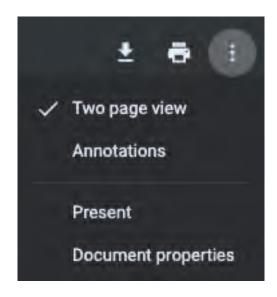
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RESIDENTIAL FENESTRATION COVERAGE, FROM SOURCE TO SALE // WINDOWANDDOOR.COM // JULY/AUGUST 2025

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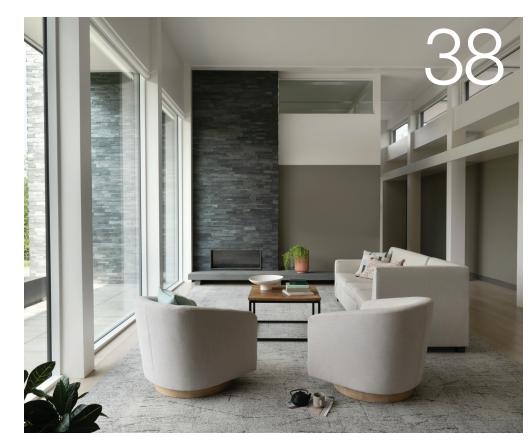
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Residential fenestration coverage, from source to sale // windowanddoor.com // Vol. 33, No. 4 // July/August 2025



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ON THE COVER: Machinery manufacturers increasingly take on an advisory role with customers as they seek to understand their processes and pain points to recommend the best machinery and automation solutions. Photo courtesy of GED Integrated Solutions.



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Grand Views

Windows, doors and design are evident even in the great outdoors

I'm writing this newly returned from an incredible hiking vacation to Grand Teton National Park in Wyoming. The beauty of that area of the country is nearly indescribable. Craggy granite mountains dramatically rise from the landscape, snowmelt and glacier-fed waterfalls roar down the mountainsides, wildflowers color the landscape and the sky truly is a deeper shade of blue compared to the lower elevation where I live.

Despite being truly disconnected (no cellphone reception!) and spending most nights in a tent, windows, doors and design shined in the Jackson Hole area.

Two things struck me during a visit to the Laurance S. Rockefeller Preserve. First, the stunning photography and displays about the park's history, flora and fauna. Second, the design of the building itself—especially the tilt-turn windows. This led me to ask the ranger on duty about the building's design. I suspected passive house principles, not only from the tilt-turn windows but also from the building's orientation, overhangs, natural ventilation and cool, open comfort despite temperatures in the high 80s. It turns out the building is certified Platinum under the U.S. Green Building Council's LEED program—the first building within the U.S. National Park system to receive certification.

On a "recovery day" after a three-day, two-night backpack hike, I visited the National Museum of Wildlife Art, which included a Wildlife Photographer of the Year exhibit. Toronto-based photographer Patricia Homonylo won the 2024 Bird Photographer of the Year award for her image "When Worlds Collide," depicting the aftermath of bird-window collisions. The striking photo includes over 4,000 dead birds from window collisions arranged in concentric circles. Read this issue's Decoded column on p. 14, which discusses residential solutions for bird-friendly glass.

A quick visit to the Jackson Lodge was perhaps the epitome of how large glazing can bring the outdoors in. As you walk up the staircase you're met with floor-to-ceiling windows overlooking Jackson Lake and the Teton Range. I can think of few areas more suited to large glazing to bring the outdoors in.

I'd love to know: What design and fenestration finds have appeared on your summer travels? ■



LAURIE COWIN
EDITOR, WINDOW+DOOR

WINDOW+DOOR

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Marvin Opens New Manufacturing Facility

Marvin opened its newest manufacturing facility in Kansas City, Kansas. The 400,000-square-foot facility will be a hub for the manufacturing, fabrication and assembly of the company's fiberglass window and door solutions. Since beginning construction on the facility last spring, Marvin has hired 70 full-time team members in Kansas City, with hiring to continue in the months ahead. Marvin anticipates a 600-person workforce in Kansas City by the close of 2028.

Woodgrain to Close Oregon Facility

A Woodgrain facility in Pilot Rock, Oregon, will close Sept. 1 and 62 of its employees will be laid off. Woodgrain acquired the Northeast Oregon sawmill and another in La Grande seven years ago from wood manufacturer Boise Cascade. Woodgrain filed a WARN notice with the Oregon Rapid Response Coordinator on July 1, informing it that the company "will permanently close its Pilot Rock sawmill."

Cascadia Windows & Doors and LuxWall Partner on Window System

Cascadia Windows & Doors and LuxWall announced a product partnership through which the companies will collaborate to bring an ultra-high-performance window system to market. By integrating LuxWall's Enthermal Plus transparent insulation into Cascadia's commercial-grade Universal Series fiberglass window frame, the companies are delivering a window product achieving an R-11+ total window insulating value.

In addition to combining the Universal Series with Enthermal Plus VIG as a complete window system, Cascadia will also offer glass-only retrofits or secondary window system retrofits, in which LuxWall's Enthermal is installed directly into existing window frames.

profine Group Opens Kömmerling Canada

profine Group is expanding its global reach in the supply of next-generation vinyl window and door systems with the opening of Kömmerling Canada, following the acquisition of a division of Fentro Services, based in Morden, Manitoba. Operating under the Kömmerling brand, profine Group is a global vinyl and hybrid window and door systems company, supplying products to over 100 countries through 42 sites. The opening of Kömmerling Canada complements its already established Kömmerling U.S. business, based in Huntsville, Alabama.

Companies Unite to Create Manifest Collective

Therma-Tru doors, Fiberon cladding and decking, Larson storm doors and retractable screens, Fypon decorative trim, and Solar Innovations glass structures are uniting their combined industry knowledge and manufacturing expertise under a new collective of brands. The Manifest Collective presents customers and partners with seamless integration, a single contact, and an expanded range of products

and building solutions. Its mission is to deliver innovative, durable and cost-effective solutions.

RiteScreen Welcomes Interstate Window & Door as Licensee

Interstate Window & Door became the newest licensed manufacturer of FlexScreen, according to RiteScreen. This partnership enables Interstate to integrate FlexScreen's technology into its window systems. Based in Pittston, Pennsylvania, Interstate has spent over 40 years developing window and door solutions for residential and commercial markets.

Kwikset Halo Locks Now Integrated with DoorBird App

Kwikset's Halo Wi-Fi enabled smart locks are now integrated into the DoorBird app, bringing together access control and live video communication in one experience. Homeowners can now unlock the Kwikset Halo lock directly within the DoorBird app during a video call with a visitor. This integration aims to enhance both convenience and security while maintaining user privacy.

Elevate Windows & Doors Adds On-Site Glass Tempering

Elevate Windows & Doors implemented on-site thermal glass tempering at its Texas manufacturing facility. Elevate also holds American Architectural Manufacturers Association window certification in glass tempering. By implementing on-site tempering, Elevate aims to streamline its process-



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es, reducing lead time and logistical complexities.

Thompson Creek Window's Employee Event Recognizes Nonprofits

Thompson Creek Window Company hosted its annual employee appreciation event, Fish-A-Palooza, on the Chesapeake Bay, bringing together employees, partners and friends for a day of camaraderie and friendly competition. To mark its 45th anniversary, the company expanded the event's impact by donating to two nonprofit organizations with strong personal connections to Thompson Creek employees.

The 2025 honorees, HOPE: Animal-Assisted Crisis Response and The Jacob Sloan Foundation, were selected for their meaningful community impact and the personal stories shared by the employees who nominated them. Each organization received a \$5,000 contribution.

Miter Foundation Donates to New Ronald McDonald House

_

Miter Foundation, the charitable arm of Miter Brands, announced a \$200,000 donation commitment to the new Ronald McDonald House in Tampa, Florida. The donation will take place over the course of five years, with a gifting of \$40,000 annually.

The 10,100-square-foot Ronald Mc-Donald House is located on the fourth floor of St. Joseph's Women's Hospital in Tampa, less than 100 steps away from the neonatal intensive care unit. Featuring 11 bedrooms with private bathrooms, full kitchen and dining area, study area for remote work, parent's



lounge, laundry center, playroom, and fitness and well-being center, the house is designed to accommodate patients and their families for a few days, weeks or months.

People



Woodgrain's board of directors elected Todd Dame as its new CEO, effective September 2025. After 16 years of service as CEO, Kelly Dame will

begin transitioning leadership responsibility to Todd Dame. Todd brings over 18 years of experience in the door, millwork and building products industry, most recently as president of the Woodgrain Distribution Division. Kelly will remain actively involved as chairman of the board and trusted advisor.



Birdview Skylights appointed Sara Frank as president. Frank brings over 20 years of experience in residential and commercial skylights

and opening glass walls. She most recently worked with NanaWall as the education vertical sales manager.

As president, Frank will oversee all aspects of the company's operations, including strategic planning, product development and customer experience. She will also focus on strengthening relationships with contractors, architects and homeowners.



Fox

ProVia promoted John Fox to vice president of finance. Fox will assume the responsibilities of Larry Troyer, who served as vice president

of finance and administration for the past 30 years and has recently retired. Fox has worked at ProVia since 2022, when he started as a financial analyst. In January 2023, he was promoted to director of finance and in January 2024, to executive director of finance.



Functional Fenestration Inc. promoted Amber Boulden to sales manager. This promotion adds

increased responsibilities for managing the FFI outside sales team and marketing initiatives. Boulden began her FFI career in 2013, serving as an inside sales representative. In 2017, she was promoted to inside sales manager.



Massara

Josh Massara joined **Winco Window** Company as an architectural sales representative, covering Georgia, Mississippi

and Alabama. With a background in sales and technical details, Massara is focused on offering architects reliable and tailored window solutions that fit their project needs.





Waddington

Anthony Innovations expanded its U.S. sales team. Mateus Tuon will now manage the Eastern region and Levi Waddington will service the western U.S., Canada and Mexico.

Tuon brings a background in technical consultative sales and engineering, having previously specialized

in industries from aerospace to plastic extrusion systems. Waddington brings over a decade of sales leadership in the building materials and hardware sectors across Australia and New Zealand.



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Innovate with Installation-Ready Products

Why installation efficiency matters and how it can help ease the labor crunch

BY JESS MATISZ

The labor shortage isn't showing signs of letting up, so we as an industry must keep searching for ways to do more with less. The Associated Builders and Contractors estimates the construction industry will need more than half a million new workers this year—on top of normal hiring. That kind of gap doesn't just slow down schedules; it changes how builders, contractors and remodelers think about everything from project scope to product choice.

The question becomes: What can we do about it? The answers aren't just about finding more labor. They're also about choosing smarter materials that save time without cutting corners. That's where installer-friendly window solutions come in. Let's talk about what that really means.

Less time on-site

Installers navigate jobsite variables from unpredictable framing to complex integration with building envelopes. As a result, there's a growing focus on in-



Full-perimeter, fusion-welded nailing fins sealed at every corner—like those used in the Alpine 70 Series new construction window—are designed to deliver fast, reliable integration with flashing systems and cladding types.

stallation efficiency and the role product design can play in saving time on the jobsite.

Fast framing

For starters, in new construction where framing is often fast-paced, windows with fully welded, full-perimeter nailing fins can help maintain square frame geometry during installation. These rigid fin assemblies are engineered to align more consistently with WRB layers and simplify integration with flashing materials like tape or preformed sill pans. While rough openings still need to be prepared properly—level, plumb and square these designs help reduce frame distortion and can minimize excessive shimming where conditions allow, and in properly prepared openings.

Whether the cladding system is stucco, vinyl siding or wood lap, proper frame depth and fin geometry allow for efficient installation and secure water management without requiring modification. This can eliminate unnecessary on-site adaptation and help crews maintain their speed and consistency.

Level, seal, done

For renovation projects, when you're looking at a full-frame window replacement system, you want precision in terms of factory-mitered trim extensions and pre-aligned accessory channels that will integrate seamlessly with the frame. That's where you get a snug, reliable fit that locks in tight without having to do field-fab exterior stops, chase warped aluminum coil, or wrestle with off-angle wood jambs.

You get consistent alignment without compromising aesthetics because the frame geometry holds stable, even when the rough opening doesn't. Of course, installers still need to correctly shim and align to ensure long-term performance. A good system will adapt to uneven sheathing or slightly bowed studs without compromising the sight lines. In most cases, you can drop it in, shim it to level, hit your fasteners, then seal and cap. You're not fighting the product, so gaps and alignment drift become much less of a concern.

Stay square

Meanwhile, windows of all styles with fusion-welded corners will give you a single, integrated frame structure that better resists twisting and deflection during installation. Fusion-welded frames retain their shape under static and dynamic loads, helping reduce the risk of frame distortion during installation, particularly in openings that may require light adjustment to achieve proper alignment.

Once more, when frame geometry is consistently square, it helps ensure alignment of mullions, sash tracks and exterior trim, which results in a smoother install process with fewer adjustments needed to achieve level, plumb and square.

No gaps or guesswork

Multiple layers of weatherstripping can also be a performance feature that saves time. It creates multiple compression points between the sash and frame—additional contact points that help maintain consistent operating force over time by minimizing air infiltration and wear on primary seals.

Your installers, meanwhile, can benefit from window systems designed to minimize reliance on foam fillers, sealant backers and manual sealing at critical points. This helps to streamline the install process and reduce time on-site.

The craft isn't gone; it's just changing

You hear it a lot these days: "We're losing the craft." In some ways, yes, we are. The old model—a veteran installer mentoring a younger one over years—is harder to sustain with high turnover and tight project timelines. But the answer

isn't to mourn the past. It's to build products that protect what matters about the craft: care, precision and pride in a job well done.

We hear from a lot of remodeler dealers who want product lines that make things more straightforward. This is especially true for newer crews. The more predictable the installation process, the easier it is to stay efficient and take pride in the job.

The labor shortage isn't going to be solved overnight. But we can make smarter choices that remove friction, boost efficiency and help skilled professionals do more with the time and resources they have.



Jess Matisz is vice president of marketing at Associated Materials, where she leads multi-

brand strategies across complex business models.





Single-family and low-rise multifamily dwellings can pose a greater threat to birds than high-rise buildings, as most collisions occur within 50 feet of the ground.

Clear Solutions

Bird-friendly glass protects wildlife and benefits residential business

Many homeowners have a story to share about a bird hitting their windows. Up to 988 million bird fatalities each year in the U.S. can be attributed to window collisions. Most people are aware of commercial building owners' efforts to minimize disruption to bird migration. What they may not know is their single-family houses and low-rise multifamily dwellings can have a greater negative impact on birds than high-rise buildings. Most collisions occur within 50 feet of the ground, where birds are most active within their habitat.

Homeowners increasingly are interested in products to preserve their outdoor views, while protecting the wildlife they enjoy. By offering bird-friendly glass, window manufacturers not only enhance safety for birds but also add value for homeowners. As the trusted experts, you can educate customers about effective bird-friendly glazing

options and offer products that benefit the environment and the homeowner, as well as your business.

Why do birds collide with glass?

Glass is essentially invisible to birds, which creates three main hazards:

- 1. Reflection. Homes located near trees, parks and water can inadvertently create dangerous flying conditions for birds. Birds mistake the reflection of trees, sky or other vegetation for actual habitat. They also can mistake their own reflection as a rival.
- **2. Transparency.** Birds try to fly through clear glass to reach what they see as the clear sky on the other side or what they perceive as a safe landing spot, such as an indoor plant.
- **3. Black hole effect.** Birds confidently fly into small openings between leaves and branches. Dark glass can

appear as a safe passage or shelter, leading to fatal impacts.

Where are the market leaders?

Regulations are being enacted at local, state and federal levels to require bird-friendly designs. Some cities—such as New York, Toronto and San Francis-co—already have established guidelines. Manufacturers who are early adopters of compliant, bird-friendly choices will gain an advantage in the market.

What are the best practices in bird glass design?

Sticking randomly spaced bird shapes onto an expansive window or door blocks the view and is neither attractive nor useful. Residential window manufacturers have a choice of several, readily available, effective glass options to help homeowners mitigate bird collisions. Birds need visible cues to recognize glass as a barrier.

Spacing. Research suggests markings should follow the 2-by-4-inch rule. Horizontal lines are spaced 2 inches apart and vertical lines are 4 inches apart. For areas with smaller birds, such as hummingbirds, spacing should be even tighter, such as 2 by 2 inches.

Markers. Markers should be at least $\frac{1}{8}$ inch in size and have high visual contrast, clearly standing out against the glass and the reflected images.

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Decoded



For more information, download NGA's Design Guide—Best Practices for Bird-Friendly Glazing Design, developed by volunteers.

Surface. Applying the markers to the outside surface of the glass (surface 1) has proven to be the most effective in deterring bird collisions under the widest lighting and viewing conditions.

What glass technologies are available?

Following the visual spacing guidelines, glass fabricators use different techniques to mark patterns birds can see without compromising the aesthetics of the window.

Etched glass. Alters the glass surface to create a light, translucent, satin appearance. It retains the light transmittance with high resistance to wear, scratching and staining.

Geramic enamel. A permanent, screen-printed coating that is highly durable and resistant to outdoor elements.

Ceramic frit glass. Uses screen printing or digital printing methods to apply permanent coatings to any surface of the glass. These coatings have high durability with resistance to ultraviolet and weather conditions.

Decals and films. Available for existing windows and applied by a professional, these can be effective, but will require maintenance by the homeowner.

Glass laminates. Highly durable glazing systems that consist of multiple glass layers bonded together with an interlayer. Fabricators can incorporate visual markers within the interlayer or on the glass surface to deter birds.

Silicone coatings. Spray-applied using patterned stencils to the surface of the glass.

UV coatings. Appear clear to humans and can reduce the risk of collisions for birds that can see ultraviolet.

What other components can add value?

Beyond effective bird-friendly glass, window manufacturers also can expand their product portfolio with such value-added options as:

- External grilles, louvers or fine mesh screens to cover the exterior glass, which will minimize reflections.
 Depending on the design, this presents both a visual and physical barrier for birds.
- Overhangs and awnings also reduce reflections from above and provide shading to enhance energy-efficient home designs.

Four bottom line benefits

Investing in bird-friendly glass isn't just about meeting regulations; it's a business opportunity.

Market differentiation.

Homeowners increasingly care about products that protect wildlife, nature and their outdoor views. Offering birdsafe windows positions your brand as an environmentally responsible leader.

Regulatory compliance. Staying ahead of evolving building codes demonstrates your expertise and industry leadership, while avoiding costly redesigns in the future.

Increased demand. As more cities adopt bird-friendly ordinances, builders and homeowners may actively seek compliant window solutions.

Sustainability certification. LEED and other green building certifications reward bird-friendly designs, making your products attractive to developers.

Bird collisions with windows are a widespread issue for homeowners. Residential window manufacturers have an opportunity to offer immediate solutions that prevent bird fatalities, improve homeowners' comfort and enjoyment, and benefit your business.

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Al drafting programs are not a substitute for human review and comprehension.

Navigating the Contract Landscape with Al

Unlocking efficiency for the fenestration industry or opening Pandora's box?

BY SUSAN MACKAY

Artificial intelligence is a hot topic these days. There are several pros and cons of using AI for contract drafting, negotiations and post-execution review. Types of contracts used in the fenestration industry include agreements specific to material purchase, manufacture or sale of products (e.g., with vendors, manufacturers, distributors, builders, installers, service technicians) as well as general business-related agreements (e.g., leases, employment, insurance, mergers/acquisitions).

Benefits and limitations

The most obvious benefit to using AI in a contractual setting is efficiency. Drafting a contract from the ground up requires time and effort. The ability to have AI identify, review and comprehend data at a speed that is not humanly possible and then put that

information into a working document is invaluable. To make good use of AI, however, the user must understand the parameters AI is using to identify the information it is using to create the contract. Numerous companies will sell you AI programs that draft contracts and review contracts you receive from others. While the programs differ, the basic concept is to enter some key information into the program, which AI will then use to generate a draft. That may be efficient, but it is only step one.

Human review needed

AI drafting programs are not a substitute for human review and comprehension. Nor are they a substitute for an attorney, who should review an AI-generated contract for accuracy, completeness and compliance with the law. An AI-generated contract should be carefully analyzed by both. A critical eye must be used to make sure all essential provisions are present to adequately protect your company (which means knowing what could be missing), ensure it encompasses the correct terms, and identify any errors in the provisions that are included.

It is also important to confirm that the contract contains all terms needed for the particular jurisdiction and accurately represents any industry-specific standards or regulations included. Finally, contract terms and industries evolve

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Letter of the Law

over time so if you use an AI program, you will want to ensure it is regularly updated to include current trends.

AI can also be used to review contracts sent from other parties. It will analyze contracts and identify important terms and potential risks. Some AI programs will also suggest revisions. Again, though, AI should not be used as a substitute for review and analysis by you and your legal counsel. AI programs might not catch creatively drafted language. AI programs will flag what it identifies as potential risks, but AI can miss issues that are complex or nuanced, or it might not flag issues in provisions that use a lot of industry-specific terms or standards. Conversely, AI can flag benign provisions as potential risks, so it is important to understand the terms used to determine whether the flagged issue is an actual risk.

Moreover, whether you are using AI to draft or review a contract, it is

To make good use of AI, the user must understand the parameters AI is using to identify the information it is using to create the contract.

important to read and understand what is in the contract you are sending to the other party or you might find yourself in an uncomfortable situation of being unable to explain why an inclusion of a certain word, phrase or provision is necessary for your company.

Post-execution review

Once you have an executed contract, AI can be useful in extracting information

such as deadlines and termination dates you can use to set reminders. It can also be used to quickly identify provisions by keyword without having to scroll the entire document. This can also be done to some extent using the "find" or "search" function in non-AI programs.

The takeaway is that using AI programs to draft or review contracts may provide some upfront efficiencies, but the work does not end there. It is vital that all contracts be carefully reviewed and understood by the company and its legal counsel to ensure accuracy and completeness.



Susan MacKay is an attorney with the Gary Law Group, a law firm based in Portland, Oregon,

that focuses on legal issues facing manufacturers of windows and doors. She can be reached at 503/620-6615 or susan@prgarylaw.com.



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Company Name: Daubert Chemical Company

Booth Number: 9088



- Specializes in polyurethane adhesives, focusing on their application in window and door wrapping
- Knowledge and experience with various primer options for wrapping extruded profiles, including nonmethylene chloride options that allow for adjustments in process without extensive equipment changes
- Providing hands-on technical support, conducting process audits and custom formulating products to meet specific lamination challenges

Ask me about...

Daubert will be highlighting its Daubond reactive hot melt polyurethane (PUR) adhesives used to wrap window, door and other fenestration

components. Our core PUR adhesives feature low processing temperatures, which are beneficial not only for the adhesive but also employee safety, substrate integrity and equipment longevity. Daubond PUR adhesives can be used with or without the use of a primer if other pre-treatment options are preferred. Daubert will also be showcasing its various primers used for wrapping extruded profiles, including non-methylene chloride options that do not require equipment modification or process changes.

Make sure to see...

Attendees will be able to see various wrapped components manufactured by industry leaders displayed in our booth. Samples will include profiles wrapped using

traditional primers, as well as profiles wrapped without the use of solvent primers, instead featuring plasma pretreatment.

What you might not know our company does

Daubert truly values you, the customer, as a partner and offers hands-on technical support, process audits and over 80 years' combined industry experience amongst our sales team. Daubert's Daubond product line includes the full portfolio of companion products for cleaning equipment, ensuring top quality lamination.

Daubert Chemical Company is IATF:16949 certified for the automotive industry, and Daubond adhesives are manufactured and held to the exact same, strict quality

requirements. This ensures the customer always receives the best quality product.
Daubert features a complete R&D lab and testing center and welcomes the challenge to custom formulate products for your toughest lamination requirements, held to the toughest industry standards.

Make an appointment?

I can be reached at jsavage@ daubert.com, or through our company website daubertchemical.com. You can also call Daubert at 800/688-0459 and ask to be connected. ■





MEET THE EXPERT: MARK IMBROCK

Years in Industry: 32

Company Name: EDTM Inc.

Booth Number: 27084

My 3 top areas of expertise

- Sales strategy that transforms salespeople into sales technicians, enabling them to build trust with clients to close more sales
- Custom sales kit development that caters to different decision-maker types
- Leadership in manufacturing instruments that measure the performance of windows

Ask me about...

I will highlight our window sales kits used for selling windows in the home. As a leader in manufacturing instruments for measuring the performance of windows, EDTM naturally compliments those instruments with the accessories and selling tools needed to conduct a con-

vincing sales presentation, bringing the performance of your replacement windows

Our proven approach allows salesmen to convert into "sales technicians" and test a customer's existing windows, showing them how poorly they perform measured against the replacement windows. While this paradigm shift often goes unnoticed, we repeatedly hear how the barrier to a sale disappears once the customer views the salesman as a sales technician—everyone trusts a technician more than a salesperson.

Make sure to see...

We will be displaying our newly designed WP4501 Window Energy Profiler, which allows a sales technician to measure the performance of a customer's existing home windows. It measures the ultraviolet and visible light transmission values and estimates the SHGC value of windows. We will highlight the new touchscreen display features and extra selling tools included in the new WP4501 design, as well as all the supporting tools, including heat lamps, carry cases, BTU meters, window frame components, insulating glass pack options and more.

We will also have our popular Glass-Chek meters on display, which allow you to measure glass thickness, identify the low-emissivity surface of the window and the type of low-e used, and identifies and measures laminated glass.

What you might not know our company does

We dig into the philosophy

of building an effective sales kit, the decision-making tendencies of analytical and sensory decision makers, how our products effectively sell to each audience, and how a well-balanced kit prepares you to sell to both types at the same time.

Make an appointment?

Customers can reach us at sales@edtm.com or call 419/861-1030.

Anything else to add?

EDTM will offer trade show discounts on any orders that we write at GlassBuild. ■





MEET THE EXPERT: STEFAN SCHIELE

Years in Industry: 35+

Company Name: Nucoat North America LLC

Booth Number: 19041



- Coating application technology with a focus on vacuum coating systems
- Designing and implementing automated finishing solutions to improve efficiency and reduce labor
- Supporting integration of scalable application systems for window and door manufacturing

Ask me about...

At GlassBuild, Nucoat is showcasing the future of automated paint finishing with a spotlight on vacuum coating technology. Nucoat, in partnership with Schiele Maschinenbau GmbH, will demonstrate how vacuum coating solves one of the industry's biggest challenges: labor. This fully enclosed system delivers precise,

consistent coverage in a single pass with zero overspray and minimal waste. It's scalable, clean and built for both small and high-volume production.

Make sure to see...

We'll have a portable vacuum coater in our booth running live demonstrations so visitors can see the machine in a small-scale setup, giving them a firsthand look at how effortless, consistent and efficient this technology is. It's an ideal solution for anyone struggling with labor, waste or application quality in their finishing process.

What you might not know our company does

What sets Nucoat apart in the industry is our true one-component coating system that covers in a single application—no

catalyst, no mixing, no guesswork. We're proud to be one of the only coating manufacturers offering a product independently verified by accredited labs to meet the AAMA 615-20 performance standard for exterior applications on PVC and vinyl. Our products have proven performance in the field for over 15 years and are trusted by window and door manufacturers, extruders and third-party applicators. We support operations of all sizes, from startups to highthroughput lines. Our laborsaving application system enables anyone—not just skilled painters—to achieve professional results.

Make an appointment?

We encourage anyone exploring finishing or automation solutions to

reach out in advance by emailing info@nucoat.com. We're happy to tailor demos or discussions around your specific needs.

Anything else to add?

Finishing is often seen as a bottleneck in production. Nucoat is redefining that by combining innovative coatings with practical automation, helping manufacturers increase speed, consistency and output—without sacrificing quality. Stop by our booth to see how we're helping shape the future of finishing.





MEET THE EXPERT: DONALD MCNIER

Years in Industry: 21

Company Name: ODL Inc.

Booth Number: 18021

My 3 top areas of expertise

- Strategic insight into regulatory shifts and market forces shaping fenestration
- Customer-focused approach to positioning solutions across residential and commercial use
- Collaborative leadership style focused on partnership, feedback, and long-term value creation

Ask me about...

We're excited to showcase the versatility and innovation of ODL's Blinds + Glass product line, which elevates what windows and doors can do for residential and commercial spaces. Blinds + Glass is an integrated solution that offers a clean, modern aesthetic while addressing common pain points such as enhancing safety, privacy and light control, all while

eliminating the maintenance that comes with traditional blinds. GlassBuild is about exploring what's next for fenestration, and Blinds + Glass is part of that future, offering end users a safer, low-maintenance solution and giving industry partners a differentiated, value-added product.

Make sure to see...

Our booth at GlassBuild will offer an interactive look at how Blinds + Glass can transform both residential and commercial spaces, from oversized sliding doors and storefront window walls to flush-glazed entry doors, casement and tilt/turn windows, and traditional double-hung styles. Our Blinds + Glass XL centerpiece will demonstrate how this solution scales beautifully

for large openings, delivering privacy and light control even in high-profile commercial settings. We'll also showcase how the technology integrates seamlessly into everyday residential designs, meeting growing homeowner demand for low-maintenance, high-performance solutions.

What you might not know our company does

Blinds + Glass represents just one facet of ODL's broader commitment to advancing the door and door glass category. As a manufacturer with expertise in decorative and privacy door glass and a longstanding leader in enclosed blinds, we continue to evolve alongside the fenestration and millwork industries. We see strong momentum in new market segments and are expanding our distribution

footprint to meet growing demand across residential and commercial channels.

Make an appointment?

Contact me at donald. mcnier@odl.com.

Anything else to add?

The past year has brought real challenges, and it's our job to help customers and partners navigate that uncertainty. That means not just reacting to change, but leading with thoughtful, sustainable strategies—and staying focused on long-term opportunity.





MEET THE EXPERT: MICHAEL BRAUDAWAY

Years in Industry: 40

Company Name: Vinyl Lite Technology Inc.

Booth Number: 9078



- Extensive experience in manufacturing and expertise in streamlining production processes
- Experience developing specialized fabrication solutions and innovative tools to enhance manufacturing efficiency
- Strong understanding of business development, catering to the specific needs of manufacturers

Ask me about...

After realizing there was a lack of practical fabrication solutions available to manufacturers—they were forced to either purchase premade kits or devise their own methods using basic tools like chop saws and routers—I developed the Magnum and

Derringer Punch systems.
The Magnum is a semiautomated system designed to integrate seamlessly with manufacturers' software, ideal for businesses with high simulated divided lites, or SDLs, production volumes.
The Derringer, on the other hand, is a manual version that operates without software integration, making it perfect for companies with lower SDL volumes or those just starting their SDL programs.

Our SDL program and punch systems allow manufacturers to efficiently manage all their SDL requirements in-house. Say goodbye to delays caused by waiting on kit orders, replacement parts or shipping. No more sorting through packages or rushing

to apply SDL kits upon arrival. With our system, you can produce SDLs daily, aligned with your production schedule

Make sure to see...

At our booth, we will showcase our machines and demonstrate how an SDL department could seamlessly integrate into a customer's production floor. Additionally, we will exhibit a wide range of SDL profiles and colors.

What you might not know our company does

We manufacture window reinforcements using a specially developed composite compound. Additionally, we offer a window protection device called Fin Guard. This clip attaches to the bottom of your windows to safeguard the

nail fin. What sets our product apart is its slip-resistant design, which eliminates the need for screws to keep it in place.

Make an appointment?

Contact me at michael@ vinyllitetech.com.

Anything else to add?

At Vinyl Lite's core, it is a solutions provider. We empower manufacturers with what they need most for SDLs—control. ■







GlassBuild America provides the foundation for smarter business decisions and stronger outcomes. See the latest innovations up close, experience live demos of cutting-edge products and get a firsthand look at what's driving the future of fenestration. With top suppliers, trailblazing ideas and nonstop action on the show floor, this is your opportunity to connect, collaborate and learn alongside a vibrant community of industry peers.

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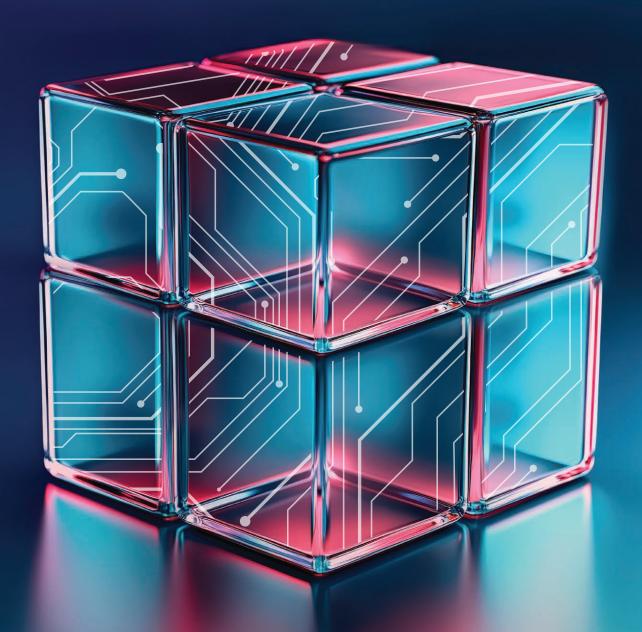


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WHERE TO FIND US 01: Daubert Chemical Company (Booth #9088) 02: EDTM Inc. (Booth #27084) 03: Nucoat North America LLC (Booth #19041) 500.42 04: ODL Inc. (Booth #18021) 05: Vinyl Lite Technology Inc. (Booth #9078) ○■■ア -0HH7



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Beyond the Beltway

How state-level policy is shaping our industry

BY JOHN CROSBY

While national headlines are dominated by the dysfunction and disruption coming out of Washington, D.C., the window, door and skylight industry has remained steadily focused on an often-overlooked arena: state legislatures, regulatory bodies and the development of model codes and standards that drive performance requirements. These are the venues where practical, targeted progress continues despite the noise from the nation's capital.

Our industry has always possessed a "can do" spirit in meeting expectations on air, water, structural, thermal and energy performance. That spirit is engrained in the culture of the industry because it is filled with

Staying plugged into state-level developments isn't optional; it's essential.

craftspeople, technical experts and material suppliers, all of whom enjoy solving problems. Their approach to policymaking has always been to seek a reasonable, pragmatic, scalable solution. They are taking that spirit to every conversation with state government officials across the nation.

State-level policy

From Maine to Colorado, and from Florida to Minnesota, manufacturers are working with state policymakers. Their collaboration spans a wide range of issues vital to our industry and the customers we serve. These include developing and adopting high-performance building codes, ensuring law-mandated requirements are achievable, crafting standards and helping states mitigate homeowner losses from natural disasters, and navigating complex timelines and regulatory processes for phasing out substances like PFAS from products.

These partnerships are not theoretical. In Maine and Minnesota, for

example, manufacturers have been at the table during key discussions about chemical disclosure and elimination.

They have helped regulators in Maine embrace the need for a careful approach with products intrinsic to the health and safety of homes and buildings. We

are hopeful this can become a model for PFAS regulation across the nation.

In Florida, our industry has historically supported the adoption of building codes to protect building owners and occupants against major storm damage. Conversely, we have also helped legislators there avoid risky legislative endorse-

ment of aftermarket products that can void warranties on sliding glass doors.

In Colorado, where its legislature mandated that only high-performance windows, doors and skylights can be sold, manufacturers helped regulatory officials recommend the appropriate model energy codes as the baseline for the industry.

Essential involvement

This work is not always flashy. It doesn't trend on social media or dominate cable news. But it matters—often more than the noisy debates in Washington. The contrast is stark: Washington may provide the sizzle, but it's the thoughtful, varied and often bipartisan work in the states that brings the steak.

As states take more active roles in climate policy, consumer protection, and product safety and performance, the window and door industry must remain proactive and engaged. Our partnerships with state agencies and legislators are not only shaping safer, more resilient homes and buildings—they're defining how innovation and responsibility can coexist. We are not merely reacting to regulatory pressures; we are helping craft practical, science-backed policies that benefit both consumers and manufacturers.

For industry leaders, staying plugged into state-level developments isn't optional; it's essential. The diversity of regulatory priorities and political landscapes across states means there is no one-size-fits-all approach. Our continued engagement ensures that state policies are informed, effective and supportive of environmental and health-related goals, while rooted in the realities of science, technology and markets.

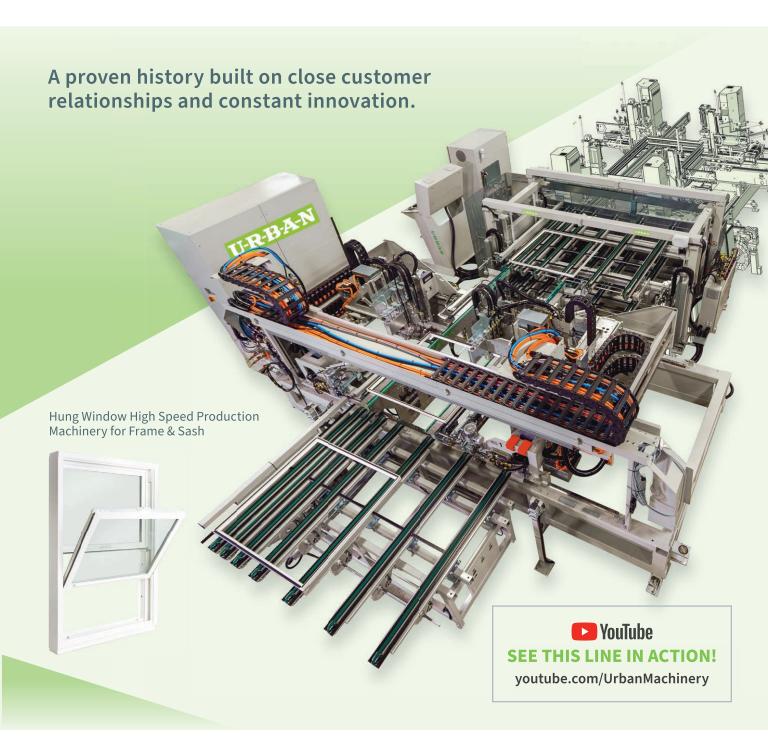
Let's all keep our eyes on the states—because that's where the future is being built. ■



John Crosby is the president and CEO of the Window and Door Manufacturers Association

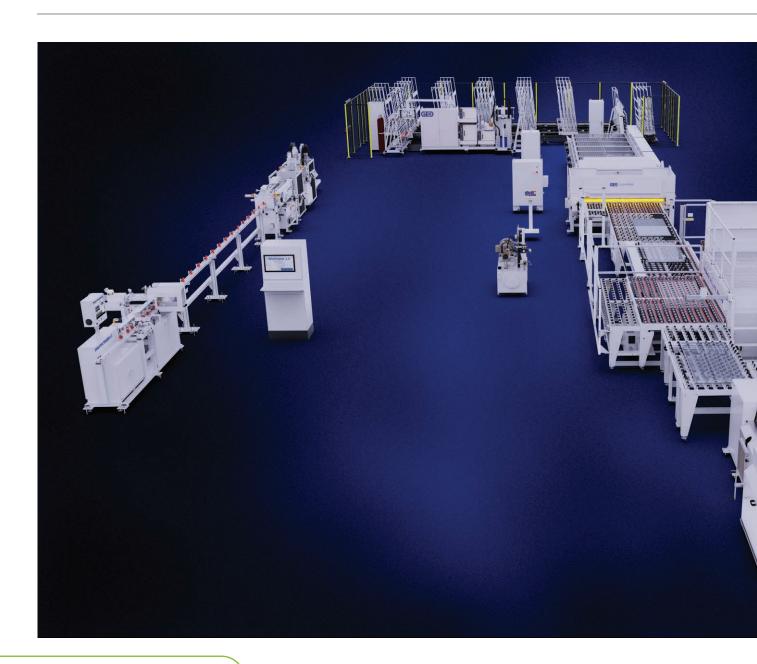
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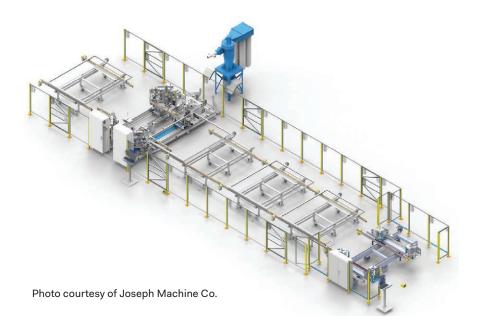


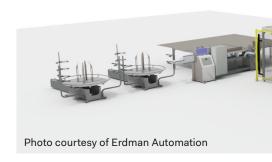
DETERMINING THE APPROPRIATE
MACHINERY AND AUTOMATION
FOR EACH CUSTOMER REQUIRES
THOUGHTFUL CONVERSATION AND
A PERSONALIZED APPROACH

BY LAURIE COWIN

The

right machinery begins with understanding. It's critical to understand where bottlenecks exist, where labor gaps lie, what can be automated and what is best left to skilled labor and manual processes. The machinery manufacturer needs to understand their customer's goals, and the customer needs to understand the capacity of what machinery and automation can do for their operation. That understanding leads to the right solutions.





What customers need ... and don't

Automation can range from simple to complex. The key is determining what the customer needs. GED Integrated Solutions' tagline "Intelligent Automation" means finding the "appropriate mix of man and machine for the application," says Joe Shaheen, vice president of sales, GED. Just because a machine can do myriad things doesn't mean it's what the customer needs. The company aims to understand its customers' pain points, what they want to accomplish, and their labor pool's capabilities and limitations.

Through those conversations, Shaheen says, his team can identify pain points, then suggest improved or even different processes. "The more of a consultative approach we take with our customers and the more they turn to us as a trusted advisor, the better we're going to be in the long run," he says. "We all have different knowledge and experiences. Let's work together, form a partnership and make the whole process better."

There are even times, he says, when automation isn't the right answer. "In some cases, you just need something simple and quick," he says. "Understand what the customer's needs are and fit the right tool for the right application."

Anthony Pigliacampo, CEO, Joseph Machine Co., agrees that understanding customers' true needs is of utmost importance. "We try to understand each customer's specific steps, the volume of those steps and the variations that occur within their product lines," he says. "Then we help them select and design equipment that optimizes for that. What works for manufacturer A might not work for manufacturer B. For example, there are parts of the country where labor is both skilled and costs less than in other parts of the country. Fully automated solutions may work well in some markets, but in other markets the ROI is too high for it to make sense."

Pigliacampo explains Joseph Machine's process. "First and foremost is to understand what product they're producing," he says. The team then understands how the process is currently

done, with what machinery, what is automated versus manual and where bottlenecks exist. "Sometimes, there will be a single part of the production process that's the actual bottleneck," he says. "If we can understand that [part], it can dictate what automation you want to put ahead of it." For example, if a glass line can produce only so much glass, it wouldn't be appropriate to sell a piece of fabrication equipment that can produce double that amount of windows.

Pain points and processes are a huge part of the equation, but so are logistics. "You also have to look at the space they have," says Brian Ludwig, North American sales manager, Erdman Automation, noting some high-speed machinery can be up to 150 feet long. Erdman tours a manufacturer's facility to determine space, staffing, how many shifts they run, pre-processing equipment, storage capacity post-production, the company's growth plans and more.

Sometimes, says Ludwig, the end result is they suggest a customer keep



"I don't think in my lifetime we're going to have a situation where glass and vinyl goes in one end of the plant and windows come out the other end with nobody in the middle."



their current manual processes and invest in catching up on pre-process work and capacity. "We're not going to suggest you buy our machine until we know you can support it from pre-processing, post-processing and maintenance," he says. "It's not just capacity. It's not just sizing. There's a whole-floor consideration. It's about setting up each customer for long-term success in coordination with all the other machines and people they have.

"It's very consultative," he continues. "We work directly with our customers, especially the maintenance teams and plant managers, to understand pain points, align those with what products we have and share how we'd solve it."

Labor

Machinery follows what Pigliacampo calls "a tide of capital equipment." Since machinery is designed to last for quite a while, cycles happen where the machinery wears down and needs to be replaced. Today, he sees legacy equipment from the 1990s and early 2000s that's difficult to support. "As the brains of the machine fail,

manufacturers are unable to offer support, and it forces people to replace those." That aging equipment, he says, creates opportunity in tandem with the labor shortage.

Customers look not only at what they need to replace but also examine where else they can improve processes. "There are certain jobs along the production line that are most problematic for staff," he says. "If we can make those jobs easier and more repeatable with automation, those can get a high ROI." Pigliacampo has also seen companies with two shifts implement higher throughput machines and get the same production rates working only one shift. "That becomes much easier for the customer to staff and justify the cost of automation," he says.

Labor appears to be a long-term problem that requires long-term solutions. "I don't think in my lifetime we're going to have a situation where glass and vinyl goes in one end of the plant and windows come out the other end with nobody in the middle," GED's Shaheen says. "There's going to be labor. There are going to be people. Our

job, our challenge, is to best use the limited labor we have."

Shaheen predicts the labor pool will get tougher and product volume will continue to grow in the U.S. "Because of that volume and our product, there's still the need for selective and correct automation," he says. "The challenge is to implement what we have and help our customers and also look at the next opportunity and areas where there isn't machinery today. We have to get into the mindset of fewer people, fewer touches, fewer contact points and more automation. Not automation for the sake of automation, but identifying the real challenges customers have and taking steps to get there."

Digital power

GED writes its own software, ties it into machines, which then can provide feedback about maintenance intervals or sense an upcoming problem to help with preventative maintenance. Shaheen likens it to a car's check engine light. "It's going to go on and your car doesn't just typically stop and break right there, but if you ignore it for a



Photo courtesy of Erdman Automation

month, you're probably going to be in trouble. We use data feedback from our machines through our software to allow people to better understand preventative maintenance and generate better preventative maintenance procedures."

Automated machinery can also catalog data from each component to allow for continuous tracking of performance parameters, says Pigliacampo. "We can look in detail at the performance of every component in a machine over time," he says. "That allows us to find the weak links in machine designs." Without that detail, he says, there's no real way to determine what is causing an issue. For example, if a saw is drawing more current than what the acceptable band is, it will flag a warning on the machine and preventative maintenance can be performed.

Joseph Machine has integrated digital twin technology into its operations, which can create fully interactive models of its machines before production even begins so the engineering team can simulate, test and optimize designs digitally.

The process began about three years ago; the first step was to redesign control architecture so the system could interact with digital tools. Then, the company built machines with those systems built in. Finally, the past year has involved putting machines into the digital environment and using them effectively. "Our goal is to make this part of our standard design process," Pigliacampo says. "It has a ton of potential, especially for highly automated solutions where the programming, setup and dialing everything in is what takes the most time. If you can do that offline in a virtual environment it can speed up the process."

A stronger industry

Although the supply chain isn't as dire as several years ago, tariffs and economic uncertainty have disrupted it somewhat. "The pandemic was a great dress rehearsal on what happens when supply chains don't work as you think they might," says Pigliacampo. "We spent a lot of time

during that period, and immediately after, updating our architectures so we wouldn't be held hostage by any one component." Since Joseph Machine designs its components in-house, if one component becomes difficult to get, Pigliacampo is confident they can swap it for something equivalent.

Innovations continue in machinery. Erdman is developing a vertical vinyl window line to take the window in, cut the frame, weld it, clean it and glaze it. Ludwig estimates it will produce 1,000 single-hung windows per day and only require people for assembly at the end. The line has six robots and targets a 20- to 24-second cycle time. The company plans to debut a new technology at GlassBuild America in Orlando this fall that will increase speeds in TPS lines.

Efficiency takes many forms. Erdman is tackling it from a different perspective: that of having one machine to process myriad shapes and sizes, including thinlite triples. Ludwig explains customers can program shapes they manufacture into a machine and feed the file with critical dimensions for that shape. Then, one machine will be able to manufacture most of their shapes, lessening a manufacturer's efficiency concerns. "A valid part of this conversation is not only do you need to know cycle times and how many pieces you need per day, but also how much of your product can be done on one line," he says.

Pigliacampo sees the industry not only embracing automation, but also lean manufacturing principles. "It's really making the production of windows and doors more efficient," he says. "There's a humungous opportunity to do more with less. To make windows and doors with less labor, less floor space and improve the quality. The market is getting to the point where they're fully appreciating the benefit of these automated solutions. It makes our customers stronger. Some are really far down the road on leveraging automation to make their production better. They're impressive to see and that's great for American manufacturing." ■



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SECOND CHANCES BUILD A

Stronger Morkford

he second-chance workforce refers to individuals who have a criminal record or who have been incarcerated and are seeking to reintegrate into the workforce. According to the Manufacturing Institute, one in four Americans currently have a criminal record. Without second-chance opportunities, many in this talent pool are excluded from the workforce, leaving them on the sidelines as employers search for candidates who can fill skills gaps.





For more information, watch this episode of Window Cast, the official podcast of Window + Door and the NGA, that features a clip from the second-chance hiring session at BEC Conference 2025.



HOW EMPLOYERS ARE TAPPING INTO THE FAIR-CHANCE TALENT POOL BY RACHEL VITELLO

Second chance hiring in action

At the National Glass Association's Building Envelope Contractors (BEC) Conference in Las Vegas in March, NGA Vice President of Workforce Development Jenni Chase sat down with Marcus Singleton and Courtney Little of ACE Glass to discuss how they've incorporated second-chance hiring at their company.

ACE Glass has employed previously incarcerated individuals for about 20 years and provided insights on the benefits and challenges. Little says that secular organizations and halfway houses in local areas are great resources for making connections within your community. A session attendee added that job fairs can be another resource.

Little and Singleton say that when it comes to challenges with second-chance hires, they are not much different than with any other employee. "It's the simple stuff with almost any new employee. You want to make sure they're trustworthy, they fit your company culture and they fit in with the rest of the team," says Singleton.

When second-chance employees begin work at ACE Glass, Little and Singleton say they start working in the fabrication shop with a mentor to help them learn their way around and then can move up from there over time. Two of their secondchance hires have now been with the company for 20 years and currently hold management positions. One of ACE Glass' most recent second-chance hires is the second female glazier in the company's 40-year history. This employee has taken many classes on NGA's MyGlassClass.com to further her knowledge of the trade and hone her skills.

Little and Singleton add that it's great to know they are giving back to their community in a positive way while helping people get back on their feet. "We're all looking for people and

there's a whole population of folks who would love to get back to work," says Little. "Recidivism is much lower when they have a productive job and can be self-sustaining. They do better when they have a program or person backing them up."

The ACE Glass officials add that second-chance hiring has benefitted the company because one of their core values is community, and this is one major way to give back to their local community and contribute positively to the company's reputation.

More information on the secondchance workforce

According to polling done by the Prison Policy Initiative, 80% of Americans support expanding second-chance hiring practices and 85% of human resource professionals believe that workers with criminal records perform their jobs as well or better than their peers.

The Manufacturing Institute also highlights some benefits of second-chance hiring. By considering second-chance hiring as a key part of a talent strategy, companies can widen their talent pools and decrease turnover. Research has indicated that employees with past convictions stay longer and advance faster than their peers. Despite some assumptions otherwise, studies also show that this group is terminated for cause at a rate no higher than their peers without criminal histories, according to the Manufacturing Institute.

Second-chance hiring can also help companies stay competitive as economic trends point to decreasing labor market participation, higher turnover and a looming talent shortage, as well as access incentives such as the Work Opportunity Tax Credit and Federal Bonding Program, which are resources available to help encourage second-chance hiring.

Inside the "New" Quanex

From manufacturing leader to versatile global supplier, how Quanex is evolving with expanded capabilities, strategic acquisitions and a customerfirst outlook to drive the future of fenestration

BY LAURIE COWIN & TARA LUKASIK

Three years after its rebranding, Quanex is evolving from a manufacturing leader in fenestration to a versatile global supplier by expanding capabilities through strategic acquisitions, enhancing customer focus, investing in R&D for innovative, energyefficient products, and broadening its market reach to drive growth and adapt to industry challenges. Window + Door sat down with Quanex President and CEO George Wilson to discuss the company's reshaped brand identity, market focus, growth strategies and vision for the future of fenestration amid industry challenges.

Window + Door: When we talked two years ago, Quanex had rebranded from Quanex Building Products to Quanex with the goal of building Quanex as a manufacturing company rather than a window and door company. How has rebranding impacted your brand identity with customers?



From left, Craig Gorecki and George Wilson at the Quanex Custom Solutions plant in St. Cloud, Minnesota. Photo courtesy of Quanex.

George Wilson: The rebranding was necessary on multiple fronts. It has been important for us and has significantly shaped our brand identity with our customers, shareholders and the communities that we operate in. Initially, we were perceived as a collection of small independent companies, which didn't truly reflect our unified capabilities as a singular manufacturing leader. The shift to the "One Quanex" approach was essential in communicating the depth of our operational and product design capabilities, showing our customers that we are much more than just components like spacers or screens. That scale is important. We're starting to create systems and do different things. This rebranding has allowed us to highlight our global geographic footprint and capabilities, which in turn, offers potential logistics, cost savings and tariff mitigation for our customers. Providing a product that's manufactured in the country in which it's needed has enormous value for our customers.

By highlighting our extensive range of products and services beyond just window and door solutions, we've made it clear that we are a versatile component supplier to many different industries, thereby enhancing our perceived value in the market.

WD: With your focus on external growth, where else have you grown and where do you plan to continue growing?

GW: I'm excited about the opportunities to continue to expand our extruded solutions segment in both the UK and international markets. Our global footprint is important, and I think you'll see continued expansion in other areas of the world. Additionally, our seals and spacer products have enormous potential. With the acquisition of the Schlegel product line—comprising weather seals, gaskets and various pile seals—we can now integrate these with our Quanex spacer products.

Other key areas include our Bilco

access product lines—focusing on roof and basement access products—which operate in an underserved market that remains ripe for expansion, and we plan to invest significantly in growing this product line. Similarly, since acquiring Quanex Custom Mixing nearly three years ago, I'm optimistic about its growth potential and we will continue to allocate resources to expand this segment. While our focus is on gaskets, spacers, mixing and access, we are not ignoring the hardware business, where we are already a significant player.

WD: How does Quanex ensure it stays attuned to customer needs as you focus on growth?

GW: The core of our business must support future growth; we can't take our eye off it. We've expanded all the customer-facing areas of the organization—increasing the sales team, product management, customer service, engineering and quality—so this wasn't just an acquisition to realize cost synergies; it was about fueling growth, a very different opportunity. My focus has been on enhancing those areas that interact with customers, positioning ourselves more as a growth story rather than just a model of manufacturing excellence.

WD: You previously mentioned significant investment in R&D. What types of products are you focusing on developing?

GW: With the acquisition of Tyman and our increased focus and investment in product management and R&D, we are more efficient in where we're putting our money. My current focus is on products that improve the thermal performance of houses, including new materials, innovations and processes to enhance windows and doors. We're also exploring home security solutions, such as security screens. Another major focus is on

The core of our business must support future growth.

improving water and air tightness to help families from a health, safety, cost and energy efficiency perspective. These areas are the key priorities we're focusing on across product lines.

This industry focus aligns with changing codes and standards in the country, driven by a new generation of consumers who care about environmental sustainability but also seek financial payback. Energy costs will not get as low as we would like, so it's crucial to improve product efficiency, and stricter codes and standards will increasingly shape the industry in a bid to be more efficient. Our products already meet most of these standards, because of our presence in Europe, and we will continue to push the envelope and innovate for future generations.

WD: The industry is in a challenging time right now with tariffs, an uncertain economy and more. What actions are you taking in anticipation?

GW: Quanex is focused on controlling what we can control and being ready to adapt fast. We're creating an operating system that allows us to react quickly to fast changes in demand and simplify complexity for our customers. There's a lot of noise out there—whether it's tariffs, interest rates or negative consumer confidence—but we can't control those external factors. What we can do is react faster than anyone else, and that's been our central focus.

We're now in the midst of restructuring our business, and as part of that effort, we have created three new segments called Quanex Extruded Solutions, Quanex Hardware Solutions and Quanex Custom Solutions. With the help of technology, these manufacturing capability focused segments will enable us to react quickly to challenges. The world is global and interconnected, so responsiveness is key.

WD: Looking ahead, how do you envision the broader fenestration industry evolving in the next few years?

GW: For the fenestration industry, it's going to be interesting because I think that there will continue to be a lot of changes. From a macro perspective, I think we're going to see some shortterm noise around tariffs, interest rates and housing affordability. For the total market, I think you'll continue to see consolidation. It's hard to be a small company; regulation will start to tighten and scale is important, so I think you'll see some of the larger customers get bigger. I also expect challenging labor markets and ongoing supply chain complexity. Another key impact on fenestration is the continued pressure for codes and standards to increase, which will increase the bar for product performance throughout the industry.

Through consolidation, we are a big tier-one supplier. Our product and capability portfolio is broad, with a global footprint, which helps our customers in a challenging world because being a big company adds stability and safety in who you're buying from. The next five to 10 years is going to be a rapidly changing environment for the fenestration industry. What we've tried to do here at Quanex is anticipate that and I'm excited about our company's future.

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01. Elevate Windows & Doors

Elevate Windows & Doors' Impact Series windows are designed to endure severe storms and high winds. Crafted with reinforced materials, these windows are built to resist the force of flying debris and heavy rainfall. The design not only provides protection but also enhances energy efficiency by reducing heat transfer.

469/490-1100 | ELEVATEWINDOWS.NET

02. Reynaers Aluminium North America

Reynaers Aluminium North America's new casement variation of the SlimLine 38 system combines aesthetics with performance. Building on the SlimLine 38 Classic, this design maintains the same frame depth while offering a fresh architectural look. One feature of this new SlimLine 38 variant is the integration of a newly developed outward-opening hardware solution. It is designed to seamlessly accommodate crank-out hardware.

704/588-3200 | REYNAERS.US

03. Larson Manufacturing

Larson Manufacturing's 60 MT Maximum View storm door with heavy-duty aluminum frame offers 5% more glass area than similar models, for optimal natural light and unobstructed views that can be swapped with the included screen for fresh air. The SureLatch magnetic technology offers hands-free, soft-open and consistent closing. The storm door comes in six colors, three glass models (clear, low-emissivity and bevel), four standard sizes and customizable options, including French doors.

888/483-3768 | LARSONDOORS.COM

Product/Solution





Key features

- Advanced precision glass cutting
- Automatic 4-station tool changer
- Integrated glass cullet handling
- Highest glass yields

Left: CleanCut 1700 with perpendicular cullet system. Bottom left: Automatic fourstation tool changer. Photos courtesy of GED.

Enhanced cutting flexibility

A key recent innovation is GED's 4-Station Automatic Tool Changer, which brings unprecedented efficiency and flexibility to the cutting process. Designed for the 1700/1800 Series, the changer automatically swaps between cutting wheels-based on production schedule requirements or wear thresholds. The software allows operators to assign cutting wheel angles and switch between tools on the fly. Additionally, the system detects when a wheel reaches its cutting distance limit and retires it from rotation until serviced.

CleanCut® 1700/1800 Series //

GED Integrated Solutions

As the North American leader in vinyl window and door fabrication equipment, GED Integrated Solutions delivers unmatched innovation across insulating glass manufacturing, vinyl fabrication and intelligent production software. At the core of GED's glass-cutting leadership is CleanCut® and its complementary family of products.

Speed, precision, efficiency

The CleanCut® 1700 and 1800 Series cutting tables represent the most advanced glass cutting technology on the market. These systems are engineered to provide exceptional speed, accuracy and cutting control while integrating seamlessly with GED's LookAhead™ optimization software. CleanCut® enables faster throughput and better glass

yields—cornerstones of costefficient fabrication.

To complement the CleanCut® Series, GED offers the Glass Cullet System, a fully integrated cullet handling solution that automates the collection and disposal of scrap glass. Designed to improve operator safety and cadence, the system includes a multi-segment conveyor and bin interface that keeps workspaces clean and production flowing.

Smart upgrades

This forward-thinking enhancement not only saves time but ensures cutting quality and tool life are optimized automatically. With retrofit kits available for existing tables and a future-forward spindle upgrade, GED is empowering fabricators to meet rising demands with smarter, more flexible solutions.

For more information, visit gedusa.com or call 330/963-5401. ■

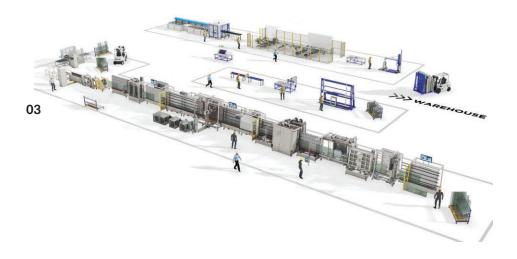


Products





01 02



01. ODL

Blinds + Glass XL by ODL Inc. is an enclosed blinds solution designed for oversized sliding and folding patio doors and large windows. Available in sizes from 9 inches to 63 inches wide by 46 inches to 90 inches high, Blinds + Glass XL meets the growing demand for expansive glass in modern architectural design. Configurations include energy-efficient low-emissivity glass to meet codes and performance needs.

800/253-3900 | ODL.COM

02. Advanced Glazings

Solera Reserve by Advanced Glazings Ltd. is a glazing product tailored specifically for refined residential design. It delivers a combination of performance characteristics, including light diffusion power for full-spectrum, glare-free daylight throughout the home; up to R25 insulation and STC 48 acoustic attenuation; built-in privacy without the need for blinds or window treatments; custom glass fabrication, including frit patterns, shapes, and daylight tuning options; and maintenance-free, all-glass construction.

902/794-2899 ADVANCEDGLAZINGS.COM

03. EVO Systems

Evoverse by EVO Systems LLC is an interactive e-commerce environment created specifically for the fenestration industry. Evoverse features a virtual factory, with 360-degree views of the typical machinery used in a door or window manufacturing facility, as well as stylized recreations of each machine. It also includes access to specific departments by clicking on an avatar of someone working in that department, and then provides recommendations about the proper type of personal protective equipment for each manufacturing function.

203/557-6717 | EVOPRODUCTS.COM

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FrameWork



Marvin's Modern Direct Glaze windows in stone white. Photo courtesy of Marvin.

Framing Nature in the Wilderness

Project: Modern Notch House in New Hampshire

Products: Marvin Modern direct glaze, casement and awning windows, and Ultimate sliding and swinging French doors. These products from Marvin's Modern Collection were used for the Notch House project because the architect was looking to feature large windows to maximize natural views.

Key players: Matt LeGeyt, architectural project manager at Marvin; Paul Lewandowski, founder at Paul Designs Project; and Windows & Doors by Brownell.

Description: Odes to nature, plus the largest Marvin Modern windows available, are some of the highlights of the Notch House, which sits on an 11-acre plot in the heart of New Hampshire's White Mountains. This project is a modern home made with materials ranging from glass and steel to concrete and high-density fiberglass.

The house faces multiple landmarks. To get the most out of all the scenery meant the need for a lot of glass. Just as Lewandowski was working through the plans for the Notch House, the Marvin Modern windows and doors became

available. "It was clear that we needed to have large windows to capture this view," says Lewandowski. "And to be able to use three large windows [in the living room], each almost 8 feet by 12 feet, is pretty stunning."

The main bedroom features wall-to-wall Ultimate Sliding doors, while the dining area includes airy Modern Casement Push Out windows. Also, high above the living room, facing the front of the home, five wide, rectangular Modern Awning windows aid in air flow and offer more natural light to the main living space.



ONLY ON WINDOWANDDOOR.COM

The Future Is Biophilic: Designing with Nature in Mind

By Jon Hauberg

As modern architecture continues to transform and evolve, the idea of blending the natural world with our indoor environments is becoming more prominent. Embracing the outdoors has a calming effect and improves our mental and physical well-being. Biophilic design aims to recreate the positive impacts of the outdoors by incorporating natural elements into our building designs.

Windows and doors play a vital role in supporting biophilic design. Products that enhance structural integrity, energy performance, natural light, ventilation and views are bringing people closer to the outdoors.

Designers and building owners are increasingly prioritizing natural light and views in the spaces where people spend the most time. From residential homes to commercial buildings, the benefits are well documented: increased productivity, reduced stress, improved mood and even faster recovery times in health care environments.

According to a Fixr report, 60% of experts predict biophilic design will be one of the most influential design trends in 2025. Windows and doors are essential to achieving this. They offer literal and figurative openings to the outside world, allowing daylight to flood interiors, encouraging airflow and framing the natural landscape as a living part of the space.



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