zola

America's European
Window Company™

IDEA BOOK

Introduction

Building custom-crafted, high performance windows and doors requires more than just passion. Technical expertise, strong relationships, and close attention to the needs of customers must converge from the first contact with the client through to project completion. At Zola, a completed project is not a box checked off. It is knowing that our work opens a crisp window from the inside to the outside, that our wide expanses of high performance units provide the frame for the artwork which is the world all around.

This book is the result of a collaborative effort with forward-thinking architects, builders, designers and—most importantly—homeowners. We want to thank all of them for their generous contributions to this book.

At Zola, we are proud of our expert staff that is dedicated to customer service excellence, share a real love for the environment, and work hard to help bring our customers' vision to life.

We partner with leading architects and builders across the U.S. and Canada—professionals who share our values for high performance, seamless interfaces between interior and exterior spaces, and uncompromising aesthetic quality.

Our German-engineered window and door products increase comfort, reduce energy usage, enable fine architecture, and are a joy to use and look at. We would be delighted to help bring these qualities to your project, too.

— FLORIAN SPEIER & JESSICA PFOHL
Co-Founders of Zola Windows
zolawindows.com

Contents

Note from US Department of Energy

I have personally delivered over 25 zero energy ready home training classes across the country. Consistently, one of the biggest "ah-hah" moments in the four-hour course is the huge impact windows have on overall wall assembly performance. Even with just a 15% window-to-floor-area ratio, windows represent a giant thermal hole that disproportionately upsets all the good work you do on the insulated wall assemblies. Who knew?

This table compares the overall R-value of the entire wall assembly with various cavity insulation levels. Assuming approximately an R-3 window (e.g., U-value = 0.30) representing 15% of the wall area, we can invest substantial cost to increase the wall cavity insulation from R-18 to R-39 with only a marginal increase in the overall wall assembly R-value (e.g., R-11 vs. R-15). In other words, we've more than doubled the wall insulation at substantial cost and only realized about a 33% improvement in overall wall assembly R-value due to the impact of much lower R-value windows. With these same assumptions, we can increase the R-18 insulated wall over 300% to R-60 and only get a 50% improvement in overall wall assembly R-value (e.g., R-11 vs. R-17). Now look at the power of high-R windows. We get nearly the same overall wall assembly R-value with an R-10 window and R-18 insulated wall as an R-3 window and R-60 insulated wall (e.g., R-16 vs. R-17).

WHOLE WALL PERFORMANCE

	R-18 insulation	R-39 insulation	R-60 insulation
R-3.3 window	R-11	R-15	R-17
R-5 window	R-13	R-19	R-23
R-6.5 window	R-14.5	R-23	R-28
R-10 window	R-16	R-27	R-34

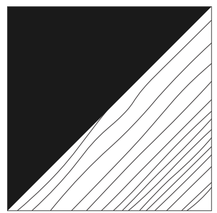
Table shows whole wall R-values for various combinations of windows and insulation. For reference, Zola Thermo Clad™ is R-7 and Zola Arctic™ is R-11.

Yes, windows are a really big deal! There is a desperate need for reasonably priced, high-R windows.

— SAM RASHKIN
Chief Architect of US Department of Energy

Frame Materials

Choose the perfect combination of aesthetic, performance, and price.



CLAD WOOD

R-11 Zola Arctic™
R-9 ZNC™
R-8 ThermoPlus Clad™
R-7 Thermo Clad™
R-7 Thermo Clad PanoramicView™
R-6 ClassicPlus Clad™
R-4 Classic Clad™
R-4 Classic Clad PanoramicView™

(FSC®-certified wood standard)
FSC License FSC-C112130

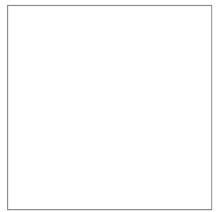
Clad wood windows combine the warmth and design flexibility of wood windows with the maintenance-free service life of an aluminum outer shell. Zola's clad wood features a back-vented aluminum shell that rides on rails. This rain screen design dramatically increases drying potential, eliminating concerns of rot and increasing window life expectancy to 60 years.

In addition to being the highest performing of Zola's window materials, clad wood offers tremendous design flexibility. Frames can be narrowed to just two inches. (See Amethyst Passive House, p.167-174.) While well-adapted to classic designs, clad wood is particularly effective in realizing the full potential of modern houses. The tactile quality of the crafted wood frames brings warmth and coziness to clean, modern design.

ALUMINUM

R-8 Thermo Alu90™
R-7.5 Thermo AluMinima™
R-7 Thermo Alu75™
R-6.5 Thermo Alu75 PanoramicView™
R-4.5 Classic Alu75™

Aluminum windows are incredibly flexible in application and offer some of the slimmest profiles available in a high performance window. Zola uses advanced thermal breaks to optimize energy savings, create true comfort, and eliminate condensation inside the home. The frames can be finished in a wide array of powder-coated or anodized finishes to complement any design.

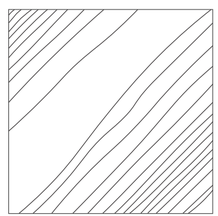


uPVC

R-8 ThermoPlus uPVC™
R-7 Thermo uPVC™
R-7 Thermo Clad uPVC™
R-4.5 Classic uPVC™
R-4.5 Classic Clad uPVC™

Our uPVC windows are the most economical high performance windows available on the market. While commonly used in multifamily applications, Zola uPVC windows are regularly used in outstanding new residences as well. (See Summit Passivhaus, p.125-128.) At the top of the uPVC range is the aluminum clad uPVC window, featuring an outer shell construction similar to that of our clad wood windows. The cladding allows a wider array of exterior finishes and increased durability and color stability.

While standard uPVC is white (our most popular uPVC window color), a wide array of color foils is available to customize these windows. Note that the maximum sizes available in uPVC are smaller than in our other frame material types.



WOOD

R-7 Thermo Wood™
R-7 American Heritage SDH™
R-4.5 Classic Wood™

(FSC®-certified wood standard)
FSC License FSC-C112130

Zola's wood windows are available for all types of projects in a wide array of wood species, with Forest Stewardship Council®-certified wood the default option. While the expected life span of wood windows can match that of a clad wood window, regular maintenance and eventual refinishing is required. As a result, wood windows are predominantly used in historic renovations where an aluminum outer skin would not be architecturally acceptable.

Configurations

FIXED WINDOW

The fixed window is the simplest way to let light in. Common sizes for a single piece of glass range up to 8' x 10', with some projects going for much larger solutions. Fixed windows can be combined to create large stacked glass walls.

TILT & TURN

A European classic, tilt & turn windows have a double function; with a turn of the handle they either tilt in (hinged at the bottom) or swing in. The tilt function provides secure, weather-proof (albeit not storm-proof) ventilation. Zola's tilt & turn windows can be made very large, with the biggest reaching nearly five feet in width and eight feet in height.

TILT

The brother of the tilt & turn window, the tilt-only window allows much wider sizes, making it a perfect solution for clerestory windows, along hallways, or underneath large fixed windows in view facades (p.35 and p.137). For ease of cleaning, the hinge can be unlocked so that the window can tilt in completely.

FORA™ OUTSWING

This take on the American classic casement window swings out and to the side. While outswing windows are more susceptible to wind than tilt & turn windows, they can open wide without encroaching on a room. Glass sizes are more restricted than tilt & turn, so many customers will mix both operator types depending on location in the home.

FORA™ AWNING

The awning window is the outswing sister of a tilt window, and is often used in conjunction with Fora™ Outswing windows. The window is hinged at the top and pushes outward from the bottom. Awning windows can be made larger than casement windows but cannot provide egress.

LIFTSLIDE

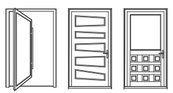
The LiftSlide door lifts out of its track and gasket system to glide effortlessly open or closed. This function makes very large moving sashes feasible and ensures a very tight seal when the sash is lowered and locked. Zola's LiftSlides are commonly built with individual glass pieces of 8' x 10', with larger ones available on request. Several large pieces can combine to create a sliding wall that can open around corners and even stash into a wall if desired. See House on the Cove (p.11-14) and Amethyst Passive House (p.167-174) for examples of what is possible.

BREEZEPANEL™

These folding glass walls are great for indoor/outdoor living, offering an opening size that only pocketed LiftSlide doors can match. Note that BreezePanel's individual panel width is more restrictive (3'6") than with LiftSlide, leading many customers to opt for the latter.

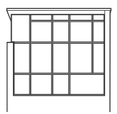
AMERICAN HERITAGE SDH™

Our replica-quality tribute to the historic double hung window, American Heritage SDH™ combines a lower tilt & turn assembly with a fixed upper, maintaining the style and proportions of a traditional double hung window while providing modern performance and functionality.



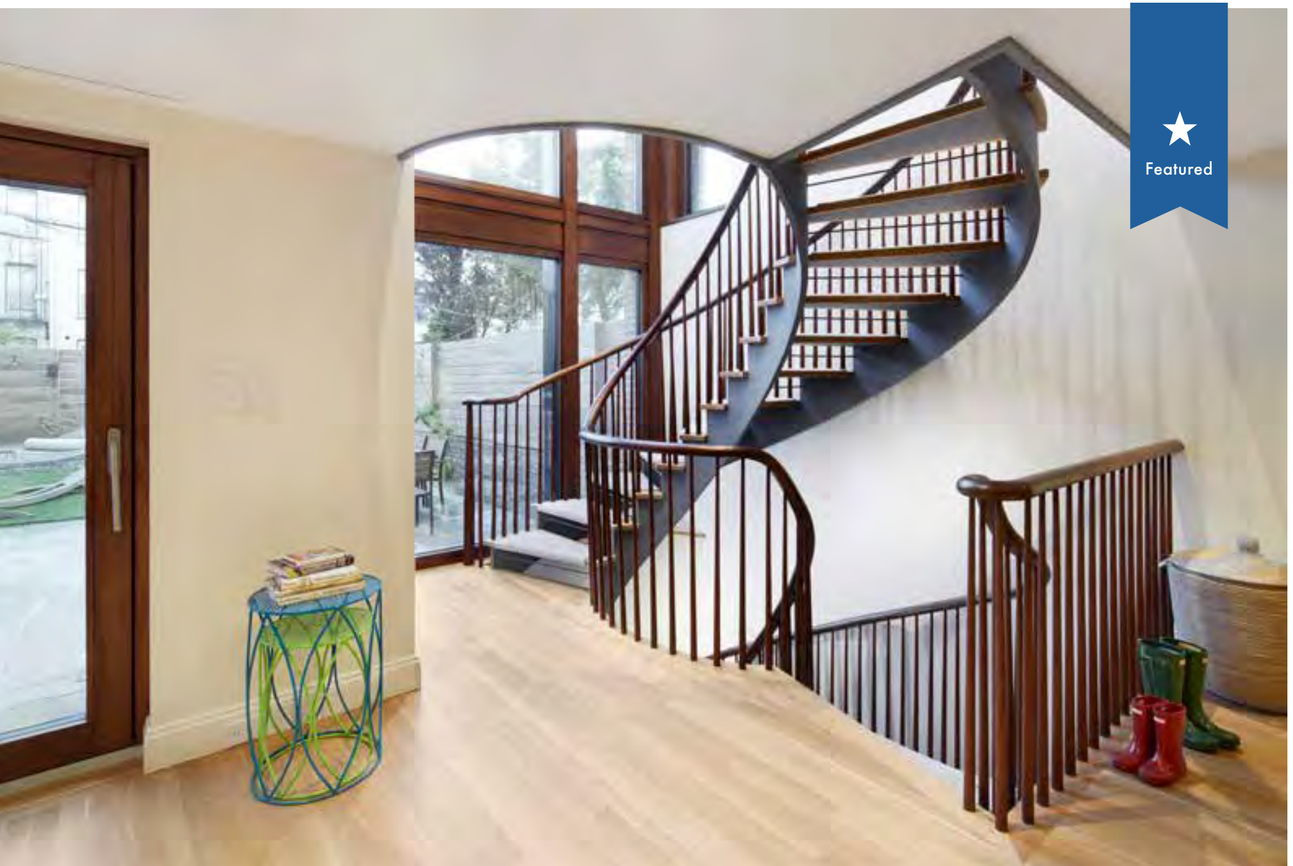
ENTRY DOORS

We apply the same German engineering and high performance design found in our windows to our entry doors: from Passive House doors to design-forward pivot doors to custom reproductions of historic doors. We also offer French doors in all styles.



FACADE SYSTEMS

Zola's large glazing units and flexible combinations offer many options for creating glazed facades. CurtainWall systems excel where minimal frames and extremely large glass expanses are desired, in both commercial and premium residential applications. CornerGlass™ preserves uninterrupted panoramic views with a post-less 90-degree corner glass assembly. StackedWall™ combines fixed and operable units in a wall of glass that maximizes natural light at a fraction of the cost of CurtainWall.



Featured

PROJECT NO. 01

78 3rd Place

Brooklyn, NY
Zola American Heritage SDH™
Zola Thermo Clad™

Fixed | Tilt & Turn | SDH™ | LiftSlide | Facade Systems

Architect: Baxt Ingui Architects
Builder: P. Joe Construction

A contemporary remodel of a Brooklyn Brownstone by Baxt Ingui Architects, this project preserves the historic façade with Zola American Heritage SDH™ (simulated double hung) windows. The back opens up with large expanses of glass in Zola's high performance Thermo Clad™ line.

Featured in Dwell Magazine, ArchDaily, and Passive House Buildings Magazine

Materials/Finishes: American Heritage SDH finger-jointed pine frames, painted RAL 9005 (Jet Black) outside and custom stained/painted inside. Thermo Clad aluminum-clad finger-jointed pine and meranti frames, powder-coated RAL 9005 (Jet Black) outside and custom stained/painted inside. Stainless Steel finish on handle hardware

PROJECT NO. 02

House on the Cove

Chuckanut Bay, WA
Zola Classic Clad™
FSC®-Certified Pine

Architect: Stephenson Design Collective
Builder: Indigo Builders

Overlooking Washington's Salish Sea, this home commands sweeping views across the San Juan Islands and the Olympic Mountain range. Architect Ryan Stephenson used Zola's Classic Clad windows to capture these views and to complement the home's exterior material palette with the windows' modernist aluminum cladding. A large LiftSlide door seamlessly connects kitchen, deck, and landscape beyond.

Featured in Gray Magazine

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 7016 (Anthracite Grey) outside and painted RAL 9003 (Signal White) inside. Titanium finish on handle hardware.

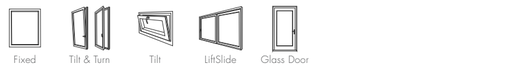
Photographer: Andrew Pogue

PROJECT NO. 03

SoFa House

Wyoming
Zola Thermo Clad™
FSC®-Certified Pine

Architect: kt814
Builder: Jackson Hole Contracting



Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 9007 (Grey Aluminum) outside and stained Matte Birch inside. Aluminum finish on handle hardware.

Located in Downtown Jackson, the three intersecting volumes of this new 5,000 square foot family home create an array of inside and outside spaces. A 20′ LiftSlide unit connects the kitchen and dining area to the courtyard outside, while a 12′ high glass door assembly opens the master bedroom to sweeping views of Snowking Mountain. An axis of light creates transparency through the entire depth of the house, illuminating both kitchen and staircase.

Designed as a Passive House, the home's R-8 windows and doors, airtight construction, and 18″ of wall insulation make for a house that needs minimal heat, even in Jackson winters. Besides low energy consumption, the home's high performance components deliver vastly increased comfort—no drafts or cold spots, even next to the glass walls.

PROJECT NO. 04

210 Pacific Street

Brooklyn, NY
Zola Thermo Alu PanoramicView™

Fixed | Tilt & Turn | Tilt | LiftSlide | Glass Door

Developer: NAVA Companies
Builder: CCNY Construction

Materials/Finishes: Aluminum frames powder-coated RAL 7022 (Umbra Grey) inside and out. Titanium finish on handle hardware.

Featured

Featured in The New York Times

PROJECT NO. 05

Fine Times

Manhattan, NY
Zola American Heritage SDH™
Zola Alu 75™
Zola Thermo Clad™
Zola Thermo Wood™

Architect: Baxt Ingui Architects
Interior Designer: Tamara Eaton

This deft remodel of an historic brownstone in Manhattan combines simulated double hung windows with modern windows and BreezePanel™ folding walls. Stained glass by Tiffany is incorporated inboard of the Zola units.

Photographer: Adam Kane Macchia

Original Tiffany stained glass placed inboard of Zola window.

Materials/Finishes: Combination of aluminum, aluminum-clad wood (finger-jointed pine), and wood (finger-jointed pine and meranti) frames. Exterior colors are RAL 9011 (Graphite Black) and RAL 9010 (Pure White). Interior colors are a combination of RAL 9010 (Pure White) and custom on-site finish. Handle hardware is a mix of Aluminum and White.

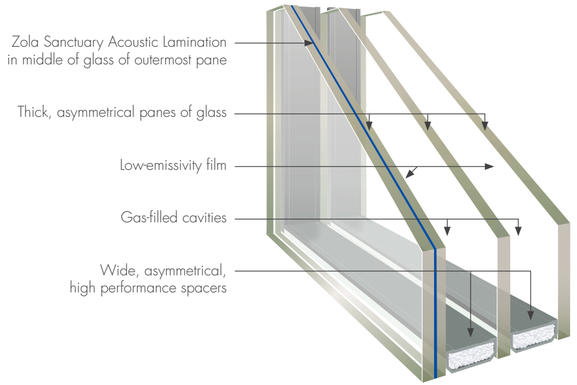
Sanctuary Glass

Escape the din outside.

Sanctuary Glass, available across Zola's window lines and configurations, dampens two to three times more sound than a conventional window.

Sanctuary Glass reaches superior acoustic performance through a combination of wide spacing between panes, attenuation gases, sound absorbing lamination, thick glass panes in differing widths, and flexible bonding of the panes. Equally important, Zola's frames match the glass performance with airtight, thermally broken construction and engineering to carry the additional weight of the glass. This optimized window and frame pairing enables Sanctuary Glass products to deliver a combination of sound protection, energy performance, and visible transmittance that is unmatched.

Available in all Zola lines, Sanctuary Glass ensures silence and tranquility at home. Even for buildings located on busy streets, close to an airport, or near loud nightlife, Sanctuary Glass provides peace and quiet inside. The importance of quiet in today's bustling world cannot be overstated. Research links exposure to noise pollution with heart disease, stress, cognitive issues, and other ailments.



Third-party testing shows that Sanctuary Glass windows dampen two to three times more sound than conventional modern windows. Sanctuary Glass tests reached an STC (Sound Transmission Class) of 40-44 and OITC (Outside Inside Transmission Class) of 35-37. Measured on a logarithmic scale, STC measures sound dampening at typical household noise frequencies while OITC measures at the lower frequencies associated with sources like transportation. Higher STC and OITC numbers signify better soundproofing. A typical modern window has an STC of 28-32 and every increase of 10 STC points reduces sound transmission by a factor of ~2. Hence, our 40 STC configurations double average acoustic performance while 44 STC samples triple it.

PROJECT NO. 06

Upper West Side Townhouse

Manhattan, NY
Zola American Heritage SDH™
Zola ThermoPlus Clad™
FSC®-Certified Pine

Fixed | Tilt & Turn | Tilt | SDH™ | LiftSlide | Facade Systems

Architect: Baxt Ingui Architects
Builder: Robert Taffera Construction

Materials/Finishes: American Heritage SDH finger-jointed pine and meranti frames, painted RAL 9005 (Jet Black) outside and RAL 9003 (Signal White) inside. ThermoPlus Clad aluminum-clad finger-jointed pine frames, powder-coated RAL 9005 (Jet Black) outside and painted RAL 9003 (Signal White) inside.

PROJECT NO. 07

Bellevue Residence

Seattle, WA
Zola Classic Clad™
FSC®-Certified Pine

Fixed | Tilt & Turn | LiftSlide

Materials/Finishes: Finger-jointed pine frames, painted RAL 8019 (Grey Brown) inside and out. Aluminum finish on handle hardware.

PROJECT NO. 08

Hill House

Sonoma County, CA
Zola Thermo Clad™
FSC®-Certified Pine

Architect and Builder:
Atmosphere Design/Build

Materials/Finishes: Aluminum-clad finger-jointed pine frames,powder-coated RAL 7004 (Silky Grey) outside and stained Matte Beech inside. Aluminum finish on handle hardware.

Passive heating and cooling strategies, thermal mass, and a high performance building envelope with triple pane Zola windows come together to make this home extremely energy efficient. A half-cord of wood heats the house annually.

PROJECT NO. 09

Harvard Stilt House

Harvard, MA
Zola Thermo Wood™
Zola Classic Wood™

Architect: Peter Rose + Partners
Builder: Skinner & Watkins

This 3,300 square-foot home is built on stilts to negotiate a steeply sloped site while minimizing disruption of the forest ecosystem. The home's series of treehouse-like boxes, connected by the spine of a central hallway, capture views of Bear Hill Pond through generous glazing. Massive LiftSlide doors open onto the home's two balcony perches.

Featured in Boston Magazine

Photographer: Chuck Choi Architectural Photography

Materials/Finishes: Meranti frames with Cypress stain inside and out. Aluminum finish on handle hardware.

PROJECT NO. 10

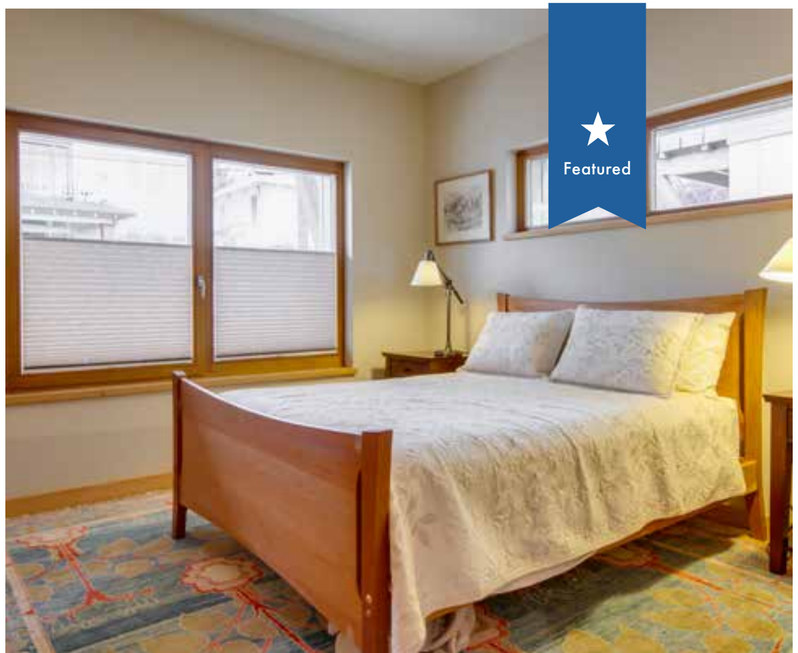
Ankeny Row Sustainable Multifamily

Portland, OR
Zola Thermo Wood™
FSC®-Certified Meranti

Architect: Daryl Rantis
Builder: Green Hammer

Fixed Tilt & Turn Glass Door

Photographer: Eric Bishoff Photography



Featured

“We chose Zola and this product line for a combination of reasons. It was aesthetically pleasing, reasonably priced, and provided high performance for energy-efficiency.

— STEPHEN AIGUIER
Green Hammer

Featured in Planning Magazine, Portland Tribune, and the book “Sustainable Homes for the 21st Century”.

“

We wanted a living arrangement that brought together a group of friends to live separately in our own homes but with a shared courtyard, common room and space—an intentional community. Stephen Aiguier, CEO of Green Hammer, suggested Passive House construction for our desired energy-efficient home.

Zola Windows is the best window solution for meeting the demands of Passive House design standards.

—FRANCIE ROYCE
Homeowner

Materials/Finishes: Meranti frames stained Old Pine inside and out. Titanium finish on handle hardware.

The Passive House Method

Revolutionary efficiency, comfort, and indoor environmental quality.

Passive House is the standard bearer for high performance design and construction around the world. Grounded in building science, advanced energy modeling, and a suite of design principles that have been proven out on tens of thousands of built projects, the Passive House method delivers superior comfort, indoor environmental quality, energy efficiency, and durability. Passive House Institute US (PHIUS) and Passive House Institute (PHI) are both certifying bodies, each with its own version of the standard.

High performance windows are mission-critical to the Passive House method. These key design principles combine to deliver Passive House's revolutionary health, comfort, durability, energy performance benefits:

- High Performance Windows and Doors—to capture solar gains, dramatically reduce heat loss, and maintain the moderate interior surface temperatures that are so vital to occupant comfort.
- Continuous Insulation—a warm sweater to wrap the building's four walls, foundation and roof, free of gaps or "thermal bridges".
- Airtight Envelope—to eliminate chilly drafts and moisture-bearing air leaks into building assemblies.
- Balanced Fresh Air Ventilation—a high performance H/ERV ventilation system supplies filtered fresh air, exhausts stale air, and recovers heat and humidity.
- Passive Solar Management—to exploit the sun's energy in the winter and shield from it during the summer.

PHIUS

Passive House Institute

Zola has supplied more US Passive House projects than any other window manufacturer.

We also created the first Passive House window—ZNC™—to be certified by both PHIUS and PHI, and have led the North American high performance window industry since the inception of the Passive House movement here. When you choose Zola for your project, you are choosing a knowledge team with unparalleled expertise in high performance fenestration.

Island Passive House by Artisans Group

PROJECT NO. 11

Fairmont Passive House

Eugene, OR
Zola Thermo Wood™

Architect: The Urban Collaborative, LLC
Builder: Six Degrees Construction

Fixed | Tilt & Turn | Tilt | BreezePanel™ | Glass Door | Facade Systems

“

It’s important to have a supplier that responds to issues and changes during installation. The Zola tech support team was always available and offered excellent support even after installation.

The windows and doors are beautiful. The hardware is incredible. The BreezePanel bi-folds for large openings operate with ease.

— RICK ROBERTSON
Six Degrees Construction

Materials/Finishes: Oak frames painted RAL 9005 (Jet Black) inside and out. Aluminum finish on handle hardware.

Photographer: Erik Bishoff Photography

“

The essence of the home is the connection between the architecture and the landscape, which allows natural light and fresh air deep into each space. The home’s large windows and movable walls facilitate this connection and make it a place where the rhythms of the day are felt and the benefits of natural lighting and natural ventilation minimize the home’s environmental impact.

The solidity of the windows and doors, made possible by the oak frames and triple pane panels, enhances the durability of the home and give it a permanence that is essential to any notion of sustainability.

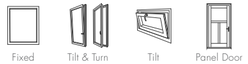
— MARK GILLEM
The Urban Collaborative

The entire outer frame of our Thermo Wood™ Passive House windows can be over insulated for enhanced performance. We factory finish with the most durable, weather-resistant paints on the market.

PROJECT NO. 12

Casa Mirasol Passive House

Napa Valley, CA
Zola ThermoPlus Clad™ windows
Zola Thermo Wood™ doors



Architect: Signum Architecture LLP
Builder: Passivworks, Inc

Materials/Finishes: Aluminum-clad clear pine frames, powder-coated RAL 8003 (Clay Brown) outside and stained Teak inside. Clear pine doors, stained Teak inside and out. Light Bronze finish on handle hardware.

Photographer: Michael Hospelt Photography

“

Our design goal was to match the simplicity the owner achieved with the front guest house while elevating the concept of what a ‘home’ should feel like.

The Zola product provides a wonderful value allowing the owner to have two windows for the price of one. There are many circumstances where you want the window or door to perform differently and having options to both tilt and turn is a luxury that, once you experience it, you benefit from over the entire lifespan of the house.

I have used tilt turn windows for almost 20 years and I enjoy the air flow that you get through a home by the tilt feature. This provides a wonderful convection air stream and most owners are amazed at the tilt swing option of the doors.

—JARROD DENTON
Signum Architecture

“

It’s all about the views from the windows and doors into the courtyard and to the back of the property. The windows and doors that surround the house give us the openness of that indoor-outdoor feel.

We wanted to build an energy efficient home with a smaller carbon footprint. We used Zola’s tilt-turn windows and doors. While being beautiful, they are exceptionally well built, easy to clean, and insulating. The French doors along the loggia (all rooms in the back of the house) let in natural light while showing off back property views.

— HOMEOWNER

“

Zola provides an excellent product and support for the Passive House community. The best part, they make a daunting process simple. Love the support after installation, this is a sign of a sure winner.

— RICK MILBURN
Passivworks

American Heritage SDH™

Zola's simulated double hung, a replica-quality tribute to the historic window.

The double hung window dates back to the English manor houses of the 1670's. English immigrants to the United States brought the window design with them, incorporating it into colonial buildings and establishing the double hung window as an architectural staple of historic American buildings. But as architects and builders work to improve the energy efficiency and comfort of historic buildings, the traditional double hung window has emerged as a key challenge.

Zola created the American Heritage SDH™ (simulated double hung), a replica-quality window engineered for historic restorations, to overcome this challenge.

American Heritage SDH™ combines a lower tilt & turn assembly with a fixed upper, providing outstanding thermal performance and modern functionality while maintaining the style and proportions of a traditional window.

Successfully integrated into historic, high performance landmark projects across the US, the American Heritage SDH™ has been approved by many historic preservation commissions, including Brooklyn and Manhattan commissions.

The window features R-11 glass and triple air seals. It mimics the original double hung window aesthetic through material choice, historic proportions, and the clever use of offset glass planes to create the shadow line that is characteristic of the double hung window.

PROJECT NO. 13

60 White Street

New York, NY
Zola American Heritage SDH™
Zola Thermo Wood™

Fixed · Tilt & Turn · SDH™ · LiftSlide

Developer: Sorgente Group

Architect: Bostudio Architecture

★ Featured

Photographers: Evan Joseph and Nico Arellano

Materials/Finishes: American Heritage SDH meranti frames, painted custom landmark color outside and stained Cypress inside. Thermo Wood windows and doors are meranti frames, stained Cypress inside and out. Aluminum finish on handle hardware.

★ Featured in Design Boom, Inhabitat, ArchDaily, and Commercial Architecture

The Penthouse at 60 White Street offers modern living in a landmark New York City building. Zola LiftSlide glass walls open to the rooftop deck. The warmth of the wood used for the windows and doors complements the natural materials selected by Bostudio Architecture to create modern, yet comfortable spaces with a strong sense of place.

PROJECT NO. 14

McKeesport Historic Renovation

Pittsburgh, PA
American Heritage SDH™
Thermo uPVC™

Fixed | Tilt & Turn | SDH™

Architect: Thoughtful Balance

Located in McKeesport, Pennsylvania, this project is a Passive House retrofit and renovation of an historic YMCA building that provides housing for at-risk and previously homeless clients. The twin goals for the retrofit were to dramatically improve the energy efficiency of the building while preserving its historic integrity.

The project team worked closely with Zola Windows to specify Zola's American Heritage SDH™ (simulated double hung) window from the budget-friendly Thermo uPVC™ line. The implementation of these windows, combined with envelope improvements and mechanical improvements, enabled the project team to reduce building energy consumption by 75%.

Photographer: Alexander Denmarsh Photography

Materials/Finishes: uPVC frames, Basalt Grey color foil outside and standard White inside. White finish on handle hardware.

“

We love our Zola windows…that really is the truth…we cannot buy windows that have this quality for this price made in the States and we think they add great value to the project.

We would like to add that Zola has great service and really responded to our needs on the project.

— LAURA NETTLETON
Thoughtful Balance

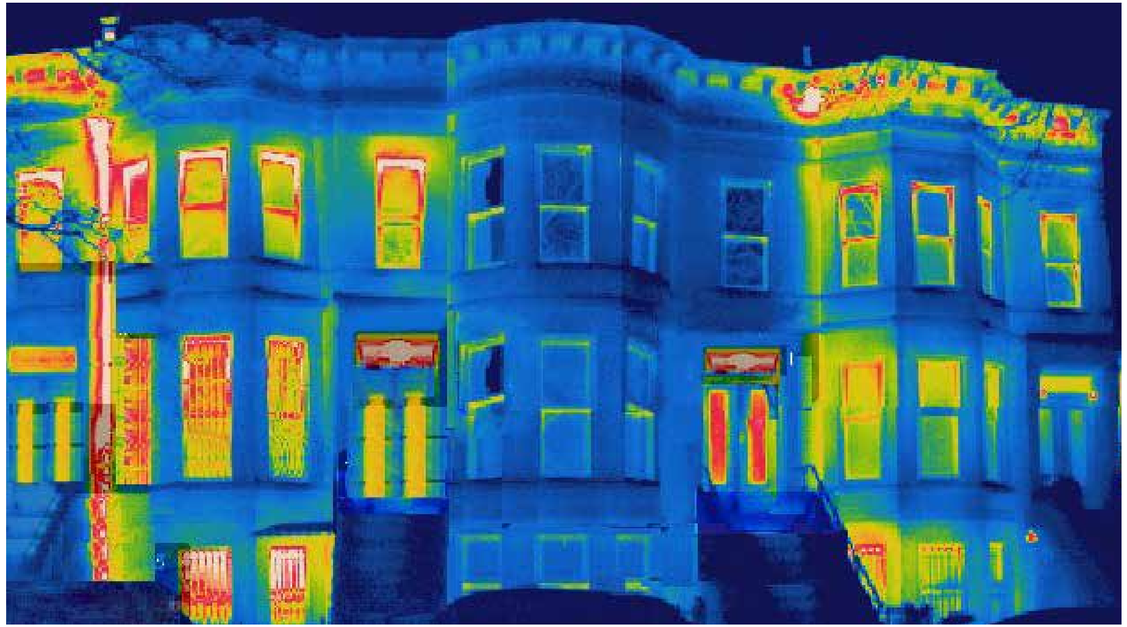
PROJECT NO. 15

Passive 154 Brooklyn

Brooklyn, NY
Zola American Heritage SDH™
Thermo Clad™ (FSC®-Certified Pine)

Tilt & Turn SDH™

Architect: Thread Collective



This infrared image taken on a cool New York night shows the incredible performance of Passive 154 Brooklyn (center). Blue areas are well insulated, while yellow and especially red coloring show heat losses. The front door was not supplied by Zola.

Photographer: Amiaga Photography

"

We had four issues to contend with on this project while searching for the perfect window: NYC Landmarks approvals, Passive House standards, cost, and beauty.

Most windows can achieve two out of four requirements, but finding a window that met all proved to be a challenge.

Zola was the only one that met the challenge with a historically appropriate window approved by NYC LPC, high energy efficiency, well priced, and aesthetically beautiful. We were extremely happy to have found a perfect solution.

— GITA NANDAN
Thread Collective

Materials/Finishes: American Heritage SDH meranti frames, painted RAL 9005 (Jet Black) outside and RAL 9016 (Traffic White) inside. Thermo Clad aluminum-clad finger-jointed pine frames with same colors as SDH units. Aluminum finish on handle hardware.

PROJECT NO. 16

Brooklyn Brownstone Renovation

Brooklyn, NY
Zola Thermo Clad™

Tilt & Turn

LiftSlide

Architect: Louis Mackall
Builder: Build with Prospect, Inc.
Fabricator: Breakfast Woodworks

Featured

Photographer: Michel Arnaud Photography

“

I have to say, Zola did a great job on Laura and Robert’s windows and doors. They are very well made, and were exactly as specified for both dimension and function. As you know, their performance is a key reason that their house required —no— heating last winter, and that was a cold one.

—LOUIS MACKALL
Architect

Featured in Design Boom

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 8019 (Grey Brown) outside and painted RAL 9010 (Pure White) inside. Aluminum finish on handle hardware.

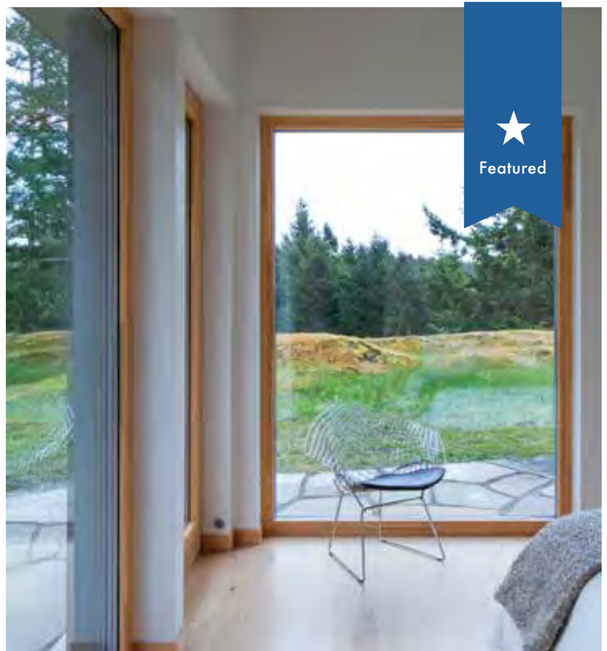
PROJECT NO. 17

Island Passive House

San Juan Islands, WA
Zola ThermoPlus Clad™

Fixed · Tilt & Turn · Modern Door · Glass Door

Architect and Builder: Artisans Group



Featured

“

Working with Zola Windows has been a stunningly positive experience. Zola offers vastly superior service and responsiveness over any other window provider I have worked with.

The price is feasible, the windows are stunning, and the performance is everything a certified Passive House consultant could hope for, not to mention the color options that come standard.

It's enough to make an architect's heart sing.

— TESSA SMITH
Artisans Group

Featured in Dwell Magazine

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 9007 (Grey Aluminum) outside and stained Clear Matte inside. Aluminum finish on handle hardware.

“

We are absolutely in love with the way our windows turned out. It is a joy to visit the site and be inspired by the artistry of our windows. They are the most noticeable feature of the house and serve as a functional sculpture just the way I hoped they would. Thank you to Zola for all the help you gave us in the decision-making stage.

— THE GRIFFINS
Homeowners

Windows and Green Building Certifications

Zola's windows support sustainability goals.

As green building certifications become the norm and building energy codes become more stringent, high performance windows made of sustainably-produced materials are in increasing demand.

The green building industry has developed innovative ways to maximize sustainable practice, energy performance, and owner value while staying on budget in residential and commercial construction. Meanwhile, state and federal governments have put in place, and continue to advance, energy codes and standards that set minimum requirements for energy-efficient design and construction for new and renovated buildings. Mandates are in place for both state and federal buildings, and an array of incentives exist to encourage green building more broadly.

While local building codes impose low minimal energy performance requirements, the home builder looking to maximize environmental sustainability, energy performance, indoor air quality, and comfort, will encounter these four important standards: ENERGY STAR®, LEED®, Net Zero certifications, and Passive House.

ENERGY STAR®

The "entry level" energy standard is ENERGY STAR, a national program of the Environmental Protection Agency (EPA). While not as demanding as Passive House, Living Building Challenge, or LEED's upper certification levels, ENERGY STAR does advance the adoption of energy efficiency, expanding market demand for high performance windows to lower energy consumption and increase comfort. Zola's broad offering of high performance window options give teams lots of options in reaching ENERGY STAR certification.

LEED®

In the Leadership in Energy and Environmental Design (LEED) approach developed by the U.S. Green Building Council, projects pursuing LEED certification earn points across several areas that address broad sustainability issues. Based on the number of points achieved, a project then receives one of four LEED rating levels: Certified, Silver, Gold, or Platinum. Zola Windows' thermal performance and passive solar qualities support LEED certification, as do Zola's Forest Stewardship Council® (FSC®)-certified wood window frames.

Net Zero

This rapidly-evolving category of green building certifications began with Net Zero Energy—buildings that offset all building energy consumption on a net annual basis with on-site renewable energy generation. Zero Carbon building is now gaining traction—highly energy efficient buildings that maximize renewable energy generation on-site and then purchase new off-site green power to meet any remaining building energy demand. The International Living Future Institute (ILFI) has been a global leader in this area with its Zero Energy and Zero Carbon certifications. ILFI is joined by local and regional certifying bodies around the country offering Net Zero certifications. Zola's FSC®-certified wood-framed and clad wood-framed high performance windows have become a go-to solution for "Zero" projects of all stripes.

Passive House

As described earlier in this book (see "The Passive House Method", p.45-46), Passive House projects bring a laser-like focus to building energy efficiency, durability, and indoor environmental quality. The energy performance requirements of Passive House surpass those of all three aforementioned certifications, making Zola's highly energy efficient ThermoPlus™, ZNC™, and Arctic™ lines a vital resource for the community of Passive House practitioners. The Passive House movement is growing exponentially in North America, with hundreds of homes in the United States and Canada now certified. With the highest-performing windows available on the market, Zola is a leading supplier of windows to this expanding Passive House market.

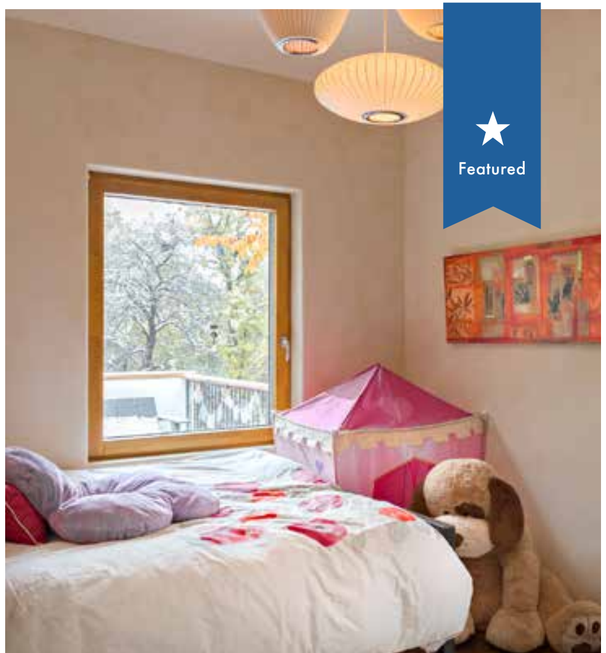
PROJECT NO. 18

Renew House

Boulder, CO
Zola Thermo Clad™
FSC®-Certified Pine

Fixed Tilt & Turn BreezePanel™ Glass Door

Architect: fuentesdesign



Featured

Featured in Colorado Magazine

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 8017 (Chocolate Brown) outside and stained Spruce inside. Aluminum finish on handle hardware.

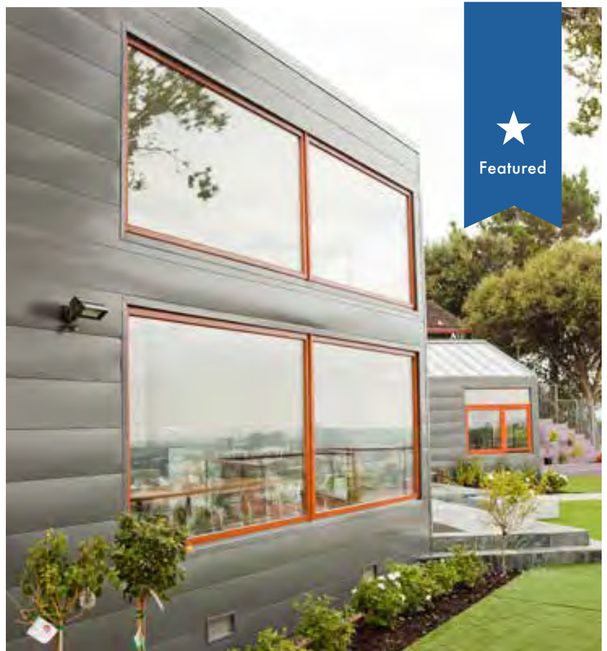
PROJECT NO. 19

San Francisco Bay Area Residence

Belmont, CA

Zola Classic Wood™

Fixed · Tilt & Turn · Tilt · LiftSlide · Modern Door · Facade Systems



Featured

Featured in Design Boom and Journal of the American Institute of Architects

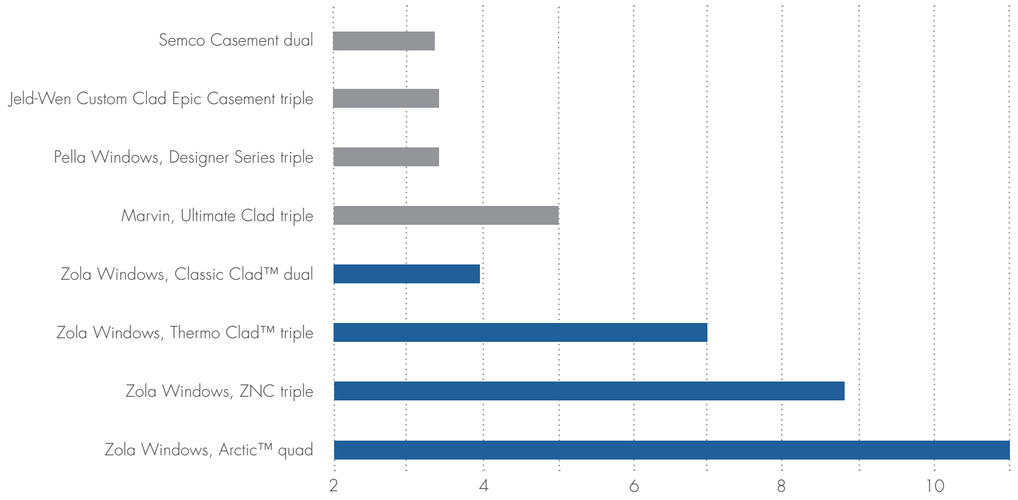
Zola Window Performance

Stacking up: leading the way among high performance window companies.

A side-by-side comparison of window performance across a wide range of suppliers for high performance windows demonstrates that Zola Windows are engineered to deliver superior performance over the lifetime of a window.

- Comfort—the superior thermal performance of Zola's German-engineered windows ensure that you stay comfortable in the depths of summer or the height of winter, even right next to one of our large glass walls.
- Save Money—our windows help revolutionize the energy efficiency of buildings, saving you money on your utility bills. The durability and condensation resistance of our windows minimize maintenance and provide decades of high performance operation
- Sustainable Future—as a North American leader in Passive House windows, net zero energy projects, and FSC®-certified frames, Zola is a capable partner in reaching your sustainability goals.

R-VALUE COMPARISON:
HIGH PERFORMANCE WINDOWS VERSUS STANDARD AMERICAN WINDOWS



Source: NFRC, ISO, PHIUS, and PHI data.

PROJECT NO. 20

La Torretta

Steamboat Springs, CO
Zola Classic Clad™
Classic Wood™
FSC®-Certified Pine

Architect: Michael J.K. Olsen Architects
Builder: Amaron Folkestadt

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated ACC1-11 outside and stained Palisander inside. Wood frames (also finger-jointed pine) stained Palisander inside and out. Stainless Steel finish on handle hardware.

“

To me, windows on a house are a lot like the final step a ballerina or opera singer might take before stepping on stage. It’s what people see from the outside. It’s the first thing, usually, that people notice. And it’s this sense that when you walk up to it that it’s beautiful before you ever even walk in.

There’s something strange, eerily strange, about a Zola window, that stands out. The Zola window had something about it that wasn’t visual, wasn’t material or tactile—just something special about it. Standing in front of them, it was just an experience. And you would think you couldn’t do that with a window, because a window is a window is a window. It has four sides and glass in the middle of it and cladding on the outside. But not a Zola window. It’s something you’ll have to experience.

—HOMEOWNER

Basics of High Performance Windows & Doors

The language of energy efficiency.

The language of energy efficiency can be difficult to decipher, but often the comparison between one window and another comes down to a few key terms. Understanding some of the numbers is crucial as you choose the right window and door units for your project. Four key factors are essential in making a choice that strikes the right balance among multiple priorities:

1

U-VALUE (OR R-VALUE)

The most important measure of window performance in any heating climate, U-value measures the rate of heat transfer through a construction assembly in Btu/h/ft²/°F. The lower the U-value, the better the window insulates. (Note that the inverse of U-value is R-value; the higher the R-value, the more thermally efficient a unit is.) U=0.25 (R-4) is considered a decent U-value in U.S. window units. Compare this to the Passive House benchmark of U=0.14 (approximately R-7), a super-high-performance threshold that most U.S. window makers have not attained. Zola Windows' ZNC™ and Zola Arctic™ lines meet this stringent standard. The ZNC line is certified by both Passive House Institute US (United States) and Passive House Institute (Germany).

2

SOLAR HEAT-GAIN COEFFICIENT (SHGC)

SHGC measures the solar energy transmittance of a window or door as a whole. It is the proportion of solar energy available on the indoor side of the window, and is expressed as a number between 0 and 1. The lower the number, the less heat a window lets in. The higher the number, the more solar heat gain the window allows. In most of the U.S. except the south, the southern east coast and southern California, a high SHGC is best. Energy modeling can determine what SHGC value is optimal for each window in a building.

3

VISIBLE LIGHT TRANSMITTANCE (VT)

If maximum natural light and a seamless connection between inside and outside is important to you (eg. for homes with views of the mountains, ocean, or a city skyline), then VT is a critical measurement for your windows. VT measures the amount of visible light transferred through a window. High quality low-e coatings achieve great U-values without restricting too much visible light.

4

AIR LEAKAGE

Air leakage, or air infiltration, is the amount of air that passes between the indoors and outdoors through the seals of a window. Low air leakage leads to better performance, durability, and sound insulation. The Passive House building standard puts great emphasis on air tightness.

PROJECT NO. 21

Lake Champlain Residence

Braintree, VT
Zola ThermoPlus Clad™
FSC®-Certified Pine

Architect: Jean Terwilliger Architect
Builder: Merusi Builders

Fixed Tilt & Turn Glass Door

Featured

Photographer: Susan Teare Photography

“

Low energy costs and low maintenance were a priority when designing our lakeside retirement home.

We chose the versatile Zola tilt and turn windows, a key decision in the design process. The windows create a strong connection to the natural environment while maintaining energy efficiency.

Even with high winds coming off the lake, the windows can be opened during the summer months for ventilation and block any drafts during the colder months.

— THE HOMEOWNER

Featured in Fine Homebuilding

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 7001 (Silver Grey) outside and painted RAL 9018 (Papyrus White) inside. Stainless Steel finish on handle hardware.

Role of Windows in Energy Performance

Plugging the hole in the bucket and bringing in natural light.

The Role of Windows in Your Home's Overall Thermal Performance

When you look at the way energy loss occurs in your home, it's easy to see why high performance windows are a key point of focus in energy efficient home design. Heat travels along the path of least resistance towards the outside of the building, and poorly performing windows create a superhighway of heat loss. Shoring that up reaps great rewards in energy performance and comfort.

When a building envelope is made up of elements with disparate thermal performance, the weakest link dictates overall performance. Unfortunately, the windows that we have become accustomed to in mainstream American construction do not insulate well, undermining investments in better wall construction and detailing. Moreover, when conventional American manufacturers do offer glass with better performance, they do so by relying on restrictive low-e coatings that significantly lower the potential for solar heat gains and natural daylighting.

To illustrate the role of windows in overall wall performance, contractor Hammer & Hand modeled the following comparison of three hypothetical walls:

- Wall A incorporates a thick layer of insulation to achieve R-50 in assembly. But when R-3 windows are added to cover 15% of this wall, the whole wall performance plummets to R-15, a 70% drop directly attributable to this not-so-stellar window.
- Wall B doubles the insulation of Wall A to achieve R-100, but because it uses the same R-3 window, its whole wall performance reaches just R-17, an insignificant overall improvement compared to the R-15 of Wall A, despite the additional insulation.
- Wall C matches the R-50 insulation level of Wall A, but this time uses an R-8 window (such as Zola ThermoPlus Clad™). Whole wall performance rises to the "high-performance" level of R-37.

Daylighting: A Naturally Efficient Consequence of High Performance Windows

With good design and good windows, generous natural lighting can be achieved for most of the day without the use of electric lights. Natural light from the sun contributes to a visually pleasant and productive environment while significantly reducing electricity usage.

The ideal high performance window has a high ratio of glass to frame. Thermally speaking, windows are one of the weakest spots in a building, but the solar gain of high performance windows can make glass beneficial to overall energy performance. In contrast, window frames do not offer this solar gain advantage, but are simply losses.

We encourage our clients to opt for expansive windows and doors whenever architecturally possible. The success of a window in maximizing daylight in any given space is a function of glass size, visual transmittance of the glass, and header height.

Sill height plays a role mainly in the subjective feel of the room—a sill that is too high will make a room feel "basement-like" and dark. Any glass area below about three feet has very little impact on actually measurable illumination levels in the depth of the room. As a general rule, we advise our customers that a window that is the width of the room and has a sill height of 3' or less creates great daylight to the room depth of about 2.5 times the header height. As an example, an 8' floor to ceiling window would daylight about 20'. By making informed choices during the window selection process, natural light can be maximized to bring multiple benefits to a living or workspace.

PROJECT NO. 22

La Casa Media Naranja

Santa Fe, NM
Zola Thermo Clad™
FSC®-Certified Pine

Architect: WAMO Studio Architects

Fixed Tilt & Turn Glass Door

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 1033 (Dahlia Yellow) outside and painted RAL 2004 (Pure Orange) inside. Aluminum finish on handle hardware.

PROJECT NO. 23

Olson Residence

Marquette, MI
Zola Thermo Wood™

Fixed | Tilt & Turn | Tilt | Glass Door

Architect: FX Architecture

Materials/Finishes: Meranti frames stained Old Pine inside and out. Aluminum finish on handle hardware.

Photographer: Christopher Burnett Photography

“

Although we did not opt for the full passive house design we were very concerned with comfort and efficiency as we have some pretty cold winters here. During our first winter in the house, the outside temperature did not go above 32° for 75 consecutive days and 65 of those days had low temperatures below 0°. Despite this, the temperature standing next to the giant living room window was within 2° of the warmest room in the house.

— BRUCE OLSON
Homeowner

“

The views are oriented towards the lake, and the large doors in front open to the patio for entertaining. In spring and fall we get shimmering reflections on the ceiling from the lake below us through the west windows. When it is snowing outside the effect is like standing inside a giant crystal snow globe. Every day there is something new to see outside.

— BRUCE OLSON
Homeowner

PROJECT NO. 24

Pumpkin Ridge Passive House

Portland, OR
Zola ThermoPlus Clad™
FSC®-Certified Pine

Architect: Scott|Edwards Architecture
Builder: Hammer & Hand

Materials/Finishes: Aluminum-clad finger-jointed pine frames powder-coated RAL 9005 (Jet Black) outside and stained Clear Matte inside. Aluminum finish on handle hardware.

Photographer: Jeff Amram Photography

Our main focus was building the greenest house we could afford, while keeping it logical, functional and comfortable. Each green characteristic had to have a good return and contribute to the overall livability of the home.

The Zola windows and doors are a huge plus as they allow for gorgeous views without any thermal bridging and provide extra insulation from the elements. They're beautiful, yet also an essential part of the function of our Passive House.

The tilt-turn windows are the best. They're versatile and function well for every need. We love the fact that we can open them to get a breeze without having a window swung into the house. Our large Zola lift slider glass door leads to our deck. That is a serious piece of hardware!

— BRYAN & STEPHANIE FARRIS
Homeowners

The Pumpkin Ridge Passive House harnesses the simplicity of Passive House design to deliver superb comfort and efficiency at minimal added construction cost. The Pumpkin Ridge Passive House is no more expensive to own than a conventional house. Yet the high performance green building will consume 90% less heating energy and offer exceptional comfort and indoor air quality. The windows from Zola play a key role in achieving this level of performance.

— HAMMER & HAND
Builder

PROJECT NO. 25

Skidmore Passivhaus

Portland, OR
Zola ThermoPlus Clad™

Architect and Builder: In Situ Architecture

Fixed Tilt & Turn LiftSlide Glass Door

Photographer: Bittermann Photography

“

The challenge with this project was to create an affordable contemporary house in an existing neighborhood that meets the Passivhaus standard.

The house is simple in form, modern yet modest, filled with light and color, and is extremely comfortable and energy efficient. My personal design focus for this project was to merge contemporary design with extreme energy efficiency.

—JEFF STERN
In Situ Architecture

Featured in Wall Street Journal, Architectural Record, and Dwell Magazine

Located in a neighborhood of post-war houses, Skidmore Passivhaus merges contemporary design with the highest level of energy efficiency. Providing a true live/work condition, two separate buildings address the program requirements while creating a unique indoor/outdoor space between. High levels of insulation, extremely airtight construction (tested at 0.32ACH50), high performing triple glazed Zola windows, and a super-efficient heat recovery ventilator allow the structure to meet the stringent requirements of the Passive House standard.

Generous amounts of south facing glazing (0.5 SHGC) maximize the solar gains for most of the year, while motorized exterior aluminum shades can be lowered to block unwanted summer heat gain resulting in extremely comfortable temperatures year-round. An extensive green roof helps manage all stormwater on site, while a roof mounted 4.32 kW PV array provides enough electricity to result in a near net zero and truly sustainable building.

“

While the lift and slide door is amazing and so easy to operate, I really love the tilt and turn balcony door. It's a key part of our cooling strategy in the summer and allows us to use the door tilted open for ventilation while remaining locked and secure.

The tilt-turn windows have many benefits including the ability to use external blinds for shading while still allowing the windows to open for ventilation, and the ability to tilt open for ventilation while remaining completely secure. They also make cleaning a breeze.

—JEFF STERN
In Situ Architecture

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 9005 (Jet Black) outside, with a combination of RAL 9005 (Jet Black) paint and Clear Semimatte stain inside. Stainless Steel finish on handle hardware.

PROJECT NO. 26

Summit Passivhaus

Park City, UT
Zola Thermo uPVC™

Fixed | Tilt & Turn | Glass Door

Architect and Builder: Park City Design + Build

Featured

Photographer: Douglas Burke Photography

Featured in Custom Builder, Contemporist, Houzz, and Design Boom

Materials/Finishes: uPVC frames with Palisander Smooth color foil outside and standard White inside. Aluminum finish on handle hardware.

“

The house itself was intended to nestle neatly into the 45-degree sloped site and to take full advantage of the limited solar access and views. The house was designed and built based on passivhaus standards. The framing, ventilation, windows and doors became critical elements to maintain such minimal energy requirements.

I chose the epic tilt-turn triple pane behemoths and patio doors from Zola. These windows and doors clearly have the engineering, quality, and performance that is far superior to any North American brand we have seen thus far.

— CHRIS PRICE
Park City Design + Build

PROJECT NO. 27

Sunshine Canyon House

Boulder, CO
Zola ThermoPlus Clad™
FSC®-Certified Pine

Fixed Tilt & Turn Glass Door

Architect: fuentesdesign
Builder: Natural Homes, LLC

Photographer: Dane Cronin Photography

Our architect recommended Zola European Windows and Doors. He had them in his own home, and we were able to see samples. Second, the u-value being better than any windows made in North America was the big selling point for us. And yes, they performed as hoped. We have big glass windows and they really keep the cold out in the winter!

We added solar shades for the daylight. This system provides passive heating and cooling which makes the rooms more comfortable and keeps our energy consumption lower.

— BROOKE WEATHERS
Homeowner

Zola's large windows and doors provide unhindered views of the surrounding mountains and make this home outstanding. The outstanding craftsmanship of the product is beautiful to look at, and their performance and easy operation make them ideal for controlling air flow and ventilation. This house will have a substantial reduction in energy use because of these high quality, thermally insulated windows and doors.

— ROGER SIMS
Natural Homes, LLC Sims

PROJECT NO. 28

Solar Decathlon House

Versailles, France
Zola Thermo Wood™
FSC®-Certified Pine

Fixed Tilt Glass Door Facade Systems

The Solar Decathlon House is a unique solar-powered house, the result of a collaboration among students from Brown University, the Rhode Island School of Design (RISD), and the University of Applied Sciences Erfurt, Germany (FHE). It was presented as part of the 2014 Solar Decathlon Europe competition in Versailles.

The Solar Decathlon Europe is an international competition that challenges twenty collegiate teams to design and build sustainable homes powered exclusively by solar energy. Through an emphasis on synthesizing a high-design, low-cost concept, the students introduced the foundation for an innovative sustainable community to Versailles. The team is one of only two from the United States that competed.

Materials/Finishes: Finger-jointed pine frames, custom stained on-site inside and out. Aluminum finish on handle hardware.

Buildings and Climate Change

Buildings can become part of the solution to climate change.

Today, buildings are playing a starring role in both the climate crisis and the clean energy transition. Moving forward, we can decide whether buildings are part of the problem or part of the solution.

According to Architecture 2030, buildings are responsible for nearly half of greenhouse gas emissions in the United States today, with the vast majority of those emissions coming from heating, cooling, and operating those buildings. Given the growing consensus that society needs to cut global emissions in half by 2030 in order to keep global warming below 2 degrees Celsius, we need a major transformation in how we design and build buildings.

The good news is that we know how to revolutionize the energy efficiency and carbon emissions of our buildings today in a cost-effective and field-tested manner: Passive House. When combined with building electrification, the dramatic energy efficiency of Passive House buildings routinely reduces carbon emissions by 90% compared to conventional code-built buildings.

A second piece of good news: Passive House and other high performance buildings are also considerably more resilient than conventional buildings, able to provide healthy conditions for building occupants even in the face of weird weather, forest fire smoke, and power outages.

High performance windows are key to creating climate-wise buildings where people can thrive. These windows are integral to the energy performance and emissions reductions of buildings. They capture passive solar gains that keep buildings warm in the winter, even if the power is out. And their interior surface temperatures (warm in the winter, cool in the summer) help keep occupants comfortable and happy year-round.

Photo composite courtesy of NASA

PROJECT NO. 29

View Haus 5 Multifamily Passive House

Seattle, WA
Zola Thermo uPVC™
Zola Classic uPVC™

Architect: b9 Architects
Builder and Developer: Cascade Built

Photographer: Aaron Leitz Photography

“

We certified one unit Passive House, so needed the performance of the Thermo, and wanted the tilt-turn with air tight gaskets for all the rest. The Zola windows and doors helped us achieve our performance goals.

— SLOAN RITCHIE
Cascade Built

Best Multifamily Project 2015, PHIUS Passive Building Awards

Our primary challenge was applying Passivhaus building performance standards to a multi-unit townhome project on a significantly sloped site.

This commitment to the project's goals required a significant collaboration between the client and architect as well as the consultants. Detailing with the goals of achieving Passivhaus produced a building that far exceeds code requirements and sets an example for how infill development can minimize its footprint and succeed in its market.

— BRAD KHOURI
b9 Architects

Materials/Finishes: uPVC frames in standard White inside and out. White finish on handle hardware.

PROJECT NO. 30

House of Fir

Jackson, WY
Zola Thermo Clad™
FSC®-Certified Pine

Architect: kt814

Fixed · Tilt & Turn · LiftSlide · Glass Door

FEATURED

The homeowners envisioned this home as one that would "sit lightly on the land" and house them comfortably for the rest of their days. The result is a conscientious project that enjoys and internalizes spectacular views of the Tetons–all while ensuring utmost comfort for the occupants. Architects kt814 used Zola Thermo Clad windows and doors, including expansive LiftSlides, to establish House of Fir's stunning inside/outside connection.

Featured in Range Magazine and The Architect's Newspaper

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated ACC1-11 outside and painted RAL 7021 (Black Grey) inside. Aluminum finish on handle hardware.

PROJECT NO. 31

La Tierra Nueva

Santa Fe, NM
Zola Thermo Clad™
FSC®-Certified Pine

Architect: Studio GP
Builder: Apple Construction


Fixed

Tilt & Turn

LiftSlide


Glass Door


Facade Systems

“

The homeowners love Santa Fe and wanted to bring the views into the house by blurring the connection between the interior and exterior as much as possible. You have to be very careful doing this; one must consider how the use of so much glass is balanced with energy efficiency of the house. Because of the performance of Zola windows we were really able to exploit this and have been able to create a number of large window walls, which really open the house to the outdoors.

— GRAHAM HOGAN
STUDIO GP

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 9007 (Grey Aluminum) outside and stained Clear Matte inside. Aluminum finish on handle hardware.

PROJECT NO. 32

Garden Place

Brooklyn, NY
Zola American Heritage SDH™
Zola Thermo Clad™
FSC®-Certified Pine

Fixed SDH™ LiftSlide Glass Door

Architect: Baxt Ingui Architects
Builder: Kleen Construction

Materials/Finishes: American Heritage SDH finger-jointed pine frames painted RAL 9005 (Jet Black) outside and RAL 9003 (Signal White) inside. Aluminum-clad finger-jointed pine frames powder-coated RAL 9005 (Jet Black) and painted RAL 9003 (Signal White) inside. Stainless Steel finish on handle hardware.

PROJECT NO. 33

Christianson Passive House

Corvallis, OR
Zola Thermo uPVC™
Zola Thermo Clad™ (FSC®-Certified Pine)

Architect: Studio.e Architecture
Builder: G. Christianson Construction
CPHC: Jan Fillinger and Win Swafford

Fixed Tilt & Turn Panel Door

This award-winning Passive House meets a full suite of ambitious green building standards, achieving PHIUS+ 2015, PHIUS+ Source Zero, Earth Advantage Platinum, and Department of Energy Zero Energy Ready Home certifications.

Silver Medal Winner, 2017 PHIUS Passive Building Awards

Featured in Dwell Magazine and Custom Builder Magazine

Materials/Finishes: uPVC frames in standard White inside and out. Titanium finish on handle hardware.

Photographer: David Paul Bayles

PROJECT NO. 34

Cedar House

Olympia, WA
Zola ThermoPlus Clad™
FSC®-Certified Pine

Architect and Builder: Artisans Group

Fixed Tilt & Turn LiftSlide Modern Door

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 9007 (Grey Aluminum) outside and stained Clear Semimatte inside. Aluminum finish on handle hardware.

PROJECT NO. 35

Accord Passive House

Accord, NY
Zola ClassicPlus Clad™
FSC®-Certified Pine

Fixed | Tilt & Turn | Glass Door | Facade Systems

Architect: North River Architecture and Planning
Builder: Reynolds Design Associates

FEATURED

In addition to meeting the rigorous standards of PHIUS+ certification, Accord Passive House achieved Net Zero operation, thanks to a 9 kW rooftop photovoltaic array. A large glass wall made of ClassicPlus Clad™ units both establishes a beautiful inside/outside connection and provides the home's central architectural gesture.

Materials/Finishes: Aluminum-clad finger-jointed pine frames, powder-coated RAL 7022 (Umbra Grey) outside and stained Zola Naked inside. Stainless Steel finish on handle hardware.

Honorable Mention, 2018
PHIUS Passive Building Awards

Longlist Selection, 2018
International Dezeen Awards

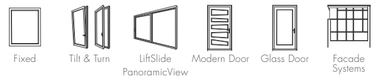
Featured in Chronogram and gb&d Magazine

PROJECT NO. 36

Amethyst Passive House

Steamboat Springs, CO

Zola ZNC™



Materials/Finishes: Aluminum-clad sapele frames, powder-coated AC1-11 outside and stained Zola Naked inside. Stainless Steel finish on handle hardware.

The family at Amethyst spends a lot of time indoors during Steamboat Spring's mountain winters, so their home needed to create an indoor environment that could be fun and joyful. To achieve this, the home incorporates lots of glass—from floor to ceiling and wall to wall—connecting inhabitants with outdoor views and light.

A giant LiftSlide unit, stretching 48 linear feet across the home's facade, features elegant thin frames that maximize this connection. A curtain wall in the master bedroom opens views to an adjacent knoll. The large ZNC™ windows' triple glazing and extra insulation make Passive House performance possible for the generously-glazed home. The energy of just two or three hair dryers can heat the 4,500 square foot home, even on a frigid, minus 30 degree night. This physical warmth of the home is accentuated by the visual warmth of the windows' interior wood frames, showing how Zola's clad wood windows can help make modern design cozy.

Zola's clad wood CurtainWall with integrated LiftSlide and CornerGlass™ opens up the views in this master bedroom. Sapele wood gives tactile warmth to the modern space and contrasts with the white walls.

This Zola LiftSlide spans 48', including a post-less corner. The 10' height opens the view to Emerald Mountain.

PROJECT NO. 37

Axboe Residence

Park City, UT

Zola Thermo Alu75™

Architect and Builder: Park City Design + Build


Fixed


Tilt & Turn


Tilt


LiftSlide


Glass Door


Pivot Door

Photographer: Kerri Fukui

Danish modern design showcases spectacular views of the Park City area in this recent project. The interior designer/homeowner and her family worked closely with Park City Design + Build to create what she describes as a "study in transparent, indoor/outdoor mountain living." Large LiftSlides, a pivot door, glass walls and other units, all in Zola's Thermo Alu75™ line, frame views and give easy access to the outdoors, while complementing the sleek but warm palette and design.

Materials/Finishes: Aluminum frames, powder-coated RAL 7021 (Black Grey) inside and out. Stainless Steel finish on handle hardware.

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