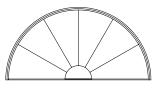
**Full Round** 

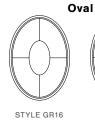


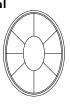
STYLE GR13

Sunburst









STYLE GR15

STYLE GR17

# **Awning & Casement Units Types of Simulated Divided Lite**

Application	Available SDL	5/8" [16mm]	3/4" [19mm]	7/8" [22mm]	1-1/8" [30mm]	2" [50mm]
MC Exterior	Standard		7,25			
Interior	Standard					
		9,00				
MC Exterior	Putty	7.25				
NC Exterior / Interior	Putty	8.00				
Interior	Square		8.00			
Interior	Impact	10.50				
NC Exterior	Ogee		8.00			



# **Double/Single Hung Units Types of Simulated Divided Lite**

Application	Available SDL	5/8" [16mm]	3/4" [19mm]	7/8" [22mm]	1-1/8" [30mm]	2" [50mm]
MC Exterior	Standard		8.00			
Interior	Standard					
		10.00			114 2 204 114	
MC Exterior	Putty					
		7.25				
NC Exterior /	Putty					
Interior		8.00				
Interior	Square					
			8.00			
Interior	Impact	10.00				
NC Exterior	Standard		8.00			



## **Picture Units** Types of Simulated Divided Lite & Glazing Stops

Application	Available SDL	5/8" [16mm]	3/4" [19mm]	7/8" [22mm]	1-1/8" [30mm]	2" [50mm]
MC Exterior	Standard		7.25			
Interior	Standard	9.00				
MC Exterior	Putty	7.25				
NC Exterior / Interior	Putty	8.00				
Interior	Square		8.00			
Interior	Impact	10.50				
NC Exterior	Standard	9.00				



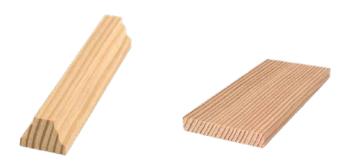
## **Patio Door Unit** Types of Simulated Divided Lite & Glazing Stops

Application	Available SDL	5/8" [16mm]	3/4" [19mm]	7/8" [22mm]	1-1/8" [30mm]	2" [50mm]
MC Exterior	Standard		7.25 1			
Interior	Standard					
		9.00				
MC Exterior	Putty					
Exterior		7.25				
NC Exterior /	Putty					
Interior		8.00				
Interior	Square		1			
			8.00			
Interior	Impact [MP]					
		10.50				
Interior	Impact [MP]				11 11 11 11	
		9.00				
NC Exterior	Standard	-				3. 177gs, 278452-15
		7.00				



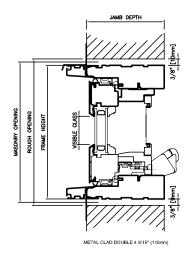
## Terrace/French & Bifold Door Unit **Types of Simulated Divided Lite**

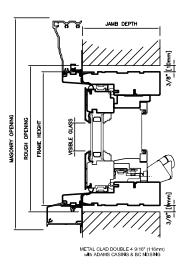
Application  MC Exterior  Interior	Available SDL  Standard  Standard  Putty	5/8" [16mm]	3/4" [19mm]	7/8" [22mm]	1-1/8" [30mm]	2" [50mm]
Exterior	Standard	2.00	7.25			
		9.00				
МС	Putty					
Exterior		7.25				
NC Exterior / Interior	Putty	8.00				
Interior	Square		8.00			
Interior	Impact [MP]	10.50				
Interior	Impact [MP]	7.00				
NC Exterior	Standard	9.00				

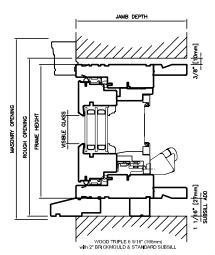


# Casing, Jamb & Opening Definitions

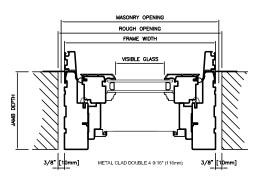
#### **Head & Sill Detail**

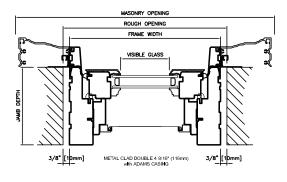


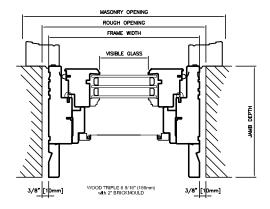




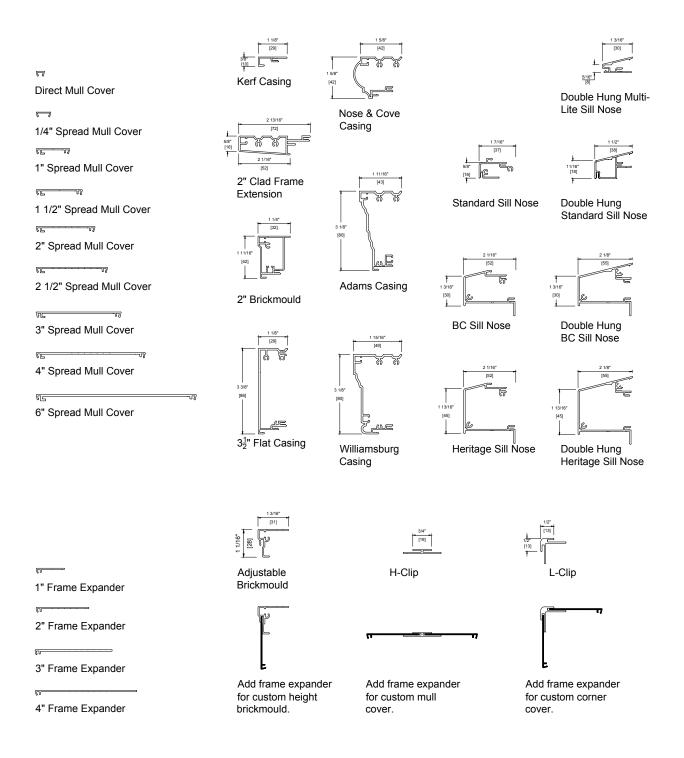
#### **Plan View**





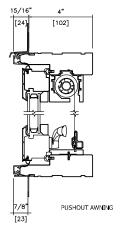


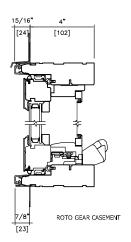
## Metal Clad Casing, Sill Nose & Accessories

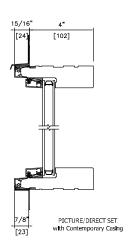


## **Contemporary Frame Cladding Detail**

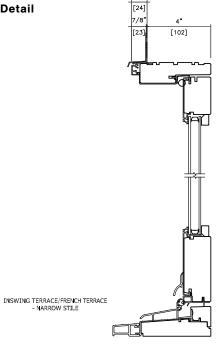
#### Head & Sill Detail

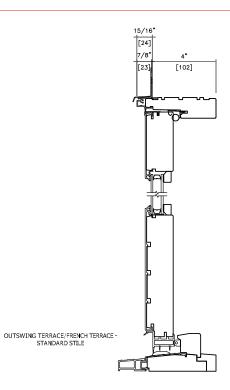




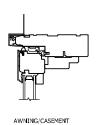






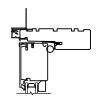


### Casing



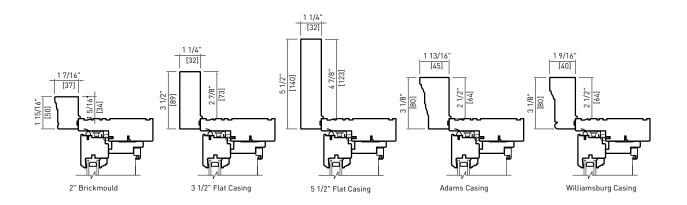




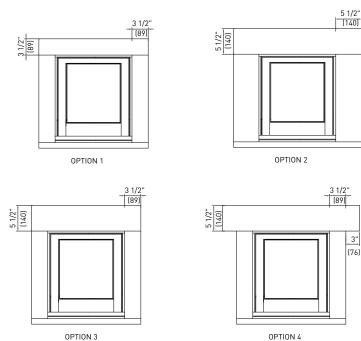


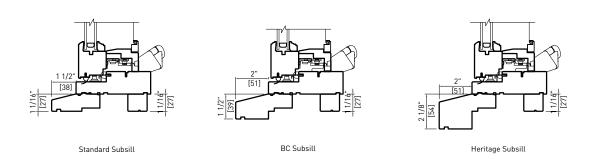
INSWING TERRACE/FRENCH TERRACE OUTSWING TERRACE/FRENCH TERRACE -

# Wood Exterior Casing Options



### **Flat Casing Option**

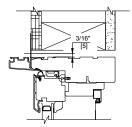




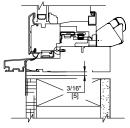
## **Masonry Opening Metal Clad**

### **Casing Options**

Frame Cladding Only. Add 3/16" (5mm) to Frame Dimensions at Head & Sides.

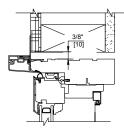


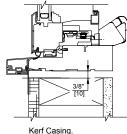
**Sill Nose Options** 



Frame Cladding Only. Add 3/16" (5mm) to Frame Dimension at Sill.

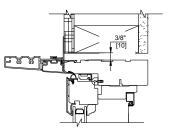
Kerf Casing. Add 3/8" (10mm) to Frame Dimensions at Head & Sides.

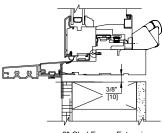




Kerf Casing. Add 3/8" (10mm) to Frame Dimension at Sill.

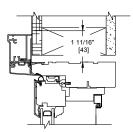
2" Clad Frame Extension. Add 3/8" (10mm) to Frame Dimensions at Head & Sides.

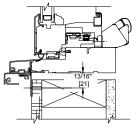




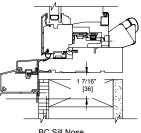
2" Clad Frame Extension. Add 3/8" (10mm) to Frame Dimension at Sill.

2" Brickmould. Add 1 11/16" (43mm) to Frame Dimensions at Head & Sides.

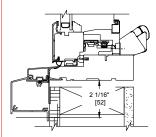




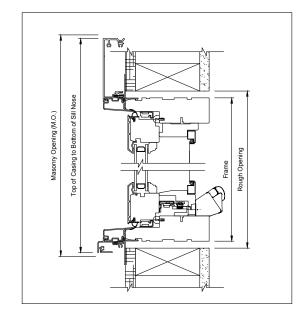
Standard Sill Nose. Add 13/16" (21mm) to Frame Dimension at Sill.



BC Sill Nose. Add 1 7/16" (36mm) to Frame Dimension at Sill.



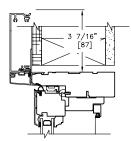
Heritage Sill Nose. Add 2 1/16" (52mm) to Frame Dimension at Sill.



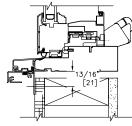
## **Masonry Opening Metal Clad**

#### **Casing Options**

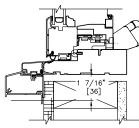
31/2" Flat Casing. Add 3 7/16" (87mm) to Frame Dimensions at Head & Sides.



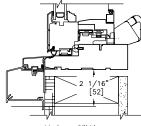
**Sill Nose Options** 



Add 13/16" (21mm) to Frame Dimension at Sill.

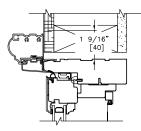


BC Sill Nose. Add 1 7/16" (36mm) to Frame Dimension at Sill.



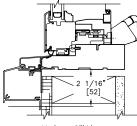
Heritage Sill Nose. Add 2 1/16" (52mm) to Frame Dimension at Sill.

Nose & Cove Casing. Add 1 9/16" (40mm) to Frame Dimensions at Head & Sides.



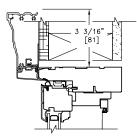
7/16" = [36]

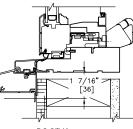
Add 1 7/16" (36mm) to Frame Dimension at Sill.



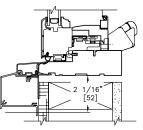
Heritage Sill Nose. Add 2 1/16" (52mm) to Frame Dimension at Sill.

Adams Casing. Add 3 3/16" (81mm) to Frame Dimensions at Head & Sides.



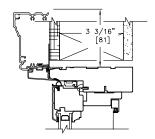


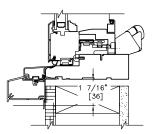
Add 1 7/16" (36mm) to Frame Dimension at Sill



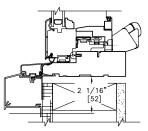
Heritage Sill Nose. Add 2 1/16" (52mm) to Frame Dimension at Sill.

Williamsburg Casing. Add 3 3/16" (81mm) to Frame Dimensions at Head & Sides.





Add 1 7/16" (36mm) to Frame Dimension at Sill.



Heritage Sill Nose. Add 2 1/16" (52mm) to Frame Dimension at Sill.

EXAMPLE #1: CA1 7515 with 2" Brickmould & Standard sill nose.

Frame dimensions, 29 1/2" (750mm) x 59 1/16" (1500mm).

Masonry width =  $29 \frac{1}{2}$ " (750mm) +  $[1 \frac{11}{16}$ " (43mm) x 2] =  $32 \frac{7}{8}$ " (836mm)

Masonry height = 59 1/16" (1500mm) + 1 11/16" (43mm) + 13/16" (21mm) = 61 9/16" (1564mm)

EXAMPLE #2: CA1 0918 with Adams casing & BC sill nose.

Frame dimensions, 35 7/16" (900mm) x 70 7/8" (1800mm).

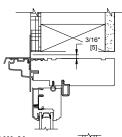
Masonry width = 35 7/16" (900mm) + [3 3/16" (81mm) x 2] = 41 13/16" (1062mm)

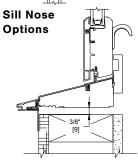
Masonry height = 70 7/8" (1800mm) + 3 3/16" (81mm) + 1 7/16" (36mm) = 75 1/2" (1917mm)

## **Masonry Opening Metal Clad - Double Hung**

#### **Casing Options**

Frame Cladding Only. Add 3/16" (5mm) to Frame Dimensions at Head & Sides.



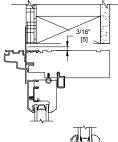


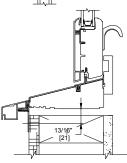
Multi Lite Sill Nose. Add 3/8" (9mm) to Frame

Top of Casing to Bottom of Sill Nose

Masonry Opening (M.O.)

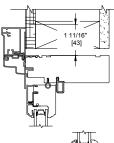
Frame Cladding Only. Add 3/16" (5mm) to Frame Dimensions at Head & Sides.

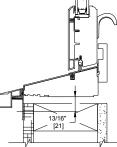




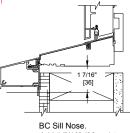
Standard Sill Nose. Add 13/16" (21mm) to Frame Dimension at Sill.

2" Brickmould. Add 1 11/16" (43mm) to Frame Dimensions at Head & Sides.

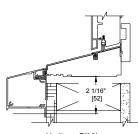




Standard Sill Nose. Add 13/16" (21mm) to Frame Dimension at Sill.

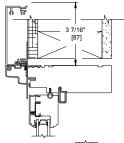


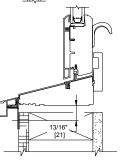
Add 1 7/16" (36mm) to Frame Dimension at Sill.



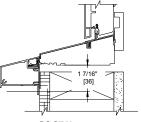
Heritage Sill Nose. Add 2 1/16" (52mm) to Frame Dimension at Sill.

31/2" Flat Casing. Add 3 7/16" (87mm) to Frame Dimensions at Head & Sides.

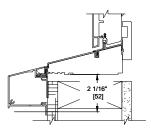




Standard Sill Nose. Add 13/16" (21mm) to Frame Dimension at Sill.



BC Sill Nose. Add 1 7/16" (36mm) to Frame Dimension at Sill.



Heritage Sill Nose. Add 2 1/16" (52mm) to Frame Dimension at Sill.

## **Masonry Opening Metal Clad - Double Hung**

#### **Casing Options** Nose & Cove Casing. Adams Casing. Williamsburg Casing. Add 1 9/16" (40mm) to Add 3 3/16" (81mm) to Add 3 3/16" (81mm) to Frame Dimensions at Frame Dimensions at Frame Dimensions at Head & Sides. Head & Sides. Head & Sides. 1 9/16 [40] **Sill Nose Options** 1 7/16" 1 7/16" 1 7/16" [36] [36] [36] BC Sill Nose. BC Sill Nose. BC Sill Nose. Add 1 7/16" (36mm) to Add 1 7/16" (36mm) to Add 1 7/16" (36mm) to Frame Dimension at Sill. Frame Dimension at Sill. Frame Dimension at Sill. 2 1/16" 2 1/16" 2 1/16" [52] [52] [52] Heritage Sill Nose. Heritage Sill Nose. Heritage Sill Nose. Add 2 1/16" (52mm) to Frame Dimension at Sill. Add 2 1/16" (52mm) to Add 2 1/16" (52mm) to Frame Dimension at Sill. Frame Dimension at Sill. EXAMPLE #1: DH1 2828 with Frame Cladding Only & Standard sill nose. Frame dimensions, 33 1/16" (859mm) x 64 1/14" (1632mm).

Masonry width = 33 13/16" (859mm) + [3/16" (5mm) x 2] = 34 3/16" (869mm)

Masonry height = 64 1/14" (1632mm) + 3/16" (5mm) + 13/16" (21mm) = 65 1/4" (1658mm)

EXAMPLE #2: DH1 3238 with Nose & Cove casing & Heritage sill nose.

Frame dimensions, 37 13/16" (961mm) x 84 1/4" (2140mm).

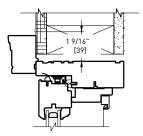
Masonry width = 37 13/16" (961mm) + [1 9/16" (40mm) x 2] = 40 15/16" (1041mm)

Masonry height = 84 1/4" (2140mm) + 1 9/16" (40mm) + 2 1/16" (52mm) = 87 7/8" (2232mm)

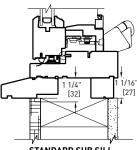
## **Masonry Opening Wood Exterior**

#### **Casing Options**

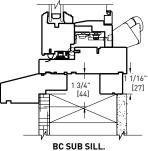
2" BRICKMOULD. ADD 1 9/16" (39 mm) TO FRAME **DIMENSIONS AT HEAD & SIDES.** 



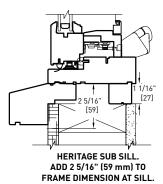
Sill Nose **Options** 



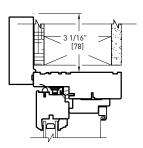
STANDARD SUB SILL. ADD 1 1/4" (32 mm) TO FRAME DIMENSION AT SILL.

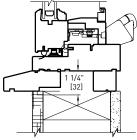


ADD 1 3/4" (44 mm) TO FRAME DIMENSION AT SILL.

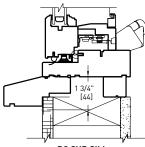


3 1/2" FLAT CASING. ADD 3 3/16" (78 mm) TO FRAME DIMENSIONS AT HEAD & SIDES.

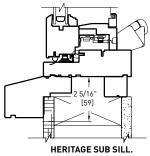




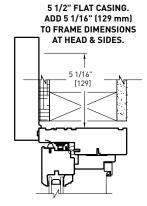
STANDARD SUB SILL. ADD 1 1/4" (32 mm) TO FRAME DIMENSION AT SILL.

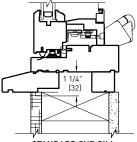


BC SUB SILL. ADD 1 3/4" (44 mm) TO FRAME DIMENSION AT SILL.

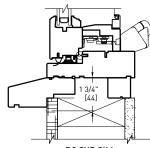


ADD 2 5/16" (59 mm) TO FRAME DIMENSION AT SILL.

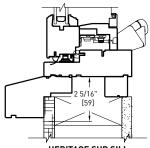




STANDARD SUB SILL. ADD 1 1/4" (32 mm) TO FRAME DIMENSION AT SILL.



BC SUB SILL. ADD 1 3/4" (44 mm) TO FRAME DIMENSION AT SILL.

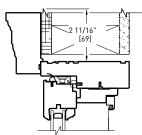


HERITAGE SUB SILL. ADD 2 5/16" (59 mm) TO FRAME DIMENSION AT SILL.

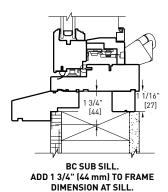
## **Masonry Opening Wood Exterior**

#### **Casing Options**





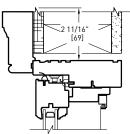
### **Sub Sill Options**

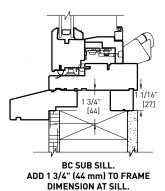


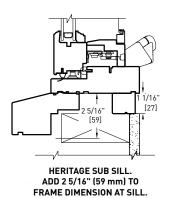


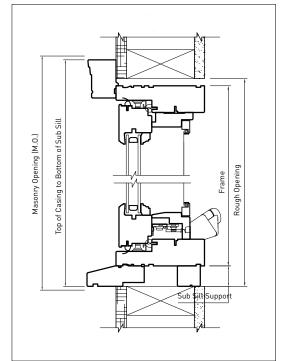
HERITAGE SUB SILL. ADD 2 5/16" (59 mm) TO FRAME DIMENSION AT SILL.

#### WILLIAMSBURG CASING. ADD 2 11/16" (69 mm) TO FRAME DIMENSIONS AT HEAD & SIDES.









EXAMPLE #1: CA1 7515 with 2" Brickmould & Standard sill nose.

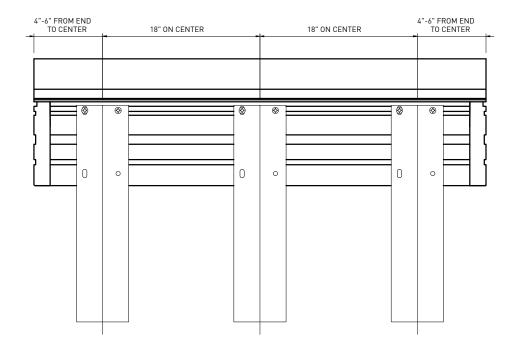
Frame dimensions, 29 1/2" (750mm) x 59 1/16" (1500mm).

Masonry width = 29 1/2" (750mm) + [1 9/16" (39mm) x 2] = 32 5/8" (828mm)

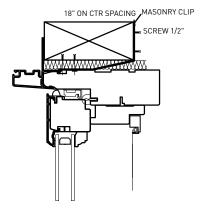
Masonry height = 59 1/16" (1500mm) + 1 9/16" (39mm) + 1 1/4" (32mm) = 61 15/16" (1571mm)

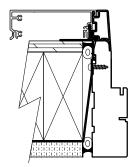
EXAMPLE #2: CA1 0918 with Adams casing & BC sill nose.
Frame dimensions, 35 7/16" [900mm] x 70 7/8" [1800mm].
Masonry width = 35 7/16" [900mm] + [2 11/16" [69mm] x 2] = 40 13/16" [1038mm]
Masonry height = 70 7/8" [1800mm] + 2 11/16" [69mm] + 1 3/4" [44mm] = 75 5/16" [1913mm]

## **Masonry Clip Installation** Universal

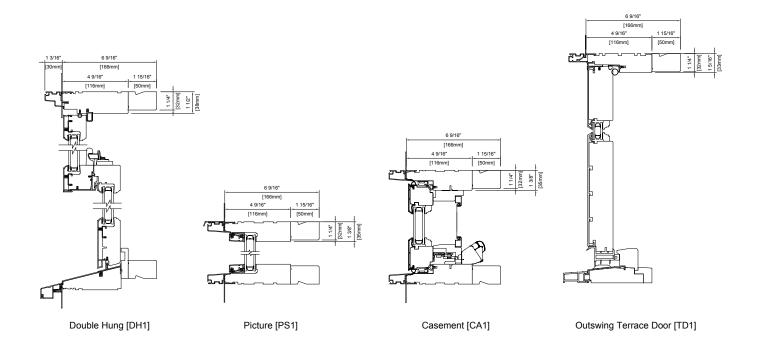


- 1. Start installation of masonry clips 4" to 6" from the ends of the unit to the center of the clip.
- 2. After placing both of the outermost clips on the unit, install the remainder of the clips moving inward to the center of the unit, placing each clip approximately 18" on center.
- Fasten clips to unit using two 5/8" #8 Panhead screws. 3.

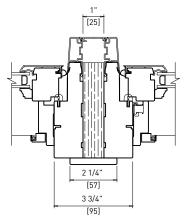




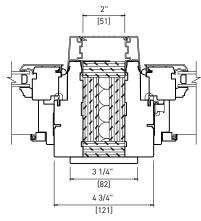
## 32mm Jamb **Extension (1 1/4")**



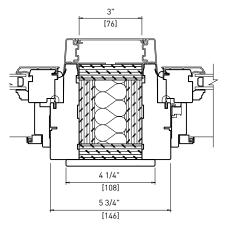
## **Metal Clad Spread Mullions**



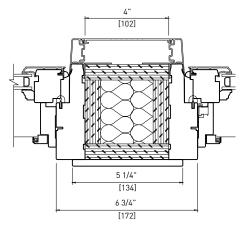
1" (25 mm) SOLID FIR SPREAD MULLION



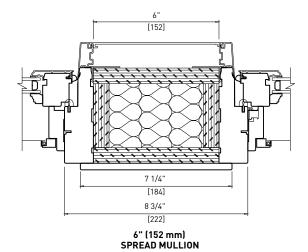
2" (51 mm) SPREAD MULLION



3" (76 mm) SPREAD MULLION

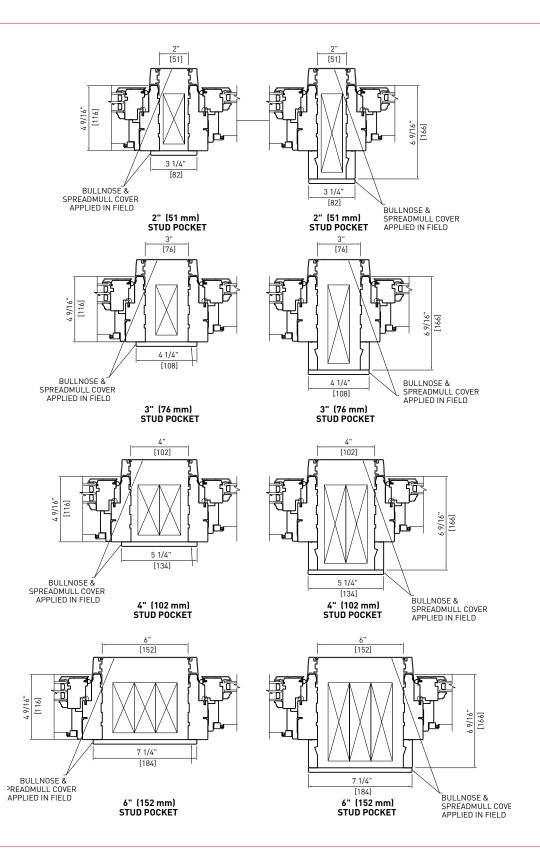


4" (102 mm) SPREAD MULLION



Note: • Other jamb widths available.
• All dimensions to have +/- 1/16" (2mm) tolerance.

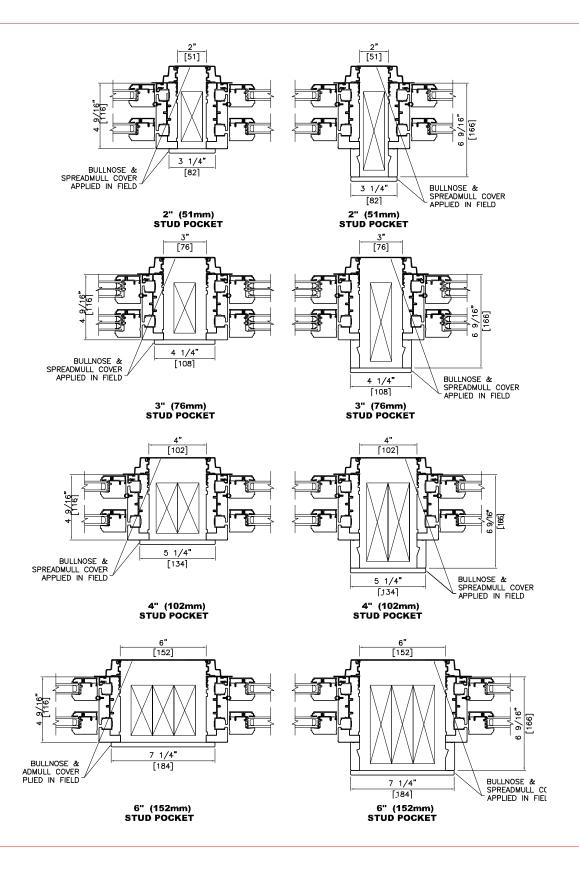
## **Metal Clad Stud Pocket Detail**



Note: • Other jamb widths available. • All dimensions to have +/- 1/16" (2mm) tolerance.

• Framing member designed and supplied by others.

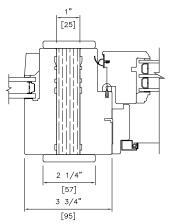
## **Metal Clad Stud Pocket Detail - Double Hung**



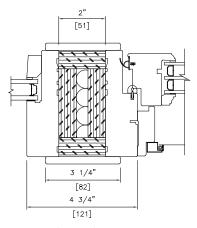
Note: • Other jamb widths available.
• All dimensions to have +/- 1/16" (2mm) tolerance.

· Framing member designed and supplied by others.

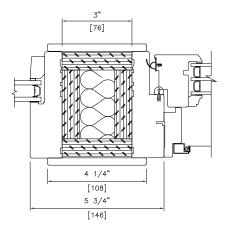
## Wood Exterior Spread Mullions



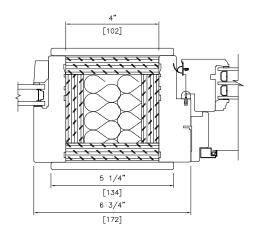
1" (25mm) SOLID FIR SPREAD MULLION



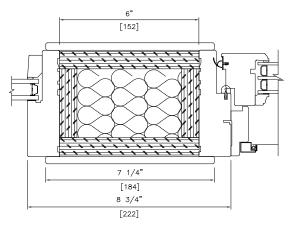
2" (51mm) SPREAD MULLION



3" (76mm) SPREAD MULLION



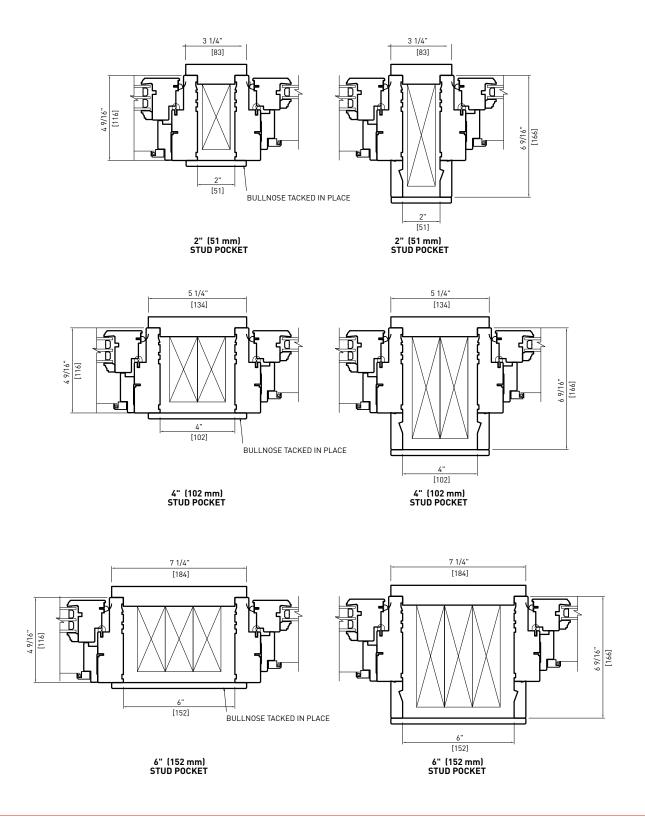
4" (102mm) SPREAD MULLION



6" (152mm) SPREAD MULLION

- Note: Other jamb widths available.
  - All dimensions to have +/- 1/16" (2mm) tolerance.

## **Wood Exterior Stud Pocket Detail**



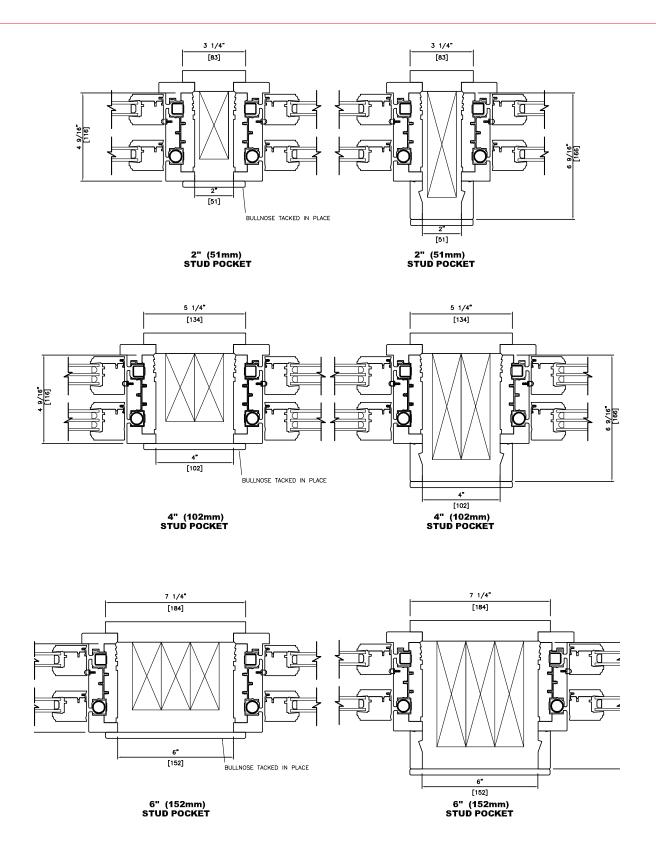
Note:

Other jamb widths available.

All dimensions to have +/- 1/16" (2mm) tolerance.

Framing member designed and supplied by others.

## **Wood Exterior Stud Pocket Detail - Double Hung**



Note: • Other jamb widths available.
• All dimensions to have +/- 1/16" (2mm) tolerance.

• Framing member designed and supplied by others.

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A5 MAI Design Group - Pronghorn Clubhouse
A5 Republic Architecture - West Hawk Cabin
A5 Square Three Design Studios - FULTON

A6 Smith & Vansant Architects - Contemporary Weekend Home

A7 Schwartz and Architecture - Crook | Cup | Bow | Twist, Schwartz and Architecture

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