



A TOUGHER KIND OF REALITY

If you live near the coast or in an area prone to hurricanes, your home is subject to harsh and potentially dangerous conditions. That's why your window and door choices are crucial to your home's survival.

ENERGY EFFICIENCY, SECURITY & RELIABILITY

At JELD-WEN®, we make reliable windows and doors that will increase your peace of mind, no matter where you live. Select JELD-WEN products have features that allow them to stand up to salt air, coastal moisture, severe winds and the dangerous windborne debris from hurricanes. In addition, these windows and doors are designed to deliver energy efficiency, security, and most importantly, reliability for real life.



Custom Wood Swinging Patio Door



Steel CT-684RLB Blinds Between the Glass Exterior Door



Custom Wood Radius Top Double-Hung Window



Premium Atlantic Vinyl



Custom Wood Radius Window

Each of the products featured in this brochure are built to last. Learn more about our industry-leading warranties at www.jeld-wen.com.

Not all products shown are available as impact-rated and are subject to change. See www.jeld-wen.com for specific certification numbers and more details.



Custom Wood Windows and Patio Doors

RELIABILITY FOR REAL LIFE



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AURALAST—THE WORRY-FREE WOOD®

Majestic, historic lighthouses have put JELD-WEN® Windows with AuraLast Wood to the test.

From Oregon to Maryland, from Wisconsin to Louisiana AuraLast Wood performs reliably and beautifully.

New Canal Lighthouse, New Orleans, LA



AURALAST—THE WORRY-FREE WOOD

AuraLast® Wood protects against wood rot for 20 years. Guaranteed.

20YR WARRANTY **Guaranteed Protection Against Wood Rot**
JELD-WEN Wood Windows and patio doors made with exclusive AuraLast Wood are guaranteed not to rot for 20 years. Wood components made from AuraLast wood maintain their structural integrity even in the toughest climates.

100% WORRY-FREE **AuraLast is Safe**
AuraLast Wood is made by using a water-based solution to deliver the effective ingredients to the core of the wood. Traditional dip-treatments use a solvent-based chemical bath. During production our AuraLast process releases 96% fewer volatile organic compounds than the traditional dip-treatment method.

100% PROTECTION **Surface To Core Protection**
Because of our vacuum/pressure process, AuraLast Wood provides virtually 100% penetration of the protective ingredients. Other manufacturers use submersion/dip-treatment methods, which only protect the outer surface of the wood.



Traditional treatments only protect the outer surface

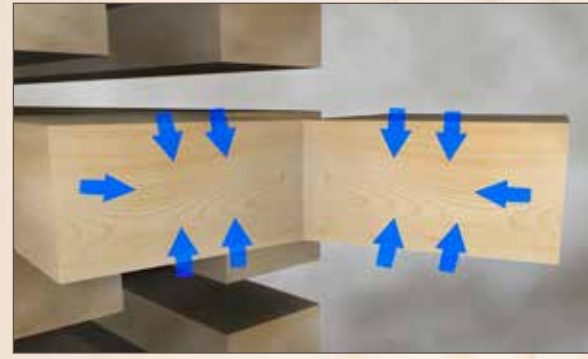
100% WOOD **Working With AuraLast Wood is Easy**
AuraLast offers the strength and beauty of real wood because it is real wood, not a composite. AuraLast Wood is colorless, stainable, and odorless.

A JELD-WEN Exclusive
Only JELD-WEN makes window and door products with natural pine AuraLast® Wood.

Protects Against Water Saturation
AuraLast Wood offers superior resistance to water saturation, which protects against swelling that causes windows and doors to stick.

Protects Against Termites
Harmful termites will eat through unprotected wood—not so with AuraLast Wood.

Visit jeld-wen.com/auralast for more information



Virtually 100% Surface to Core Protection

NEW HEIGHTS: CUSTOM WOOD PATIO DOORS



Custom Wood 10-foot 4-panel Swinging Patio Door

Swinging Patio Door

JELD-WEN Custom Wood Clad Patio Doors reach great heights for coastal projects! These beautiful outswing doors made with rot-resistant, 20-year guaranteed AuraLast® Wood can be made in a height to suit your style, up to 10 feet tall. Available in square or radius top, they meet Wind Zones 3 and 4 and High Velocity Hurricane Zone (HVHZ) ratings.



Custom Wood 10-foot Radius Top Swinging Patio Door



IMPACTGARD®—Impact-Resistant Glass



www.jeld-wen.com/impactgard



This glass stands up to strong impacts from wind-borne debris as well as harsh coastal conditions. In fact, ImpactGard® features the industry's leading laminated glass technology that can withstand a nine-pound piece of lumber striking it head-on at approximately 34 miles per hour. It also reduces sound transmission, blocks up to 95 percent of harmful UV rays and enhances home security.

Safe Impact-Resistance

During a severe storm, a broken window can affect a home's structural integrity. Windows and patio doors with ImpactGard protection are designed to resist impacts so even if the glass cracks, the fragments will adhere to the interlayer, so the shards remain within the frame. ImpactGard protection also meets the nation's toughest building codes. These codes specify that windows must withstand a nine-pound 2x4 traveling at 50 feet per second (34 miles per hour).



Standard Glass ImpactGard Glass



Secure Forced-Entry Resistance

Windows and patio doors with ImpactGard protection resist forced entry. Because the interlayer separating the panes helps resist a potential intruder's glass cutter, break-ins are less likely.

HURRICANE AREA REQUIREMENTS

Foiling Nature's Fury

Recent hurricanes that have affected the United States have caused many tragedies, including extensive property damage. These storms led to the development of building code certification standards for windows and doors installed in coastal areas prone to hurricanes and strong winds—from Texas to Maine.

The certifications are designed to ensure homes can withstand extreme weather. In fact, windows and doors are crucial to maintaining a home's structural integrity. If a window or door is broken, wind can enter the home and cause increased pressure that may lift the roof and push walls outward.†

Windborne Debris Regions

Areas subject to strong winds or hurricanes are categorized into four different windborne regions (or zones). The zone you live in determines the types of windows and doors your home must have to meet building codes. JELD-WEN offers products that meet the requirements for all 4 zones.

Structure Breached

When strong winds enter a home through a broken window or door, the increased pressure can lift the roof and push walls outward.



Structure Protected

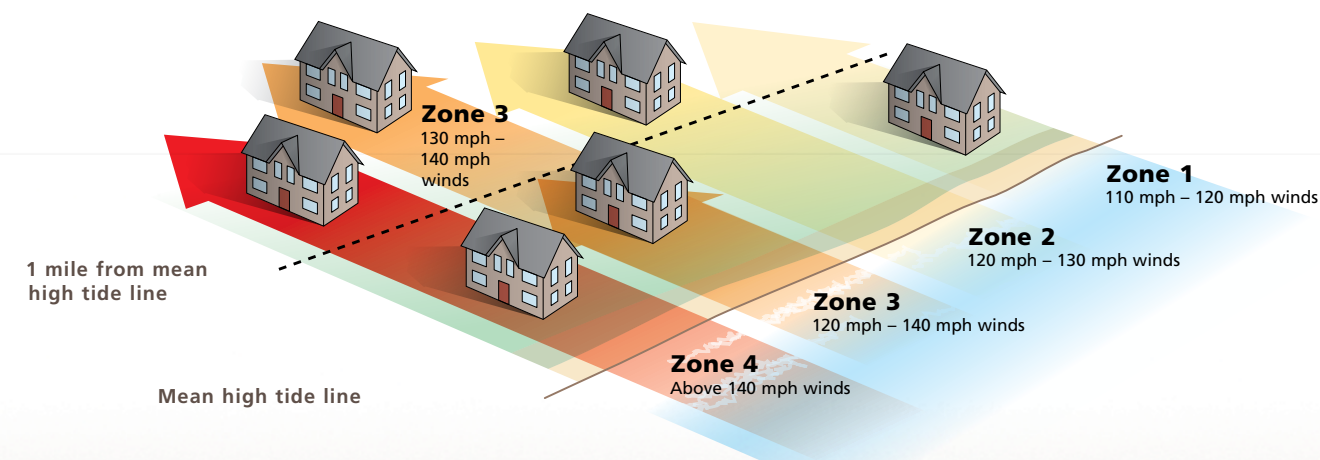
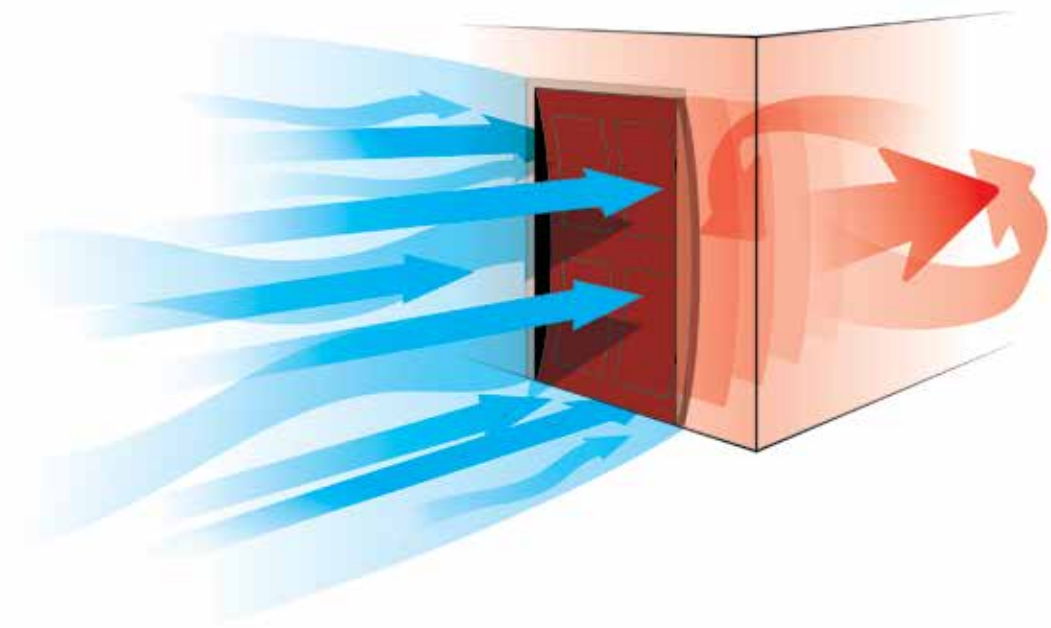


Design Pressure Ratings

Homes in windborne debris regions must have windows and doors with specific design pressure (DP) ratings, which include both positive and negative numbers. The positive number corresponds to pressure created by wind blowing at a window and door. The negative number represents vacuum pressure on the other side of the structure. DP rating requirements are site specific. Consult your architect or contractor for the ratings needed for your area and home.

Effects of Positive and Negative Pressure

As wind blows at a structure (positive DP, illustrated in blue), a vacuum is created on the opposite side (negative DP, illustrated in red).



WINDBORNE DEBRIS*	
ZONE 1	Areas within 1 mile of the mean high tide line with winds 110 mph and up to 120 mph
ZONE 2	Areas more than 1 mile from the mean high tide line with winds 120 mph and up to 130 mph
ZONE 3	Areas with winds 130 mph and up to 140 mph; or 120 mph and up to 140 mph within 1 mile of the mean high tide line
ZONE 4	All areas with winds in excess of 140 mph (<i>high-velocity wind zones</i>)

*As defined by ASTM E1996 and ASCE-7-05

†SOURCE: Federal Emergency Management Agency

Testing Requirements

To meet building codes, windows and doors within hurricane areas must pass certain requirements, such as impact resistance and wind pressure tests. These requirements vary by area. Consult your builder or contractor for specific criteria.

Different testing results are required in each of the four wind-borne debris regions. Many JELD-WEN® windows and doors have passed these necessary tests (see chart below); for certified products, please visit jeld-wen.com/coastal.

TESTING REQUIREMENTS		
Windborne debris region	Impact resistance requirement	Cyclic wind pressure requirement
ZONES 1 and 2	Must withstand a 4-foot-long 2x4 at 40' per second (27 mph)	Hurricane loads up to 9,000 wind cycles
ZONE 3	Must withstand an 8-foot-long 2x4 at 50' per second (34 mph)	Hurricane loads up to 9,000 wind cycles
ZONE 4*	Must withstand an 8-foot-long 2x4 at 50' per second (34 mph)	Hurricane loads up to 9,000 wind cycles

*Impact resistance testing for Zone 4 may also include multiple hits per test unit and mullions.

TESTING & CERTIFICATIONS

Performance Approved

JELD-WEN® windows and doors are consistently tested to ensure they perform at the highest standards for energy efficiency. These tests are performed by our own internationally recognized, industry-leading research and development labs, as well as independent labs that provide a range of certifications.

NFRC Certification

The National Fenestration Rating Council (NFRC) establishes standards for energy efficiency based on the performance of the whole product—not just the glass alone. Tests administered by independent third-party labs determine the ratings a window or door receives in the following areas:

- U-factor: This is the amount of heat flow through a product. The lower the number, the more energy efficient the product is.
- Solar heat gain coefficient (SHGC): This indicates a window or door's ability to block heat generated by sunlight. The greater the blockage is, the lower the SHGC number will be.
- Visible light transmission: This is the percentage of visible sunlight that penetrates a window or door. A higher number means more light is entering through the glass.
- JELD-WEN windows and doors are NFRC-rated: they meet rating requirements for NFRC energy efficiency standards.

To learn more about the processes for certifications and the organizations that award them, please visit the following websites:

NFRC certification: www.nfrc.org

ENERGY STAR®: www.energystar.gov



Custom Wood 10-foot Radius Top Swinging Patio Door

ENERGY EFFICIENCY & PROTECTION

Low-E and LoE³-366 Insulating Glass

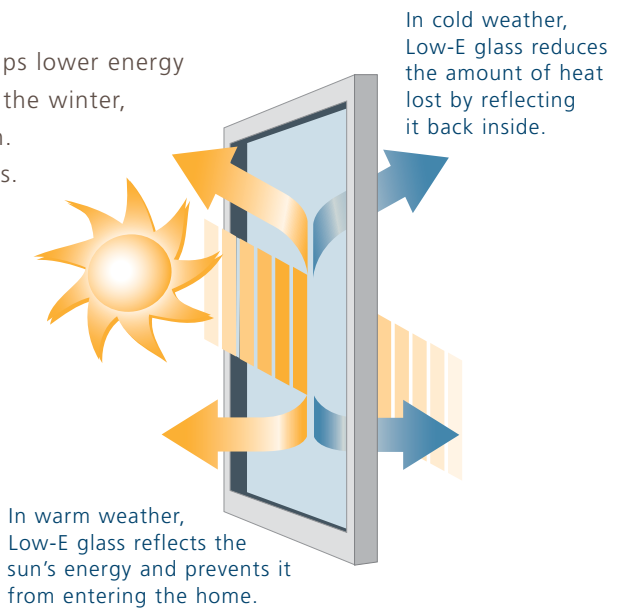
High-performance Low-E insulating glass comes standard and helps lower energy costs, allows homes to stay cooler in the summer and warmer in the winter, prevents fading of interior furnishings, and reduces condensation. It also delivers greater visible light transmittance than tinted glass.

We also offer optional LoE³-366, which provides more protection against heat loss and fading, as well as greater energy savings.

Most windows and patio doors with Low-E glass are ENERGY STAR® qualified. ENERGY STAR products help Americans save energy, save money and reduce their carbon footprints. ENERGY STAR criteria for windows are based on the U-factor and SHGC combinations that provide significant energy efficiency for a given climate zone.

Tell your JELD-WEN dealer that you want JELD-WEN windows that are ENERGY STAR qualified for your climate zone.

For more information, visit www.jeld-wen.com/energyefficiency.



ENERGY STAR®



Many JELD-WEN windows and doors are ENERGY STAR qualified. Homeowners can save energy—and money—by replacing old windows with ENERGY STAR qualified windows and pay a 7-15 percent lower household energy bill. Lower energy consumption also reduces greenhouse gas emissions from power plants and shrinks a house's carbon footprint. JELD-WEN has been an ENERGY STAR partner since 1998.



Appropriate Protection for Exterior Doors

To adequately protect your door and extend its life, several factors must be considered. Door type, climate, exposure, color choice and the use of a storm door all have an effect on the durability of a door.

Every door type weathers differently. Wood doors, for example, are more susceptible to the elements than steel or fiberglass.

An overhang as shown is required for wood doors, and recommended for steel and fiberglass doors. Overhangs protect the door's finish, minimize the need for refinishing and help keep the weather out of the home.

For complete information and guidelines for designing the best combination of door material, overhang protection, and other factors affecting the long-term performance of the door, visit www.jeld-wen.com.

A FEW DESIGN CONSIDERATIONS

Beauty Begins Here

JELD-WEN® windows and doors can enhance the look of any home, and they provide a sense of visual continuity both on the exterior and interior. Therefore, it's important to consider which windows and doors are the best choice for your home. We've provided a few questions to help you make your selection.



Aurora® Custom Fiberglass
A1260 Segment Top Entry Doors

Product Styles

Within our complete range of products, you'll find windows and doors to complement any type of architecture and meet any design preference. We invite you to view the entire selection today at www.jeld-wen.com.

Options

Windows and doors can be some of the most striking design elements in a home, and they can reflect your own tastes. That's why JELD-WEN offers abundant options for our products. From custom designs and colors to defining details like divided lites and decorative hardware, our options make it easy to add your personality to the windows and doors you choose.

THINGS TO CONSIDER

What is the architecture of your home?

JELD-WEN creates a variety of designs and options to enhance and complement any architectural style. For example, simulated divided lites (SDL) are appropriate for traditional styles, whereas windows without any divided lites appear more modern. Arched doors and windows, doors with vertical planked designs, and doors with iron straps and clavos all add to the charm of Old World homes. And Craftsman homes often call for windows and doors with clean lines and simple profiles.



Are there any elements your windows and doors should match, such as cabinetry or moulding?

You can stain the interiors of your entry door and wood windows to match your moulding and millwork for a unified look in your home. To help achieve optimal design consistency, select JELD-WEN windows and doors with matching wood species.



Do you want to enhance your windows or doors with options or custom features?

Choosing options for your windows and doors helps you personalize them, and taking advantage of custom capabilities lets you achieve a truly one-of-a-kind look. JELD-WEN provides a vast array of options, from color finishes and divided lite patterns for windows to decorative glass and metal accents for exterior doors. We can also create custom wood windows, wood exterior doors and custom carved medium density fiberboard (MDF) interior doors in nearly any design you have in mind.



What is your budget?

There's a window and door for any budget, and costs can vary greatly depending on size, material type and options. For doors, prices are generally lowest for steel doors, followed by JELD-WEN® FiberLast® E.C., fiberglass, and wood or custom fiberglass are the most expensive. In terms of windows, aluminum is the most affordable, then vinyl, and metal-clad wood. However, remember that overall value should be considered, rather than the price alone. For instance, ENERGY STAR® qualified windows and doors can cost about five percent more, yet you can recover this additional cost through reduced heating and cooling bills (approximately 15 percent annually).



What are the building codes or requirements in your area?

Local building codes, designed to help protect you and your home, will affect the products and options you select. Consult your contractor, local building inspector's office or your state's building code division for more information about these codes.



WINDOWS & PATIO DOORS

Light Comes In, Storms Stay Out

JELD-WEN offers a range of windows and patio doors that are perfect for coastal environments. By selecting optional impact-resistant glass, they'll also meet the strictest building codes. You can find these and other JELD-WEN collections to meet all your design and building needs on our web site, www.jeld-wen.com.

Custom Wood Windows & Patio Doors

Carefully made to order by true artisans

- Made from solid pine AuraLast® Wood
- 41 exterior metal clad colors with commercial-grade 70% Kynar 500®

- Three optional interior wood species
- Low-E glass is standard; LoE³-366 glass is available for even greater energy efficiency
- 20-year limited warranty*



Custom Wood Swinging Patio Doors



Custom Wood Tilt-Sash Double-Hung Window



Custom Wood Casement Window



Custom Wood Segment Top French Casement Window



Custom Wood Radius Window

AFFORDABLE & LOW-MAINTENANCE

Premium Atlantic Vinyl Windows & Patio Doors

Clean, affordable design with minimal maintenance

- High-quality vinyl won't chip or peel
- Low-E glass is standard; LoE³-366 glass is available for even greater energy efficiency
- Never needs painting or staining
- Lifetime limited warranty

Premium Atlantic Aluminum Windows and Patio Doors

- Feature streamlined, modern design
- Minimized sight lines for better views
- Optional ImpactGard® protection (subject to availability)
- 10-year limited warranty



Premium Atlantic Aluminum Double-Hung Window

Premium Atlantic Vinyl Sliding Patio Door



Premium Atlantic Vinyl Radius Top Single-Hung Window



Aurora® Custom Fiberglass A1308 Entry Door

EXTERIOR DOORS

Aurora® Custom Fiberglass

Entrances that are a breeze to maintain

- Impact-rated designs available
- Architecturally inspired collections
- Many woodgrain textures and prefinish colors
- Available with decorative metal accents
- Coordinating sidelights and transoms

Fiberglass

Superior strength, stability and durability

- Deeper texture and detailing
- Mahogany or Oak woodgrain
- 20-minute fire rating
- Low-E glass is available

FiberLast® Engineered Composite

Made from a patented technology providing superior stability in extreme temperatures.

- Impact-rated designs available
- Multiple panel designs to fit your architectural style.

Custom Wood

Custom designs crafted from several hardwood species with different finishes

- Collections for different architectural styles
- Coordinating sidelights and transoms
- Available with decorative metal accents and coastal hardware

Authentic Wood

Clean, affordable design with minimal maintenance

- Multiple designs available in either Hemlock or Meranti Mahogany
- Coordinating sidelights

Steel

Superior strength with low maintenance

- Impact-rated designs available
- Created to resist rust and corrosion
- 20- or 90-minute fire ratings are available
- Matching door and sidelight designs
- Low-E glass is available

STRENGTH & STABILITY

Designed for Durability

We craft an array of exterior doors that have passed stringent design pressure or impact resistance tests to meet strict Florida requirements. This means they're also reliable for other areas that border the Pacific, Atlantic,

Great Lakes and Gulf Coast. Please visit jeld-wen.com/coastal for more information on our Coastal Selections and to see which designs are available with impact ratings.



Custom Wood 252 Entry Doors



FiberLast® Engineered Composite FL-686ME Entry Door



Steel CT-30 Entry Door



Aurora® Custom Fiberglass A362 Entry Door and Sidelights



Aurora® Custom Fiberglass A1260 Entry Door



Authentic Wood 6206 Entry Door

FEATURES FOR COASTAL HOMES

Standing up to the sea.

Every JELD-WEN® window and door is made to be reliable, regardless of where you live or what the weather brings. Of course, it's important that our products stand up to specific coastal challenges, which is why we offer optional features such as ImpactGard® protection, which includes impact-resistant glass, and hardware that resists damage from saltwater. When you review all these features, you'll see that our windows and doors are engineered to perform to the highest standards.

Commercial-Grade Cladding

We offer many commercial-grade color finishes for our Custom Collection metal-clad wood windows and patio doors. These finishes feature a durable 70% Kynar 500® resin system, which means they stay truer and brighter than other finish options, even in coastal areas. What's more, our warranty guarantees the finish won't chalk or fade for 20 years.*



*Clad products installed within one mile of a saltwater source (or other corrosive environment) have specific maintenance requirements. Refer to our full care and maintenance instructions in the resources section of our website, www.jeld-wen.com.

Actual colors may vary from the samples displayed. Please visit your JELD-WEN dealer for actual samples.



HARDWARE FEATURES

Coastal Hardware

Typical hardware can easily become corroded or damaged when exposed to constant sea air. JELD-WEN meets this challenge by offering optional coastal hardware for our windows and doors.

This hardware will consistently stand up to saltwater and other harsh coastal conditions, which ensures lasting performance and smooth operation.

Please note: hardware requires regular maintenance.



Fiberglass Entry Systems

Aurora® Custom Fiberglass and JELD-WEN® Fiberglass entry systems, which include both doors and door frames, will durably perform in the harshest climates, weather and temperatures.

These doors are designed to reduce warping, rotting, cracking and splitting, which means they require almost no maintenance. An added benefit is that these entry systems are designed to emulate the look and feel of real hardwood.

They are also supported by superior warranties—a lifetime warranty for fiberglass and FiberLast® Engineered Composite doors.

To review complete warranties, visit www.jeld-wen.com.



This illustration shows the construction of our Aurora® Custom Fiberglass entry system with a solid hardwood jamb, an impact tested system



Custom Wood Swinging Patio Door with Transoms and Sidelights

BEAUTY & BRAWN

Lighthouses, constantly exposed to the elements, are excellent places to test the reliability of our windows and doors. JELD-WEN products are designed to endure harsh environments while enhancing the look of your home. There's simply no need to sacrifice beauty for brawn. JELD-WEN gives you both.

Read more about restored lighthouses on the following pages.



Custom Wood Radius Window

Custom Wood Segment
Top French Casement



Custom Wood Casement Window



Aurora® Custom Fiberglass A1202 Entry Door System

Custom Wood
Geometric Window

WIND POINT

Living up to its name, Wind Point Lighthouse, built in 1880, is recognized for withstanding gale force wind gusts off of Lake Michigan.

An exterior steel replacement door was already showing its wear and tear, and did not reflect historical designs of the late 19th century. To protect the structure and beauty of this historic building, nine windows and one exterior door were replaced. The JELD-WEN Custom windows are stylistically similar to the original radius top and rectangular fixed windows and include high-tech features such as AuraLast® Wood.



NEW CANAL

Hurricanes Katrina and Rita crushed this historic structure in 2005, leaving many to wonder if New Canal Lighthouse was doomed to be one of New Orleans' lost icons.

JELD-WEN Windows and doors were important both visually and structurally to this one-of-a-kind restoration effort. The 16 Custom Wood Windows from JELD-WEN were designed to resemble as closely as possible the windows that were in the lighthouse in 1890. This was accomplished by matching size and style all the way down to tiny details such as the narrow muntin bars with a unique profile that looks like the putty-glazed bars of yesteryear.



UMPQUA

After 111 years of harsh coastal conditions, Oregon's first lighthouse was in dire need of repair.

The new exterior Aurora® Custom Fiberglass doors were designed to withstand harsh coastal conditions, yet look and feel like original wood doors. The new custom windows are stylistically similar to the originals, but include high-tech features such as AuraLast® Wood. The Custom Clad-Wood windows with Low-E insulated glass feature real wood simulated divided lites, which more accurately showcase the beauty of the historic architecture.



THOMAS POINT SHOAL

It's a lighthouse so famous it once appeared on a U.S. Postal Service stamp.

After more than a century of harsh storms, wind and rain, Thomas Point Shoal Lighthouse received a makeover. Built in 1875, after more than 130 years this rare screw pile lighthouse had experienced years of exposure to harsh coastal conditions.

Many of the wood windows were either boarded up or inexpensively replaced with historically inaccurate and dysfunctional windows. Existing wood doors had rotted due to the constant damp weather.

The new JELD-WEN Custom windows with simulated divided lites are stylistically similar to the originals, and include high-tech features such as AuraLast® Wood. Exterior Aurora® Custom Fiberglass doors are designed to withstand harsh coastal conditions yet look and feel like the original wood doors.



The JELD-WEN website is your ultimate resource for learning about our reliable windows and doors. It has all the product information and design advice you need. Visit us at jeld-wen.com today.



Official window and door provider of Major League Soccer



JELD-WEN is proud to support a better way to build

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