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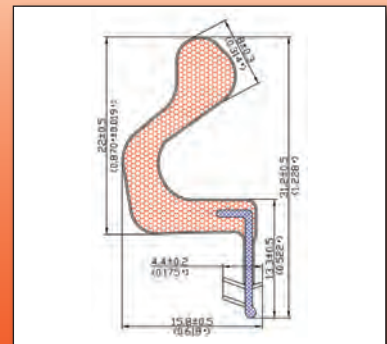
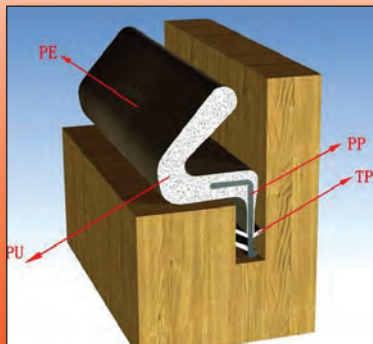
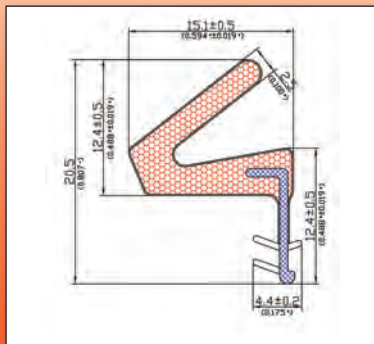


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**On the cover:** Vinyl extrusions are tested for weatherability, dimensional stability, bending strength, and more, as well as meeting a variety of aesthetic requirements. Photo courtesy of Deceuninck.



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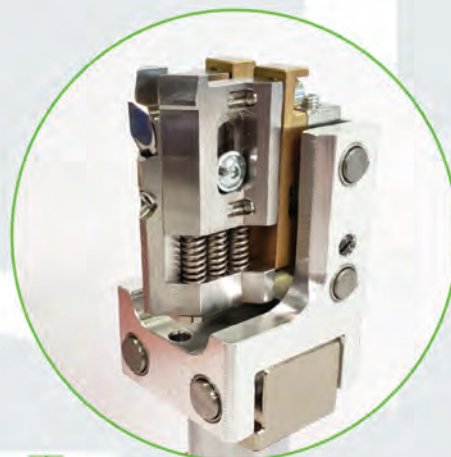
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## ➔ The Talk // Blogs of the Month

Catch up on all the latest industry "talk" at windowanddoor.com/talk



### An Optimistic Outlook for a Busy Industry

By Laurie Cowin



### 3 Tactics to Contend with Lengthy Lead Times

By Eric Thompson, Quanex Building Products, quanex.com

"Ask around the industry these days, and lead times have become a hot topic of discussion. In some instances, homeowners who have purchased new windows are waiting months before installation, and it's created a situation like we've seldom seen. But getting quality products into our customers' hands in a timely manner is our responsibility, and we need to be doing whatever's in our power to do it."

QUOTED

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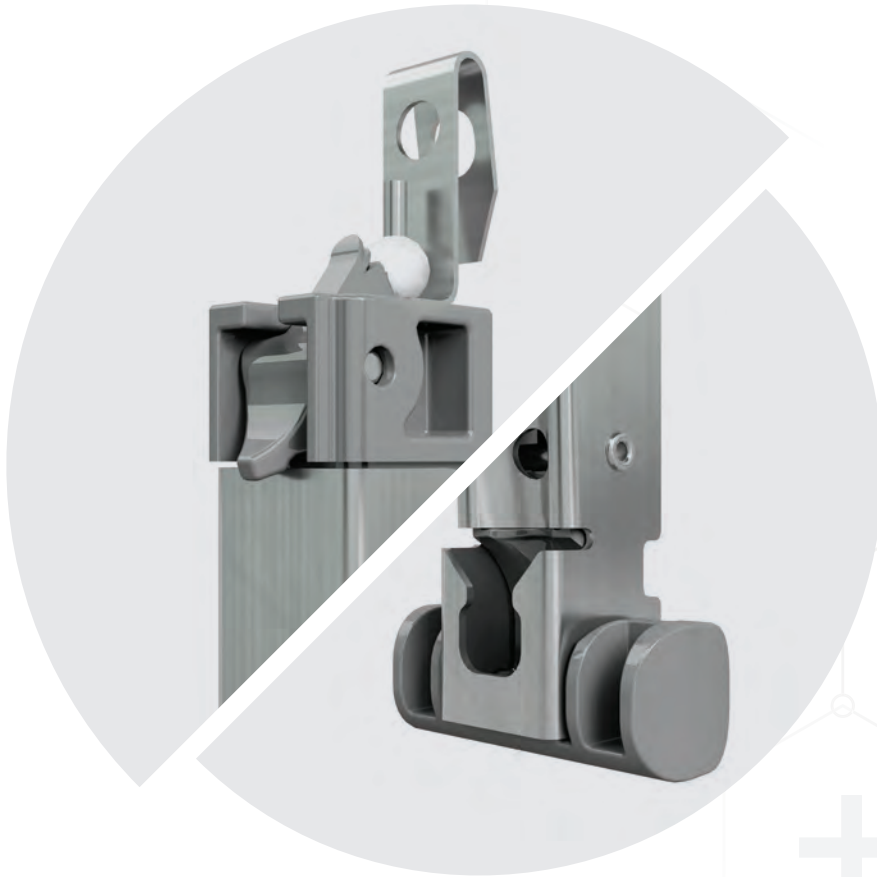
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## Remodeling Fully Recovered, but Builder Sentiment Falls Amid Rising Prices

Spending on residential improvements will continue to grow at a healthy pace over the next two years, according to experts during the 2021 International Builders' Show virtual experience. Professional remodelers from across the country agreed with the forecast, citing increased demand during COVID-19 and consumer confidence.

The remodeling market declined significantly at the onset of COVID-19 in March and April 2020, but has since more than fully recovered. NAHB predicts that remodeling spending for owner-occupied single-family homes will increase four percent in 2021 and increase two percent in 2022.

"NAHB estimates that real spending on home improvements will continue to increase in 2021 and 2022 throughout the COVID-19 pandemic," says Paul Emrath, NAHB's assistant vice president for surveys and housing policy research. "The biggest factors prohibiting stronger growth are mainly the volatile material prices and labor shortages."

Rising lumber and material prices, however, caused builder sentiment to fall, according to the NAHB/Wells Fargo Housing Market Index. "Though builders continue to see strong buyer traffic, recent increases for material costs and delivery times, particularly for softwood lumber, have depressed builder sentiment this month," says Chuck Fowke, NAHB chairman. "Supply shortages and high demand have caused lumber prices to jump about 200 percent since last April. Policymakers must address building material supply chain issues to help

the economy sustain solid growth in 2021."

"Builder confidence peaked last November and has trended lower as supply-side and demand-side factors have trimmed housing affordability," says Robert Dietz, NAHB chief economist. "While single-family home building should grow this year, the elevated price of lumber is adding approximately \$24,000 to the price of a new home. And mortgage interest rates, while historically low, have increased about 30 basis points over the last month. Nonetheless, the lack of resale inventory means new construction is the only option for some prospective home buyers."

## Industry Events Move Forward

The National Glass Association announced its plans to hold GlassBuild America: The Glass, Window & Door Expo in person Sept. 13-15 in Atlanta. Registration is slated to open June 1.

Fenestration Canada plans to hold a hybrid event for WinDoor, Nov. 16-18, with limited booth space at its in-person event in Toronto and an online presence. Fenestration Canada is also hosting its 2021 Spring Conference Online May 18-20.

Fensterbau announced that 80 percent of the available net stand space is already booked for its 2022 event, held March 29-April 1 in Nuremberg. The show will once again run parallel to Holz-Handwerk.

Online events also continue: NAHB launched the IBSx Education & Exhibitor Showcase, which will remain open through June 30. FeneTech will offer a free virtual user conference June 7-9.

## IN THE NEWS:

## Month in Review

### GED Integrated Solutions Inc.

acquired **Norfield Inc.**, a California-based provider of automation equipment, parts and services to the residential and commercial door manufacturing market. **Leaf Home Solutions** entered the window and door space with its acquisitions of direct-to-consumer businesses **Thiel's Home Solutions**, **Storm Tight Windows** and **Miracle Windows & Showers**.

**Window Nation** opened a showroom in the greater Cincinnati area.

**FlexScreen** announced a strategic partnership with Saint-Gobain ADFORS, which grants it exclusive rights to sell FlexScreen products within the retail and dot-com channels. **Kömmerling USA** increased production for its lift and slide KomaDoor, and **Quanex Building Products** added a 60,000-square-foot screens facility in Allentown, Pennsylvania.

The **International Code Council** released new framework, which includes using the Code Council's American National Standards Institute-approved standards process to update the International Energy Conservation Code.

**Pella Corp.'s** Easy-Slide Operator won Best in Show at the 2021 International Builders' Show and **Kolbe** is celebrating its 75th anniversary.

The **NGA** celebrated Women in Construction Week March 7-13 and the **NAHB** formed a diversity, equity and inclusion task force.



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# Virtually Speaking

*Conversations at industry events look at what to keep an eye on in the coming year*



**By**  
**Laurie Cowin**  
EDITOR

One of the silver linings of the pandemic-related travel restrictions is the ability to attend myriad conferences and events virtually. Although the coronavirus is indelibly shaping the industry, the industry events of late aren't solely focused on the pandemic anymore. Rather, it appears to be evolving to a space where we can resume business and conversations that certainly address COVID-related challenges, such as supply chain disruptions, but are not hyper-focused on how to deal with COVID itself.

Although the International Builders' Show virtual exhibit floor in February encountered technical glitches and had to be closed after the first day, the event still delivered with robust educational programming, much of which remains on demand through the end of June.

Mike Rowe, of "Dirty Jobs" fame, focused on the skills gap during his keynote address and, specifically, reaching younger people. One of the biggest things we can do to close the skills gap, he purports, is tell stories of success around the trades.

"If we do a better job presenting examples of men and women who are prospering today as a direct result of mastering the skill, sooner or later that will become overwhelming," he said. "You're fighting against stigmas, stereotypes, misconceptions and myths. People want to be challenged. Don't be afraid to say you'll work hard, and it won't always be pleasant, but if you stick with it and apply yourself, here's a path to prosperity."

The Fenestration & Glazing Industry Alliance Annual Conference in late February was a packed three days that painted a positive picture of a recovering economy with a strong focus on sustainability and energy efficiency. One of

the more profound takeaways for me, however, was Chris Kuehl's economic update. Data shows strength in new construction and remodeling, and suppliers and manufacturers are working furiously to keep up with record-high demand.

But, Kuehl pointed out, prices are also high. Rising lumber prices alone have added an average of \$24,000 more to the price of a single-family home since April 2020, according to NAHB. "If mortgage prices go up, along with the price of homes that has already gone up, it'll throttle [residential] growth in a hurry," said Kuehl. So, although residential is the clear bright spot in construction, it may not be as bomb-proof as we think it is.

The March NAHB/Wells Fargo Housing Market Index is beginning to reflect this caution, too, as builder confidence for newly built single-family homes fell two points and February housing production weakened. Experts attribute both drops to rising material prices and interest rates.

"Interest rates and regulatory barriers to construction need to stay low," said Jim Tobin, executive vice president, governmental affairs, NAHB, during the Window & Door Manufacturers Association's Spring Virtual Meeting and Legislative Conference. Despite the rise in interest rates, however, they still remain historically low.

As the country continues to emerge from the coronavirus and the Biden administration continues to take shape, industry associations are keeping a close eye on regulation, legislation and other policy that could affect the construction industry.

I look forward to continuing to connect during these virtual meetings and hope we can resume in-person conversations later this year. ■

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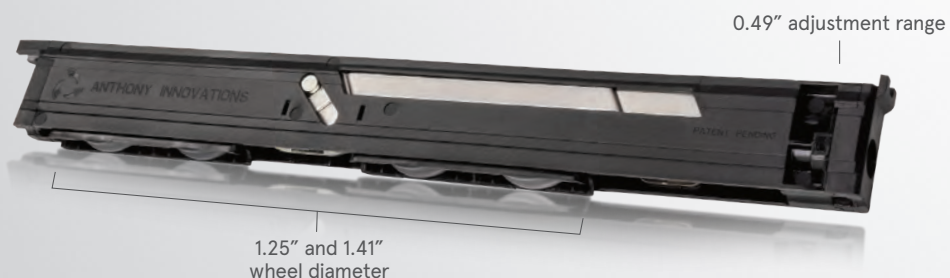
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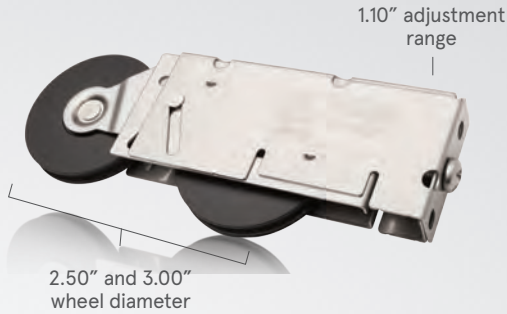
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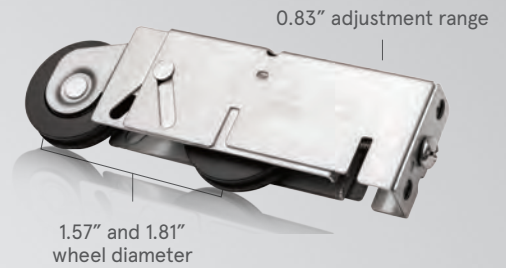
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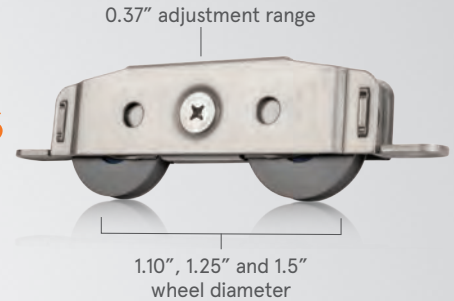
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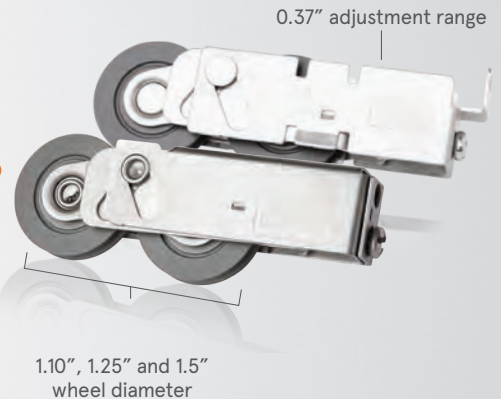
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# Launching LEAFF

*New NFRC program aims to simplify the certification process and may help manufacturers get products to market faster*



**By  
Scott Hanlon**

The National Fenestration Rating Council's Linear Energy Analysis for Fenestration (LEAFF) new simulation methodology aims to reduce the amount of time required to conduct simulation testing, streamline the certification process and empower manufacturers to advance the continuous improvement of fenestration products.

Manufacturers do not need to be NFRC members to use the tool; it is available for everyone. As with any new process, there's often a learning curve, and NFRC plans to host training in fall 2021.

## How it works

Formerly known as Residential Component-Based Calculation (RCBC), the LEAFF methodology leverages the simulation process that NFRC has relied on for more than 30 years.

The LEAFF method establishes a fenestration product's energy performance with various glazing and frame types using product-line characteristics to determine trendlines. This replaces the need to run multiple simulations separately.

Current simulating procedures for residential products allow manufacturers to produce the matrix of performance data they need, but as these matrices grow and new options for improving thermal performance enter the market, these procedures have become time-consuming and costly.

Furthermore, these current procedures often require simulating numerous individual product options for a product line. A product line with 100 individual product options, for instance, could require modeling 20 individual options or possibly all 100.

## Seeking a solution

The LEAFF methodology provides a more efficient alternative by using a regression line, or trendline, approach based on the center-of-glass (COG) U-factor value.

The trendline is calculated by plotting three product options that generate a slope intercept

formula ( $y=mx+b$ ). Generally, there will be multiple trendlines for each product line. To calculate the whole product U-factor rating, the LEAFF Certified Simulator places the COG value for a specific glazing option in the formula. Consider the product line with 100 options, for example. If there are three trendlines when using LEAFF, the simulator is required to model just nine options.

While investigating the viability of a component methodology for NFRC's residential certification program, staff experienced two "ah-ha" moments.

The first occurred when they uncovered how to categorize all the components to determine the number of trendlines. When comparing LEAFF whole product ratings to the current methodology, research showed that the LEAFF methodology's ratings were a maximum of  $\pm 0.003$  Btu/h·ft<sup>2</sup>·°F different.

The second came when they realized modeling can be reduced 80 to 99 percent when adding options to a product line that is certified using LEAFF. Today, if you add an option, in most cases, you have to model it to generate the whole product ratings. LEAFF, however, eliminates the modeling when the options can use an already established trendline. The simulator creates the glazing option, applies the COG U-factor to the trendline formula, and you have the whole product rating.

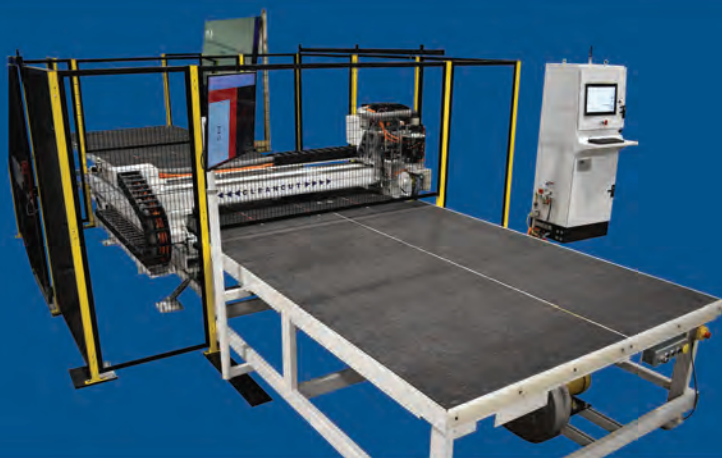
Once users become acclimated to the new methodology, LEAFF has the potential to reduce the time required for performing certain simulations. Simplifying the certification process and decreasing the manufacturer's time to market are the two potential benefits that could come from this. ■

---

Scott Hanlon is a program director for NFRC. For more information on LEAFF and its upcoming pilot program, Hanlon can be reached at 240/821-9519.

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## Process Improvements

*How high-speed welding and cleaning increases production capacity in an existing footprint*



By Mike Biffi

It wasn't always smooth, but our industry is one of the fortunate sectors of the economy that weathered the past year's challenges and actually got stronger. Despite COVID-19, material shortages, business disruptions and a major shift in how we collaborate, window and door manufacturers continue to grow during this time.

To keep up with that growth, the demand for capital equipment and improved methods of manufacturing has never been greater. Much of that demand is to allow increased production capacity in an existing footprint. Over the past several years, many machinery manufacturers have invested in R&D efforts to provide exactly that.

High-performance turbo welding and high-speed corner cleaning are becoming the norm in PVC window fabrication. Significant resources have been dedicated to improving the process and getting increased production from a machine with the same footprint while maintaining a consistent flow through the line.

### Welders

Current state-of-the-art welders take advantage of servo technology to increase speed, reduce maintenance and provide a more consistent product than previous generations of welders. The main area that benefits from this technology is the melt and push motions. Traditionally

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### ➔ In the Trenches

achieved with air cylinders, this has long been a limiting factor in speed and consistency. As air pressure fluctuates throughout the plant, melting and joining pressure can vary from one cycle to the next, creating inconsistent weld strength and alignment.

Servo driven motions are shorter, faster and provide consistent operation on every cycle. The added control also has the capability to provide increased pressure and to vary that pressure consistently as the material melts and as it cools. Combined with higher temperatures, this technology reduces machine time by up to 30 percent per weld cycle. Loading and unloading times remain unchanged, but the significant reduction in machine time creates a far more efficient machine in the same overall footprint.

### Corner cleaners

If your corner cleaning won't keep up with faster welding, however, then all you've done is create a new bottleneck. To maintain a consistent line flow, increase production and remain in the same footprint, corner cleaning technology has also been a focus of improvements in recent years.

Again, the intelligent use of servo controls has allowed for added speed while maintaining a consistent footprint. By splitting a single servo axis into two—generally a top and a bottom—the machine can now run multiple tools concurrently, the distance each tool needs to travel to and from a home position is reduced and machine speed increases similarly to the 30 percent we see on a turbo welder. This provides a consistent flow of product down the line, eliminating a potential bottleneck at the cleaner.

### Information transfer

Automating the transfer of information to the cleaner has also proven beneficial in the welding and cleaning area. The old way of hanging sensors on the machine to try to measure the

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The best current technology in welding and cleaning is more evolutionary than revolutionary. Our industry has its challenges and some of the time-proven concepts remain the most reliable and efficient methods of production. Incremental improvements allow window and door fabricators to continue growing without major plant overhauls or building expansions.

profile, or independent measuring devices mounted in the cleaner, are unreliable and limited in what they can tell the cleaner.

The more information you can provide to the corner cleaner, the faster the machine can pull up the required program and, in the case of a two- or four-head cleaner, the more quickly it will move to size. Waiting for a measurement system or the operator to manually open the heads to a close size and then fine-adjusting once the part is in the cleaner slows operations.

Barcode scanning direct networking of the welder to the cleaner are the methods of choice in today's manufacturing environment to combat these shortcomings. Barcode scanning is ideal in a scenario where multiple welders may feed one corner cleaner because it allows a welded square to be brought from anywhere in the plant. By scanning the barcode, the cleaner knows exactly what size and what program it needs to run. In the case of an automated line where one welder always feeds the same cleaner, a network connection is the quickest and most reliable way to pass information to the cleaner.

In short, the best current technology in welding and cleaning is more evolutionary than revolutionary. Our industry has its challenges and some of the time-proven concepts remain the most reliable and efficient methods of production. Incremental improvements allow window and door fabricators to continue growing without major plant overhauls or building expansions. ■

Mike Biffel is the eastern sales manager for Sturtz Machinery Inc., a Twinsburg, Ohio-based supplier of stand-alone and automated equipment and systems for vinyl window production. Biffel joined Sturtz in 2000.

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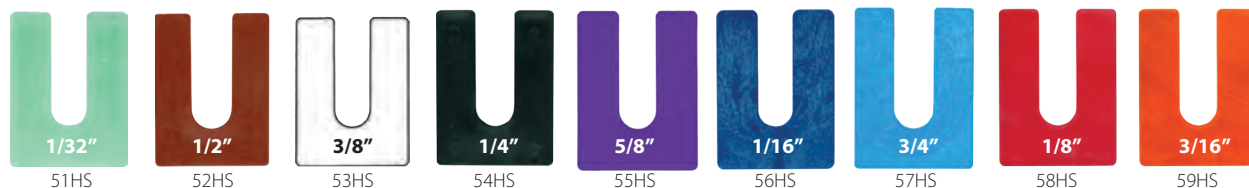
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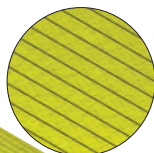
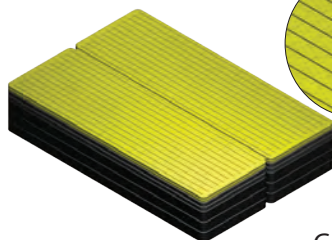
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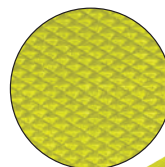
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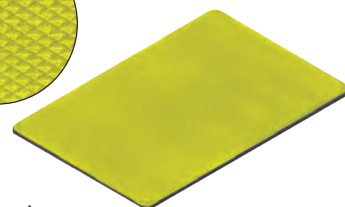
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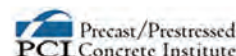
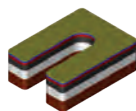
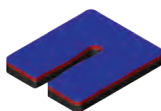
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# Mulled Assembly Performance

*New guidance simplifies qualification of performance of mulled products*



**By Rich Rinka**

The landmark U.S. hurricane seasons of 2004 and 2005 have prompted questions about the performance of mulled assemblies, or two or more individual window products installed in a single rough opening using joining members, or mullions. If mulled assemblies are not built or tested to existing standards, they may not perform up to expectations, especially in extreme weather conditions.

Published originally in 2000 as AAMA 450-00, *Voluntary Performance Rating Method for Mulled Fenestration Assemblies*, the document defined procedures for arriving at a meaningful design pressure rating from which air, water and structural performance of mulled assemblies could be more effectively assessed. Practical experience, however, showed that more was needed. As building envelope design, installation and maintenance processes have evolved, so have rating methods and requirements, as well as building codes.

This evolution is evident in the recent release of AAMA 450-20, retitled *Performance Rating Method for Mulled Combination Assemblies, Composite Units, and Other Mulled Fenestration Systems*, an FGIA technical document. To address many of the evolving concerns, AAMA 450-20 is expanded to now cover:

- Composite units: A composite unit indicates two or more independent fenestration units,

each of which must meet appropriate North American Fenestration Standard requirements, utilizing integral mullions within a single continuous outer main frame. A combination assembly, as covered in previous editions of 450, is two or more independent products that are joined together, typically at the factory, using a combination or reinforcing mullion.

- Side-hinged door systems: These must comply with NAFS or be tested in accordance with ASTM E330.
- Products outside the scope of NAFS, namely storefront and curtain wall products.
- Clarification of differing deflection limits based on span length and/or different product types.
- Analysis of the strength of connections between individual units and mullion elements.
- Load application for test or calculation, which must be in both positive and negative directions.
- Adequacy of the anchorage of the mullion element or mulled fenestration system under specified design pressure load (as determined by engineering calculations).

The magnitude of the different available configurations of mulled fenestration systems can be overwhelming to analyze and test. Therefore, a key component of AAMA 450 is the allowance of product grouping for the purpose of qualifying multiple designs with a single test or evaluation. While other published methods, such as AAMA 2502-19, *Comparative Analysis Procedure for Window and Door Products*, allow rating of untested sizes, AAMA 450-20 allows rating of untested configurations.

A product group may include several different operator types such as casements, hung windows, sliders and fixed windows, potentially of different performance classes that are combined in different

As building envelope design, installation and maintenance processes have evolved, so have rating methods and requirements, as well as building codes.

ways using the same mullion profile. One test may qualify all possible combinations of the window types based on the weakest configuration.

AAMA 450 offers three options for determining the overall design pressure rating of a mullied fenestration system, which is the lower design pressure achieved by either an individual product or by the mullied system, as determined by testing, calculation or a combination of the two.

#### 1. Testing the total system configuration.

The minimum performance levels for air leakage, water resistance and uniform load are as outlined in NAFS. Curtain wall and storefront systems are tested according to AAMA 501 using the uniform load test described in ASTM E330, Procedure B.

**2. Testing mullion elements as individual components.** The design pressure rating of the mullion element is determined by means of a simple beam concentrated load test with the load applied at center span. Deflection under load and permanent set deflection after removal of the load are recorded and must be less than  $L/175$ .

**3. Structural calculations.** Calculations must follow the procedures referenced within the Engineering Design Rules as set forth in FGIA/AAMA

2502-19. The structural calculations include:

- Area moment of inertia, bending moments and section modulus of the mullion element
- Deflection of the mullion element (not to exceed  $L/175$  for spans of 13 feet, 6 inches or less and  $L/240 + \frac{1}{4}$ -inch for spans more than 13 feet, 6 inches at the given design pressure)
- Extreme fiber stress (structurally calculated)

The qualification of mullions and the progressive development of AAMA 450 is an interesting study in how evolving fenestration performance concerns find their way into industry standards and, ultimately, into building codes. AAMA 450 has become more useful to engineers and manufacturers alike and makes compliance of mullied systems easier and more effective. The current version is available for purchase in the FGIA Online Store at [FGIAonline.org/store](http://FGIAonline.org/store). ■

Rich Rinka serves as technical manager, standards and industry affairs for the Fenestration & Glazing Industry Alliance. Rinka previously worked in the industry as a field technical engineer for a component supplier and developed and holds four patents related to sealants.

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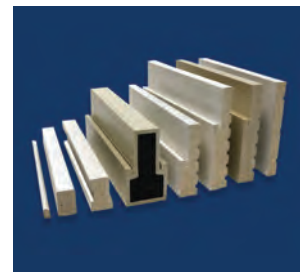
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## The Additional Insured Provision

*Review contracts and know the terms of your company's insurance policy to lessen financial risk*



**By**  
**Susan MacKay**

It seems like everywhere you turn these days someone is asking your company to sign a contract. I routinely see all lengths of contracts, from “simple” three-page documents to hefty 50-pagers, and at times even in excess of 100 pages by “incorporating” other documents.

When presented with a long or complex contract, your first thoughts may be, “I don’t have time for this!” or “What’s the point in trying to negotiate?” So you just sign it. Problem fixed, right? Unfortunately, the time and headache saved at that moment may come back to haunt you.

One example is the additional insured provision. Builders often include additional insured requirements in contracts they present to distributors and manufacturers. An additional insured endorsement extends your company’s liability insurance coverage to include another party (or parties) who then, as an insured, receive the same benefits under the insurance policy as your company.

Here’s a real problem: As the named insured on the policy, your company may be responsible for paying the deductible on a claim made by an additional insured.

A recent Fifth Circuit Court of Appeals case, *Big Binder Express, LLC v. Liberty Mutual Fire Insurance Company* (5th Circuit 2021), demonstrates how this can happen. The underlying lawsuit involved an auto accident with a tractor and trailer driven by an employee of Big Binder Express and another vehicle. Darling Ingredients owned the trailer and Big Binder leased it. Darling was insured by Liberty Mutual under a policy with a \$1 million per claim deductible. Liberty Mutual defended Darling as a named insured, as well as Big Binder and the driver as additional insureds.

The underlying lawsuit was settled, with Liberty fronting \$1 million of the settlement because a disagreement remained as to whether the \$1 million deductible applied to additional

insureds. Big Binder then filed a declaratory action against Liberty Mutual arguing that it should not be responsible for payment of the \$1 million deductible. The District Court found in favor of Big Binder, Liberty Mutual appealed, and the Court of Appeals reversed the lower court's decision.

Focusing on the terms of the Deductible Endorsement, the Court of Appeals held that Liberty Mutual could not recover the \$1 million deductible from Big Bender. The Deductible Endorsement read, in relevant part, "1. You are responsible, up to the Deductible Amount shown in the Schedule..."

The \$1 million deductible could not be enforced against Big Binder because Big Binder was not the "You" referenced in the Deductible Endorsement. The insurance policy defined "You" as the named insured. As the named insured, Darling was the "You." Therefore, Liberty Mutual could recoup the \$1 million deductible for Big Bender's additional insured claim from Darling.

To avoid a similar situation, it is important to carefully review contracts before signing them and to know the terms of your company's insurance policy. There are ways to lessen your risk; it all depends on how creative you are and whether you can convince the other party to allow the change. Can you remove the additional insured requirement? Can you add a contract term that the additional insured will pay any deductible? Can you agree to actively defend and indemnify the party in lieu of naming them as an additional insured? Consider consulting with a lawyer who can help with the analysis and negotiating terms.

Taking the time at the outset to carefully consider and negotiate the terms of a contract could save you a million-dollar headache in the future. ■

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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](mailto:susan@prgarylaw.com).

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# Security Steps

*What employers and employees can do to reduce the risk of cybersecurity breaches for remote workforces*



By Norah Dick

There's no question that the pandemic has made remote work more of a necessity than ever before, a situation that has led to a rise in cybersecurity risks. According to "Cyber Security: Protocols for Manufacturers during COVID-19," produced by the National Association of Manufacturers, the COVID-19 work experience can create unique vulnerabilities for companies, as employees' home networks may not be secure as traditional business networks.

## What kinds of cyber risk are there?

There are many kinds of cybersecurity risks. According to NAM's report, some of the most common cyber threats include ransom or ransomware, an attack during which a third party infiltrates a company's network, and remotely holds a company's files or systems hostage, restricting access until the person's money demands are met. Additionally, a phishing scam can arrive in the form of an email, or attached document, that seems to be from a trusted source but is designed to allow a third party to steal the email recipient's, or the company's, information.

## What can an employer do?

**Update all systems.** eSentire, a cybersecurity firm, recommends that companies ensure that all computer systems are up to date, including workstations and servers. The firm also recommends restricting the downloading of applications.

**Create a closed or segmented network.** NAM's guidelines also recommend implementing a virtual private network, or VPN, for home network users. This kind of network is closed, securing it from outside users and offers a secure

and encrypted connection between devices and the company server. A company can also divide its network into several segments that are not connected, which limits the impact of a data breach in any one segment.

**Train employees.** Both NAM and eSentire emphasize the importance of employee training. This includes making staff aware of the ways to securely access the company's systems, and what current cyber threats look like. Sending employees "tests," such as practice phishing emails, is one tool to gauge employees' understanding.

## What can employees do?

**Follow email best practices.** As stated, phishing scams are a common type of cyber-attack that employees should be aware of. The IT solution firm designData recommends that users always hover over links in emails to make sure they're legitimate, and to never click on an attachment until the reader determines that the email is legitimate. Users should also distrust emails that have threatening language or ask for personal information, they say.

**Change passwords.** According to a 2019 Verizon data breach report, 81 percent of data breaches resulted from stolen or weak passwords. designData recommends that users ensure that all accounts have different passwords, with a length of 15 characters or more. The firm also recommends password managers, such as LastPass, that generate unique passwords for all accounts, as well as two-factor authentication applications that require users to provide two pieces of information in order to access an account. ■

# Fenestration

## FOCUS

Your industry insight

### How to Capitalize on New Trends in Color

Long gone are the days when color options for window framing were limited. Today, consumers are demanding an increasing variety of bold colors to bring extra flair to their homes.

Are you prepared to meet those demands?

As 2021 gets underway, and as the housing market remains at explosive highs, it's worth investigating how to best position yourself to offer color options to your customers:

#### Navigating a hot market

Success under market conditions like we've seen over the past year will involve keeping up with high demand, while simultaneously navigating trends like colored vinyl sought by homebuilders and owners.

It's worth taking stock of your manufacturing process when it comes to offering color. Are you painting profiles in-house? Using laminate technology? These are both popular options that have served the market well, but both methods require additional labor on the plant floor—which can be hard to come by today. Depending on the quality of the materials, laminates and paint can also be susceptible to longevity issues in rougher climates. Consider that some of the housing markets with the strongest remodel projections in 2021 include heat-intense cities like Houston, Phoenix and several cities in southern Florida.

Co-extruded vinyl color technology can serve as a reliable solution here. For example, Quanex Building Products' patented SuperCapSR™ exterior color technology delivers enhanced scratch resistance, long-term durability and outstanding resistance against weathering and sun damage. Co-extrusion also eliminates any additional labor needs because the color is already fully integrated.

#### A diversity of options

While black has been the dominant alternative color option in recent years, others are joining

the mix. Bronze, grays and other colors could see upticks in demand in the coming years. Additionally, dual-color windows are becoming increasingly desirable—where the interior frame is a different hue than the exterior, complementing home design on both the inside and outside.

One challenge inherent to offering this kind of color variety is the additional SKUs doing so involves. For example, assume your company currently offers one profile in two color options. Perhaps now you'd like to offer that same profile in a third, or in a dual-color option. You can see how quickly SKUs can pile up with the addition of new colors.

From an inventory perspective, this can create a headache. No manufacturer wants to be holding onto countless varieties of color options in their warehouse and neither will your extrusion supplier. However, a collaborative vinyl supplier should be able to deliver on your changing needs, in step with the demand you're seeing, with reasonable lead times. If you're considering new color options, it's worth having this conversation with your supplier sooner rather than later.

**Interested in learning more about how to add color to your offerings? Contact your Quanex representative to learn how we can help today, or visit [www.quanex.com](http://www.quanex.com).**



# SuperCapSR™

## Heat-Reflective Color Technology



## One Way to Cut Your Lead Times

“Unprecedented” is a term we hear a lot these days, and it’s manifesting in a new way in the residential window market: Lead times.

If you’re a homeowner in the market for new windows and you order them today, you aren’t likely to see them installed for about 10 weeks. That much lead time certainly qualifies as unprecedented.

There are a few easily identifiable factors that have led to this situation. First, the pandemic and its consequences have wreaked havoc on the global supply chain. Obtaining raw materials at reasonable prices and in a timely fashion remains a challenge for manufacturers around the world.

Meanwhile, demand in the residential space is booming. Low interest rates have spurred investment in home improvements, coupled with the increased amount of time people have spent in their houses for the past year. A “good problem” to have—but also one that has placed even more strain on windowmakers throughout the country.

Finally, the ongoing and worsening labor shortage has further compounded the problems associated with difficult supply chains and high demand. Even when we can get the materials we need, it’s extremely difficult to find the people to put them together.

It’s all resulted in a market where an 8-to-10-week lead time for a homeowner has become normal. For manufacturers, it’s worth continued investigation in how we can get back to delivering



quality products to our customers in a timelier fashion.

One potential solution is **rethinking your in-house screens production**. Making screens involves frame cutting, punching corners, frame assembly and applying screen mesh, with each of these distinct processes involving a different skilled worker. It’s hard work—and it has the potential to become a major headache if it isn’t all performed efficiently and consistently. No window and door manufacturer should be sacrificing their best people to screens production when they could be helping assemble the high-performance, high-value window systems that make you money.

But let’s face it: Your customers expect quality, functional screens when their new windows are installed. It’s a necessity, and it must be treated as such. If you’re making 600 windows per day

but can only manage to make 500 screens for those windows, that means you’re only able to ship 500 orders out the door to your customers. Screens could be creating an artificial cap on your production.

What is to be done? Get rid of the headache by eliminating the source. Consider outsourcing your screens production with a trusted supplier. Full-service window and door screens outsourcing from Quanex Building Products can help you focus on building quality windows and doors without the headaches associated with screens production. If you’re struggling with inventory, devoting too much floor space to screens production, or are looking for an effective way to get completed windows into your customers’ homes faster, we can help.

To learn more, visit [www.quanex.com/Screens](http://www.quanex.com/Screens).



## How to Effectively Meet a Variety of Performance Demands

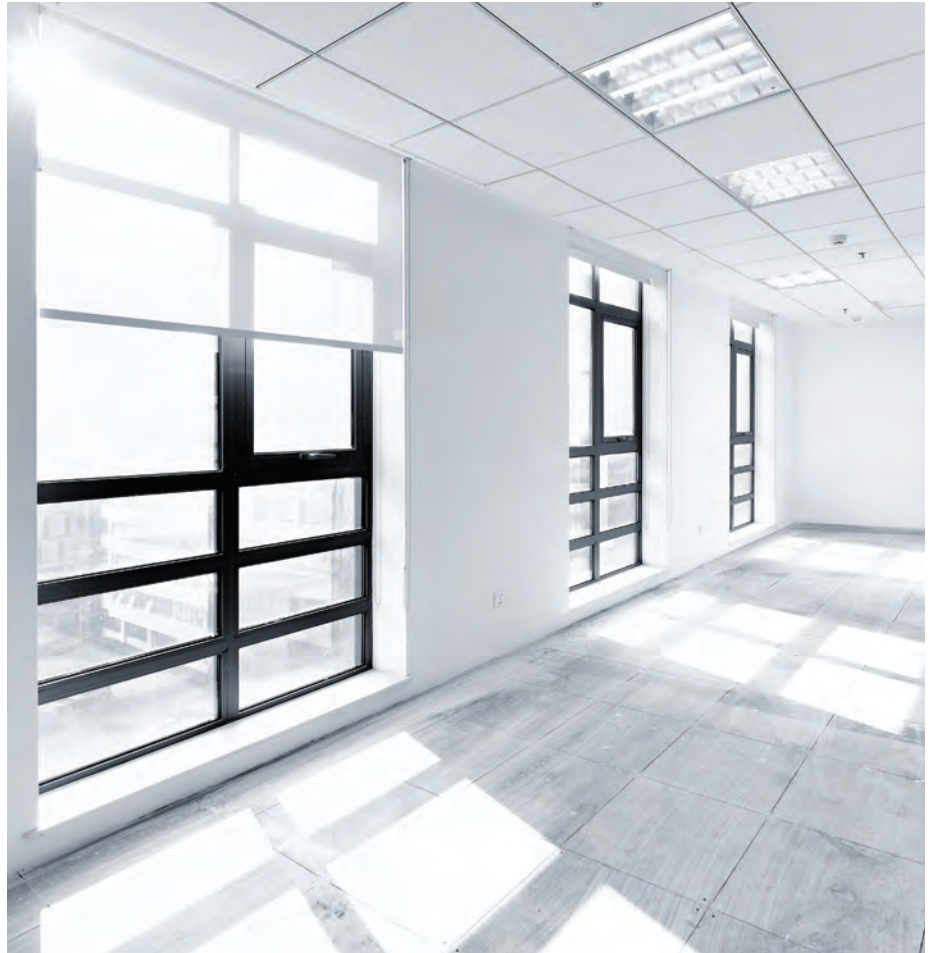
Windows, doors and commercial glazing have long been guided by the need to meet certain thermal performance targets. Our ability to meet those targets has allowed occupants of buildings everywhere to enjoy the benefits of glass and windows without worrying about compromised interior conditions.

So, what happens when a new demand starts trending? How do we build a new performance characteristic into our products without compromising all of the other necessities?

Consider acoustic and sound performance. As holistic occupancy comfort becomes increasingly desirable, it means we must be thinking about how windows and glass can limit sound transmission from the outside to the inside. This is especially true in urban areas, where multifamily developers are now pursuing construction at sites near train tracks, elevated lines, and major freeways. Design of these spaces must account for the loud rumbling of trains, cars, and other noise—and windows have a critical role to play.

In order to maximize the benefits occupants are looking for, window and glass manufacturers have to find the right balance. If you're pursuing higher acoustic performance, one area to consider is the window frame. For large-scale multifamily development, metallic framing has typically been the traditional choice. But in recent years, high-performance vinyl options like Quanex's Mikron® AW-Rated System C3- 11300™ have become increasingly attractive for their ability to meet heightened thermal targets while demonstrating high performance under demanding conditions.

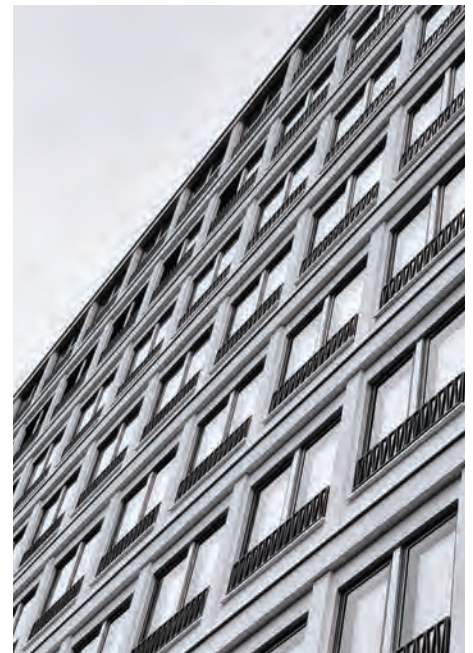
Vinyl and composite options can additionally deliver on new demands for acoustic performance. Multichamber designs like that found in the C3-11300 system can help dampen noise versus a metallic frame that may reverberate more readily. Though dampening technology can be incorporated into metallic options, this may add complexity to the manufacturing process that vinyl does not require. In addition, vinyl and composites, which can be welded vs. mechanically fastened at corners, have an advantage by reducing tiny gaps or small openings where noise can seep through. Though framing material choice alone does not make



or break a window's ability to achieve excellent acoustic performance, it is one area to closely consider moving forward.

As we continue to work toward high-quality windows and glazing that meet the evolving needs of occupants everywhere, we must be thinking about how to achieve the right balance. Energy efficiency remains the most important consideration when it comes to building design—but it's not the only one. The right mix of high-quality products will be required as our understanding of buildings and their impact on people continues to evolve.

**Interested in learning about how Quanex can help? Get in touch with our teams or visit [www.quanex.com](http://www.quanex.com).**





## How to Make the Most of the Virtual Tradeshow Experience

The fenestration industry is built on personal networks and quality relationships, and 2020 made it challenging for us to maintain the same professional connections as years past. One of the venues most affected were tradeshows and events. These opportunities to connect were often watered down to Zoom calls and digital platforms where attendees tried their best to stay engaged and free of interruptions.

Being able to log in to some educational sessions in your slippers has some appeal, but the energetic environment and bustle of a tradeshow floor were impossible to replicate online. But with 2021 in full swing, and large gatherings still out of reach, we have the opportunity to leverage our experience from last year to build more engaging digital experiences for as long as it's necessary this year. With all this in mind, here are a few best practices to make the most of your tradeshow dollars, time and experience:

### 1. Control what you can control.

Some associations will be better—and have exponentially larger budgets—than others when it comes to virtual shows. The 2021 Consumer Electronics Show (CES), for example, had exceptional technology and engaging presenters bring the CES experience into each attendee's home at a very reasonable ticket price.

But not everyone has the money to pull off an event like CES. So, take control of your situation and leverage what you can to make a splash. If the event platform is lacking, create your own landing page with relevant resources, share your news on social and set up video calls for media appointments. You may not be able to control how successful the show is as a whole, but you can still make your company stand out.

### 2. Leverage video.

Video is your friend with virtual events. Encourage your sales team to use it for customer conversations, record SMEs talking about industry hot topics, and even dabble with the live features on social channels if you're up for



it. In-person conversation can't be replaced, but most people will watch a video rather than read a press release. Zoom and Microsoft Teams both have easy-to-use recording functions—experiment with them ahead of the show and leverage video wherever you can.

### 3. Get social.

Now more than ever before, joining the conversation on social is important. Keep an eye on any event hashtags, help your organization's experts push content out during the show and don't be afraid to engage in online conversations. Having your name alongside the others who are talking about relevant topics will increase your visibility beyond the event platform.

### 4. Share insights.

A lot of the virtual tradeshows keep presentation recordings available well beyond the show dates. Take advantage of the additional time to virtually attend sessions, capture insights and share them out via a content piece to your customers and internal stakeholders.

I think we're all looking forward to the day when we can come back together for in-person meetings, have a cocktail and toast to a successful tradeshow. But until then, take advantage of the extra time you have to dig deeper into what's happening in our industry. We'll be back at it (hopefully) soon enough.

To receive Fenestration Focus electronically, please visit [www.quanex.com/register](http://www.quanex.com/register).

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# BACK TO GLASSBUILD

# EXTRUDING



Formulations continue to evolve to meet energy, performance and aesthetic demands. Photo courtesy of Quanex.

# SOLUTIONS

VINYL EXTRUSIONS NEED TO MEET INCREASINGLY STRINGENT PERFORMANCE CRITERIA WHILE MATCHING THE DESIGN FLEXIBILITY CUSTOMERS WANT **BY LAURIE COWIN**

A

Although straightforward in some ways, PVC can be a surprisingly complex material that extruders make formulaic adjustments to so it can meet a robust and evolving set of performance criteria.

It has to meet handling requirements while it's being processed, punched, cut, welded, shipped and installed. The installed product needs to perform well in the opening and weather well. "It's amazing what kind of an engineered piece of product a window and door is," Greg Koch, vice president of sales and marketing at Deceuninck, says.

## Performance

Extrusions are all tested to minimum AAMA 303 standards, which address weatherability, impact resistance, heat resistance, shrinkage, heat buildup and more. Each time an extruder adjusts a compound in its formulation, it is

qualified. "If we're going to qualify a new impact modifier, heat stabilizer or pigment, we're only changing one variable at a time," explains Kevin Seiling, vice president of engineering and new product development, Veka Inc. Then, companies test attributes like bulk density, flowability and torque before optimizing extrusion conditions of the new formulation. Finally, the profile is tested for impact, shrinkage and heat resistance. If it passes all of those test conditions, it then goes into accelerated weathering and out for weatherability testing.

"The professionals in the business very rarely make a mistake with compounding and formulation," he says. Seiling notes that if there's a problem in the field, liability can be what he describes as "pretty substantial. ... We're very careful to not put something out





in the field we don't think is better than what we've been doing."

**WEATHERABILITY:** Vinyl had a poor reputation for weathering in the 1980s because the formulations were European-based, and only tested in Europe to a climate that is similar to Toronto, Canada, explains Seiling. As discoloration and field problems related to color change popped up as the vinyl replacement window market expanded, especially South and West, two-year outdoor weathering tests were born.

Eric Thompson, commercial sales manager for Quanex Building Products, explains extrusions are tested in Arizona, Florida and Kentucky to represent hot and arid, humid and sea salt, and hot/cold swing climates, respectively. The geographic diversity of the locations, he says, gives enough testing data to allow the product to be used anywhere in the world and hold up.

The Fenestration & Glazing Industry Alliance currently has two active weathering task groups. One relates to

long-term performance, says Seiling. The current program hinges on two years of outdoor weathering. "The requirement is only two years, because after two years the rate of change has slowed dramatically. There's very little change after two years," he says. Despite that most vinyl windows in the field are still in service after 20 or 30 years and only come out of service because of remodeling preferences or a desire to upgrade insulating glass, he says, questions loom around how manufacturers can offer



Deceuninck pushes about a half million pounds of material each day between its two facilities. Photos courtesy of Deceuninck.

longer warranties with only two years of weathering. The task group is exploring what it would look like to extend the weathering for various lengths of time (i.e. three, five, 10 years) and what new performance requirements would be.

Another task group is exploring accelerated weathering and how to correlate outdoor weathering with accelerated weathering such as QUV and Xenon Arc. If proper correlations can be proven, says Seiling, it could fast-track new product development and enable products

to get to market faster. That correlation, however, is difficult to determine because color change in vinyl is specific to location, climatic data and start date.

**DIMENSIONAL STABILITY:** An AAMA 303 study group is discussing if accessory profiles should be added to dimensional stability requirements under AAMA 303. Currently, the frame, sash and other structural components are certified, but glazing beads, trim pieces and accessories are not, explains Seiling. Those components do require weathering

performance, and the task group will determine if dimensional stability testing is also necessary and, if so, at what level.

**BENDING STRENGTH:** Some extruders try to improve the bending strength of profiles with fillers such as wood fibers, chopped glass fibers and other minerals, says Seiling. “Although bending strength can be improved, it’s generally inversely proportional to severe reductions in impact resistance, weld strength and weathering.”



## RAW MATERIAL PROCUREMENT

The challenges of today's supply chain environment remain at the forefront for many companies as effects from the coronavirus pandemic and natural disasters threaten stability. Koch says hurricanes hitting the Gulf Coast where Deceuninck sources its PVC resin affected them, but that they "dodged a bullet" with some of the force majeure events. "Our team here did a fantastic job," he says. "We had a good program in place, but it was a real challenge."

Pressure remains this year, though, while volume is as strong as ever. "Our customers are still going as strong as they were in August of last year," Koch says.

As end user demand continues to be strong, Thompson says the raw material supply appears to be worsening and Quanex has done backorders of raw material supplies to have enough on hand. Strategic alliances helped the company remain on track with its material procurement, says Thompson. Although he says such alliances can reduce flexibility and lower bargaining power, those alliances have been an asset in the past year in particular, especially as force majeure events were enacted around the pandemic and hurricanes. "When you're strategically aligned with your core suppliers, you're usually at the top of the list," he explains.



### Color solutions

Basic PVC extrusion colors are in pigmented white, almond, beige and clay/putty, says Seiling. "Once the colors get darker than that, there's not sufficient technology developed in PVC extrusion to handle both heat buildup and weathering. Generally you get one and you sacrifice the other," he says.

Several solutions exist, says Seiling, such as paint, laminates and capstock. Paint is governed by AAMA specifications for paint on vinyl and heat buildup. Laminates, he says, have low heat buildup and strong durability and weathering attributes because the top layer is acrylic or PVDF. Acrylic capstocks are coextruded and therefore integral to the extrusion.

"You don't have to sacrifice aesthetics for performance," says Thompson. Quanex, for example, uses its own technology that is thermally fused to the extrusion without modifying the





**Left:** Vinyl is easily recyclable, which sources say could make it an appealing material in the green space going forward. Photo courtesy of Veka.

base extrusion. “It is a color cap that is formulated with pigments and acrylic modifiers that create a durable, harder surface,” says Thompson, going on to say the color is IR invisible so that light can pass through it, thereby negating heat buildup and color and material degradation.

Thompson notes that color technology continues to evolve from a performance and energy standpoint. “When you co-extrude a color, you’re only handling that product once,” he explains, as opposed to other options such as laminate and paint that require the product to be handled multiple times, thereby increasing the overall cost. “Co-extrusion color technology is continuing to grow across the industry.”

When it comes down to it, flexibility is key. “If you can’t have flexibility, you’re really handcuffed,” says Koch. “We need different solutions with different customers in different areas

of the country because they’re all facing different challenges.”

One challenge of darker colors is heat buildup. Koch explains the key component in weatherability is titanium dioxide, most of which is found in white paint and is what keeps the extrusion from yellowing. Darker colors, however, make it difficult to include the titanium dioxide, thereby making weatherability of darker colors more challenging.

Those dark colors also absorb heat, which can affect material stability. Deceuninck issues guidelines for its darker profiles, including inserting reinforcement to the vinyl profile, opening the closed chambers of the windows for ventilation and, from the installation perspective, ensuring the window opening allows sufficient space for the product to expand when it gets hot. “It starts with materials, but then there’s also guidance that our application team provides to the

customers,” Koch explains. “You have to manufacture it a little bit differently; then when it gets installed, it has to be controlled as well.”

### Sustainability

Much focus in the building world lies in embodied carbon, or the amount of carbon required to produce all of the materials that go into a structure such as concrete, steel and glass. “What that tells me is that if I had a choice between building a new building or remodeling one, I should remodel one,” says Seiling. “There’s no embodied carbon; it’s already sitting there.” That means remodeling and repurposing buildings likely will dominate for the next few years until occupancy rates recover.

Deceuninck recycles its manufacturing scrap and is in its ninth year of being Green Circle certified for recycled content, says Koch. “We are also continually assessing our manufacturing processes and energy usage to reduce waste and consumption.”

Deceuninck’s parent company operates a recycling plant in Belgium that recycles end-of-life product to produce several recycled waste streams, but Koch notes this is more difficult in the U.S. with longer distances. “Most U.S. window fabricators already work with a local scrap company to recycle their end cuts,” he says. “It is one of our goals to start to recycle customer scrap into our products. We are investigating how this can be done in a sustainable way.”

Thompson says up to 25 percent of Quanex’s profiles are made from post-industrial waste. The company uses its own scrap to make up the recycled content, he says.

At the end of life, vinyl windows can be disassembled and the various parts—including the glass, EPDM gaskets, vinyl and any steel or aluminum—can be recycled. “Vinyl windows have a huge future in the green space going forward,” Seiling says. “The amount of recycling capability at end of life is much better for vinyl windows than other products for punched openings.” ■

## REPLACEMENT'S

# ROBUST OUTLOOK



THE REPLACEMENT WINDOW MARKET IS POISED TO ENJOY GROWTH THROUGH 2023 AS DEMAND INCREASES IN THE REPAIR AND REMODELING SEGMENT

BY CASEY OLSON

The replacement window market is a sweet spot in U.S. residential window demand, driven largely by growth in the repair and remodeling segment. Manufacturers and installed sellers serving the replacement market earn above-market profitability and experience faster growth by targeting the homeowner and understanding what influences homeowner purchase decisions. That knowledge, in turn, will help manufacturers and installed sellers further succeed in this robust segment of the market.

### **Strong R&R demand growth**

Repair and remodeling demand generated almost two-thirds of the \$17 billion U.S. residential window product demand in 2020, according to Principia research. R&R volume growth is expected to outperform new construction through 2023, growing at an

annualized rate of 5.3 percent.

Research further shows that total residential window demand will increase by an additional 8.1 million units over the next three years. The R&R market will account for more than 5.3 million new units, with 4.4 million coming from single family. Single-family new construction is also expected to perform favorably over the next three years, but the multifamily new construction segment is not expected to generate any new demand through 2023, mainly due to pandemic-related disruptions.

### **Specialty channels positioned for success**

Replacement windows go to market through a variety of channels, with a heavy reliance on specialty retailers. Two distribution channel nodes have experienced particularly strong growth and

profitability: sell-furnish-install (SFI) and installed sellers. These channels market directly to the consumer and install the windows.

- The SFI channel is where the manufacturer sells directly to the consumer and installs its own products. Examples include Renewal by Andersen and Champion.
- Installed sellers do not make windows; rather, they leverage marketing and sales expertise to sell directly to the homeowner and install the product. Power Home Remodeling and Window World lead this channel.

These channels are positioned for continued success driven by the growth of the R&R market.

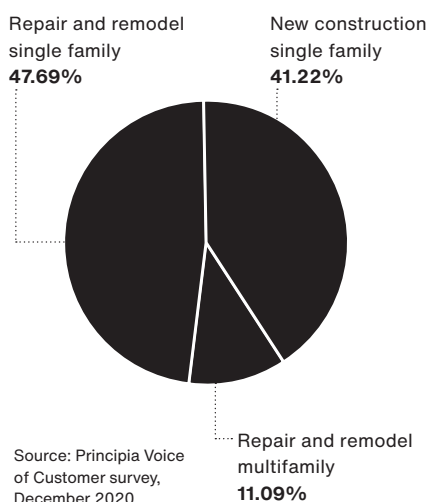
### **The homeowner's role**

Because the homeowner is the decision maker in replacement windows, understanding what matters to them

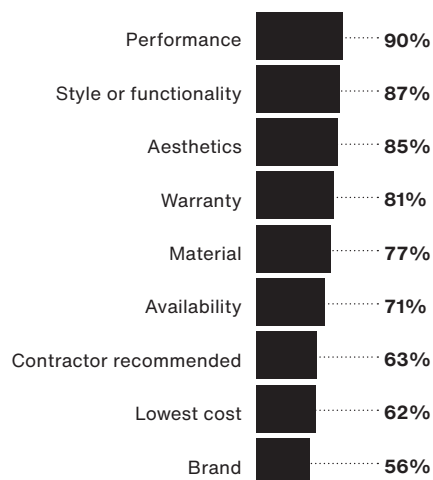


This project featured Kömmerling System 76 custom windows with ultralight control glass. Photo courtesy of Kömmerling USA.

## U.S. residential windows: New demand through 2023



## Importance of factors in replacement window choice



Source: Principia DemandBuilder

is instrumental. Research shows that homeowners spend more when they make the window purchase decision versus when a contractor or builder makes the selection for them. And, homeowners who replaced their windows for aesthetic reasons did so 10 years sooner than those who replaced them for functional reasons.

In a recent Principia survey, product performance, including durability, low maintenance and energy efficiency, mattered most to homeowners in their window selection. Vinyl was the most prevalent frame material cited, followed by composite windows. Wood was the most commonly replaced material.

Window style or functionality and aesthetics also ranked as important factors. Double-hung, single-hung and sliding styles accounted for the bulk of replacement windows. Casement, however, has been increasing over time and recent social listening buzz Principia tracks has been around bay windows and sunrooms.

Brand ranked least important to homeowners in window selection, but brand awareness and positive brand perceptions reinforce the homeowner's peace of mind with their purchase decision and their confidence that the manufacturer will stand behind their products. Brand also helps justify a higher ticket price for higher-quality replacement windows, especially because brand importance increases with homeowner income. Homeowners clearly value product performance and strong consumer brands play a supportive role. ■

Casey Olson is the senior industry analyst for Principia Consulting, where she is responsible for managing and executing primary and secondary research efforts to provide critical market insights. Her focus is on executing and preparing topical industry reports and Principia's BuilderSeries research data products.



REPLACEMENT

# WINDOWS



1

## Plum Street Residential Renovation

SAN DIEGO

CONTINUED ON PG. 42

### Online

Visit [windowanddoor.com](http://windowanddoor.com) to read commentary from window manufacturers about the state of the replacement window market.

**Project Team:** Architect, Will & Fotsch Architects Inc., La Jolla, California; Builder, Royal Home Remodels Inc., Alpine, California; Interior decorator, Tidal Interiors, La Jolla, California; Kolbe

dealer, Dimensional Millwork Inc. (DMI), San Diego

**Window Product:** Kolbe VistaLuxe Collection, including sliding windows, casements, direct

sets, awnings, French doors, a swinging door, sliding doors and multi-slide doors.

**The Project:** This renovation was designed for casual entertaining while taking

advantage of the climate and San Diego skyline. It took just 12 months to complete the renovation, construction and finishes on the 3,700-square-foot property, originally built in the 1960s.



# IN ACTION



One of the goals of the remodel, which involved re-imagining the existing floor plans, was to frame views. The architect notes the “connection of the frame detail between the doors and the windows provides a consistency throughout the house. It gives the windows a distinctive look and feel.”

Two multi-slide doors on the deck connect the great room to the dining room and kitchen. Headers in the dining room and kitchen had to be reframed to accommodate the 8-foot height of each door, each of which is six panels wide, opening in the center with three panels on each side.

The windows and doors, with features such as thermal spacers and various glass choices, contributed to meeting California’s Title 24 Building Energy Efficiency Standards, according to Kolbe.

**Photo credit:**

Zack Benson Photography;  
San Marcos, California

2

## Kitchen Remodel

LOS ANGELES

**Window Product:** Marvin Signature Ultimate Picture, Marvin Signature Ultimate Glider, Marvin Signature Ultimate Multi-Slide Door

**The Project:** The home’s existing windows were craftsman style and didn’t match the rest of the house so when the homeowners decided to remodel the kitchen, they focused it around well-being, which involved introducing as much natural light as possible and bringing natural elements into the design of the home. A picture window, which brings light to the kitchen table corner, and glider with bare wood frames fit into the existing window openings. And, a multi-slide glass door was “one of the biggest game changers” for letting in natural light, according to the homeowner.

**Photo credit:** Carlos Naude

3

## The Two Flat

CHICAGO

**Window Product:** Andersen 100 Series windows and 100 Series insert window

**The Project:** The windows in this 1890 two flat in Chicago’s Logan Square neighborhood were a mix of rotted wood from the late 1800s and some aluminum replacement windows. Although most retained some functionality, many were crooked, leaky and inefficient, according to the owners, who purchased the two flat as an investment property.

The replacement windows fit into existing window frames without disturbing interior or exterior trim, thereby allowing the owners to preserve more of the historic home.

**Photo credit:** Yellow Brick House – Kim and Scott Vargo

4

## Grand Lakefront Home

SKANEATELES, NEW YORK

**Project Team:** Architect, Meyer & Meyer Inc., Boston

**Window Product:** Hope’s Empire Bronze and Jamestown 175 Series windows, and Hope’s Empire Bronze and Jamestown 175 Series doors

**The Project:** Built in the 1900s, this 14,000-square-foot, four-story waterfront mansion was redesigned and reconfigured into a residence in accordance with the late 19th-century Victorian architecture of its neighbors. This project involved installing 26 fixed solid bronze windows, including five curved windows, plus six operable windows and 11 pairs of swing doors.

The curved windows were curved to an inside radius of 203 3/8-inch and glazed with curved-on-plan glass to fit frames measuring 22 by 61 inches.

**Photo credit:** Christian Phillips Photography

5

## Coco Kelley Kitchen Remodel

SEATTLE

**Window Product:** Milgard’s Ultra Series windows and Tuscany Style Double Sliding Door in White

**The Project:** The original slider windows in the kitchen were drafty and the sliders often stuck. The homeowners chose to not change the size or location of any of the windows and referred to Milgard’s Architecture Guide to determine what windows would best fit with the Tudor-style home. White windows over the sink and in the breakfast nook match existing trim. The homeowner reports using less heat in the winter and increased sound abatement properties.

**Photo credit:** Photography by Ellie Lillstrom. Interior Design by Cassandra LaValle of Coco Kelley











6

## Energy-efficient Replacement

WHEATON, ILL.

**Project Team:** Contractor, Fox Valley Unlimited

**Window Product:** Mezzo Full-frame Replacement System by Alside and Trimworks Decorative Accents

**The Project:** One of the homeowner's goals was to reduce energy use, which involved replacing the no-longer-operable 35-year-old wood frame windows. The replacement windows are designed to prevent water intrusion and air infiltration. In addition, the project incorporated wide window casings through the system's snap-fit decorative accents, which also provided a consistent aesthetic across all windows in the home. Replacing the siding yielded additional insulating properties.



7

## Whole house remodel

DALLAS/FORT WORTH, TEXAS

**Project Team:** Sales and installation, Advanced Window Systems

**Window Product:** Jeld-Wen Siteline Bronze Clad wood casement windows featuring AuraLast pine

**The Project:** The homeowners

wanted to update their 20-year-old aluminum windows with windows that would fit their home's design and offer performance and longevity benefits. The bronze-clad windows met their aesthetic requirements and the treated wood is reported to be termite- and rot-resistant.

Shortly after installation this year, Texas experienced the Arctic weather conditions with below-freezing temperatures for a week. The homeowners report their home maintained a consistently more comfortable temperature than neighboring homes during that time.





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# Products



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01



02



03



04

## 01 / Pella Corp.

Pella Corp. unveiled the Easy-Slide Operator, a hardware solution that allows homeowners to slide the operator up to open and down to close the window, offering a smoother operation than continuously cranking, say officials. The product, which features a minimalist, low-profile look, is now available on Pella Impervia casement and awning windows, and was tested to 20,000 cycles. **888/847-3552 | [PELLA.COM](http://PELLA.COM)**

## 02 / Paradigm

Paradigm introduced Paradigm Vendo, a digital selling solution designed to help residential renovation sales professionals manage the entire spectrum of in-home and virtual selling. This web-based application leverages versions of the product catalogs in-home sales professionals are already using and showcases products, marketing materials, and purchasing options on any device. It also syncs with existing CRM technology to manage the customer experience from a single application. **608/664-9292 | [MYPARADIGM.COM](http://MYPARADIGM.COM)**

## 03 / TruStile

TruStile released its Wood Entry Door Systems, which encompass a selection of door, sidelite and transom combinations. Professionals and homeowners can select from entry systems like modern, traditional, coastal or craftsman styles, or build a custom entry system around one of TruStile's 500 door styles now available as entry doors. Developed with Marvin, the new offering includes the use of new materials like Tricoya, an exterior-grade MDF.

**877/283-4511 | [TRUSTILE.COM](http://TRUSTILE.COM)**



#### 04 / Rehau

Rehau launched the System 190 hung-slider design with integrated Raushield storm protection system for the U.S. market. This system extends the high-performance uPVC side-load window line with a solution for meeting hurricane impact codes in residential and light commercial buildings. Designed for new construction and replacement, the new 3 1/4-inch frame with Raushield features integral anchor points allowing for quick, easy installation of storm protection fabric that meets Zone 3 wind load requirements.

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01



02

### 01 / GED Integrated Solutions

GED Integrated Solutions updated its RoboClean, RC2000, Twin-Head Vinyl Corner Cleaning System to include a dedicated sash version—RoboClean RC2000-S. This 12-axis robotic machine provides complete corner cleaning with no need for touch-ups, consistent, repeatable movements, and presentation of tools at previously unattainable angles, according to the company. RoboClean's Star Hub is designed to rotate to present tools at multiple angles of attack.

330/963-5401 | [GEDUSA.COM](http://GEDUSA.COM)

### 02 / Andersen Windows

Andersen expanded its blinds-between-the-glass to be available on its A-Series gliding and hinged inswing and outswing patio doors. The blinds are located between the panes of insulating glass and feature a cordless design. They are available in slate gray or white, and can be ordered with any exterior or interior finish offered on the A-Series patio doors. 800/426-4261 | [ANDERSENWINDOWS.COM](http://ANDERSENWINDOWS.COM)



03

### 03 / Velux

Velux Skylights introduced new colors for stock and special-order blinds. Velux blinds are available in four types: room darkening, light filtering, manual venetian and solar-powered blackout. The blinds are each compatible with remote- or app-activated control and the Velux Active climate control and monitoring system. 800/888-3589 | [VELUXUSA.COM](http://VELUXUSA.COM)

# People ON THE MOVE



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**Roberts**

## **The Fenestration and Glazing Industry Alliance**

hired *Amy Roberts* as its new director of Canadian and technical glass operations. Roberts

will be training with Marg Webb, FGIA glass products and Canadian industry affairs director, prior to Webb's retirement later in 2021. Roberts has more than 20 years of industry experience in both residential and commercial window manufacturing, as well as glass and insulating glass manufacturing, according to an FGIA statement.

## **The Window and Door Manufacturers Association**

installed its new leadership team. The Board elected *Steve Tourek* of Marvin as the association's 2021-2023 chair. Tourek replaces outgoing Chair *Bob Lewis* of Masonite International Corp.

In addition to Tourek, the other members of the 2021-2022 WDMA Executive Committee are: vice chair/treasurer, *Emily Videtto*, Pella Corp.; executive committee door representative, *Fenton Challengren*, Therma-Tru Doors; executive committee window representative, *Jeff DeLonay*, Kolbe Windows & Doors; executive committee supplier representative, *Dave Pinder*, Cardinal Glass Industries; and immediate past chair, *Bob Lewis*, Masonite.



**Adamson**

## **Fenestration Canada**

welcomed *Terry Adamson* to its technical team, effective May 2021. His addition creates a technical department within the

organization, which the organization says will help member companies "successfully navigate the challenges presented by

the accelerating pace of change in the regulatory environment."

**Deceuninck North America** welcomed *Lytia Watson* as vice president of human resources, and *Brian Haigis* is the new vice president of finance and accounting. Haigis succeeds *Logan Arumugam*, who retired in March after 30 years with the company.

Watson has more than 25 years of experience in operations, sales and marketing, supply chain and multi-site HR leadership in the automotive, distribution, aerospace and industrial manufacturing industries.



**O'Connor**

## **Roto North America**

hired *Kevin O'Connor* and *Suban Ari* to the team.

O'Connor joined as the business development executive and will focus on helping Roto further develop the commercial aluminum market. Ari joined the company as a design engineer and brings with him experience in the aerospace and machine design sector.



**Ari**



**Murray**

## **Quanex Building Products**

named *Cristina Murray* as its new North American Director of Marketing. Murray brings 20-plus years of marketing

and branding experience to her role, with her most recent tenure at PPG Industries. She is based out of the Akron, Ohio, offices.



**Orlando**

**FeneTech** promoted *Nick Orlando* to development group manager. He will be responsible for the software development production and service teams.



**Harger**

## **Kolbe Windows & Doors**

promoted *Mark Harger* to vice president of the Manawa Division in Wisconsin. In this role, he joins the company's

executive team and reports directly to Kolbe's president, Jeff DeLonay. Harger brings with him more than three decades of experience in the wood, window and door industries, including 15 years with Kolbe.

## **Ergo Robotic Solutions**

promoted *Ryan Nudi* to president. Prior to joining Ergo in 2018 as head of administration and logistics, Nudi worked with Ayco, a Goldman Sachs company, for five years. "Ryan brings a background of professional management skills to our small company," says co-founder Jerry Nudi. "We are confident that he will steer this business to not only remain as the leader in quality but our expansion throughout North America."



**Boza**

## **PGT Innovations Inc.**

elected *Xavier Boza* to its board of directors. Boza was appointed to serve on the board's compensation committee. He will serve

as a Class I director and the board expects to nominate him to stand for election as a director at PGT Innovations' 2022 annual meeting of stockholders.



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### Senior Technician

Stürtz Machinery Inc is seeking talented senior technicians with experience in industrial machine assembly and factory testing preferably in the fenestration industry. Knowledge of PLC's, electronics, wiring schematics and assembly drawings are required. Must be reliable and able to work in a team environment in our Twinsburg OH facility. Occasional travel in the US and Canada is required.

Stürtz Machinery Inc offers a competitive compensation program and an excellent opportunity in a fast-paced growing business committed to success.

Please send resumes to [tmehring@sturtz.com](mailto:tmehring@sturtz.com).



### Production Manager

Eastern Architectural Systems (EAS) is seeking a highly talented and accomplished Production Manager who brings results-oriented experience in custom manufacturing as it relates to quality, complete/on-time delivery and development of personnel.

Send resumes to:  
[MHolland@easternmetal.com](mailto:MHolland@easternmetal.com)



### Field Service Technician

Stürtz Machinery Inc is seeking a field service technician with experience in industrial machinery repair and installation. This person will possess hands on skills and knowledge of PLC's, electronics, wiring schematics and basic computer skills. The position requires self-motivation, accountability, and willingness and ability to travel throughout the US and Canada to support customer needs with installations including operator and maintenance training.

Stürtz Machinery Inc offers a competitive compensation program and an excellent opportunity in a fast-paced growing business committed to success.

Please send resumes to [tmehring@sturtz.com](mailto:tmehring@sturtz.com).



### Service Manager

Stürtz Machinery Inc is seeking a highly talented service manager with experience in the fenestration industry to develop and manage its growing needs. This person will possess hands on skill and knowledge of industrial machinery as well as excellent written and verbal skills. The position will be responsible for CRM development, managing, scheduling, and training field service technicians while working with our operations team in our Twinsburg OH facility. Willingness and ability to travel occasionally throughout the US and Canada is required.

Stürtz Machinery Inc offers a competitive compensation program and an excellent opportunity in a fast-paced growing business committed to success.

Please send resumes to [tmehring@sturtz.com](mailto:tmehring@sturtz.com).

For a price quote,  
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Stürtz Machinery	55	330/405-0444	email: info@sturtz.com
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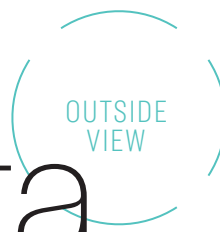
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# Market Data



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## A Solid Year // Construction Spending to Modestly Increase, But Economic Unknowns Remain

*Chris Kuehl, Armada Corporate Intelligence, expects a “jagged swoosh” recovery for the U.S. where the country will experience periods of growth followed by periods of decline over the next several years, but collectively still trend positively.*

### HERS-rated Homes

299,755

homes in the U.S. were HERS rated and issued HERS Index Scores in 2020. Source: Residential Energy Services Network

### New Home Sales

4.3%

Growth in newly built, single-family home sales in January, from an upwardly revised December reading. Source: U.S. Department of Housing and Urban Development and U.S. Census Bureau

### Delayed Work

66%

of surveyed contractors indicated they saw delays or cancellations in work, down from a peak of 85 percent. Source: Farnsworth Group COVID Home Improvement Tracker

February 2021 window and door stock index decrease

-3.9%

February 2021 S&P 500 increase

+1.2%

Year-over-year return for window and door index

20.3%

Year-over-year return for S&P 500

23.3%

The window and door stock index underperformance was caused by the continued rollout of the COVID-19 vaccine, causing the rotational trade out of residential names that outperformed earlier in the pandemic (e.g., new residential and residential repair & remodel). This was exacerbated during the month when the Commerce Department reported a 6 percent decrease in housing starts. Record high lumber prices impacted the broader construction market, but the forward-looking permits report continued to increase, showing that the fundamentals for residential repair & remodel and new construction activity continue to be strong and investors continue to expect growth in 2021. Source: Lincoln Financial

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[info@sturtz.com](mailto:info@sturtz.com)  
[www.sturtz.com](http://www.sturtz.com)





“I honestly don’t know what we would have done without FeneVision in 2020.”

Pat Heytens, President FEN-TECH

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