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The Manufacturing Issue

Finding the New Normal:
A special report on the current
state of manufacturing

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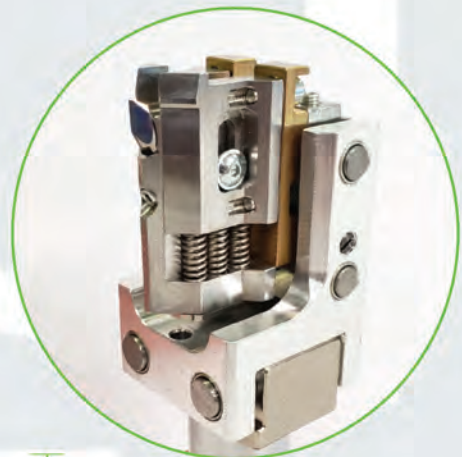
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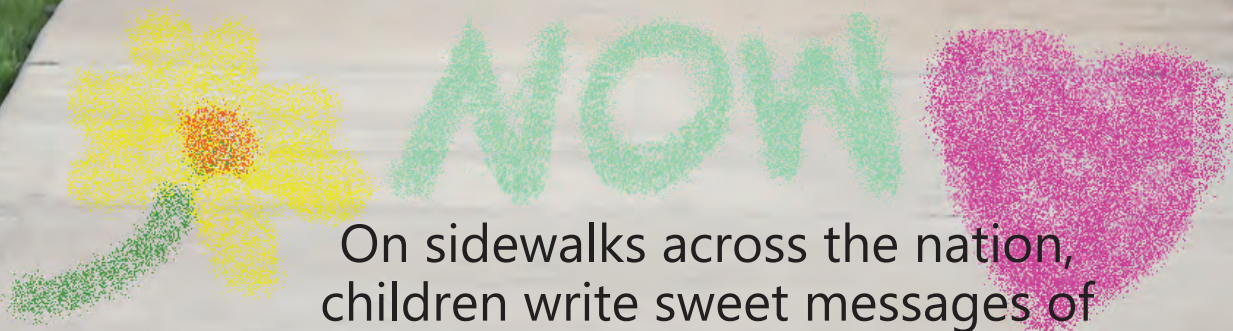
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On the Cover: A Hayfield Window & Door technician inspects glass on the Billco Glass Cutting System. Hayfield operates in a 190,000-square-foot manufacturing facility, with an additional 6,000 square feet of office and showroom.

Note: Window + Door's annual Top Manufacturers list, detailing North America's largest manufacturers of residential windows, doors, skylights and related products, based on sales volume in 2019, is available online at glass.org/resources/market-intelligence.

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Over the past few months, Window + Door has produced dozens of insightful and informative articles to help the fenestration industry navigate the current and constantly evolving pandemic. Our original reporting combined with proprietary webinars and resources from parent organization, the National Glass Association, is intended to help build the new normal. In case you missed it, check out:

Now and Next Webinar Series: glass.org/covid-19-webinars

- Legal keys to COVID-19
- Survive and thrive/sales and marketing tips
- Essential steps to a business plan
- All about SBA loans

Resources from NGA: glass.org/covid-19-information-nga

- Families First Coronavirus Response Act: what you need to know
- Labor, HR and paid leave: help staff understand the new laws
- Best practices for working in customers' homes
- Emergency financing options and analysis

Special Digital Edition: windowanddoor.com

- Insights on protecting finances and applying for assistance
- Tips on selling from home and keeping employees safe on the jobsite
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- Essential roles for employees

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5 Ways to Improve Finances

By Marco Terry, Commercial Capital LLC,
comcapfactoring.com



How to Sell from Home

By Madeleine MacRae, MM MacRae Coaching &
Consulting, mmmacrae.com

Window + Door™ (ISSN 1525-1195), Volume 28, Number 3. This periodical is published six times a year, January/February, March/April, June/July, August/September, October/November and December by the National Glass Association, 1945 Old Gallows Road, Suite 750, Vienna, VA 22182. There is no charge for subscriptions to qualified requestors in the U.S. and Canada. All other subscriptions will be charged \$49.95 in the U.S. and Canada, and \$79.95 in all other countries. Periodicals postage paid at Vienna, VA, and at additional mailing offices. POSTMASTER: Send changes of address to Window + Door, PO Box 419, Congers NY 10920. Canada Post: Publications Mail Agreement #40612608. Canada Returns to be sent to Bleuchip International PO Box 25542, London, ON N6C 6B2, Canada. For all subscription inquiries, please call 1-800-765-7514. ©2020 National Glass Association. All rights reserved. Printed in the U.S.A.

WINDOW+DOOR

Produced by



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PPP Update: Loan Forgiveness, Audits and More

The Small Business Administration's Paycheck Protection Program offers much-needed emergency financing for companies affected by the COVID-related economic downturn. However, the program has introduced numerous questions and concerns among business owners, many of whom are now concerned about available financing, future audits, loan forgiveness and more.

There is particular concern among construction industry companies. "There are a lot of questions of whether firms are exposing themselves to audits," according to Ken Simonson, chief economist for the AGC of America, who spoke during a ConstructConnect forecast webinar.

The National Glass Association provides answers to the following top questions regarding PPP.

Q: Can I still apply for a PPP loan?

A: The SBA announced it resumed accepting PPP applications from lenders April 27 and is still open to applications. While the first round of PPP financing (\$349 billion) was exhausted in two weeks, as of press time, the second round (\$310 billion) continues to be available and could be for some time.

Q: What are the Payroll Requirements?

A: PPP loans can be fully forgiven, provided that 75 percent of the loan goes to payroll. This labor requirement is particularly challenging for construction firms, says AGC's Simonson.

Contractors are concerned "they may not wind up qualifying for the rather stringent requirements for maintaining headcount," he says.

Q: I received a loan. Will I be audited?

A: "The Treasury said that the SBA will audit every loan over \$2 million," says Marco Terry, managing partner for Commercial Capital LLC. "This would be challenging to enforce. Audits take time, resources and money. The Treasury also said that companies that took under \$2 million will be assumed to have acted in good faith."

Terry notes that "everyone that has a loan should be prepared for an audit, just in case. Owners should keep accurate and up to date accounting, receipts (especially for large expenses), and above all payroll/payroll tax information," he says.

Q: How can I apply for loan forgiveness?

On May 15, the SBA issued guidance on loan forgiveness and posted the application. "Forgiveness is based on the employer maintaining or quickly rehiring employees and maintaining salary levels. Forgiveness will be reduced if full-time headcount declines, or if salaries and wages decrease," according to the SBA.

Main Street Lending Program Overview

As of press time, the Federal Reserve has yet to announce a start date for the \$600 billion Main Street Lending

Program established under the CARES Act. However, the Window & Door Manufacturers Association encourages small and mid-sized businesses interested in the Program to review the Eligible Borrower requirements.

The Program offers three different secured or unsecured four-year term loan options with principal and interest payments deferred for one year for eligible borrowers. Though the Program cap is substantial, the program is open to U.S.-based businesses with up to 15,000 employees or 2019 annual revenues up to \$5 billion, so the cap could be met quickly, according to WDMA.

Established by the Federal Reserve to increase the availability of credit for small and medium-sized businesses that were in sound financial condition before the onset of the COVID-19 pandemic and are now in need of financial assistance, the Program is designed to support the provision of credit to such businesses.

To implement the Program, the Federal Reserve will purchase up to \$600 billion in participations in loans originated by Main Street eligible lenders and made to small and mid-sized businesses that also meet certain Main Street eligibility requirements. Unlike Paycheck Protection Program loans, Main Street loans are full-recourse loans and are not forgivable.

WDMA compiled a summary document for its members with additional information.



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As we continue to look ahead and plan for the Summer and Fall of 2020 we do so knowing our risk mitigation structure has performed perfectly throughout the COVID-19 crises. We want to assure you that we are committed to being responsive to the needs of our customers as the situation evolves.

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➔ News

IN THE NEWS:

Month in Review

Tracking COVID-19

Fenestration companies' response to COVID-19 dominated the clicks in Window + Door weekly and on windowanddoor.com in the months of April and May. Among them: **Jeld-Wen** temporarily suspended operations at some locations; **Marvin** reported it would furlough employees to avoid layoffs; **MI Windows** closed two Milgard production facilities; **Renewal by Andersen** employees tested positive for the coronavirus; and **PGT** consolidated manufacturing facilities (and also announced intentions to hire 150-plus new employees).

Many readers were also tracking updates and recommendations from the Centers for Disease Control and Prevention and the U.S. Department of Labor's Occupational Safety and Health Administration. **OSHA** issued guidance on respiratory protection in April, as well as an alert listing safety tips employers can follow to help protect manufacturing workers from exposure to the coronavirus in early May. OSHA also released a memorandum providing interim guidance for enforcing the requirements of recording cases of COVID-19, which went into effect on May 26. This guidance is intended to be time-limited to the current COVID-19 public health crisis, and officials advise checking the OSHA webpage for updates. The **CDC** issued updated guidance for how to clean and disinfect public spaces, workplaces, businesses, schools and homes.

Related, readers sought resources from the **NGA**, including insights on the CARES Act and on how to navigate paid leave options for employees. NGA's new webinar

series, Now and Next, also provided practical advice on virtual sales, marketing, legal issues and keeping employees safe during the pandemic.

In Other News...

- The Ohio Bureau of Workers' Compensation recognized **Woodcraft Industries**, a **Quanex Building Products** company, for its Middlefield and Orwell, Ohio, locations' safety records.
- In big news from the UK, **Profine purchased extrusion and finished products assets** from the administrators of Aperture Trading Ltd, for an undisclosed sum.
- **Yawal S.A.** launched a U.S.-based operation that will offer high performing windows and doors for the residential and light commercial markets.
- Vancouver-based startup **Click Materials** announced a development partnership with **Cardinal Glass Industries** aimed at bringing Click's smart window solution to the homes of millions across North America.
- **GED Integrated Solutions** made revisions to the look and feel of its software. The company retired NxWare and renamed the software department and group of products, now called GED Software.
- **FeneTech** hosted its first-ever Virtual User Conference, where users from over 106 different window and door manufacturers and glass fabrication companies from five continents attended via video conferencing.



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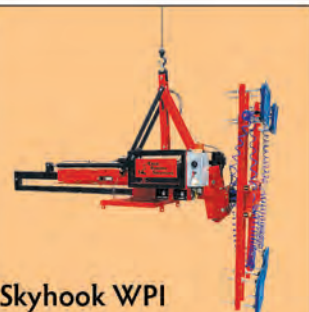
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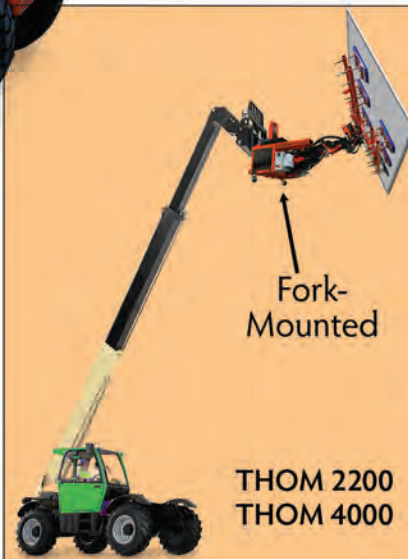


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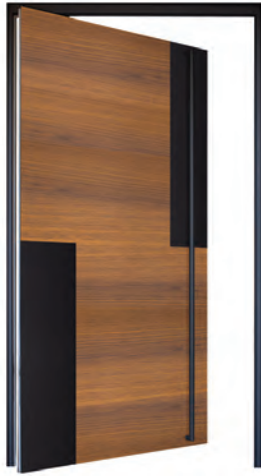
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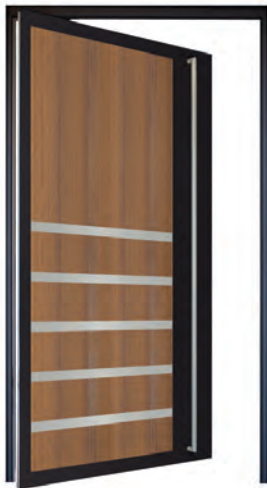
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Finding New Opportunities

How to confront the down cycle as an opportunity zone to re-evaluate and improve business

By Laurie Cowin

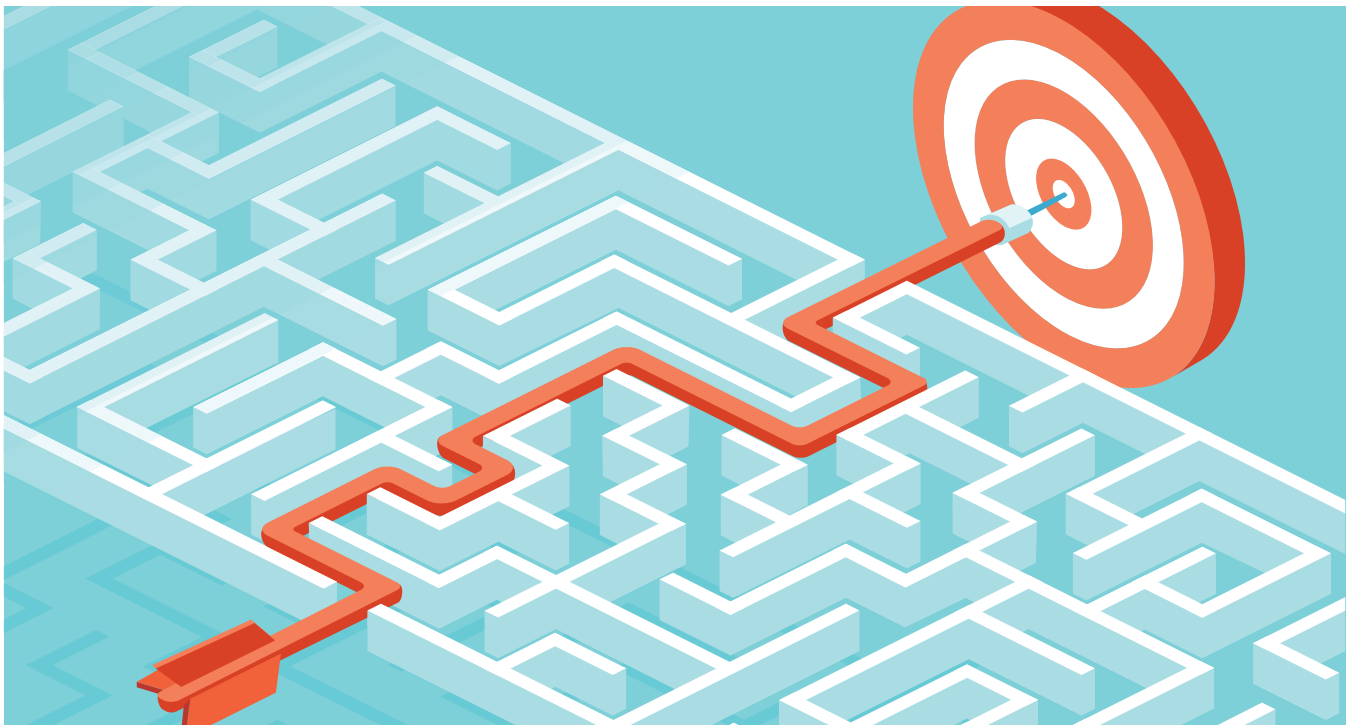
The coronavirus has muddled the economic and business outlook waters for many. Craig Webb, president of Webb Analytics, said in a May 1 webinar from the Window & Door Manufacturers Association that what is clear is “we’ll have a long, slow period to get back to normal.” He also described the term “normal” as a misnomer. “We won’t get back to where we were,” he says. “There’s a new normal out there.”

Although construction bans are being lifted, the impact around the coronavirus won’t diminish for quite a while, Webb predicts. Those who work in the field will need to be cognizant of social distancing, wearing personal protective equipment, and scheduling changes to accommodate possible staggered shifts, breaks, work areas and even new procedures for material drop-offs that limit contact. “It’ll take longer to do the kind of work that used to be done in a relatively short time,” says Webb.

Right now, dealers “aren’t necessarily hurting that bad,” says Webb, but noted the effects are highly regional. One Georgia-based dealer Webb spoke with cited the best April ever in the business’s 11 years. Meanwhile, some dealers in New York and Michigan, which had stringent construction bans, closed.

Nearly all of the business dealers have now reflects previous orders, purchases and projects put in place by builders, says Webb. Starts rates haven’t declined a lot yet. The current problems, Webb says, are further up the chain with people visiting home projects, applying for mortgages, filing paperwork and making decisions about major remodels.

Consequently, the strong activity dealers currently report will peter out as the problems trickle down. “It’s possible to see a lull relatively soon,” says Webb. “The challenge won’t be getting through right now; the challenge is getting through



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July. It'll take a while for business to come back up."

High unemployment also means that a lot of people who used to have money now don't, which Webb predicts will result in slashed spending in remodeling, repair and replacement, and new homes.

Webb organized a three-day summit in late April to discuss the current landscape with dealers and shared several key takeaways he came away with:

- Dealers started the crisis with robust sales, which remain "surprisingly decent" in most places.
- Recent technological advances, such as cloud computing, videoconferencing and faster Internet, help a lot.
- A lot of dealers sought Paycheck Protection Program money through the SBA, although it's unknown how many got funds. Dealers report layoffs have been minimal.
- Do-it-yourself business rose; big-ticket remodeling projects that require a professional dropped.
- The next challenge for many dealers will be keeping new walk-in customers.
- Dealers are starting to reduce inventories based on stress tests of their revenue outlook. They are living more on existing inventory and not buying ahead as much.
- Dramatic increases in videoconferencing and data reliance are likely to stay.
- In general, agile companies with strong cultures, financial discipline, some e-commerce and access to cash and capital will do well.

The weak will get weaker, Webb predicts.

Ultimately, dealer prospects depend on builder prospects. Webb hasn't heard consistent predictions from economists about what will happen with builders. What he does feel is certain, though, is that publicly held builders will be OK because of better access to capital and financing, whereas privately held builders that are more dependent on bank lending will struggle more because banking and credit access are long-term concerns.

Construction is cyclical in nature and Webb says to look at down cycles such as this as "opportunity zones." Really good dealers, he says, have been thinking about and planning for down cycles. As such, "the dynamic of the supply market will change a little bit because some have been thinking about this problem and others will be caught flat-footed." ■

Get-ahead Strategies

Webb posed nine strategies for dealers to get ahead now in preparation for the years ahead.

1 If production has slowed, use this time to spot inefficiencies and improve your processes.

2 Practice video conferencing. Learn how to add images to your presentations. He also recommends changing thinking about regional sales reps. "Don't think of regional reps as regional," he says. Rather, try to match the personality of sales people with the personality of customers. If more selling happens by video conference, it isn't as important to have geographical proximity, but matching personalities is important.

3 Start incorporating disaster response into your company's plans. Make agility part of the company's culture. "If you can build a team that can handle challenges," says Webb, "you already won half the battle when new challenges come along because an idea of what to do is already in your culture."

4 Evaluate how telework is going. Which jobs could become virtual rather than bound to the office? Which could be handled by people who live nowhere near you? Which out-of-work people might be great candidates for jobs with you?

5 Rely on your data more deeply and more often. Get a sense of where things are, what business is like and take actions accordingly. Use those metrics to reduce personal biases in performance reviews.

6 Explore free, cloud-based alternatives to what may be clunky legacy systems.

7 Evaluate your team. Which team members are showing unexpected talents in these crazy times? Who deserves a battlefield promotion?

8 Many businesses probably stopped doing certain things because of this pandemic. Which practices don't need to be revived?

9 Communicate and be transparent, even when you're uncertain or must deliver hard truths.

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Left: Masonite associate receives “Certificate of Completion of Kaizen Facilitator Yellow Belt Course.” **Right:** Masonite Kaizen workshop.

Lean Manufacturing

Tried-and-true lean processes lead to an extraordinary customer experience



By Randy White

In today’s manufacturing environment, where processes and productivity are constantly evaluated, lean manufacturing techniques and training remain core to continuous improvement. In the lean manufacturer mindset, everyone wins. Companies save money, workplaces run efficiently and safely, product manufacturing is simplified, and jobs are made easier. The concept also takes employees out from behind desks and onto the *gemba* or where the work gets done—where processes can be practiced and evaluated in realistic scenarios.

While there are many ways to drive lean manufacturing, companies that invest in their employees typically achieve the most success. Internal training and certification programs are critical to long-term sustainability because of their ability to build capability within and throughout the workforce, contributing to higher levels of employee engagement. This ultimately leads to daily continuous improvement with an end goal of delivering an extraordinary customer experience.

Employee engagement

People remain a manufacturer’s most valuable asset, even as modern manufacturing evolves. When people have a voice in what they do, they are more engaged and have more ownership in making high-quality products for their customers. Through lean Kaizen workshops on the plant floor, associates of all levels come together to have their voices heard and make proactive, incremental improvements to the product manufacturing process.

Masonite, for example, focuses on employee development internally, empowering and supporting plant associates, engineers and management to gain lean certification through the Masonite Mvantage system, founded in and evolving since 2015. Masonite recognizes that improvements are not made in the conference room; the recommendations from employees involved in the day-to-day work are what set a manufacturer up for success.

The company asks employees to identify a project, simulate the scenario, then tackle it as a team



“FeneVision supports the way we do business.”

Laura Doerger-Roberts
President, Vinylmax Windows

When Vinylmax Windows’ founder Jim Doerger passed down his family-owned business to his children—a business he had begun in 1982 with a mere 50-window per day capacity—he emphasized what has become a company-wide caveat often repeated among the Vinylmax family: “Decisions should be grounded in reason.”

One of those decisions was **FeneVision**.

With FeneVision, Vinylmax learned that the customer experience was not just part of *their* mission statement, but was also a cornerstone of FeneTech’s—an example of this is FeneVision WEB. Once implemented, Vinylmax discovered that FeneVision WEB, which serves over 500 of their customers, proved to be a seamless experience. “The tool is intuitive and easy to use, and it frees up our employees to do what they do best—manufacture outstanding products.”

Read more about the partnership between Vinylmax and FeneTech at <http://fene.tech/vt>. To arrange a demo or onsite visit, contact FeneTech at 330.995.2830 or email us at info@fenetech.com.



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on the plant floor. Upon completion, the employees earn their lean certification. Through this approach, employees are provided with the tools they need to continuously improve the work they are involved in every day.

Efficient processes

Kaizen workshops provide an invaluable opportunity for employees to identify and eliminate waste from the processes they are involved in daily as part of a total team approach. Process improvement and waste elimination are integral pillars of lean manufacturing.

Process improvement—from where to house tools to proper workload balancing to the development of standard work—builds on the idea of root cause analysis by the people making products each day. Waste is defined as any activity that does not add value for the customer. By focusing on identifying and

“
WHEN PEOPLE HAVE A
VOICE IN WHAT THEY DO,
THEY ARE MORE ENGAGED
AND HAVE MORE
OWNERSHIP IN MAKING
HIGH-QUALITY PRODUCTS
FOR THEIR CUSTOMERS.
”

eliminating waste, processes are made more efficient and reliable, leading to improved quality and customer service.

Extraordinary customer experience

Creating an extraordinary customer experience is the goal of any lean operating system, and at the core of

that system is a corporate culture that embraces lean thinking and commits to the cycle of continuous improvement. When coupled with lean processes, developing and investing in employees will result in delighted customers who will see consistent service performance and consistent product quality.

Organizations that create a lean culture are committed to constantly improving their products and processes. It is through this cycle of continuous improvement that benefits grow over time and deliver breakthrough results. ■

Randy White is the senior vice president, global operations and supply chain of Masonite International Corporation, with more than 25 years of industry experience in implementing lean operating systems and driving growth and profitability through operational excellence.

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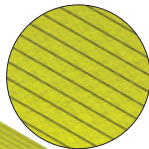
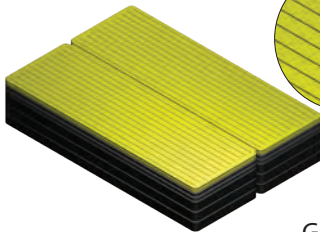
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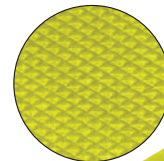
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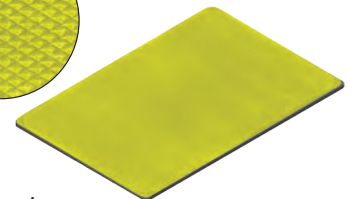
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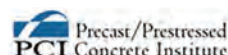
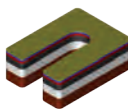
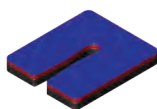
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Insulating Glass

IG certification testing and application workshops help ensure long-term energy savings



By Janice Yglesias

Insulating glass has become the standard for window units intended for all but the southernmost parts of Florida, Texas and other regions in the Southwest U.S., Double glazing is reaching near-saturation market penetration in the U.S. of 97 percent of residential applications, according to the AAMA U.S. Industry Statistical Review and Forecast.

One of the important factors in the overall long-term thermal performance of a complete fenestration system is the performance and durability of its insulating glass. In addition to the glass panels and edge spacer, an IG unit consists of a rather complex combination of desiccants, sealants, gas fill, glass coatings (low-emissivity, reflective, etc.) and (optionally) muntins or grids. All of these must work together to prevent failure.

Despite this complexity, IG has an excellent track record for durability. Yet, failures can occur. Compromised spacer seals are one of the most common failure modes, which allow moisture to penetrate the space between the panes of glass and condense onto the glass surfaces to cause fogging or frost. Also, any original inert gas fill (typically argon) can slowly leak out, lessening the thermal insulating performance. In addition, the oils, solvents and plastic in the spacers, sealant, desiccant, solvents, and any muntins or grids can release a volatile “chemical fog” that can deposit on the glass surfaces within the IG unit. Certain low-E coatings can oxidize as a result.

Specifications

The ability of an IG unit to resist such failure is spelled out by recognized consensus specifications in the U.S. and Canada. The foundational specification is either ASTM E2190-19, Standard Specification for Insulating Glass Unit Performance and Evaluation (originally released in 2002), or the National Standard of Canada CAN/CGSB-12.8-2017, Insulating Glass Units. Both outline performance requirements indicative of durability for IG units with one or two airspaces (double or triple glazing).

To meet the North American Fenestration Standard, windows must be constructed with IG units that meet ASTM E2190 or CAN/CGSB-12.8,

which is also required for third-party thermal performance certification by the National Fenestration Rating Council and, by extension, for inclusion in the Energy Star program.

ASTM E2190 references several essential test methods that use UV radiation and elevated temperatures to impose accelerated simulated weathering conditions in the laboratory to assess IG performance and establish third-party certification. The standard requires that the units:

- Pass a dew point test,
- Resist high humidity and weather cycling,
- Do not have internal components that release chemical substances that could potentially affect the integrity of the unit, and
- Retain a minimum quantity of inert gas after being cycled through real-world condition simulations.

The CAN/CGSB 12.8 standard has a similar testing protocol of initial dew point, volatile fog, humidity and weather cycling, and argon gas content, but with variations in some of the prescribed requirements and procedures.

Additionally, to help with understanding how IG units pass such rigorous testing, earn certification and maintain performance over many years of service, FGIA (formerly AAMA and IGMA) offers the IG Fabricator Workshop, typically in November.

Since its launch in 2016, more than 300 industry professionals have experienced classroom sessions and hands-on laboratory demonstrations to discover best-practice fabrication “dos and don’ts” for cleaning, cutting and handling glass, and selecting and applying desiccants, sealants, gas fill and more. The highly popular forensic investigation segment of the workshop was offered in repeated sessions during the 2019 GlassBuild America show and is being expanded for future workshops. For more on upcoming workshops, visit aamanet.org/pages/ig-fabricators-workshop. ■

Janice Yglesias serves as the executive director of the Fenestration and Glazing Industry Alliance, fgiaonline.org, overseeing all daily operations. She joined the association in 1999. She can be reached at jyglesias@fgiaonline.org.

IG certification is offered through three programs supported by the Fenestration and Glazing Industry Alliance:

- ALI/AAMA Sealed Insulating Glass Certification Program operated by Associated Laboratories Inc.
- IGCC/IGMA Insulating Glass Certification Program
- IGMAC Certification Program

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The Battle of the Forms

The fine print on run-of-the-mill documents can cause a legal mess



By Melanie Scherer

Read the fine print. We've all heard it; we all know better. But, it is essential to actually read and understand it. Purchase orders, order acknowledgements, invoices—these are often viewed as generic forms or templates but can be just as binding as any formally negotiated contract.

It is often unclear which of the terms contained in these documents truly “control” in a given transaction. And, the terms and conditions contained in the forms can even tie into other agreements or terms, creating a convoluted set of obligations one or both of the parties did not intend to create.

A typical scenario involves one party issuing a purchase order to a supplier. The supplier sends an order acknowledgement or simply fulfills the order. An invoice is submitted to the buyer; the buyer pays the supplier. These actions, together with the various terms and conditions in the documents, have formed a legally binding contract.

Usually, this does not present a problem ... until a dispute arises. And that's when it gets really tricky, really fast. This is commonly referred to as a “battle of the forms” and there is usually no clear way to determine which terms control without involving the court.

The Uniform Commercial Code addresses situations where additional or different terms are provided in a party's acceptance or confirmation than the terms offered or agreed upon. If a dispute reaches the court, the court will examine the context, communications and actions of the involved parties in addition to the forms. It will then determine which terms constitute the agreement on a case-by-case basis under the UCC.

Through the purchase and sale process, you may unwittingly enter into an agreement for more than

you would have bargained for had you entered into an express contract signed off by all parties. If the terms in the forms do not line up, the parties may be left wondering who is obligated to do what. Read the documents to determine whether anything contained in that document is at odds with what you intend to agree to. It seems obvious but, in the usual course of business, it can be easy to overlook.

Example: warranties

Warranties present an example of the potential for a battle of the forms in the window and door industry. We all rely on warranties. In the context of a component supplier transaction, both parties should be familiar with the other's warranty terms.

Manufacturers of fully assembled window products that purchase hardware components from a supplier, for example, want to ensure protection if the hardware component is defective. On the flip side, a supplier wants to limit its risk and exposure, too; i.e., if the terms of the supplier warranty and the manufacturer's warranty are at odds, what happens when the manufacturer is pulled into a lawsuit that involves the supplier's hardware? Perhaps the supplier warranted its materials for five years, but the manufacturer provided a lifetime warranty to the consumer purchaser.

What if the manufacturer included terms and conditions in its purchase order that obligate the supplier beyond the scope of the supplier's warranty? Both sides of this transaction should consider the implications of these terms to ensure they intended to accept the scope of the obligations they are committing to as a part of the relationship.

It is possible that these individual documents



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may reference other documents with a separate set of terms and conditions purporting to govern all transactions between the parties. Or, if master terms and conditions exist, the order documents may not even expressly reference the master. It is even possible that a seller's order acknowledgement and invoice each contain conflicting terms. Each set of terms and conditions likely includes a statement that they control. So which ones *really* apply?

Resolving conflicts in these scenarios can become convoluted, and no one really wants to get involved in a legal battle, so what can you do to protect yourself? Read the fine print.

Protection strategies

Your company may have a designated person or department to handle contracts and manage risk. Regardless, it is wise to establish a protocol and requirements for

anyone who is authorized to enter into these purchase transactions so they can know what to look for and when to push back or seek additional input, either internally or from legal counsel.

Review the terms on each document involved in the transaction. Make sure the terms and conditions reflect your understanding of the obligations you intend to accept. If not, reach out to the other party to coordinate and modify the terms. Do not simply move forward with the transaction and deal with potential consequences down the road. These proactive steps can prevent conflict and preserve the business relationships.

Additionally, a master set of terms and conditions can potentially resolve some of the unknowns if the parties agree and the terms state that they control regardless of terms in purchase orders and invoices. The master terms and conditions can be put in place to

control the transactions, so at least the parties have a common understanding of their obligations without needing to make sense of the terms across multiple documents and guess at the true scope of the agreements.

Be careful what you agree to. Know the documents at play. Read and understand the terms and conditions. Be proactive. Even if you've dealt with a party in previous transactions, confirm that the terms and conditions under which you've operated previously remain unchanged. Do not hesitate to seek legal counsel if you encounter any questions as to applicability of a term, potential impacts or enforceability. ■

Melanie Scherer 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. Contact her at 503/620-6615 or melanie@prgarylaw.com.

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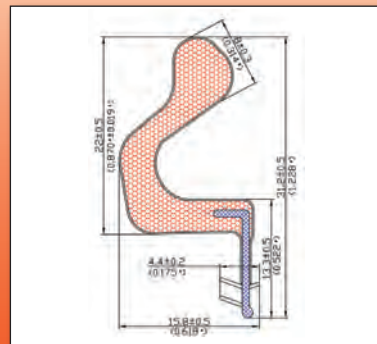
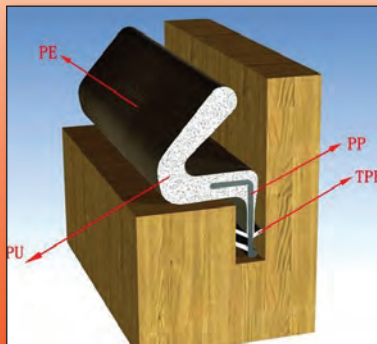
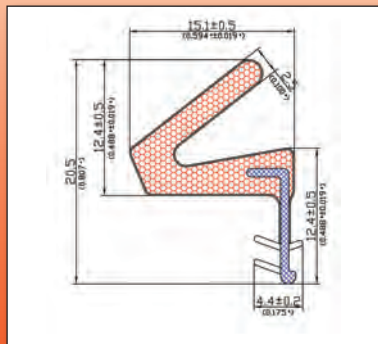


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Helping is the New Selling

How to leverage Instagram and LinkedIn for sales and marketing

By Laurie Cowin and Emily Thompson

In a world where technology is permeating every area of life, it's harder than ever for sales and marketing professionals to break through the noise, said Zach Williams, founder and CEO of Venveo, during a recent webinar.

Marketers are tasked with finding new ways to get in front of potential customers and communicating messages that resonate. And, with people remaining home under coronavirus-induced shelter-in-place orders, organic reach is incredible right now. More people than ever are online and the time is ripe for marketers to reach new prospects—but the message has to be right.

"Helping is the new selling," says Williams. "You have to find new ways to help people in order to get through the noise." Even though many potential contacts may not be ready to do business right now, Williams emphasizes the importance of using this time to build contacts and "create relational capital you can use down the road."

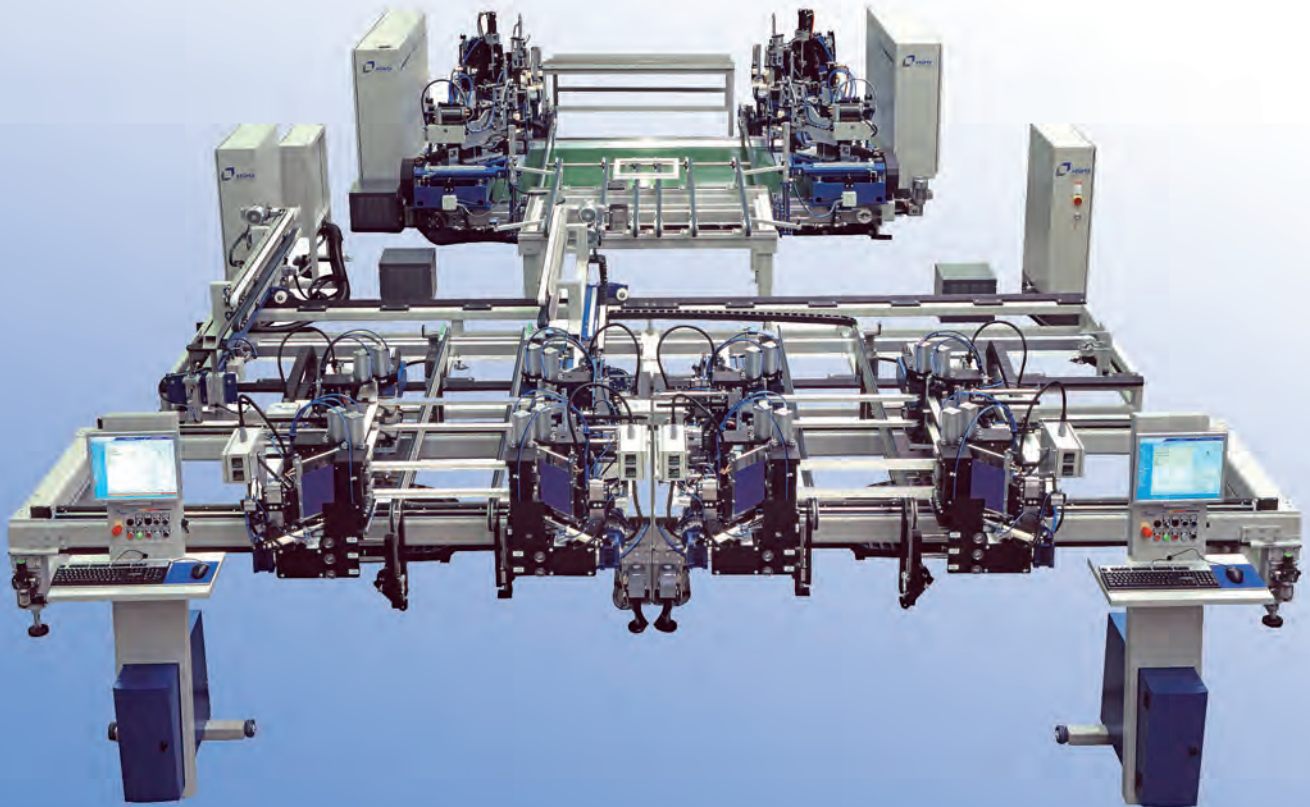
Williams shares tactics for how professionals can best leverage Instagram and LinkedIn to create new contacts.

Instagram

Instagram is heavily focused on inspiration and architects frequent the platform for research,

according to Williams. He offers five steps professionals can take to leverage the platform to build new opportunities:

1. Find new Instagram accounts to target: Use the search icon on Instagram to search for hashtags that apply to your product category and follow those hashtags.
2. Look at Instagram profiles and audit those accounts: Find the profiles that are posting under each hashtag you follow and determine which individual profiles to follow.
3. Bring them value: Consider what your customers need and the friction points they have that you can reduce with your product and services. Don't focus on yourself in outreach. Focus on them and where you can bring hope and help. "If you aren't providing value, they won't respond," says Williams.
4. Direct message: Once you find a target, direct message them and start building a relationship. It may be smarter to introduce yourself and compliment their work and then mention your product after you establish communication.
5. Rinse and repeat: Success, says Williams, is a numbers game. Try this approach with 20



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to 50 accounts. The likelihood of starting a conversation that will lead to opportunity exponentially increases as you find more people, he says.

LinkedIn

Williams describes LinkedIn as an “incredibly untapped” platform. Its sole purpose is to form business connections, whereas other social platforms mix business and personal accounts. LinkedIn has what he calls ideal customer visibility—the ability to view employees who work for a certain company—and ideal customer accessibility.

Before messaging people, however, take some time to determine the ideal customer profile, which should include demographics about individuals and psychographics about what matters to them. Once there is a clear picture, use the LinkedIn search bar to start researching those key demographics and psychographics. Then, narrow down who to reach out to by geography and specialization. Repeat the same exercise outlined for Instagram on LinkedIn: search for specific hashtags and content terms.

Williams offers several tips for effective LinkedIn use:

- Be personable—it’s OK to show you are a human being.
- Personalize every connection request. Adding a note will make you stand out and look like a genuine connection.
- Do not send generic messages.
- Do not try to pitch someone in a connection request.
- Send a tactful follow-up note when someone connects that provides some sort of value. Wait at least 24 hours to do so.
- Create value in the way you interact with people on LinkedIn.
- Contribute—don’t just be a taker.
- Engage people and seek to build a community.
- Do not sit back and expect people to come to your profile if you’re not active. ■

Bonus: 4 Branding Considerations During COVID-19

Kantar Media hosted a webinar series regarding COVID-19’s impact on the retail market. In the initial webinar, David Morcotte, senior vice president for Kantar, offered tips for how brands can respond and be upfront during this time.

1. Empathy, branding and engagement have never been more important

“If you are not out there communicating that brand, you’re going to have some issues,” says Morcotte. “You’re going to be off the consciousness of your consumers.” He offered HyVee, Wegmans and CVS as examples with messages to customers such as we stand ready to help, our brand is our family, and we are in this together. Consider how to integrate the following messages:

- We’re part of your solution
- We’re working to help you
- We are part of your neighborhood, part of your community

2. Effective communication, community orientation and curated solutions are key

Considering the volume of the media right now, think about a differentiated communication stream. What are you going to do to stand out? Whatever it is, Morcotte says, be concise. He adds, “Make your messaging stand out by including some lighthearted language or posting updates on social media to engage with community rather than just sending an email blast.”

If you have community outreach, this is the time it goes on steroids, he continues. Shoppers are prioritizing ways to help their communities and are looking to their favorite brands and retailers to aid as well. Consumers welcome opportunities to help those severely affected.

3. Assure customers that your business is part of the overall story that is emerging

December of 1941 was the last time the country closed down, Morcotte reports. Looking back at the messaging of those times, what we can glean is to be clear to customers that your company will:

- Support their lives at difficult times
 - Reposition to support the critical solution
 - Be there for them when the difficult times end
- Be selective, he adds. “Too much is too much at this time of isolation.”

4. Use experience, not data, to plan

This year is lost for data, Morcotte asserts. The masses of data currently being reported, and even that generated from AI sources—all of it is soft. This is unprecedented, so the information is crowd-sourced, opinion, and surveys, but no real hard data exists. “We overwhelmingly have been focused on data-driven life and prediction,” he says. “We need to start thinking our way through.”

This is where scenario planning comes in, he says: “How do you do marketing, production, inventory planning when you have no data? Rely on experience to think through the what-ifs.” To do so:

- Leverage the foundation of your company’s experience
- Establish multiple planning points to develop as events unfold
- Have a real inventory of your assets and their flexibility
- Be creative with your assets of knowledge, experience and client knowledge.

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Leading With Safety, Now and Always

By Larry Johnson, VP of Sales

"Safety first" is a common refrain in the manufacturing industry, as well as the building and construction space. It's an important idea—and today, as the world grapples with the COVID-19 crisis and its implications for all parts of our businesses, "safety first" is more critical than ever before.

It's worth reconsidering: What do we really mean when we say, "safety first?" What does it look like in practice? And how do we ensure that we're maintaining a culture that prioritizes safety, all while dealing with the economic ramifications of an unprecedented global pandemic?

This isn't about specific precautionary measures you should be taking—the Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control and Prevention (CDC) have provided guidelines outlining what

workplaces should be doing in that regard. Instead, I wanted to share some thoughts about how your organization can center all its actions around employee health and safety.

Constant communication is key. Communication is an important part of safety under regular circumstances. But dealing with COVID-19 means new and different challenges are cropping up every day. State and local guidance may be changing regularly, and your organization must be on top of every recommendation and how you can remain in compliance and prioritize employee safety.

When in doubt, overcommunicate with your teams about the measures you're taking and the policies you're implementing. Speaking from a personal perspective, every single internal meeting at Quanex begins with safety. Whether we're talking sales, forecasting, customer concerns, product production, supply chain management, or anything else, the meeting begins with how we're prioritizing employee safety in relation to that subject.

This is just one way to go about it. But no matter how you're communicating with your teams, make sure everyone is on the same page and knows the plan.

Encourage common sense. We all have a sense of what safe behavior looks like—and what it doesn't look like. An organizational culture that truly puts safety first empowers its employees to speak up when unsafe behavior is occurring and holds everyone accountable.

Much of the fenestration industry involves people doing physical work, which means new COVID-19-related safety measures have been implemented on our plant floors and job sites. These measures aren't there to prevent an immediate physical safety threat, like a slip or a fall, but they're just



as important, and we should be treating them that way. That means every employee should feel like they're able to stop unsafe behavior if they see it happening. Promote this kind of good common-sense decision-making, and it will soon become second nature to everyone.

It starts at the top. Safety is a shared priority, and it should be top of mind for everyone at every level of the organization, especially today. Coming into a physical work environment right now carries an inherent risk that it never before has. Business leaders must take that risk into account by prioritizing the safety of workers and their families by communicating and enforcing those new protocols. Leading with safety, in everything your organization is doing, is more important than ever.

Question or comments? Contact me directly at Larry.Johnson@Quanex.com.

This article was first published on our In Focus blog on Quanex.com.



7 Reasons Screens Production Causes Headaches (and one way to fix it)



Every manufacturing company has that one troublesome process. For window manufacturers, the problem process that likely comes to mind is screens production.

Why is screens production such a headache? There are a few different reasons:

1. Intensive inventory. Manufacturers must purchase and warehouse frame material, screen material, corner keys, latches, pins, springs, plungers, clips and more.

2. Troublesome equipment. Screens production requires frame saws, screening tables, notching equipment, punches and assembly tables to complete each part of the process, not to mention carts for storage and packing material. Like all equipment, it requires maintenance, which takes valuable time and resources away from higher-value tasks.

3. Space requirements. In most window production facilities, raw material storage and screens production equipment can occupy up to 20% of usable space—even more in some cases. And that space is at a premium. Imagine what else you could do with it, including adding new automated equipment that will help you produce more of your core products, faster and with higher quality and fewer touchpoints.

4. Skilled technicians. This is a big one. The efficiency and quality of factory screening processes are dependent upon the skill and efficiency of the person doing it. In the grand scheme of the business, screens are a low-value process that requires the highest degree of skill. Add in the labor shortage and this is a recipe for quality and efficiency issues, among others.

5. Order (and payment) delays. For most companies, the window screen is the last part added to complete the window. If a screen is incomplete or damaged, it can hold the entire order up and delay shipping. Also, the resources allocated to solving these issues could be used for something else more productive (see #4).



6. Warranty claims. The bane of window producers is paying out warranty claims, and oftentimes screens can be an annoying culprit. Issues with screens usually occur at install if a screen is ripped, bent or doesn't fit properly. There are also seasonal upticks, particularly in spring or fall when homeowners want to open their windows. Regardless of when it happens, a faulty or misfit screen often results in a rush situation to satisfy the end user and that can mean disrupting normal production flows and orders to settle the claim.

7. Customer complaints. Related to #6 is the threat of the online complaint when the screen issue is noticed or if a claim isn't settled in a satisfactory time frame. Not only is this a black eye to the window company, it can also be a drain on human capital to deal with the issue, from taking the call to scheduling production to ensuring fulfillment and ultimate satisfaction.

One solution:

The answer? Get rid of the headache by eliminating the source. Quanex offers screens outsourcing solutions with multiple dedicated screens production facilities operating throughout the U.S. Since screens production is all we do at these locations, quality is assured, along with custom packaging and delivery options to meet the needs of any manufacturer.

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How Windows Play a Role in Indoor Air Quality

According to the EPA, Americans spend an average of 90% of their time indoors, where some pollutants are often two to five times higher than typical outdoor concentrations. As many are spending more of their time at home these days, indoor air quality and its impact on our health have become a hot topic.

For fenestration professionals, it's important that we all understand the impact quality windows can have on the air we breathe and how to guide consumers to make the right choices for their homes.

The effects of indoor pollutants.

Poor indoor air quality is linked to several illnesses and symptoms, including headaches, fatigue and eye irritation. It can also have a negative impact on respiratory health, especially for those with preexisting conditions, such as asthma. The very young and older adults are also more prone to respiratory complications associated with air quality.

Poor ventilation and fluctuating temperatures and humidity levels are common factors that impact our indoor air. When it comes to protecting homes, families, businesses and employees, finding the right indoor humidity levels can be problematic.

A review by Yale scientists reports that "seasonal moderation of relative humidity—the difference between outside humidity and temperatures and indoor humidity—could be an ally in slowing rates of viral transmission."

In the winter, the air is dry and relative humidity can drop to about 20%, making it easier for viruses to spread through the air. During these months, many use humidifiers to increase moisture and soothe familiar problems, such as sinus issues, breathing issues and dry skin.

When humidity rises, either because of season changes or humidifiers, a new set of problems can occur. First, viruses will fall to surfaces with the weight of the moisture and can live there for extended periods, making it more essential to clean surfaces regularly. Second, as it relates to windows, moisture and differences in temperatures between indoor and outdoor environments can cause condensation to build up on the glass—leading to stained frames, peeling paint and, most importantly, mold growth.



Studies cited by the CDC found sufficient evidence linking indoor exposure to mold to upper respiratory issues, such as coughing and wheezing, even in healthy people, and the development of asthma in some children.

Solving the humidity problem.

The bottom line is that humidity can be both helpful and harmful when it comes to indoor air quality, the spread of viruses and overall health. The CDC recommends keeping relative humidity in homes and buildings between 30% and 50% year-round. Proper ventilation, air conditioning and air purification systems can also help. They also recommend repairing leaks and any areas where moisture can stand as a means of preventing mold growth.

As it relates to our industry, we can help guide our customers toward windows that offer less heat transfer and condensation buildup. Windows with Super Spacer® can help reduce mold-causing moisture around the window edge, contributing to better air quality overall. This is something we've talked about for years, and we have Health Smart Windows® marketing tools to help you convey that message.

Indoor air quality is just one of the pieces of the puzzle when it comes to keeping our families and co-workers safe during the pandemic. But it is one we can help control—and one we can help our customers understand.

Contact our marketing department at Qmarketing@Quanex.com for more information on Health Smart Windows®.



Quanex Supports Hometown Communities

During the pandemic, our 40 locations have been supporting their hometown communities and first responders over the past couple of months—and we are proud of each and every contribution.

Here's a spotlight on a few locations that have made a big impact:

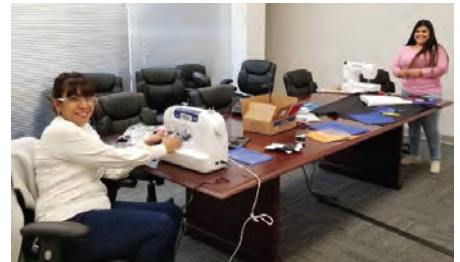
Rice Lake employees band together to provide relief. The team out of our Rice Lake, Wisconsin, facility has done an exceptional job spreading positivity and finding creative ways to help its community, including taking out an ad to congratulate the 2020 graduates of Rice Lake Senior High, setting up a blood drive through the Red Cross and securing and donating PPE to local hospitals.



**Hometown
Charity
Spotlight**

The team was also able to support both St. Vincent de Paul Pantry & Kitchen and Ruby's Pantry, which combined provide food for nearly 2,800 local families each month and more than 1,200 hot lunches monthly. The team encourages everyone to consider supporting their own local food pantries, which have seen a 50% higher demand since the pandemic started.

To further the spirit of giving, the Rice Lake team is also working with local radio stations to sponsor an auction with proceeds going to COVID-19 relief and programming that urges patience, togetherness and progress. Congratulations to the Rice Lake team for the excellent work and for being great stewards of your community!



Arlington team sews face masks for donation.

In late 2019, Quanex expanded its manufacturing footprint and capacity in Texas to position Quanex to better serve this market. After months of hard work and careful planning, the Texas team successfully opened an expanded window and door screen facility to Arlington, Texas.

Not long after, the pandemic posed another challenge—and this team rose to meet it head on. While continuing to meet the needs of our Texas customers, the Arlington teams have been busy utilizing extra capacity to sew masks for donation to local organizations in need of them.

Continue the support. Over the next couple of months, we'll be promoting the charities we're supporting on the Quanex LinkedIn page. If you wish to join in furthering our support these local nonprofits, head to our page where you'll find a full list of links.

Akron-Canton Regional Food Bank (Akron, Ohio)
Berea Kids Eat (Berea, Kentucky)
Berea Senior Center (Berea, Kentucky)
Catholic Charities Pandemic Relief Fund (St. Cloud, Minnesota)
Chatsworth Fire Department (Chatsworth, Illinois)
Community Food Warehouse of Mercer County (Sharon, Pennsylvania)
Country Neighbor Program (Orwell, Ohio)
Dallas Meals on Wheels (Dallas, Texas)
Edgar County Community Foundation (Paris, Illinois)
Edgar County Emergency Services & Disaster Agency (Paris, Illinois)
Feeding America Riverside (Riverside, California)
Food Bank of Iowa (Des Moines, Iowa)
Food Bank of the Rockies (Denver, Colorado)
Grace Pantry (Cambridge, Ohio)
Greater Chehalis Food Bank (Chehalis, Washington)
Hotel Inc. (Bowling Green, Kentucky)
Kids Meals Houston (Houston, Texas)
Meals on Wheels (Cambridge, Ohio)
Milaca Area Pantry (Milaca, Minnesota)
Molalla Service Center (Molalla, Oregon)

Mounds View Schools Education Foundation (Shoreview, Minnesota)
North Land Municipal Ambulance Inc. (Luck, Wisconsin)
Northern Illinois Food Bank (Geneva, Illinois)
Northwest Harvest (Seattle, Washington)
Old Man Rivers Mission (Parkersburg, West Virginia)
Richland Wilkin Food Pantry (Wahpeton, North Dakota)
Richmond Police Department (Richmond, Illinois)
Ruby's Pantry (North Branch, Minnesota)
Sacramento Food Bank & Family Services (Sacramento, California)
Second Harvest Heartland (St. Paul, Minnesota)
Second Servings (Bellaire, Texas)
SELCAS (St. Fairbury, Illinois)
Shenango Valley Meals on Wheels (Sharon, Pennsylvania)
St. Vincent de Paul Pantry & Kitchen (Rice Lake, Wisconsin)
St. Mary's Food Bank (Phoenix, Arizona)
St. Stephen's River Bend Food Bank (Dubuque, Iowa)
Stanford Settlement Neighborhood Center (Sacramento, California)
Tacoma Rescue Mission (Tacoma, Washington)
The Geauga Hunger Task Force (Chardon, Ohio)
Toledo Northwestern Ohio Food Bank (Toledo, Ohio)

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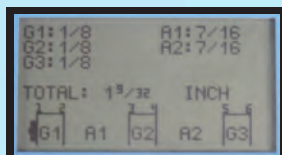


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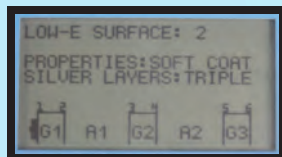


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Compatible with ALL Low-E Coatings	YES
Expanded 2.0" Overall Thickness Range	YES
Differentiate Between Hard Coat and Soft Coat Low-E	YES
Detect Single, Double, Triple Silver Hard Coat & Surface 4 Low-E	YES
Determine Number of Soft Coat Silver Layers	YES
Low Battery Indicator	YES
Graphical Display with Window Illustrations	YES
Laminated Glass Identification & PVB Thickness Measurement	YES
Determine Whether Coating is Present on Surface 3 or 4	YES
Modes for Bullet Resistance, Reflective, Suspended Film, and More!	YES
Ability to Store 30 Measurements	YES



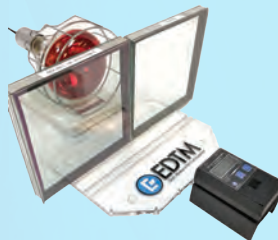
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STATE OF FENESTRATION MANUFACTURING





A snapshot of the initial impacts of COVID-19 on U.S. fenestration manufacturers; looking ahead to the new normal **BY EMILY KAY THOMPSON**



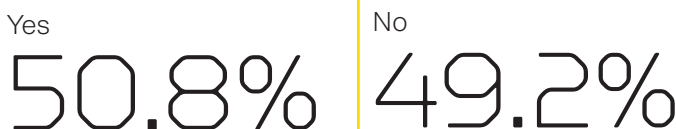
THE FACE OF MANUFACTURING, AS THE FACE OF THE WORLD ECONOMY, HAS CHANGED. THE WAY WE BUY, SELL AND MAKE GOODS. THE WAY WE WORK, WHETHER WE CAN WORK. ALL OF IT HAS CHANGED. ONE OF THE BIG REASONS WINDOW + DOOR EXISTS IS TO DOCUMENT THOSE CHANGES AND TO PROVIDE A PICTURE OF WHAT OUR INDUSTRY LOOKS LIKE WITHIN THE SCHEME OF MANUFACTURING AT LARGE. THIS YEAR, IN THESE UNPRECEDENTED TIMES, WINDOW + DOOR PROVIDES THIS STATE OF THE INDUSTRY REPORT IN LIEU OF OUR ANNUAL TOP MANUFACTURERS REPORT AND LIST, WHICH IS PUBLISHED ONLINE AT GLASS.ORG. THE FOLLOWING PAGES PROVIDE RELEVANT SNAPSHOTS FROM MULTIPLE SOURCES RELATED TO THE INDUSTRY, AS WELL AS SOME STATISTICS DIRECTLY FROM OUR SURVEY. ➔

Manufacturer Surveys

Manufacturers
(General) Anticipating
a Change in Operations
during Early Stages of
COVID-19 in U.S.*

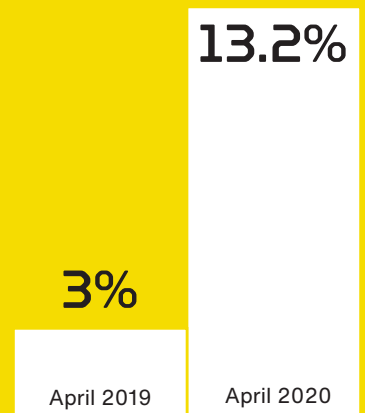


Respondents
That Had an
Emergency
Response by
March 9*



*Source: NAM Coronavirus Outbreak Special Survey, February/March 2020

Unemployment Rates: Manufacturing[†]



[†]Source: U.S. Bureau of Labor Statistics: Unemployed persons by industry and class of worker, not seasonally adjusted, April 3, 2020

Early implications

Just as the coronavirus began making an impact in the United States, the National Association of Manufacturers conducted a survey of its member companies on the impact of the COVID-19 outbreak on manufacturers. The survey ran Feb. 28 through March 9. Even in these very early stages of the pandemic in the United States, 78.3 percent of respondents anticipated a financial impact. Only 53.1 percent anticipated a change in operations. About half of surveyed manufacturers reported they had an emergency response plan.

The timing of Window + Door's annual Top Manufacturers survey was also right around the time when the pandemic just started affecting the U.S. market—late February into early March. At that time, only 19 percent of our respondents reported seeing signs of a recession. Of those, many already noted the coronavirus as its biggest concern regarding economic faltering.

(It should be noted: most respondents who called out COVID-19 replied to the survey in early March.)

Although only a relatively small number of manufacturers were anticipating a downfall pre-COVID-19, 64 percent of surveyed fenestration manufacturers reported they were taking measures to protect their businesses against a potential recession. The biggest area for preparation: improving efficiencies. Specifically, respondents noted they were working to reduce the cost of delivery, reducing overhead and waste, working on labor rates and adding robotics, simplifying processes, and seeking opportunities for vertical integration.

The next most common practice these respondents noted was expansion—diversifying and expanding products and customer mix, expanding into new markets, and concentrating on market share. A final common theme among those preparing for a downturn

was watching their cash. Respondents cited reducing debt, conserving cash reserves and controlling costs.

Labor

Another noted area of concern for respondents to the Window + Door survey is labor and employment. This has been the case for many years, but COVID-19 added an entirely different layer to this conversation. Adjusted leave policies under the Families First Coronavirus Response Act complicated the situation.

Though unofficially reported, we have been told repeatedly that a high number of employees have been simply too scared to show up for shifts. Unconfirmed reports from industry sources cite unprecedented levels of absenteeism. On top of that, for some plants, social distancing measures also means reducing the number of employees per shift. Still, for as many manufacturers struggling with

Window + Door
Manufacturer
Respondents
Preparing for a
Recession in Late
February/Early
March 2020*

64%

How Manufacturers were Preparing for a
Downfall Pre-COVID-19*

1. Improving Efficiencies
2. Diversifying Product/Customer Mix
3. Cash Management

Did you have more difficulty finding workers
in 2019 compared to 2018?*

Unsure
6%

Yes

64%

No

30%

*Source: Window + Door Top Manufacturer Survey, February/March 2020

Personnel Management

HOW MANUFACTURERS ARE HANDLING ABSENTEEISM

In addition to reduced personnel because of new shift structures that promote social distancing and other employees needing to adjust work schedules or take leave to care for sick family members or school-age children, some companies struggle with personnel who don't feel safe coming to work but don't technically qualify for any of the leave programs.

"We want to take those concerns seriously. [What] we encouraged people to do is consult with their doctor," says Joe Peilert, Veka president and CEO. "If the doctor supports the concern, then we will support it as well."

PGT Innovations offered employees age 65 and over, and other at-risk demographics, the opportunity to have a temporary furlough so they can shelter in place with no adverse consequences to their employment status, says Bob Keller, president of PGT's southwest business unit.

Seaway Manufacturing has not necessarily seen a huge impact. "Our employees trust that, while we may not always be or have been correct, we have always had what's best for them and their families' welfare in mind," says Jana Goodrich, CEO. The biggest challenge, she notes, is all the unknowns.

"No one has all the facts they need to make the important decisions required, we're all in 'uncharted waters' not only across the country but really across the globe. Doing what is the 'right thing' or taking the path that is best for the most stakeholders and the greatest good is not obvious in most cases," she says. "Balancing personal health and well-being with the long-term health and well-being of the company and its customers' needs can pose significant challenges, especially to small businesses."

Editor's note: To help employees determine when they qualify for paid leave, the National Glass Association developed a fact sheet that employers can distribute to their workforce. Download the resource at glass.org/do-youremployees-qualify-paid-leave-due-covid-19-0

staffing, many also (unofficially) report minimal impact. The effects seem to be geographically and market dependent.

"We have heard from many that they are hanging on as long as they possibly can in keeping employees on the payroll," National Association of Manufacturers President and CEO Jay Timmons said in a March 26 press conference. "I do believe we will see a resurgence. I have a great deal of confidence in the resiliency of manufacturers in this country to ramp up quickly."

Reports of furloughs and layoffs have not been widely reported in the industry. It should be noted that most industry sources are reluctant to go on record or provide official statements and statistics regarding the current situation.

On record, Deceuninck North America reorganized its Monroe, Ohio, operations, with a 30 percent reduction in its workforce in April. In a statement, the company said the adjustments were initiated "to further protect employees, streamline operations, focus on strategic opportunities and invest in the future." Filip Geeraert, president and CEO of Deceuninck North America, said, "Over the last few weeks, we have quickly entered a new reality, the duration of which is unclear." As demand increases, he continued, "we will again adjust our team and operations to handle the growth."

Other companies on record regarding operational changes:

► **MI WINDOWS AND DOORS** planned to close its Milgard manufacturing facilities in Aurora, Colorado, and Grand Prairie, Texas, as of May 1, "in response to the weakened economic conditions brought on by the coronavirus pandemic," according to a release from the company. MI will continue to provide Milgard-branded products and services to customers in the Denver and broader Mountain West Region from its manufacturing facilities located in the Western U.S. The Milgard brand will no longer be available in Texas;

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deceuninck



however, a full line of MI-branded products is available from the company's 400,000-square-foot facility in Flower Mound, Texas, the company reports.

MI also reported that a team member at its Hegins, Pennsylvania, facility tested positive for the novel coronavirus in early March. MI contacted an expert remediation contractor to analyze the situation, according to a release. "Based on the time since the team member was last at work along with MI's cleaning practices and adherence to Center for Disease Control and Prevention guidelines, the remediation contractor considered the work area safe to occupy," the statement said.

► **IN APRIL, JELD-WEN** temporarily suspended operations at a few undisclosed locations as a result of the global outbreak of the novel coronavirus. While the company did not disclose in which locations production was suspended, the company stated in a news release that the locations cumulatively represent less than 10 percent of its 2019 consolidated net revenues. In addition, an April filing with the U.S. Securities and Exchange Commission showed that Jeld-Wen executives would take a 25 percent reduction in their 2020 base salaries as a response to the challenges brought on by COVID-19.

► **PGT INNOVATIONS INC.** announced in late April plans to consolidate its Florida manufacturing facilities to optimize operations and reduce fixed costs. The company expects to cease production at its Orlando facility in June 2020. The company plans to relocate the manufacturing of those products to the Venice and Tampa, Florida, plants, respectively. In a later release, PGT announced it was seeking to fill over 150 positions throughout its manufacturing plants in North Venice, Hialeah, Miami, and Tampa, Florida.

► **MASONITE REPORTED** it would temporarily close all its UK facilities in March, due to the impact of the COVID-19 virus in the UK and the recent country-wide stay-at-home order.

NOTE

Window + Door's annual Top Manufacturers List is available through the National Glass Association, our parent organization. Go to glass.org/resources/market-intelligence/top-company-lists to see the list of top manufacturers by sales volume, along with contact information and information on the companies' product lines.

Additional governmental stay-at-home orders impacted some other operations as well, specifically in Canada, according to a company statement.

► **MARVIN STATED** it began furloughing employees the week of April 20 at plants in North Dakota and Virginia in a recently published article in Twin Cities Business. Marvin CEO Paul Marvin indicated the move is to avoid layoffs despite a "sales downturn." In the interview, Marvin said it was "very likely" employees at the Warroad plant would also be furloughed, but a specific timetable wasn't released. Marvin employees on furlough qualify for state unemployment benefits and The Marvin Companies maintains their health insurance coverage.

The article also reported that orders for the company's products have fallen by 15 to 25 percent, depending upon the product line. "Orders have slowed, and in each of our businesses and plants they slow at different rates based

on the products that they are making," Marvin said in the interview. The article also reports Marvin told his employees on April 2 that he would forgo his salary during the current crisis.

Resiliency

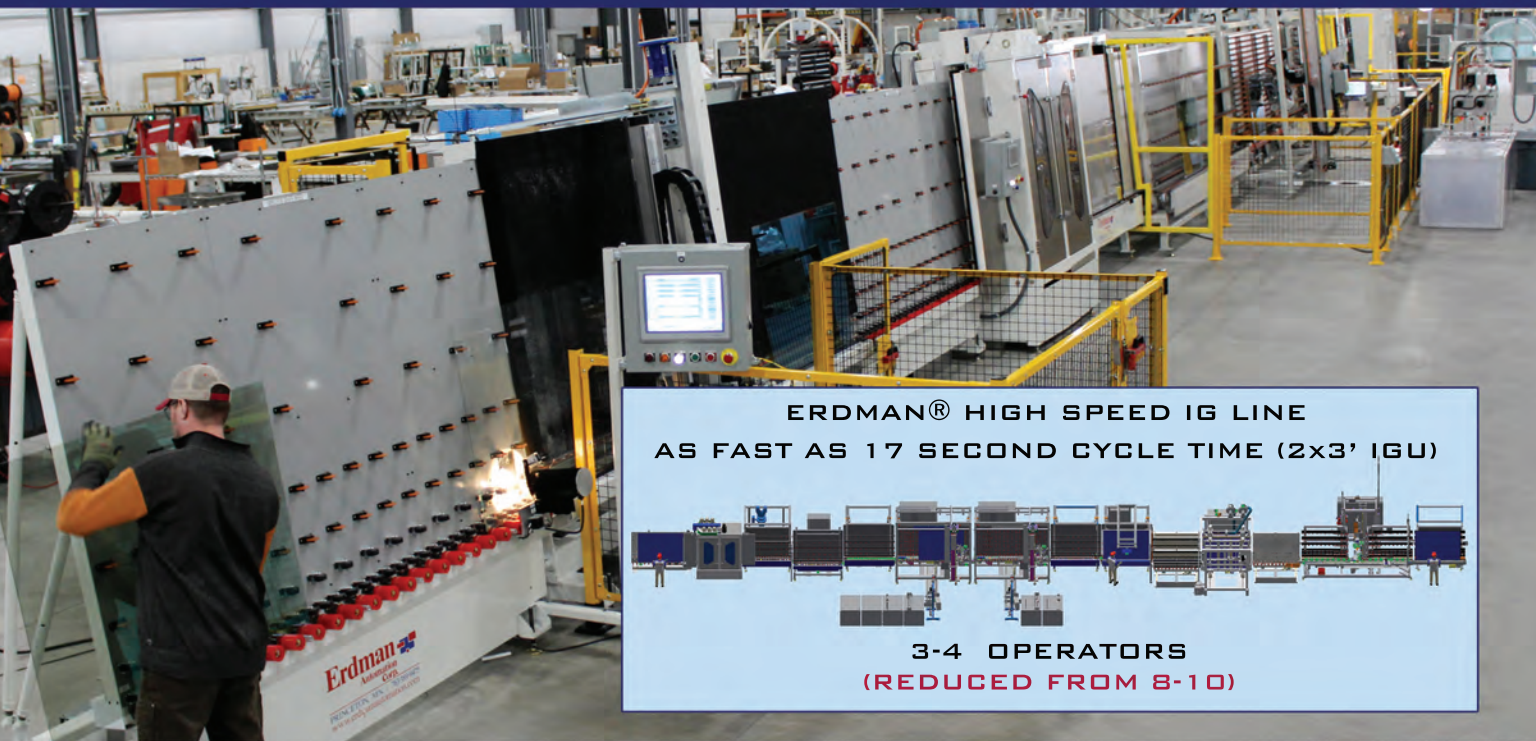
It is too early to project or document the lasting effects of the coronavirus and its economic impacts on the fenestration industry. What we have already seen, however, is the humanitarian spirit of the industry. This is embodied in the following stories of repurposed manufacturing, where manufacturers that use 3D printing on their shop floors are finding a new use for the technology: making face masks and shields for workers.

"When the manufacturer purchased their first 3D printer, they didn't realize at some point they'd be using it in response to a pandemic," says Jeff Inks, senior vice president – advocacy, with the Window & Door Manufacturers Association.

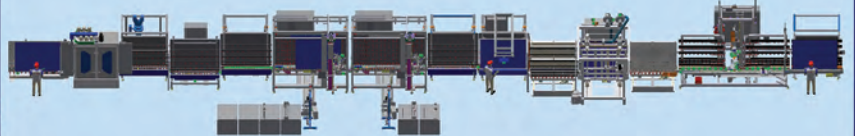
For example, Pella Corp. can use its 3D printing facilities to manufacture more than 600 clear protective face shields per day and has dedicated four full-time team members to the effort. "3D printing is faster than traditional production line manufacturing so we're able to quickly create protective facial shields and get them delivered to workers who need them," Aaron Ryan, senior engineer team leader of the Design Assurance Lab at Pella, said in a statement.

Using a template from resources from the National Institute of Health, Therma-Tru is also manufacturing face shields with its 3D printing machinery at several of its Ohio facilities. "The particular design of shield we are making offers added protection with the visor," said Connor Funk, lab technician at Therma-Tru, in a press release. "We are also exploring other designs without a visor that are even faster to print to increase the number of shields we can produce daily for health care staff." ■

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FACTORY VIEW:
AN EYE TO THE



THE FUTURE

MANUFACTURERS ARE RE-IMAGINING HOW THEIR PROCESSES WORK AS THEY NAVIGATE A NEW SET OF CHALLENGES BROUGHT ON BY THE CORONAVIRUS PANDEMIC **BY LAURIE COWIN** Image courtesy of Crystal Window & Door, crystalwindows.com.



Component and end-product manufacturers in the residential fenestration industry all seem to agree on one thing: the coronavirus pandemic and its associated effects are unprecedented and have caused businesses to alter and re-think how they operate.

Despite H1N1 laying a foundation for crisis communications and operations in 2009, says Jeff Inks, senior vice president – advocacy, with the Window & Door Manufacturers Association, “there’s nothing that could have prepared the manufacturers for dealing with the pandemic we’re dealing with in such a widespread case in every state.”

As of press time, much remains unknown about the pandemic. How long will it last? Will there be a second wave? What will the long-term economic fallout be?

“One of the biggest challenges has been the sweeping executive orders in nearly every state and many larger metropolitan areas may have even more stringent orders that are enforced by local jurisdictions,” says Inks. “It’s a patchwork of executive orders, many of which may not be as clear as they could be with respect to how they are applied in terms of essential businesses.”

That uncertainty is especially tough for manufacturing. “Manufacturing is about having a repeatable process, fulfilling demand and meeting customers’ orders,” says Bob Keller, president of PGT Innovations’ southwest business unit.

Modified practices on the manufacturing floor

To maintain social distancing, many companies transitioned office workers to working at home, but that’s not practical for hands-on manufacturing jobs. Instead, companies are modifying industrial hygiene practices to create as safe an environment as possible. Inks says some of the common changes include handwashing stations, handwashing breaks several times per shift, cleaning of work areas multiple times per shift, and visual aids and other markers that indicate six-foot distances, particularly in heavily trafficked areas like near the time clocks.

“Some of those practices may become permanent because the world is forever changed. It’s important we follow a lot of good hygiene practices wherever we are,” says Inks. He continues that implementing such practices not only keeps employees physically healthy, but also gives them confidence that their company encourages a safe workplace.

Jana Goodrich, CEO of Seaway Manufacturing Corp., confirms these practices are in play at the plant in Erie, Pa. “We are operating at what I believe will be the new normal for a while, at least until the end of this year,” she says, mentioning measures such as disinfecting, extra cleaning several times per week, additional separation of workers, and redesigned work stations and procedures. “Breaking meetings into several smaller groups or having them electronically ... sharing information to ensure proper social distancing, additional PPE,

Image courtesy
of MI Windows
and Doors,
miwindows.com.

IT'S A DIFFERENT FEEL WHEN YOU WALK ON THE SHOP FLOOR AND SEE THE SOCIAL DISTANCE MARKINGS ON THE FLOOR.

working from home where possible, and additional sick/personal time away from work are here to stay for quite a while, in my opinion.” The resulting frustrations and inefficiencies, she says, have become part of the cost of doing business.

Veka Inc. employees wear face masks and practice social distancing guidelines, among other safety practices. “It’s a different feel when you walk on the shop floor and see the social distance markings on the floor,” Joe Peilert, president and CEO, says. Veka had one isolated confirmed COVID-19 case at its Reno facility at press time. Team members and customers were notified, and a third-party hazmat certified provider cleaned and disinfected the space to allow for continued production with minimal interruption, says Peilert.

PGT Innovations adjusted production schedules and operations to promote social distancing, as well as implementing work-from-home programs where possible and banning air travel, says Keller. “Some of that temporarily impacted the capacity of some lines,” he says. “We’re working to get that capacity back through other means.” Because some production lines have fewer people, Keller explains PGT is spreading people across previously unused shifts to maintain capacity, but with a different shift structure. “It varies by line depending on how severe it is and what impact it has,” he says.

Late last year, PGT started doing virtual equipment runoffs for new equipment. The OEM runs the equipment for 24 hours with cameras on it,

which PGT engineers interact with. This negates the need to send anyone to the location for the equipment runoff.

Similarly, if technical equipment goes down and needs maintenance, Keller anticipates these virtual check-ins could be an opportunity for augmented reality to get a boost. Several equipment manufacturers already provide such technology.

Supply chain realities

Supply chain health largely relies on public health orders and whether a business is classified as essential. Because company operations and capacity vary so much by state, Inks says clear communication between manufacturers and suppliers is critical. While he isn’t aware of any significant supply chain disruptions among WDMA members at this time, he asserts that managing supply chains is “always something that is critical to the product, pandemic or not.”

Veka is in what Peilert calls a “solid position,” which he attributes to being a global company with certified supply chains feeding into its production, as well as having backup plans. “All of those things coming together now are being put to the test, and it’s working. It’s not easy, but it’s working. That doesn’t mean there might not be any disruptions going forward, but right now we don’t see any,” he says.

Peilert says Veka takes special care with its outbound shipping area. Markings and signs in the area indicate where drivers can come in and direct them to facilities. Veka also gives each driver a

WE ARE GOING TO SURVIVE AND PROSPER THROUGH THIS MESS AND COME OUT THE OTHER SIDE BETTER/STRONGER PEOPLE, BETTER/STRONGER MANAGERS, AND BETTER/STRONGER COMPANIES.

thank-you package with snacks and water. “[Trucking delivery personnel] are the ones that travel all over the country and are getting exposed to so many different environments,” says Peilert.

Keller shares that “material procurement has been an interesting challenge and probably one of the larger challenges to manage.” He credits a strategic sourcing team with managing supply chain challenges and, as of late April, has not had to alter operations or reduce capacity because of supplier challenges. “We have had to move supply between suppliers as the different shutdowns have created a fluid environment,” he says.

For Seaway Manufacturing, Goodrich reports that the incoming supply chain is adequate for the most part. “We stock and order in advance so have not been negatively impacted by any protracted lead times in the market so far.” Outgoing, however, is a problem. “Most of our dealer base has now been shut down for between one and four weeks. Initially, they continued to send in orders and accept deliveries, but those who have remained under stay-at-home or shutdown orders are now refusing any deliveries due to fully loaded or overloaded warehouses and receiving areas.”

Not knowing how long dealers will be restricted from installing products or even measuring for the products they have sold via electronic sales calls, Goodrich says, means they are also holding orders so as not to run up their accounts payable and work awaiting installation.

The future

Although the year started strong for many manufacturers, the end likely will look very different. Manufacturers agree

they haven’t yet felt the full economic effects of the coronavirus. “We’re hopeful the economy will begin reopening in Q2, which will allow us to get a better understanding of how much ordering will be impacted and for how long,” says Keller. “We expect to achieve our sales growth goals over the long term and feel like this is a shorter-term impact to our demand. We just don’t know how short-term and how deep and long that will be.” In the meantime, however, Keller says PGT is producing “as many windows as we possibly can to fill the demand we have.”

On the supplier side, Roto told us it expects a 20 to 30 percent decline in incoming orders through the next few months. Its forecasts are based on GDP outlook, customer input and “gut” feelings about future demand, according to Dan Gray, director of sales.

The company also is reevaluating the rest of the year. “Our biggest challenge is determining the future demand for incoming purchase orders from customers,” Gray says. “We are looking at the next nine months differently than we were looking at them at the beginning of Q1.”

Peilert reports Veka also saw a drop in demand for a period in late-March and April. He initially anticipated this economic downturn would see a sharp, rapid drop and a sharp, rapid recovery. Based on worldwide conditions, though, he now predicts a longer recovery with some setbacks and significant geographic differences. “I now believe it might take us until the end of the year to return to run rates we saw in 2019,” he says. “There’s no expectation we’d return quickly to anything that resembles normal—uncertainty will be the new normal for a while.”

It’s an ever-evolving forecast, to be

sure, agrees Goodrich. Based upon customer input and what is happening on its retail side, she says that Seaway anticipates a significant pent-up demand. “If so, and the economic state of the American homeowner returns to what it was, we would still anticipate a year of at least modest growth,” she says.

The flip side is the unknown of what disposable income will remain available to homeowners once the situation eases, she continues. “There are just too many unknowns to forecast reliably at this point.”

With so much uncertainty, it is difficult to concretely plan a return to normal. “What is returning to normal?” says Keller. “With any shock like this to a market or industry, you really have to fall back on good leadership to quickly adjust to whatever the new normal is. ... Strong leadership will figure out a way to get through the challenging times and find opportunity in the middle of it.”

Goodrich has similar sentiments. “No one can be sure they’re always going to make the correct decision,” she says. In order to be successful, she believes, companies “need to be decisive and take action guided by our best judgement relative to the best facts and information we have available to us at any one time, and with the attitude that we are going to survive and prosper through this mess and come out the other side better/stronger people, better/stronger managers, and better/stronger companies.”

Regardless of changes to the world status and manufacturing specifically, Inks believes manufacturers are responding to COVID-19 “with an eye to the future about a second or perhaps even third wave of this and being better prepared in a different way than we were prepared for this one.” ■

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BE READY FOR WHAT'S Next

How adaptable automation allows manufacturers more flexibility in times of uncertainty **BY MIKE BIFFL**

As Heraclitus said 2,500 years ago, “The only thing that is constant is change.” As the world responds to the current COVID-19 pandemic, his words still ring true today.

Just a few years ago, the industry

was coming out of the housing crisis that began in 2008. As the fenestration market ramped back up and the economy started to grow, there was a steady stream of capital investment. After the industry consolidation, window and door fabricators tried to find a better way to grow and capture new markets. Labor markets tightened and automation was on everyone’s mind. There was

a major shift in manufacturing philosophy in an attempt to become more flexible in future economic downturns. There was also a greater effort to watch the key indicators in the economy and be ready for the next bump in the road.

Our industry, and the economy as a whole, enjoyed steady growth over the past five years or so. It isn’t the out-of-control situation we saw earlier

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MANY FABRICATORS ARE BETTER SERVED WITH A MIXTURE OF MANUAL AND AUTOMATED OR SEMI-AUTOMATED EQUIPMENT TO ALLOW FLEXIBILITY, FREQUENT CHANGEOVERS AND THE CAPACITY TO ADAPT TO FUTURE CHALLENGES.

this century but, rather, a seemingly more sustainable year-over-year growth. When 2020 started, we were all optimistic. Housing was strong. Window fabricators were investing in new capacity and new technology. By all accounts, the future was bright for fenestration in North America. Then we hit the proverbial bump.

As we were making our plans for growth and success, a novel coronavirus was starting to spread. There was no way to see this coming—it wasn't like the fiscal irresponsibility, poor financial markets or a glut of unsold homes that hit us before. The forces of nature caught us all off-guard. In a matter of a few short weeks, what had seemed certain to be another good year became a mass of uncertainty, both professionally and personally for most.

As more cases of COVID-19 were reported around the U.S., states began implementing measures to slow the spread. As more businesses were forced to close, many states deemed fenestration to be an essential industry, allowing window and door fabricators to remain in operation. Still, some companies chose to close voluntarily, while others were forced to close due to staff either being unable or unwilling to come to work.

While business has by no means dried up, we are now faced with a slew of unknowns that could impact our

industry in both the short and long term. So, where do we go from here?

Availability of labor

One of the major issues we face in the current COVID-19 era is uncertainty about the availability of labor. While the labor market has been tight in recent years, the current state of affairs makes it an even bigger issue for manufacturers in all industries.

This is not only due to the spread of the illness, but also the restrictions put in place to try to slow that spread. Responsible businesses view the health and safety of employees as critical. As that health and safety has been put at risk in recent months, employers need to adjust operations to minimize that risk.

In many cases, this has meant fewer people in the facility or limited numbers within a certain area—both of which require rethinking manufacturing methods and plant layout. The most common solution thrown out there is to add automation to reduce labor requirements. While this is the most effective way to reduce reliance on labor, it is not possible for everyone.

Automation scenarios

Automation allows larger operations with high capacity requirements to streamline the process, improve efficiencies, reduce operator errors

and minimize intermediate handling. However, the vast majority of window manufacturers in North America are smaller-scale operations and cannot afford a lot of automation or realize the full benefits automation offers. These fabricators are better served with a mixture of manual and automated or semi-automated equipment to allow flexibility, frequent changeovers and the capacity to adapt to future challenges.

Regardless of size, most window and door fabricators can benefit from this hybrid type of layout. The ability to eliminate some of the operations that are conducive to operator errors, to move parts automatically from one machine to another, or invest in current technology that speeds up some of the operations to produce more with the same number of machines, allows for flexibility in staffing and the ability to grow without adding a lot of labor. This adaptability can allow manufacturers to shift on the fly when things don't go as planned. Because, as evidenced recently, they eventually won't.

Every manufacturing company can learn something about themselves when they look at how they've responded to this pandemic and the ways it has impacted their operations. Based on this, consider where we need to be in two years to reduce the impact of unforeseen circumstances. Do your due diligence. Research equipment options and look at how to make changes now to be ready for whatever comes next.

We likely won't see anything like this again in the near future, but whether it's an economic downturn, new market conditions or nature reminding us who's boss, there will be new challenges that arise. Nobody knows what will change, only that it will. ■

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

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Products



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01



02



03

01 / Erdman Automation Corp.

One of Erdman Automation's latest innovations is incorporating a robot to unload the Erdman Dura and Super Spacer High Speed IG Lines. The unloading robot reportedly reduces the chance of injury from unloading larger, heavy IG units, but can also be designed to unload all IG units and reduce the operators on the line to two to three, according to the company. This allows for even greater social distancing.

763/389-9475 | ERDMANAUTOMATION.COM

02 / YKK AP America

YKK AP America added a black finish to its StyleView window and door line, designed to complement the company's existing dark bronze finish. The black exterior laminate window provides a dark exterior option with a white vinyl interior and comes in multiple grille profiles and grid styles, including single-hung, casement, picture, geometric, transom, awning and a sliding door. The finishes resist UV degradation, do not fade or chalk, and resist moisture and dryness, says the company.

866/348-9091 | YKKAP.COM

03 / INOX

INOX now offers an antimicrobial coating for its line of stainless-steel products, including commercial and residential door levers and pulls, deadbolts, panic devices and push/pull plates. MicroArmor Antimicrobial Coating is a powder coating that contains silver ions that attach themselves to a microbe's cellular enzyme. It is applied during the hardware manufacturing process and works to inhibit the growth and reproduction of harmful bacteria, mold and mildew by up to 99.9 percent, according to the company.

916/388-1888 | INOXPRODUCTS.COM

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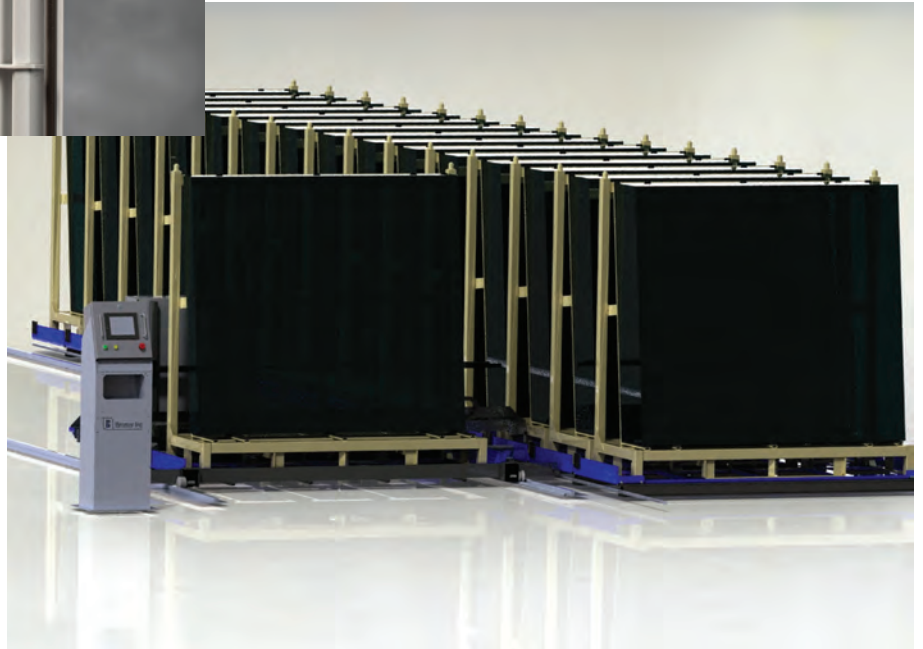
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01



02

01 / ODL

ODL Inc. introduces new size options for its Zeel doorglass frame offerings: 22 by 48 inches, 20 by 64 inches, 8 by 80 inches and 22 by 80 inches. They can be used in conjunction with most doorglass, including clear and decorative options from ODL, says the company. Other Zeel features include a clip system that eliminates the need for screws; construction from FiberMate plus, a PC/ABS blend designed to increase durability; and use of Resolve sealant.

800/253-3900 | ODL.COM

02 / Bromer

Bromer introduces its Returnable Steel Rack Shuttle System. The system is built in North America and is entirely controlled and monitored with a touch screen for fast access to different types of glass. It reduces or eliminates downtime manipulation and can be controlled with many optimization programs, according to the company.

450/477-6682 | BROMERINC.COM

Cardinal Glass Industries

(not pictured)

Cardinal Glass Industries launched Quad LoE-452, a true four-layer silver coating with solar control and the lowest emissivity within the Cardinal Glass family of low-E coatings, say officials. Quad 452 comes standard with Neat+ glass, creating a combination of superior performance and naturally cleaner glass. Quad 452 has a solar heat gain coefficient of 0.22, a visible transmittance of 52 percent, and a 2.30 light-to-solar-gain ratio.

952/229-2600 | CARDINALCORP.COM



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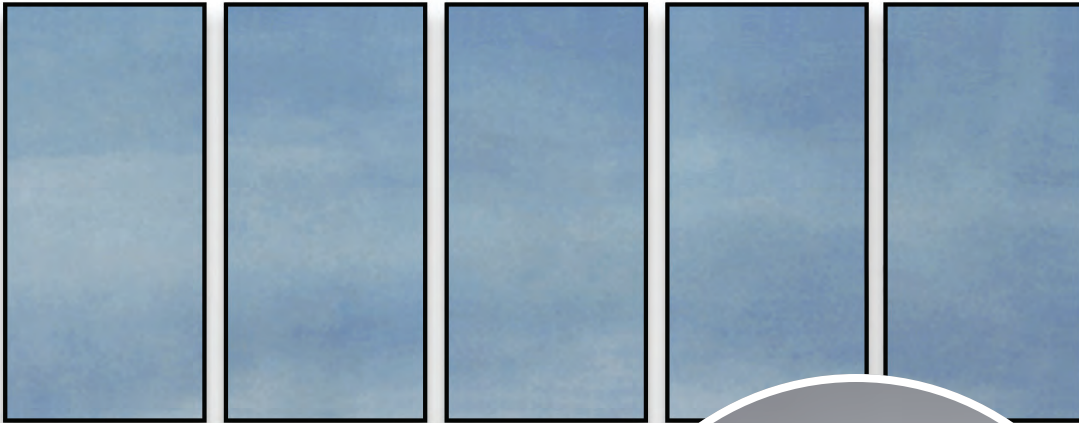
Patio Lift

Swing Door

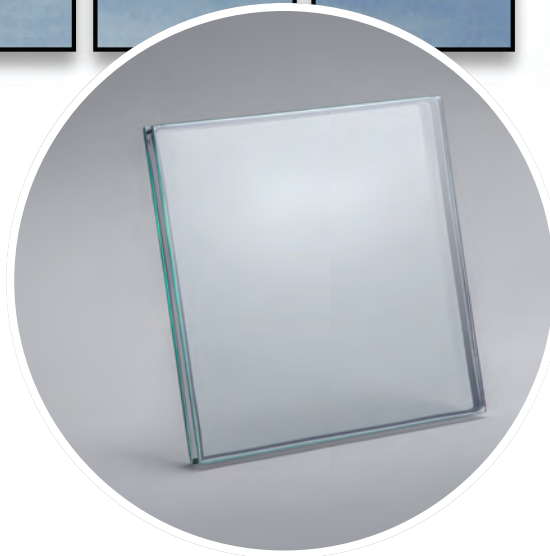
Casement

Sliding Patio Door

Sash Locks



01



02

01 / Viracon

Viracon introduces its coating, VRE-4725, featuring neutral to graphite reflected tones, 47 percent visible light transmission, and a 0.25 solar heat gain coefficient. The coating can be combined with a broad selection of other fabrication options and can be applied to a variety of tinted substrates to alter the exterior aesthetics and further improve solar performance and glare reduction, according to the company. It can be applied on the same surface as digital print or silkscreen.

800/533-2080 | VIRACON.COM

02 / Guardian Glass

Guardian's ClimaGuard 80/71 coated glass is a low-E coated product designed to have a center-of-glass heat gain coefficient as high as 0.71 and U-factor down to 0.266 in a standard insulating glass unit using 3-mm glass. It is available in annealed or heat-treated versions.

855/584-5277 | GUARDIANGGLASS.COM

GED Integrated Solutions (not pictured)

GED offers GED Software, a product that encompasses two categories. Production Control & Analytics is used in office settings to create and release/organize schedules for machinery to run. Machinery Software retrieves data from scheduling software to communicate to machinery on a plant floor, translating human input to machine output, and provides schedule and machine statuses back to the Production Control & Analytics software. GED Software drives IG and window production by connecting front-end systems directly to IG and window systems.

330/963-5401 | GEDUSA.COM

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State of Construction by the Numbers

Residential starts

▼ 28.6%

Residential starts will experience a steep decline in 2020, according to ConstructConnect's Alex Carrick. He forecasts a drop of 28.6 percent in 2020, falling from \$294 billion to \$210 billion.

Single family starts

▼ 22%

Single family starts are expected to drop 22 percent, from \$199 billion to \$155 billion, according to Carrick.

“Residential construction started the year strong because it was supported by... an extremely healthy labor market and income increases.”

—Alex Carrick, ConstructConnect

Number of unemployed

33,000,000

The 33 million people on unemployment aren't going to be hired back at once, Carrick says. “Even when they are hired back, some who are hired back will be working part time. So, one of the chief underpinnings supporting residential has been removed.”

Construction employment

975,000

Construction employment fell by 975,000 jobs in April, according to AGC of America, and the unemployment rate in construction jumped from 4.7 percent in April 2019 to 16.6 percent.

Immigration

▲ 0.5%

The second pillar supporting residential building at the start of the year was immigration. “There has only been about 0.5 percent increase in population. All of that came from immigration, and immigration has completely dried up,” Carrick says.

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