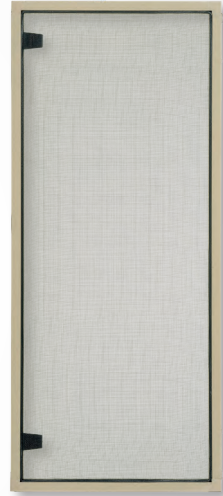


ADVERTISEMENT

G L A S S M A G A Z I N E [®]

THE GLASS AND GLAZING AUTHORITY

AUGUST 2021



Vinyl Systems. IG Systems. Screens.
Quality solutions for every step in your journey.

Quanex
building products

Quanex is here to help you in all aspects of building your fenestration business with the quality products your customers want, the productivity-enhancing solutions you need and the expert R&D, marketing and technical support to help drive your business forward.



Visit [Quanex.com/Solutions](https://www.Quanex.com/Solutions)
and visit us at GlassBuild
booth #2519.



GLASS

MAGAZINE®

THE GLASS AND GLAZING AUTHORITY • AUGUST 2021

GLASSMAGAZINE.COM

OFFICIAL
PUBLICATION

NGA
NATIONAL GLASS ASSOCIATION with GANA

GLASS.ORG

PRODUCT
SHOWCASE
SHOW
PREVIEW
EXHIBITOR
LIST

INDUSTRY
INNOVATIONS,
IN PERSON

BACK TO

GLASSBUILD

**THEY WANT IT.
YOU NEED IT.
WE MAKE IT.**

INTRODUCING

7/8" Custom Blinds + Glass

For Windows &
Patio Doors

Perfect for Windows and Doors that
Accommodate a 7/8" Insulated Glass Panel

Offered in Custom Sizes Up to 18 Sq. Ft.

Available in six colors and multiple glass
coating options

See us at GlassBuild, booth 1223.



BLINDS + GLASS

An  Brand



Scan me 



FIRE RATED GLASS



SUPERCLEAR[®] 45-HS-LI

No wires. No amber tints. No films. No laminates. Just clear, low iron, fire rated glass.

Patent-pending **SuperClear[®] 45-HS-LI** (*hose stream-low iron*) by **SAFTI FIRST[®]** is the only true **CLEAR SOLUTION[®]** for 45 minute doors, sidelites, transoms and openings. It meets all the fire, safety and hose stream requirements at a much more affordable price compared to traditional ceramics and wire glass which **SAFTI FIRST[®]** now considers obsolete. Listed by UL & Intertek. Proudly **USA-made**.

Visit safti.com to learn more about **SuperClear[®] 45-HS-LI** and **SAFTI FIRST[®]**'s complete line of advanced fire rated glass, doors, storefronts, curtainwall and floors.

See us at GlassBuild, booth 2417.



FEATURES

46. **Back to GlassBuild**
The glass and fenestration industries return to in-person learning, connecting and investing at the 2021 GlassBuild America: The Glass, Window & Door Expo. Check out the complete preview of the industry's largest event in the Americas.
BY NORAH DICK AND KATY DEVLIN
50. Industry Insights
54. Product Showcase
94. Exhibitor List

INSIGHTS

22. **Your Profits**
To Buy or Not to Buy: Questions to ask before acquiring a company
BY MARCO TERRY
28. **Code Watch**
How to Determine the Fire Rating
BY THOM ZAREMBA
36. **Best Practices**
The 3 Most Critical Points of IG Production
BY JOE ERB AND DOUG HAUCK
42. **Factory Floor**
Stabilize Pressure Variations in IG Cavities
BY AMY ROBERTS

DEPARTMENTS

8. Editor's Notes
10. From the NGA
11. Glass Informational Bulletin
14. News to Know
110. Product Solution: SAFTI First
111. Products
114. People
118. Classifieds
120. Suppliers Guide
132. Reader Response Center
134. Here's an Idea

On the cover: The oil-lubricated vacuum pump for Denver's vertical and horizontal CNC machines, including the Denver Advance vertical CNC series or the Denver Quota and Denver Digit horizontal CNCs, available from Salem Fabrication Technologies Group Inc. See more of the latest equipment innovations in the GlassBuild Product Showcase, beginning on page 54.



GLASS HAS A NEW DAY JOB

See us at GlassBuild, booth 1719.

Generate clean energy. Replace building envelope materials. Give glass something new to do.

Produce CO₂-free power. Customize aesthetics and performance with any Vitro Glass product. Potentially replace typical building enclosure and exterior elements. Next-generation, energy-efficient design is inevitable with new Solarvolt™ BIPV modules by Vitro Architectural Glass.

For more information, contact an architectural representative. Find yours at vitrosolarvolt.com.



ONLINE

AT GLASSMAGAZINE.COM

YOUTUBE.COM/GLASSMAGAZINE

TWITTER.COM/GLASSMAG

INSTAGRAM.COM/GLASSMAGAZINENGA

FACEBOOK.COM/GLASSMAGAZINENGA

Glass Magazine Weekly newsletter and digital edition: Subscriptions available under the "Subscription Services" tab on GlassMagazine.com

SIGN UP FOR OUR DIGITAL EDITION



BONUS CONTENT

NEW PRODUCTS

View the extensive, online GlassBuild Product Showcase, at glassbuildamerica.com.

RESOURCES

Downloads of National Glass Association technical documents, at glass.org

CONFERENCE UPDATES

News from recent industry events, at glassmagazine.com

GLASSBLOG



PERFORMANCE

Green and Daylighting Top FGIA Summer Conference Discussions
By Norah Dick



SPECIALIZATION

How it benefits the Glass Contractor
By Chris Phillips, Showcase Shower Door



THE DEAL

Thoughts on AGC-Cardinal
By Max Perilstein, Sole Source Consulting

CASE STUDY



Featured in Glass Magazine Weekly and on GlassMagazine.com. To submit projects or case studies, write Norah Dick, ndick@glass.org. Pictured: Palumbo Glass is an insulating glass manufacturer in southern Italy. The plant's 32,291-square-foot manufacturing space includes two Forel insulating glass lines, which enable the company to efficiently handle different types of orders.

Glass Magazine® [ISSN 0747-4261], Volume 71, Number 6, is published eight times annually in January/February, March, April, May/June, July, August, September/October and November/December by the National Glass Association, 1945 Old Gallows Road, Suite 750, Vienna, VA 22182; 703/442-4890. There is no charge for subscriptions to qualified requestors in the United States. All other subscriptions will be charged \$49.95 in the U.S., and \$79.95 outside the U.S. Periodicals postage paid at Vienna, Va., and other mailing offices. POSTMASTER: Send changes of address to Glass Magazine®, Subscriptions, Box 460, Congers, NY 10920. Canada Post: Publications Mail Agreement #40612608. Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2. For all subscription inquiries, please call 1-800-765-7514. ©2021 National Glass Association. All Rights Reserved. Printed in the U.S.A.

GLASS MAGAZINE

Published by the

NGA NATIONAL GLASS ASSOCIATION
with GANA

1945 Old Gallows Rd., Suite 750
Vienna, VA 22182-3931
P: 703/442-4890 F: 703/442-0630

EDITORIAL

Content Director

Jenni Chase • jchase@glass.org

Associate Publisher, Editor-in-Chief

Katy Devlin • kdevlin@glass.org

Associate Editor
Norah Dick

Creative Lead
Cory Thacker

Senior Manager, Digital Media
Bethany Stough

Production Director
Beth Moorman

Web Editor
Wendy Vardaman

Circulation Manager

Jo Ann Binz

jbinz@glass.org • 843/388-3808

ADVERTISING

Executive Publishing Account Managers

Chris Hodges

chodges@executive
publishing.com • 410/459-8619

Mike Gribbin

mgribbin@executive
publishing.com • 410/459-0158

Tim O'Connell

toconnell@executive
publishing.com • 443/717-1425

NGA BOARD OF DIRECTORS (2020-21)

Chair
Cathie Saroka
Goldray Glass

Chair-Elect
Guy Selinske
American Glass &
Mirror Inc.

Treasurer
Doug Schilling
Schilling Inc.

Immediate Past Chair

Chris Bole
Pikes Peak Glass

Denise Bardwell Baker
Spring Glass & Mirror

Brian Hale
Hale Glass Inc.

Courtney Little
Ace Glass

Ron Crowl
FeneTech Inc.

Tim Kelley
TriStar Glass Inc.

Rick Locke
Windows, Doors &
More Inc.

Chris Doan
Guardian Glass

Silas Koonse
Koonse Glass Co. Inc.

Jim Stathopoulos
Ajay Glass Co. NA

President & CEO
National Glass Association
Nicole Harris

BOVONE SERVICE AND ASSISTANCE IN THE USA?

WE HAVE A BRAND NEW SOLUTION

MIRROR SILVERING LINE

BEVELLING MACHINES

EDGING MACHINES

WASHING MACHINES

ROBOTIC SYSTEM

LAMINATED LINES

ASSISTANCE & SPARE PARTS

BOVONE NORTH AMERICA YOUR GENUINE SUPPORT

After almost 50 years of trade relations with the States, now more than ever we can now guarantee the most reliable and satisfactory genuine support. Our North Carolina Headquarters will provide first rate and timely pre / after-sales service.

From Today, our wide range of machines and plants goes along with a fast and efficient customer assistance for all of North American market, directly from Our North American Branch.

GLASS
WORKING
SOLUTION



See us at GlassBuild, booth 3331.

Two Simple, but Not Easy, Priorities



KATY DEVLIN
Editor-in-Chief
kdevlin@glass.org

There are two closely related leadership priorities that can help companies to recruit and retain employees, improve engagement and profitability, and keep workers safe. One: promote diversity, equity and inclusion in the workplace; two: address racism and discriminatory practices on the job.

“Focusing on diversity, equity and inclusion creates a competitive advantage, increased innovation, drives employee retention and increased job satisfaction, promotes business growth and development, and increases revenues,” according to Terrie Daniel, assistant vice president of supplier diversity for the University of Southern Florida, speaking during a DEI certification program, hosted by USF.

Per Daniel, younger generations are more diverse and consider diversity as a factor in job seeking. According to CNN Money, “56 percent of the 87 million millennials in the country are white compared to 72 percent of the 76 million members of the Baby Boomer generation.” Additionally, “67 percent of job seekers and entrepreneurs consider diversity an important factor when considering employment opportunities and doing business with organizations, and more than 50 percent of them want these organizations to do more to increase diversity,” according to Glassdoor.

While the glass and glazing industry continues to grapple with an ongoing labor shortage, more diverse recruitment efforts can help companies

find workers in underrepresented populations. For example, 12 percent of U.S. workers across all industries are Black or African American, compared to just 6 percent in construction, according to the Bureau of Labor Statistics.

DEI efforts also translate to revenue improvements, Daniel says. According to the American Sociological Association, companies with the highest levels of racial diversity “brought in nearly 15 times more sales revenue on average than those with the lowest levels of racial diversity.”

However, the work goes beyond promoting DEI. Leaders must recognize and confront racism on the job. According to a 2019 Diversity and Inclusion Study from Glassdoor, 42 percent of U.S. workers have experienced or witnessed racism at work. Those numbers are reflected in construction surveys as well. In 2020, Construction Dive surveyed its readers about racist incidents on the jobsite. More than 40 percent of respondents reported they had seen racist graffiti on the site, and 38 percent reported hearing racial slurs.

While the work of dismantling discriminatory practices and confronting racist behaviors is hard, it offers a payback for companies, beginning with worker safety and satisfaction. According to the Construction Dive survey, racial harassment and exclusionary behavior leads to increased turnover of workers of color. Additionally, in construction, racism on the jobsite often leads to more segregated and exclusionary work environments. In such cases, workers of color are often asked to tackle less desirable tasks—those that are more dangerous, dirty or isolated—or they are not given appropriate or thorough instructions. Such segregation on the jobsite directly correlates with greater safety risks, according to Construction Dive report.

Addressing these priorities is a simple, but not easy, task. However, company leaders don’t need to start their work from scratch. In June, NGA released a DEI Toolkit, available at glass.org, that combines resources from NGA with those of other leading construction and manufacturing organizations to help companies begin the important work of anti-racism and DEI. It’s too important to ignore. ■

“

ACCORDING TO THE AMERICAN SOCIOLOGICAL ASSOCIATION, COMPANIES WITH THE HIGHEST LEVELS OF RACIAL DIVERSITY ‘BROUGHT IN NEARLY 15 TIMES MORE SALES REVENUE ON AVERAGE THAN THOSE WITH THE LOWEST LEVELS OF RACIAL DIVERSITY.’

”



Reach Higher

with CRL integrated
product solutions

CRL's collaborative approach to solving project specific challenges leads to custom-engineered products that turn bold architectural visions into real world experiences.

3500 linear feet of prefabricated **Unitized Glass Railing System** was used in the One Museum Square residential tower. The system enhanced aesthetics for the architect, expedited installation for the glazing contractor, and reduced costs for the developer.

See us at GlassBuild, booth 1921.

CRLTM

A CRH COMPANY

800.421.6144 • crlaurence.com
railings.archmetals@crlaurence.com

Project: One Museum Square
Product: Unitized Glass Railing System
Developer: J.H. Snyder Co. / Dreamscape
Architect: MVE + Partners
Glazier: Rountree Glass Co.
Photo: Chipper Hatter

YOUR ASSOCIATION AT WORK

NEED-TO-KNOW INFORMATION FROM THE NGA

MYGLASSCLASS.COM SPANISH COURSES NOW AVAILABLE

To support glass and glazing companies with Spanish-speaking personnel and to further the positive impact of the MyGlassClass.com training curriculum, NGA has partnered with the Friese Foundation to offer MyGlassClass.com courses in Spanish.

Fourteen courses are now available in Spanish from MyGlassClass.com, with more to come later this year.

The Friese Foundation, founded by industry veteran Don Friese, is committed to supporting the glass and glazing community through education. MyGlassClass.com courses help turn new hires into skilled personnel and are designed to complement—and shorten—companies' hands-on training.

“Learning the glass and glazing trade when materials are not in your first language is challenging,” says NGA President & CEO Nicole Harris. “We believe providing these Spanish-translated courses will help industry companies with their training efforts and in turn, increase the skilled labor pool for the entire industry. This initiative fits with NGA's focus to promote diversity, equity and inclusion in the glass and glazing industry and would not be possible without the Friese Foundation's generous support.”

Access the Spanish courses through the MyGlassClass.com course catalog. ■

NCCER TO ENDORSE AND PROMOTE THE NGA GLAZIER APPRENTICESHIP CURRICULUM

NGA and NCCER, the National Center for Construction Education and Research, have signed an agreement for NCCER to endorse and promote the NGA Glazier Apprentice Curriculum. Beginning fall 2021, students who complete the curriculum will earn a jointly endorsed NGA/NCCER credential indicating a journeyman-level minimum competency reached through knowledge and performance.

The NGA Glazier Apprentice Curriculum was developed for organizations and companies that want to establish a glazier apprenticeship program approved by the U.S. Department of Labor. The curriculum offers 430+ hours of education to meet the classroom learning requirement of most three-year apprenticeship programs and includes online courses, manuals and OSHA 30 certification.

“NCCER is proud to partner with NGA to further the training of glazing professionals,” states NCCER President & CEO, Boyd Worsham. “The NGA Glazier Apprentice Curriculum is a comprehensive training program that will help elevate the glazing trade by expanding its skilled workforce.” ■

ASC Z97 COMMITTEE CONTINUES TO LEAD THE WAY FOR THE ANSI Z97.1 SAFETY STANDARD

The ASC Z97 Committee is the group of member companies maintaining and leading the development of the ANSI Z97.1 voluntary standard for safety glazing materials used in buildings. The committee recently re-approved the ANSI Z97.1-2015 (R2020) version of the standard and will be preparing to initiate its five-year review process soon in anticipation of publishing the 2025 version.

The ASC Z97 Committee currently consists of 28 member companies spanning membership categories that include: general interest, testing labs, professional trade organizations,

fabricators/distributors, component manufacturers and users. The committee must maintain a certain balance among the six categories and is currently seeking membership applications for those categorized as “user” members.

To learn more about participating in the ASC Z97 Committee, visit ansiz97.com. For information on membership, including a description of the membership categories, download the application at ansiz97.com/ASC_membership_form_2007.pdf. ■



GLASS INFORMATIONAL BULLETIN

Recyclability of Architectural Glass Products

A recent survey conducted by the National Glass Association showed that the architectural glass industry is interested in more recyclability of post-fabrication products. Respondents indicated roadblocks, such as labor, cost, space and lack of local resources, prevent them from recycling glass waste. This bulletin clarifies misconceptions about glass recycling and provides examples of products that can be created or improved using recycled glass.

Over one million tons of architectural glass is recycled annually throughout North America. Due to the weight of glass, the proximity between the glass fabricator, the recycler and the end user is important. The supply chain begins with a glass fabricator shipping its glass scrap to a recycler. From there, the recycler mechanically cleans, crushes and screens the glass to create a uniform material. This material is generally sold in bulk to an end user or manufacturer where it is melted for use in a derivative product. A glass recycler may grind the material to a fine powder to sell for use as a filler or an abrasive. The desire for additional recycled glass is high and scrap glass generators have an opportunity to find a better economic alternative to discarding glass in a landfill.

Recycling in float glass manufacturing

The float glass process recycles virtually all the glass waste (called cullet) from

FIND MORE
NGA GLASS
INFORMATIONAL
BULLETINS AND
TECHNICAL
PAPERS AT GLASS.
ORG/STORE.
CLICK BROWSE,
THEN SEARCH
KEYWORDS OR
SORT BY TYPE.



the in-plant production melting and cutting processes. Cullet generated within the same plant and reintroduced to the original process does not qualify as pre-consumer recycled content for green building initiatives such as LEED Building Product Disclosure and Optimization - Sourcing of Raw Materials credit. However, there is still opportunity to gain LEED credit by participating in a LEED EPR recycling program.

Float glass manufacturers typically do not recycle post-consumer or pre-consumer recycled cullet from glass fabricators or other sources due to glass composition differences and possible contamination.

Glass recyclability

A wide variety of architectural soda-lime glass products can be recycled. Annealed, tempered and low-emissivity

GLASS INFORMATIONAL BULLETIN—RECYCLABILITY OF ARCHITECTURAL GLASS PRODUCTS

(low-E) glass can be recycled with virtually no restrictions; however, other types of glass, such as laminated, mirror, ceramic frit and insulating glass units (IGUs) require additional processing and may not be accepted by all recycling locations. It is now possible to recycle both laminated glass and PVB interlayer by separating them. After PVB is separated from glass, the glass portion becomes a clean cullet supply. The PVB is made into different sizes or forms, such as fleck, pallet, liquid or new film. The main consumer of recycled PVB is the carpet industry, which uses recycled PVB as part of the carpet backing.

Contaminants

Glass recyclers are able to process most contaminants, such as limited amounts of cutting stones, metal, aluminum or plastic frames, plastic films, temporary protective film (TPF), refractory or rocks, caulk, rubber gaskets, etc. Contamination that may hinder recycling opportunities are mixed chemical compositions like some types of borosilicate and glass ceramic. Other unacceptable contaminants that may result in rejected loads are lead-based paints, desiccants, and hazardous or heavy metal material. Communicate with the glass recycler to understand what types of glass and what levels of contamination are acceptable.

Clarifying the current situation

Search local listings for recycling facilities. Glass fabricators that establish a working relationship with the nearest glass recycling company may lower freight costs and drive the highest value. Recyclers typically accept glass from a spectrum of suppliers and industries beyond just glass fabricators. They work with automotive,

solar, glazing and others, and therefore are knowledgeable of how to leverage value across many different end markets.

Prior to shipment, fabricators should work with their recycler to define the best way to segregate their scrap to ensure positive value and acceptability. If a supplier has a variety of tinted glass, it would be helpful to provide their chemistries to the recycler, if known. The value of the recycled glass is contingent upon the distance to the recycler, the amount of contamination and the uniformity of the type of glass included (e.g., clear glass only; mixed glass). While most glass scrap has a positive value to the fabricator, the distance to the recycler, the distance from the recycler to the end market, or the glass contamination levels may result in a negative value. However, it could result in cost savings for the glass manufacturer when compared to landfill disposal costs.

Products originating from recycled glass

Fiberglass

Use of recycled glass in manufacturing fiberglass insulation reduces consumption of raw materials, saves on energy costs, extends furnace life and improves air emissions. Recycled glass accounts for 40 percent of the raw materials in residential fiberglass insulation. According to the North American Insulation Manufacturers Association, the industry uses over 2.2 billion pounds of crushed glass annually.

Highway glass bead

Clear, low-iron and tinted glass are used in the production of small glass beads, which are added to highway paint to create a

reflective surface. The glass beads are sprayed on top of paint. On average, 102 pounds of glass beads are needed for one mile of a continuous strip of paint.

Abrasives

Glass is crushed, separated by mesh size, and then sold to blasting distributors and contractors who use it to clean and prepare metal surfaces for painting.

Terrazzo countertops and flooring

Some terrazzo countertops and flooring are produced using 100 percent recycled decorative glass as one of the primary materials. Terrazzo countertop and flooring manufacturers often mix crushed mirror with their glass aggregate for these applications.

Other usage and applications

Recycled glass is used as abrasive material to place in grinding wheels or into matches, as flux in metal foundries and as specialized fillers. Recycled glass can be used as decorative glass aggregate in landscaping or firepits. The glass aggregate may be further processed to form mosaic patterns.

The Glass Packaging Institute, the glass container industry's trade group, advises that every 10 percent of recycled glass content contributes to approximately a 2 to 3 percent energy savings in manufacturing finished glass container products. The glass container industry's goal is to use 50 percent recycled content. Generating new sources of recycled content is identified as the biggest hurdle. They can and do use architectural glass as part of their batch formulations, although the practice is not widespread. ■



GLASSFAB
TEMPERING SERVICES, INC.



“Raise Your Glass With Excellence”

CERTIFICATIONS



The most clicked news stories on GlassMagazine.com, brought to you by **GLASS MAGAZINE WEEKLY***

MERGERS, ACQUISITIONS & PARTNERSHIPS

AGC Sells North American Architectural Glass Business to Cardinal Glass Industries

Officials from AGC Inc. announced the company will sell its North American architectural glass business to Cardinal Glass Industries, according to a June 15 AGC release. The \$450 million transfer deal is subject to the approval of the related authorities.

The glass facilities subject to sale include AGC's Greenland, Tennessee, float glass manufacturing plant with two furnaces and one coater; its coating facility in Abingdon, Virginia; and a float plant in Spring Hill, Kansas, with one furnace, according to the release.

The North American architectural glass business became a target for sale in the AGC plus-2023 management policy, announced in February. According to AGC officials, "AGC has strived for improvements of the profitability and asset efficiency of its architectural glass business, which was designated as one of the AGC Group's priority issues. AGC has concluded that it will create further growth opportunities by transferring it to Cardinal Glass Industry, which has business trading experience with AGC in the past and is expected to make the most effective use of AGC's assets and personnel."

Cardinal Glass Industries operates 42 locations in the United States, including five float glass manufacturing facilities. The addition of AGC's float production capabilities will make it one of the largest float glass producers in North America. Previously, Cardinal has operated primarily in the residential market, providing glass for windows and doors.

According to Cardinal officials in a separate release, "This deal positions Cardinal to significantly expand its float,

coating, and tempering capacity to stay responsive to the needs of its expanding customer base."

"Our capital investment plan for these operations will allow us to sustain even higher volumes in a very tight North American glass market," said Roger O'Shaughnessy, CEO of Cardinal Glass Industries, in the release.

FHC, Glasswerks Acquire Assets of Consolidated Glass Holdings

Both Frameless Hardware Co. and Glasswerks acquired the assets of subsidiaries of Consolidated Glass Holdings. Frameless Hardware Co. acquired substantially all of the assets of Columbia Commercial Building Products, specifically its architectural aluminum offerings.

Glasswerks, a full-service fabricator of architectural glass headquartered in South Gate, California, acquired the glass manufacturing assets of Columbia Commercial Building Products, as well as J.E. Berkowitz, another subsidiary of Consolidated Glass Holdings.

Assa Abloy Acquires Sure-Loc, MR Group's Hardware Division

Assa Abloy acquired two hardware companies in spring. The company purchased Sure-Loc, a supplier of residential locks and associated hardware in the U.S. The company also signed an agreement to acquire MR Group's hardware division, a leading supplier of aluminum profile hardware and locks in Portugal. The acquisition is subject to regulatory approval and customary closing conditions and is expected to close during the third quarter of 2021.

CMS Acquires Manufacturer of Fabrication Machinery, Develops Production Center

CMS, a manufacturer of glass technology,

acquired GFP, a Venice-based company specialized in cutting tables and seaming machines for glass fabricating. The acquisition allows CMS Glass Technology to reinforce its global presence in the sector of machines and technological solutions for glass processing, say officials.

CMS also enhanced its production center in Zogno, Italy, with a new, state-of-the-art wing. The area, an additional 83,313 square feet, was designed for the company's largest machines.

The new warehouse was designed in collaboration with the architect Cinzia Robbiati from the Archeology, Fine Arts and Landscape Authorities for the provinces of Bergamo and Brescia, with special concern regarding the facility's impact on the surrounding landscape. The new area uses a solar panel system with 504 polycrystalline solar panels fitted on the roof providing an overall maximum power of 150 kW.

Sika Acquires Adhesives and Sealants Business in Japan

Sika agreed to acquire Hamatite, the adhesives business of The Yokohama Rubber Co. Hamatite, based in Japan, offers adhesives and sealants to the automotive and construction industries. The acquisition will significantly strengthen Sika's market position in Japan, increase market access to all major Japanese OEMs, and notably extend the product offering for sealing and bonding applications in the Japanese construction industry, say company officials. Headquartered in Tokyo, the business generates annual sales of \$175 million. The transaction is subject to clearance by anti-trust authorities.

M-D Building Products Acquires Cardinal Aluminum Co.

Oklahoma City-based M-D Building



Coast to Coast Sales & Rentals

Financing Available

GM 2000-26



Lift 2000 lbs.
26 feet high



Made in the USA
Means Serviceability

More Done in
Less Time

SKYHOOK WPI
Crane attached
manipulator



Lift 2800 lbs.
or more

In
the Factory
or on
the Job Site

GM 2000-16



Lift 2000 lbs.
16 feet high

GM 2000-12



Lift 2000 lbs.
12 feet high

GM 800



Lift 800 lbs.
10 feet high

GM 2000-16
WITH WINCH



Lift 2000 lbs.
16 feet high
2 ways!

GM 4000-12



Lift 4000 lbs.
12 feet high

GM 1200



Lift 1200
lbs. 10 feet
high

THOM 2200
Fork-mounted
manipulator



Lift 2200 lbs.

PL 1000



Lift 1000 lbs.
12 feet high



CUSTOM
SOLUTIONS
AVAILABLE!

Which
one works
best for you?



See us at GlassBuild, booth 623.

Call or email Jerry j.nudi@ergorobotic.com 518-796-2179 ErgoRobotic.com

NEWS TO KNOW

Products Inc., a family-owned company involved in developing, manufacturing and marketing a range of residential and commercial weatherization, flooring, caulking and specialty extrusion products, acquired the assets of Louisville-based Cardinal Aluminum Co. and its subsidiaries, Cardinal Architectural and Designer Moulding.

Founded in 1946, Cardinal Aluminum Co. provides custom aluminum extrusion, fabrication and finishing to customers across North America. Cardinal Architectural provides a motorized louvered roof system, and Designer Moulding provides metal and wood picture frame mouldings.

Prince International Corp. to Acquire Ferro Corp.

Prince International Corp., a portfolio company of American Securities LLC, announced that it is acquiring Ferro Corp. for \$22 per share in cash, in a

transaction valued at approximately \$2.1 billion, including the assumption of debt, net of cash. The agreement has been unanimously approved by Ferro's board of directors.

In conjunction with the closing of the transaction, the company will combine with Chromaflo Technologies, a premier global provider of colorant technology solutions and also an American Securities portfolio company. The combination of Prince, Ferro and Chromaflo will result in a global diversified business with sales of approximately \$2 billion.

DefenseLite Announces Strategic Alliance with Binswanger Glass

Impact Security LLC, the manufacturer of DefenseLite, announced a strategic alliance with Binswanger Glass. Binswanger will launch its DefenseLite program at the company's locations in Dallas and Houston, offering clients

high-security window glazing options for maximum protection against security threats.

"We are honored that Binswanger Glass has elected to participate in our DefenseLite dealer program," says Jeff Franson, president of Impact Security. "Their commitment to providing clients with the strongest possible window glazing security solutions make them an ideal partner. We look forward to what promises to be a long-standing, mutually beneficial relationship."

Faro Acquires HoloBuilder Inc.

Faro Technologies Inc., which manufactures and supplies 3D measurement, imaging and realization solutions, announced the acquisition of HoloBuilder Inc. HoloBuilder brings to Faro its photogrammetry-based 3D platform, which delivers hardware-agnostic image capture, registration and viewing to the fast-growing



SKYLIGHT & CANOPY SUPPORTING SYSTEM

KIN LONG
For Better Living

INTEGRATED EXPERTS ON CONSTRUCTION HARDWARE SOLUTIONS

Stock Code : 002791

www.kinlong.com

Contact : mail@kinlong.com



Pilkington SaniTise™

Engineered with titanium dioxide coating technology, Pilkington **SaniTise™** is an antimicrobial glass product made to protect against bacteria and enveloped viruses. Have some peace of mind knowing your glass surfaces are continuously working for you.

Pilkington **SaniTise™**. For a healthier, cleaner, safer world.

1.800.221.0444
buildingproducts.pna@nsg.com
www.pilkington.com/na



digital twin market. With an initial focus on construction management, HoloBuilder's technology platform provides general contractors a solution to efficiently capture and virtually manage construction progress using off-the-shelf 360-degree cameras.

Dodge Data & Analytics and BSD SpecLink Announce Strategic Partnership

BSD SpecLink, a specification-writing platform, partnered with Dodge Data & Analytics. Together, BSD and Dodge deliver information, insights and opportunities to architects, designers and building product manufacturers across each step of the construction life cycle, with an emphasis on facilitating collaboration between key participants to drive better project outcomes.

FLOAT GLASS

Vitro to Build Third Float Furnace at Garcia Plant

Vitro, S.A.B. de C.V. announced that its board of directors approved construction of a third float furnace at the company's García plant near Monterrey, Mexico. Construction of the new furnace will begin later this year.

The approximately \$120-million investment will allow the company to meet the growing market demand in Latin America and provide greater product availability and improved logistics, enabling the company to provide a higher level of service to its customers and markets.

"Board approval of the construction of this new float line demonstrates Vitro's commitment to meeting the needs of the markets we serve," says Adrian Sada Cueva, chief executive officer, Vitro. "Vitro is continually developing

new products with improved efficiency, aesthetics and value. With building construction steadily increasing in the region, these are the attributes that the industry is seeking in glass. Expanding our capacity will help meet that demand and allow us to get glass to our customers faster, using the latest production technologies."

NSG Group Invests in U.S. Plant, Will Close U.K. Facility

NSG Group rebuilt one of its furnaces at its float glass plant in Laurinburg, North Carolina. The Laurinburg plant manufactures float glass for the commercial architectural and export markets.

In the U.K., NSG Pilkington announced it will close its glass manufacturing plant in St. Helens by the end of 2021, according to local reporting, due to a lack of profitability.

www.e-bentglass.com

One piece or thousands, our custom fabricated BENT GLASS is bringing form and function to the designs of tomorrow.






Architectural, Interior, Solar & Transport Applications



Precision Glass Bending

**THE WORLD LEADER IN
CUSTOM FABRICATED
BENT GLASS**

**Precision Glass Bending Corporation
PO Box 1970, 3811 Hwy 10 West
Greenwood, AR 72936-1970
UNITED STATES OF AMERICA**

TEL (800) 543-8796 • FAX (800) 543-8798 • sales@e-bentglass.com



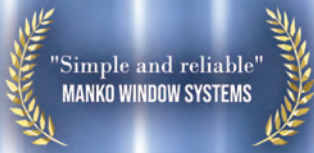
Guardian SunGuard Select™ Fabricator







"Fast and scalable"
INTERGLASS CORPORATION



"Simple and reliable"
MANKO WINDOW SYSTEMS



"Competitive advantage"
FLAT GLASS DISTRIBUTORS

DEBUTING AT GLASSBUILD IN ATLANTA



The FuseCube™ Express is making its grand appearance at GlassBuild America. Trust the reviews. This is one award-winning machine you don't want to miss. For more information, visit www.dfisolutions.com.

OFFICIAL EXHIBITOR
GlassBuild
AMERICA
THE GLASS, WINDOW & DOOR EXPO
September 13-15, 2021 | Atlanta, GA



Saint-Gobain Invests in U.K., India Plants, Divests of German Fabrication Business

Saint-Gobain invested in float plants in both the U.K. and India. The company invested \$41.5 million in its U.K. glass plant, located in Eggborough, East Yorkshire. The complex engineering and construction program will see the complete rebuild and installation of a state-of-the-art float glass furnace.

The company also plans to invest in its Bhawadi plant, located in the state of Rajasthan in India. The new investment will expand the plant’s float line, making it the largest in Asia, according to the company, and create 300 jobs.

The manufacturer also announced the sale of Saint-Gobain Glassolutions Objekt-Center, which specializes in glass fabrication operations as part of the Glassolutions network in Germany, to the

German privately-owned AEQUITA group based in Munich.

Guardian Glass to Replace Float Line at Luxembourg Plant

According to local reporting, Guardian Glass will replace a float production line at its float plant in Bascharage, Luxembourg. The existing line has reached the end of its life, according to reporting, and the new furnace will be operational by 2023. The company also plans that the new line will have improved environmental performance and energy efficiency.

INDUSTRY

U.N. General Assembly Declares 2022 International Year of Glass

The U.N. General Assembly officially declared 2022 as the International Year of Glass. The International Commission on Glass, the Community of Glass Associations, and ICOM-Glass had submitted the application for glass to be recognized.

The draft resolution was introduced by the representative of Spain, who in her remarks said the basis of the draft was born thousands of years ago in the cradle of civilization when glass was first discovered. “Glass has evolved along with humanity,” she said, highlighting the need to develop technologies that will foster a more sustainable future.

The Glass Guru Opens First Location in PA

The Glass Guru added the organization’s newest franchise location in Lehigh Valley, Pennsylvania. This marks the company’s first franchise location in the state of Pennsylvania. Franchise owners Placido and Alicia Hernandez completed their initial franchise training in mid-February 2021. ■

*From March 16 to press time June 30. Read these stories, and others, in their entirety at GlassMagazine.com.



Azon Saves Energy

Daylighting systems produced with Azon structural thermal barrier technologies—the **MLP™** or **Dual Cavity**—for aluminum windows and curtain wall, along with high performance glazing components for insulating glass, will yield a fenestration system capable of upholding the highest efficiency and sustainability standards

Contact us to learn about the role of Azon thermal barriers in energy conservation.

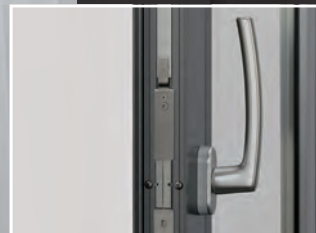


1-800-788-5942 | www.azonintl.com

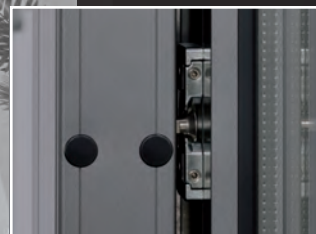


Inowa

Innovative **hardware** for quality sliding patio doors in Aluminum, Wood, & PVC profiles.



Concealed Hardware



Energy Efficient



Ease of Use

Excellence in Window and Door Hardware | rotonorthamerica.com

Sliding Patio Door • Swing Door • Patio Fold • Patio Lift • Casement • Tilt & Turn • Sash Locks

YOUR PROFITS: MANAGEMENT

TO BUY OR NOT TO BUY

BY MARCO TERRY



One way to grow a business, especially during uncertain economic times, is by acquiring companies and merging them with your existing business. When executed correctly, an acquisition or merger strategy can grow your revenues, increase your market penetration and provide economies of scale. However, acquisitions are also challenging to execute and can backfire. They can lead to serious losses. In this article, we discuss some of the basic concepts to keep in mind if you choose this strategy.

Consider these important questions as you evaluate an acquisition target, develop a strategy and prepare for financing.

1. Is it a horizontal or vertical acquisition?

The first step in your acquisition strategy is to determine if you will expand horizontally or vertically. Both expansion strategies have advantages and disadvantages. In our experience, horizontal integration is more common and simpler to execute.

A horizontal acquisition is when you acquire companies that are similar to your company. They work with the same type of customers and are in the same position in the value chain as yours. A vertical acquisition is when you acquire a company below or above you in the value chain. Examples include acquiring suppliers or customers.

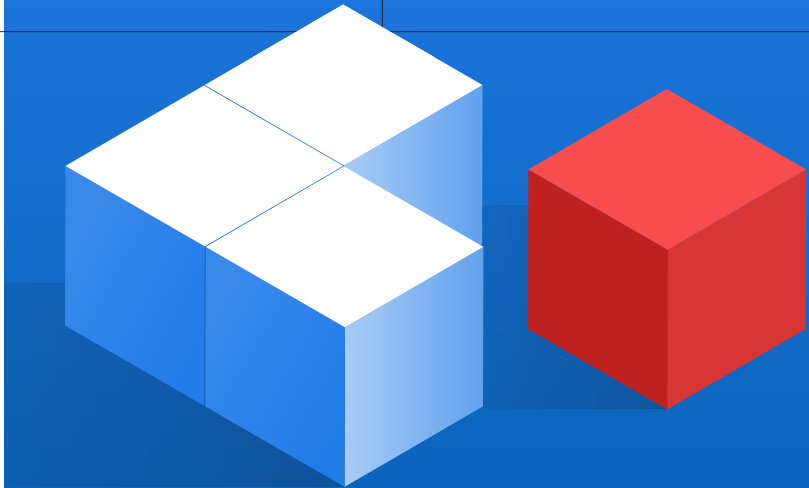
2. Can the target companies be merged?

As you evaluate targets, determine if the company can be merged with your existing business. Combining the companies into a single entity allows you to gain

some efficiencies of scale. However, integrating the businesses is also the most challenging post-acquisition task. Most transactions fail because the merger is not well-executed. When evaluating acquisition targets, consider the following:

Company culture. A merger will work only if the company cultures are compatible. Buyers often overlook this important consideration. Companies with very different cultures make bad acquisition candidates and often lead to disasters. Ultimately, key employees and clients become dissatisfied and leave.

Redundancies. Mergers often lead to redundancies. Redundancies are functions that both businesses perform but don't need to be duplicated. Eliminating redundancies can lead to savings, which boosts profitability. A straightforward example is rent. The company may not need to pay rent for two locations when a single location works fine. This is an obvious benefit of eliminating redundancies.





SystemSelect[™] System thermal performance, instantly.

Compare thermal and visual performance details for entire architectural glass and metal systems quickly with our free online tool. No downloading, training or onboarding necessary. In minutes, you can literally save hours.

systemselect.obe.com

Unfortunately, you will also have to deal with personnel redundancies. These are handled through layoffs. This is one of the hardest parts of a merger. Additionally, implementing layoffs right after an acquisition is a sure way to destroy company morale.

If possible, avoid layoffs by retraining and reassigning staff. If you have no alternatives, consider using a kind and generous approach with the laid-off employees. It's the right thing to do and the best strategy for the company.

Client base. Good acquisition targets have a client base that complements yours. This point is extremely important

if you plan to merge the target with your business. Acquiring a company whose client base is not complementary to yours is often a recipe for problems.

For example, if you are currently set up to handle large commercial projects, acquiring a company that focuses on small residential projects could create problems in some environments. They are two very different customer bases with no overlap. The customer base, scale, sales process, billing, customer management and overhead are all different.

3. Will the acquisition be profitable?

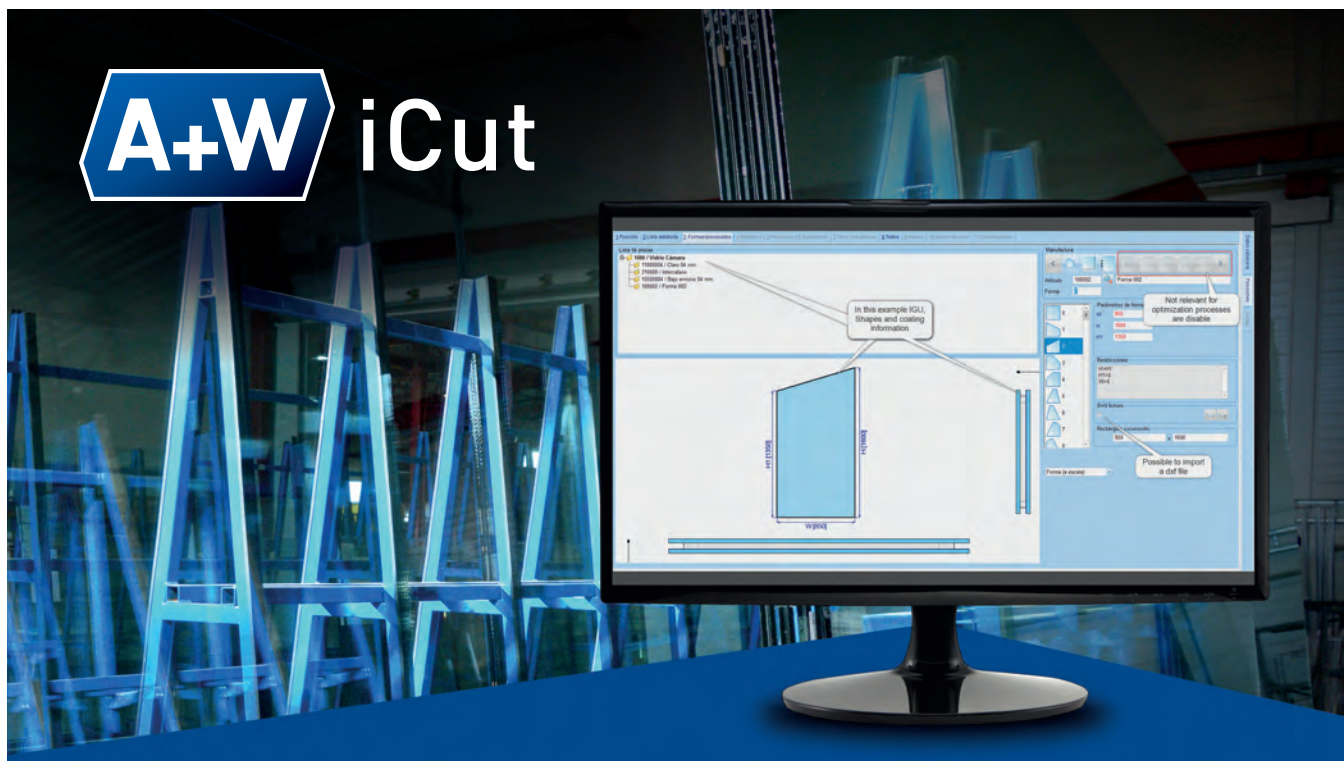
Your main objective is to increase your

profits of the combined businesses. Determining whether an acquisition will be successful is difficult and very time-consuming. It involves building and testing financial models. You don't want to skimp on this effort.

Test your business model against different market conditions. Don't assume things will always be rosy, as many first-time buyers often do. Shock the business model with recessions and other problems to see how it performs.

4. How will you pay for the acquisition?

Every acquisition requires that the buyer




A+W iCut

Looking to optimize cutting?
 A+W iCut is designed for local glass houses ready to automate.

Now you can easily enhance your cutting operation with robust software.

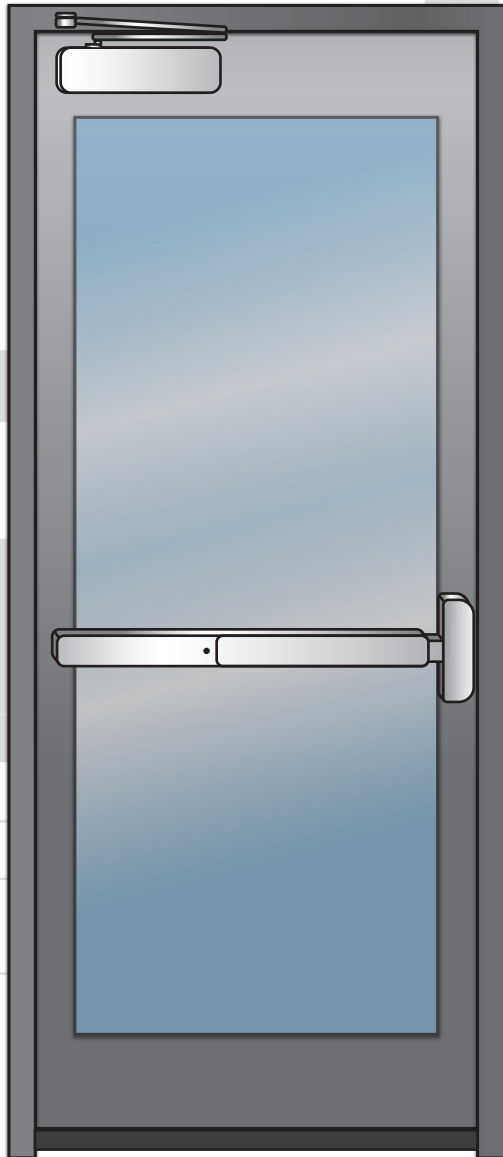
- Manage Order Entry
- Optimize Cutting and Residuals
- Automate Reporting Functions



See us at GlassBuild, booth 2421.

YOUR FIRST CHOICE IN DOOR HARDWARE

JLM Wholesale stocks multiple standard door hardware options from leading manufacturers. We can assist you in finding the best solution for your next project.



LCN 1250 CLOSER



FIRST CHOICE 3600 SERIES
EXIT DEVICE



BURNS MFG, INC.
39C OFFSET PULL



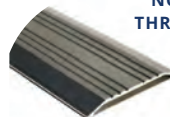
GMS RIM
CYLINDER



SELECT
SL11
HINGE



NGP 600A
SWEEP



NGP 425
THRESHOLD

See us at GlassBuild, booth 802.



MI | 800.522.2940
NC | 800.768.6050
TX | 877.347.5117



423.JLM.HELP
704.509.2940

www.jlmwholesale.com

jlm
Wholesale
Security Door Hardware

Custom High-Performance Fenestration Products

for high acoustic, historic, coastal, ATFR, and general commercial applications



Quiet. Safe. Timeless.

stcloudwindow.com
800.383.9311



st. cloud
window

INSIGHTS | YOUR PROFITS

contribute funds to the transaction, whether the acquisition is paid for solely in cash (a rarity) or via financing (most common). This financial contribution is called an equity injection. The amount of cash you need for the purchase is determined by the size of the equity injection.

At a minimum, most loans require that the buyer contribute 10 percent of the total project cost. The total project cost is calculated by adding the following:

- Cost of the business
- Capital expense additions (e.g., machinery, equipment)
- Cash flow additions (i.e., funds to operate the business)
- Transaction costs

Note that 10 percent is usually the absolute minimum. Some transactions may require a higher contribution.

5. Can you afford the acquisition?

The equity injection must come from your current company, your own funds or a combination of both. Even if you have the funds, you must determine if you can afford to spend them in the transaction.

Investing funds in the acquisition reduces your liquidity, which affects your ability to weather future problems. Make sure your remaining funds are sufficient to handle small or moderately sized issues.

6. How will you finance the acquisition?

Acquisitions up to \$5 million are usually financed using SBA-backed financing. Transactions that don't meet SBA eligibility or are larger than \$5 million are usually financed through conventional lenders.

Not every lender is comfortable with companies in construction-related industries. Look for a lender that is comfortable with the glass and fenestration industries. It may take some effort, but this strategy will ensure you get the best financing terms.

Your acquisition will have a better chance of getting funded if you prepare ahead of time. Do the following things before you look for financing:

Fix your company's accounting

system and financial statements. You will likely want to pay for part of the equity injection or collateralize the acquisition using your existing company's assets. And, in most cases, you will likely merge the acquisition with your current company. Consequently, lenders will want to review your company in detail.

Address any accounting issues before you look for financing. Work with a CPA to ensure your financial reports are pristine. This effort shows lenders that you operate a well-managed company. Be prepared to show two or three years' worth of financial statements.

Get your taxes in order. Lenders will examine your business and personal tax returns. Personal and business taxes must be in order and up to date. If you have tax issues, fix them before you look for financing. Seek the help of a CPA if necessary.

Organize personal financial statements. All business acquisition loans, SBA-backed or not, require a personal guaranty from the buyers. Consequently, the lender will examine your personal financial statements and assets. Get ahead of the process by organizing your finances and assets before you look for funding.

Obviously, offering a personal guaranty for an acquisition can impact your personal assets. For this reason, I consider growing through acquisitions to be a risky strategy. Consider this strategy only if you are very certain that the transaction will succeed.

Additionally, **review your personal credit**, which lenders will review as part of their decision-making process. They consider the credit score to be a proxy (albeit imperfect) for financial responsibility. SBA-backed loans require a minimum credit score of 650 to 680. Other lenders have higher requirements. If your credit does not meet these criteria, consider addressing those situations before seeking a loan. ■

Marco Terry is managing director of Commercial Capital LLC, a factoring company and provider of invoice financing to companies in the glass industry. He can be reached at 877/300-3258.

INDUSTRY PARTNERS ADVOCATE FOR NACC CONTRACTORS

“Responding to a **dire need** in the industry, **NACC** is a welcomed resource to the design and construction community providing access to prequalified companies who have **demonstrated** sound business practices, compliance with industry standards, and a commitment to **quality** and **safety**. The word ‘*demonstrated*’ is the difference between lip service and **meaningful action**. As building envelope consultants, designers, and specifiers who have a unique perspective to assess an installation contractor’s overall competence, CDC is an **advocate** for the NACC program.”

– Rodney Harvey | Principal
Curtainwall Deign Consulting (CDC) | Dallas, TX

MITIGATE RISK.
BUILD BETTER PROJECTS.
STRENGTHEN THE INDUSTRY.
WWW.NACCPROGRAM.COM



NACC
North American Contractor Certification

The North American Contractor Certification Program recognizes architectural glass and metal contractors that consistently demonstrate quality and safety excellence.

The program offers an ANSI-accredited third-party endorsement of companies having completed a significant and time-intensive evaluation process establishing a baseline for competency, business practices, and adherence to industry-accepted guidelines.

See us at GlassBuild, booth 1718.



Two-hour fire-resistive test for Safti First's SuperLite II-XLB Glazing with GPX Architectural Series Framing. Photo by Safti First.

HOW TO DETERMINE THE FIRE RATING

BY THOM ZAREMBA

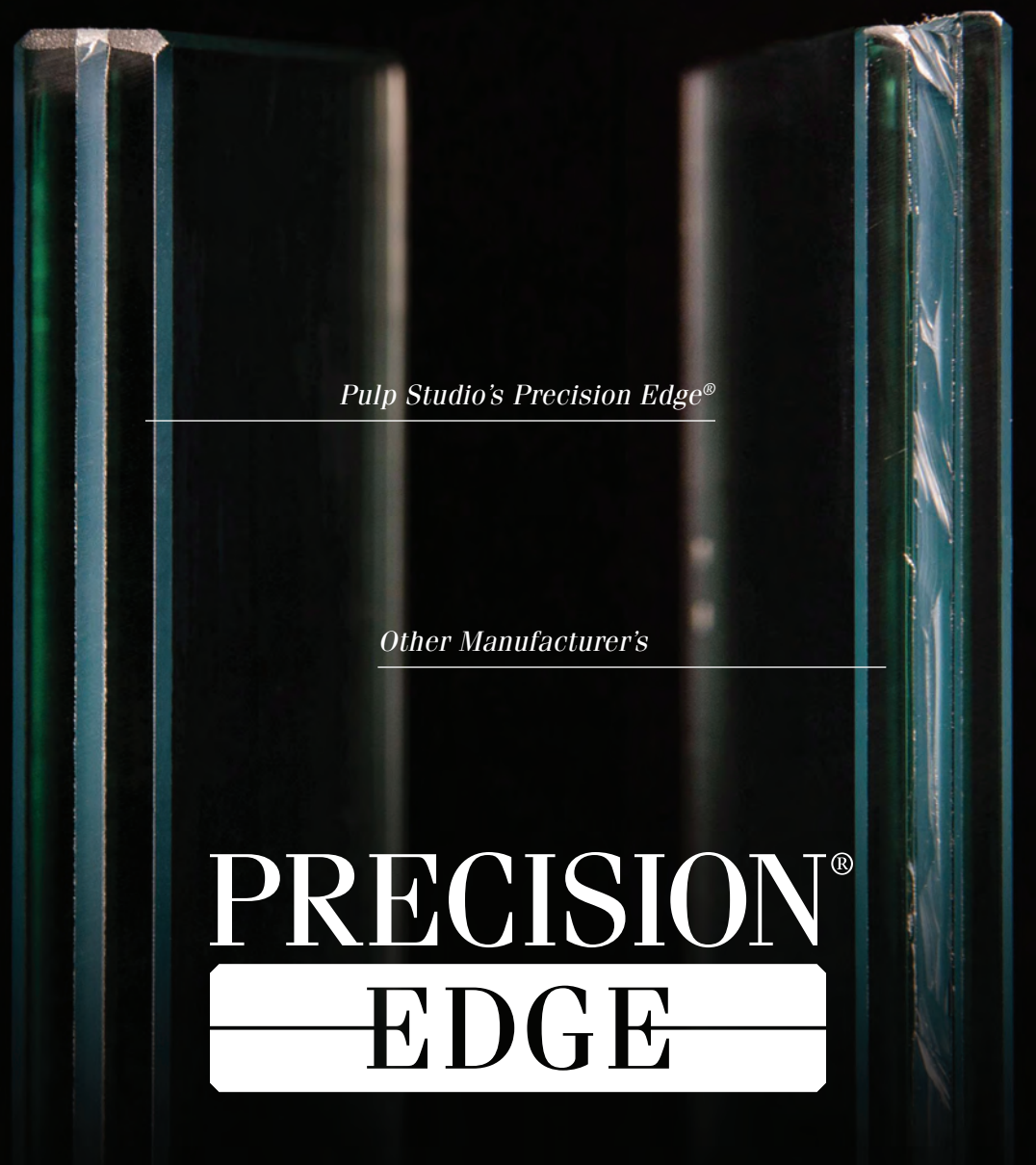


Building codes require specific building components to have a fire rating. The fire rating can vary from 20 minutes to 4 hours and indicates the ability of a wall, window, door, floor or ceiling to reduce the spread of a fire or the amount of protection provided to structural members to allow safe egress of building occupants and ingress for first responders. These requirements have a direct effect on windows and doors installed within a building, as there are specific limitations on glazing in fire-rated installations.

Four types of fire-rated walls

Buildings are constructed with four types of fire-rated walls:

- Fire walls separate two adjoining buildings.
- Fire barriers are typically used to separate exits from the occupied areas of a building.
- Fire partitions are used in corridor walls where an access area leading to an exit requires a fire rating.
- Exterior walls are fire-rated only when the fire separation distance between a building's exterior wall is a distance specified by code



Pulp Studio's Precision Edge®

Other Manufacturer's

PRECISION®

EDGE

The exposed edges on glass handrails are an aesthetic detail you don't want to overlook. Codes only require that handrail glass be laminated, but high-quality edgework is imperative for the integrity of the design. Never feel pressured to accept a pre-polished laminate product when you have better options.

Precision Edge® complements the design by providing a high-quality, zero-tolerance finish, with perfect alignment for both tempered and annealed laminated glass.

PULPSTUDIO

www.pulpstudio.com

2100 W. 139th St. Gardena, California 90249

Tel: 310-815-4999 Fax: 310-815-4990

Email: sales@pulpstudio.com

Opening Fire Protection Assemblies, Ratings and Markings

Type of Assembly	Required Wall Assembly Rating (hours)	Minimum Fire Door and Fire Shutter Assembly Rating (hours)	Door Vision Panel Size	Fire-rated Glazing Marking Door Vision Panel	Minimum Sidelight/Transom Assembly Rating (hours)		Fire-rated Glazing Marking Sidelight/Transom Panel	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Fire walls and fire barriers having a required fire-resistance rating greater than 1 hour	4	3	See Note a	D-H-W-240	Not permitted	4	Not permitted	W-240
	3	3 ^d	See Note a	D-H-W-180	Not permitted	3	Not permitted	W-180
	2	1 ½	100 sq. in.	≤100 sq. in. = D-H-90 >100 sq. in. = D-H-W-90	Not permitted	2	Not permitted	W-120 ←
	1 ½	1 ½	100 sq. in.	≤100 sq. in. = D-H-90 >100 sq. in. = D-H-W-90	Not permitted	1 ½	Not permitted	W-90

FIGURE 1: Fire-rated Glazing Table for Fire Doors, from 2021 IBC, Chapter 7, Table 716.1[2]. The arrow indicates the applicable row of the table for two hour fire barriers.

Type of Assembly	Required Wall Assembly Rating (hours)	Minimum Fire Door and Fire Shutter Assembly Rating (hours)	Door Vision Panel Size	Fire-rated Glazing Marking Door Vision Panel	Minimum Sidelight/Transom Assembly Rating (hours)		Fire-rated Glazing Marking Sidelight/Transom Panel	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Horizontal exits in fire walls	4	3	100 sq. in.	≤100 sq. in. = D-H-180 >100 sq. in. = D-H-W-240	Not permitted	4	Not permitted	W-240
	3	3 ^d	100 sq. in.	≤100 sq. in. = D-H-180 >100 sq. in. = D-H-W-180	Not permitted	3	Not permitted	W-180
Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access ramps, interior exit stairways and interior exit ramps; and exit passage walls	1	1	100 sq. in.	≤100 sq. in. = D-H-60 >100 sq. in. = D-H-T-W-60	Not permitted	1	Not permitted	W-60 ←

FIGURE 2: Fire-rated Glazing Table for Fire Doors, from 2021 IBC, Chapter 7, Table 716.1[2]. The arrow indicates the applicable row of the table for one-hour fire barriers.

(often 30 feet or less) to a lot line, the center line of a roadway, or another building on the same lot.

Within the four types of fire-rated walls, fire-rated glazing can be installed as a window, an opening in a door, or as a glass fire-resistance rated wall. The requirements for fire-rated glazing are generally found in Chapter 7 of the International Building Code.

Fire protection versus fire-resistance

The building code recognizes two types of fire-rated glazing: fire protection-rated, and fire resistance-rated.

- Fire protection-rated glazing is installed for the purpose of containing fire and preventing the spread of flames, smoke and hot gases. A fire-protection-rated glazing is not designed or

required to block thermal transfer through the glass. When used in a fire window, fire-protection-rated glazing is tested to UL9/NFPA 257 UL10B or UL10C/NFPA 252, depending on the application.

- Fire resistance-rated glazing is installed not only for the purpose of containing fire and preventing the spread of fire, smoke and



On this path, speed and patience go together.

Your glass business needs the right solutions onsite, on time. But everything has to fit together, too. So our technical experts offer all the guidance, support and patience you need.



NEW and IMPROVED!

GLASS CUTTING TECHNOLOGY

CleanCut™ 1700 Series



Highest glass yields with extremely fast sheet process time with or without deletion.

Ask GED about larger-size 1800 Series

VINYL WELDING TECHNOLOGY

TruWeld™

Consistent, high-quality vinyl servo speed welder.



31100 Diamond Pkwy
Glenwillow, OH 44139
330-963-5401
www.GEDUSA.com



OFFICIAL EXHIBITOR
GlassBuild
AMERICA
THE GLASS, WINDOW & DOOR EXPO
September 13-15, 2021 | Atlanta, GA

IG Systems

Software

Window Systems

INSIGHTS | CODE WATCH

hot gases, it is also designed to, and is intended to block the transmission of radiant and conductive heat. Fire resistance-rated glazing is tested to UL 263/ASTM E119 Standard Test Method for Fire Tests of Building Constructions and Materials.

How to determine the fire-resistance rating

The steps often used to determine the fire-resistance rating of specific applications can be illustrated with an example. Imagine construction drawings indicate fire-rated glass is required in several doors in the wall of a fire barrier that separates an interior stairway that is part of an exit from the rest of the occupied space in the building.

01— Determine the type of fire-rated wall. Refer to Chapter 7 of the IBC for the specific wall type:

- Fire walls are addressed in Section 706.
- Fire barriers are addressed in Section 707. (The example given above is a fire barrier.)
- Fire partitions are addressed in Section 708.
- Exterior walls are addressed in Section 705.

02— In the example, Section 707 for fire barriers says the fire-resistance rating of fire barriers separating interior exit stairways must comply with IBC Chapter 10 Means of Egress.

03— Chapter 10 Means of Egress designates:

- a. If the exit stairway connects four stories or more, it must have a fire-resistance rating of not less than 2 hours.
- b. If it connects less than four stories, it must have a fire-resistance rating of not less than 1 hour.

04— Return to IBC Chapter 7 to the fire-rated glazing table for fire doors, Table 716.1(2), shown previously for reference.

- a. The table indicates if the exit



CHANGING THE WAY YOU LOOK AT YOUR SPACE

Modernfold's Acousti-Clear® movable wall systems provide flexible space management solutions for your ever-changing space requirement needs while providing daylighting and 51 STC acoustical control..

• ACOUSTICS • AESTHETICS • PERFORMANCE •

 **MODERNFOLD**®

MODERNFOLD.COM

HORIZON

ORDERS OVER \$100 SHIP FREE
IN THE CONTINENTAL U.S.



FRAMELESS SHOWER DOOR
HARDWARE SPECIALISTS

877.728.3874
888.440.9567

Browse online at
ushorizon.com

INSIGHTS | CODE WATCH

stairway connects 4 or more stories, a 2-hour fire-resistance rated fire barrier wall requires the use of a 1 1/2-hour fire-rated door.

b. The table also indicates that a 1 1/2-hour fire door may include up to a 100 sq. in. view panel of 1 1/2-hour fire protection-rated glazing.

c. The table also allows the glass in the door to exceed 100 sq. in. if fire resistance-rated glass is be used.

d. The table indicates that the 1 1/2-hour fire door assembly may also include fire-rated glass sidelights and transoms, but those must also be made of fire resistance-rated glazing, not fire protection-rated glass.

e. If the exit stairway connects less than 4 stories, a different section of the table indicates the required 1-hour fire barrier wall only requires a 1-hour fire door. The 100 sq. in. view panel using fire protection-rated glazing and the use of any larger size glass in the door leaf, as well as any glass used in transoms and sidelights in the door assembly remain the same, namely that only fire resistance-rated glass would be permitted.

The same steps outlined above can be used for all the different types of fire-rated walls. For assistance with this process, consult with manufacturers or fabricators of fire-rated glazing, or with the authority having jurisdiction for the building project.

Manufacturers of fire-rated building materials, products and components have their products tested by approved independent testing laboratories and are able to produce certificates stating their ratings. Each installation of fire resistance or fire protection-rated glass must be permanently labeled with the mark of the certifying agency. ■

Thom Zaremba, Roetzel & Andress, is the fire, structural and safety glass consultant for the National Glass Association and GICC.



myglasstruck.com Top Quality Glass Racks & Truck Bodies Since 1989



- All racks ship fully assembled with step-by-step instructions
- Factory authorized installations available across North America.
- Glass trucks built to order and in-stock for fast delivery.

(844) 364-4022 | MyGlassTruck.com

See us at GlassBuild, booth 1823.

SCHÜCO



Schüco SmartActive

Engineered to stop infection.

As the world struggles to fight the most severe global health crisis of our lifetime, it is upon all inhabitants of the earth to protect themselves and their neighbors from spreading dangerous infections. Likewise it is upon every business and organization to develop solutions to reduce the spread of infection amongst its employees and guests. Schüco has risen to this challenge with the development of a window handle with an anti-microbial surface finish.

To learn more about Schüco SmartActive, **please contact us at +1.860.666.0505 or at SmartActive@schuco-usa.com.**

www.schuco-usa.com



THE 3 MOST CRITICAL POINTS OF IG PRODUCTION

All parts of insulating glass manufacturing are important. But uncompromising quality on these points can best help prevent unit failure

BY JOE ERB AND DOUG HAUCK

Reliable production of quality insulating glass depends on many little things going right throughout the fabrication process. Some of today's market dynamics, however, have made this process more challenging than ever.

In the face of ongoing labor shortages, evolving production techniques and an ever-increasing demand for higher performance, what is to

be done? It's worth taking a step back, identifying which components of an IG unit are the most critical and ensuring that every operator is well-versed on how to spot potential errors.

Operators are, after all, the first line of defense against a bad IG unit. Their ability to understand both how and why certain elements of production can lead to unit failure is important. Let's examine three points that

Hartung's Automated Forel Commercial IG Line. Photo courtesy of Quanex.

are important to get right every time:

01 Protect the desiccant
Desiccant plays one of the most important roles in long-term IG performance, preventing moisture accumulation within the unit's interior. Without desiccant, even a perfectly sealed IG unit can begin to show condensation in the air space shortly after it's been assembled.

WHERE EXPERIENCE MEETS STATE-OF-THE-ART TECHNOLOGY



**American
Insulated
Glass**



Find the Right Solutions for Exterior & Interior Design Applications

As a certified fabricator for the world's leading glass manufacturers and a wholesale distributor, American Insulated Glass is a foremost provider of high-performing glass for building facades and luxurious interior design solutions. Backed by a team of knowledgeable industry professionals and with a proven track record of excellence, AIG will meet your glazing requirements—commercial or residential—all while exceeding service expectations. **Simplify your project experience with AIG.**

**Certified fabricator for world's
leading glass manufacturers**

**Extensive product range for
commercial, residential and interior**

**Custom fabrication, architectural
aluminum, fire-rated, hurricane impact,
IGUs, shower enclosures and more**

**Custom glass fabrication & wholesale
distribution**

Alabama | Florida | Georgia | Maryland | Michigan | North Carolina | Tennessee

AIGlass.com

“ OPERATORS ARE ... THE FIRST LINE OF DEFENSE AGAINST A BAD IG UNIT. THEIR ABILITY TO UNDERSTAND BOTH HOW AND WHY CERTAIN ELEMENTS OF PRODUCTION CAN LEAD TO UNIT FAILURE IS IMPORTANT.”

But your desiccant’s ability to perform this essential task over the long term isn’t guaranteed if the right protocols and best practices aren’t in place on your shop floor.

Whether it is a separate, powdered component, or it is incorporated into the spacer material, the desiccant’s job is to absorb moisture from its surrounding environment, but its ability to perform this task is not infinite. Molecular sieve, the most common desiccant used in IG, has a very strong affinity for moisture even at very low humidity. A desiccant-filled spacer left out and exposed long enough, to even a modest 20 percent relative humidity, can potentially absorb up to 80 percent of its total moisture capacity before it even makes it into your IG unit.

The solution is simple. Protect the desiccant at all stages of production—from storage and filling to final IG assembly. Protecting the desiccant from exposure to fresh air when not in use limits its potential to waste desiccating capacity before it’s applied, helping it to deliver proper performance once sealed into the unit.

02 Ensure a good primary seal

A good primary seal starts with a good sealant profile. Make sure your primary sealant is properly placed and not over- or under-filled. Avoid skips or voids in the primary sealant, as this is the main moisture/gas barrier.

Next, it’s essential to close the start/stop joint(s) of the spacer on your unit, bringing the two ends of the spacer together as closely as possible and sealing it. If the spacer ends are not joined/sealed, this could be a path for moisture/gas and potential for desiccant to get into the air space. Finally, once the unit is pressed, verify that the primary sealant is fully pressed out and wetted to the glass and spacer. Examine the seal with a flashlight—fully wetted PIB should be a solid, flat black.

Checking these criteria on the first few units out of the press should give you a good indication of whether any adjustments are needed.

Template complex shapes easily and digitally

Replace your tape measure, physical templates & ladders with the LT-2D3D.

MEASURE THESE SHAPES IN...

SCHEDULE AN ONLINE DEMO!
877-679-1300 or
815-341-7612
 laserproductsUS.com

MADE IN THE USA
 WITH SOME IMPORTED PARTS

See us at GlassBuild, booth 1202.

OFFERING THE MOST COMPREHENSIVE SUITE OF FENESTRATION TESTING SERVICES IN THE INDUSTRY

TOTAL QUALITY. ASSURED.



Location / Flexibility

Intertek has strategically located laboratories and field teams all over the world.



Certification

Streamline your market access by partnering with Intertek to test and certify, proving to your customers and AHJs your continuous commitment to safety.



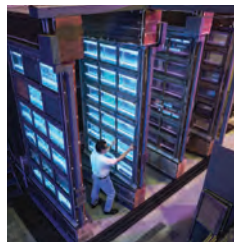
Expertise / Knowledge

Leverage the building, engineering, and construction market leader and our staff of experts for building products and construction projects.



Equipment / Technology

Our labs are fully equipped and accredited to test every type of opening from residential vinyl, aluminum, wood and fiberglass windows to commercial curtain walls and window wall systems.



Other Testing Services

Precisely design, coordinate, install, construct, inspect, and test a wide variety of conditions throughout the life cycle of openings and other building products.



Speed / Efficiency

With a wide range of service offerings, Intertek is your solution for faster and more cost effective access to domestic and international markets.

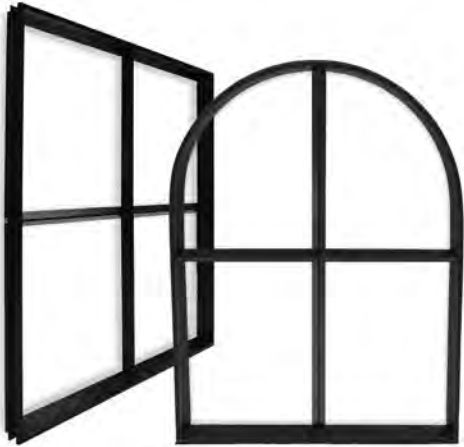
FOR MORE INFORMATION

1.800.WORLDBLAB

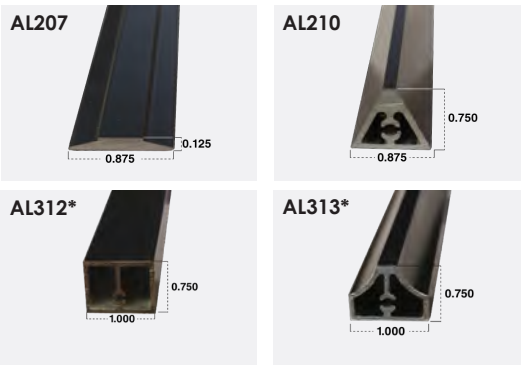
icenter@intertek.com

intertek.com/building

**COMMERCIAL
WINDOW GRILLES**



FrontLine Bldg. Products, Inc. has been exceeding expectations in the commercial and residential grille markets for over 40 years. Our attention to detail and our closed halving joint (“dado”) enable us to provide a beautiful, finished look while adding value and savings in your shop or on the jobsite. Our experience, expertise, and engineering support make us the ideal partner for your job. Whether it’s our ever-expanding range of SDL options or our perimeter options, we have the right application for your project. Our pattern capabilities include diamonds, radius, and even simulated vents.



View all profiles at www.frontlinebldg.com

610 Jensen Drive, Medford, WI 64451
715-748-2288 | www.frontlinebldg.com



See us at GlassBuild, booth 915.

“
POOR RACKING CAN
CAUSE AN OTHERWISE GOOD
UNIT TO FAIL EARLIER THAN
EXPECTED.
”

03 Properly apply the secondary seal

The secondary seal ensures the structural integrity of the unit, helping it withstand temperature fluctuations and dynamic pressure changes inherent to demanding commercial applications.

First, the spacer should be consistently inset to allow for a proper secondary sealant depth. Consult the sealant supplier for sealant depth recommendations to meet structural performance standards. Thicker glass, larger units or units intended for highly demanding applications may require more sealant depth.

Next, be sure that the inset is properly filled (avoid slumping or dishing in the center). Sealants can sometimes flow up the sides of the glass first, making it look as though the inset is fully filled when the center might actually be much shallower. Remember that the structural effectiveness of the secondary sealant is dependent on a proper fill. Once the proper depth is achieved, check for and close any joints or gaps, and fix any bulges that extend past the glass edges.

Finally, good racking practices are essential to ensure units are protected while they

cure. Be sure that racks are clean and free of old sealant material. Dust and debris can become embedded in a freshly applied secondary sealant, reducing its strength, while old sealant material can bond to freshly applied sealant and damage the secondary seal when the unit is moved. Support strips should be firm and wide enough to fully support the weight of your unit without compressing—if your unit sinks into the support, the strip can displace the secondary sealant. Poor racking can cause an otherwise good unit to fail earlier than expected.

While there are many factors that contribute to high-quality IG, these are some of the most important to prevent failure. Ensuring that employees are well-versed on these essentials can help contribute to fewer failures and a fabricator’s ability to maintain your good reputation. Consult with trusted component and equipment suppliers for ongoing training programs and best practices. ■

Joe Erb is commercial sales specialist for Quanex Building Products. Doug Hauck is senior technical service engineer for Quanex Building Products.

PYRAN® Platinum

Fire-rated glass-ceramic with a clear and fast advantage

Not all fire-rated glass is made equal. PYRAN® Platinum is a transparent glass-ceramic that's thin, lightweight and easily installed in virtually all UL-listed metal frames. Readily available in most local markets, through your distributor, lead times can be as short as just a few days. Get the advantage of working with the glass of the future now. Visit our website to see why PYRAN is clearly the choice for your project.

What's your next milestone?

www.us.schott.com/pyran





STABILIZE PRESSURE VARIATIONS IN IG CAVITIES

BY AMY ROBERTS



Insulating glass units are dynamic assemblies. The glass panes on either side of the central cavity can bow in or out as ambient air pressure increases or decreases due to the elevation of the installation site versus the manufacturing location, passing high- or low-pressure weather systems, or changes in temperature. Such glass deflection can cause failure of edge seals and spacers over time, and in extreme cases, glass breakage.

This is a complex issue, as many variables can affect the cavity pressure, including glass type and thickness, glass area, aspect ratio, cavity width, sealant and spacer selection, and spacer size. To forestall problems, IG units can be provided with a compensation system that permits regulation of internal gas pressure.

There are several methods for compensating the IG unit cavity, which are described in detail in the newly published

IGMA TM-3200 manual, Design Considerations for IG Unit Cavity Pressure Compensation.

Methods used to regulate internal pressure

Reseal holes. Holes into the sealed cavity, created either in the field or at the factory, are permanently sealed in the field after pressure compensation is accomplished.

Insert tubes. A capillary tube is inserted in an IG unit during fabrication to control unit internal pressure during shipping and/or during in-service use. Typically, these are small-diameter aluminum or stainless-steel tubes that allow slow pressure equalization of the IG unit cavity. (More details are covered in a separate publication, TB-1601/95 (14), Guidelines for Capillary Tubes.) Note that capillary tubes are not recommended for use in gas-filled IG units.

Apply post-fabrication valves. This option usually takes the form of a one-way valve applied post-fabrication (often at the installation site) that can be mechanically depressed under a specific pressure differential load to adjust the pressure in the cavity. After venting, a spring mechanism closes the valve.

Adjust pressure. The manual outlines several options for adjusting pressure:

- **Desiccant adsorption.** This technique typically involves the adsorption of a sacrificial gas, mixed into the insulating gas at the time of filling, onto a desiccant material added to the cavity to reduce cavity pressure. This allows sealing at atmospheric pressure, without the need to puncture the spacer or glass for pressure adjustment after sealing.
- **Pre-inflating/pre-deflating.** Pre-inflating and pre-deflating is accomplished by removing or injecting gas to increase or



California's Premier Glass Fabricator

Glasswerks is a full-service fabricator of flat and bent glass for all your residential, commercial, and architectural projects. Including tempered, laminated and decorative glass, as well as custom glass products and hardware.

The Broadest Range of Capabilities in the Industry

- Jumbo Tempered & Laminated Glass
- Bent Tempered, Laminated, & I.G.
- Jumbo High-Performance I.G.
- Digital In-Glass Printing
- Heat Soaked Glass
- Custom Mirrors
- Entrance Systems
- Shower Doors
- Much More

THINK BIG THINK GLASSWERKS
888.789.7810 | glasswerks@glasswerks.com | glasswerks.com

GW1220

GLASSWERKS' GROUP OF COMPANIES





INVISIBLE
SHIELD

PRO
15

Lasting Protection for the Life of Glass

- 93% Increased Scratch Resistance
- Prevents Staining, Etching & Pitting
- Faster & Easier Cleaning & Maintenance
- Long Term Clarity & Improved Appearance
- Industry Best Performance, Warranty, Safety & Value



Tested Tough & Approved!

Thousands of long-term customers & proven projects worldwide.

BSD
SpecLink

DOWSIL™

NANOVEA™
a Better Measure



Advanced Surface Technologies

Ask About New INVISIBLE SHIELD®
MICROBURST™ Two-Sided Glass
Coating Machine with Incredible UV &
IR Curing Technology!

1.800.528.3149 | www.GlassCareExperts.com | www.Unelko.com

See us at GlassBuild, booth 2017.

decrease the volume by a specific amount to compensate for the expected expansion or contraction of the gas. This method may not work for certain IG unit constructions, due to increased stress on the seal and glass.

- **Temperature manipulation.** The entire unit is heated or cooled prior to sealing and/or gas filling, thereby impacting the gas volume. This is an easy way to implement the process and is predictable, but there are some drawbacks as well.

Use a bladder relief system. A

bladder relief system consists of an external flexible container connected to the IG unit cavity via a tube. The bladder inflates or deflates as necessary to allow the IG unit cavity to exhale and inhale as the unit is transported and/or as temperature and pressures change throughout the life of the IG unit. It can be used for a single IG unit or in parallel with multiple IG units. A bladder relief system is effective, but introduces numerous issues as discussed in the manual.

Resources

The TM-3200 manual offers advantages and disadvantages of the above methods, as well as manufacturing and workmanship considerations, storage and handling, implications for glazing (installation limitations, recommendations, etc.), and IG design considerations for environmental conditions.

Included for quick reference is a table summarizing the advantages and disadvantages of the above listed pressure equalization methods, allowing easy comparison and choice of which to use. Commercially available software programs that can address the aforementioned variables and predict the glass deflection are listed in the manual.

Learn more at FGIAonline.org/store. ■

Amy Roberts is director of Canadian and technical glass operations for the Fenestration & Glazing Industry Alliance. She can be reached at aroberts@FGIAonline.org.



How will you inspire the futurescape?

Want to make a mark on the future? We want to make one *with* you. Whether you aim to create visually stunning new buildings that perform at the highest level or bring new life to existing structures, put more than a half-century of building science innovation and proven performance on your side.



Let's sit down at the design table together.

dow.com/futurescape



Image: dow_63796022987

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

© 2021 The Dow Chemical Company ("Dow") or an affiliated company of Dow.

AGP16602

Form No. 63-7164-01



Seek Together™

VISIT US AT GLASSBUILD AMERICA, BOOTH 1402



BRINGING YOUR CREATIVE VISIONS TO LIFE.

From building facades to stunning interiors and public art displays, GGI offers specialty glass solutions, custom fabrication and oversized capabilities designed to enhance the modern built environment. Glass that is functional, decorative and environmentally friendly, combined with precision workmanship and five generations of glass industry expertise.

This is what you can count on from GGI.

ALL-GLASS SYSTEMS • DECORATIVE GLASS • FIRE-RATED • SPECIALTY GLASS



800-431-2042



sales@generalglass.com



www.generalglass.com

SEE WHAT
GLASS
CAN DO
GGI

48. Schedule
48. Education
50. Insider Insights
54. Product Showcase
94. Exhibitor List

Back to GlassBuild



In-person investment and innovation, in Atlanta

By Katy Devlin and Norah Dick

After more than a year of virtual collaboration, the glass and fenestration industries will return to in-person learning, connecting and investing at the 2021 GlassBuild America: The Glass, Window & Door Expo, scheduled for Sept. 13-15 at the Georgia World Congress Center in Atlanta.

“This year we expect an extraordinary edition,” says Nicola Lattuada, partner, Adelio Lattuada Srl, and president, Lattuada North America. “After so many months of restrictions and conference calls, it’s really time to meet in person, sharing ideas and projects for the future.”

“When the pandemic hit, the glass industry got creative. We turned to technology to stay connected and continue operations and it kept us going through the crunch, but we clearly saw some limits with virtual meetings. People need human contact. GlassBuild 2021 is an important part of getting back to a normal, and it is a celebration of the resilience shown by the glass industry,” says Danik Dancause, marketing operations manager, Walker Glass.

The show will host about 300 exhibitors over more than 115,000 square feet of exhibit space. GlassBuild America is organized by the National Glass Association and is the largest annual gathering place for the entire glass, window and door industries in the Americas. Per organizers, it is the key event in the Western Hemisphere where buyers and sellers meet and learn how to solve their most pressing challenges.

SCHEDULE AT-A-GLANCE

As of press time. Visit glassbuild.com for updates. Events will take place at the Georgia World Congress Center unless otherwise noted.

Sunday, Sept. 12

9:00 a.m. - 4:00 p.m.

Registration open

Monday, Sept. 13

8:00 a.m. - 5:00 p.m.

Registration open

10:00 a.m. - 5:00 p.m.

Exhibit hall open

8:00 a.m. - 5:00 p.m.

Glazing Executives Forum*

Tuesday, Sept. 14

9:00 a.m. - 5:00 p.m.

Registration open

10:00 a.m. - 5:00 p.m.

Exhibit hall open

Wednesday, Sept. 15

8:00 a.m. - 1:00 p.m.

Registration open

9:00 a.m. - 1:00 p.m.

Exhibit hall open

8:00 a.m. - 2:00 p.m.

NGA Glass Conference**

*Separate registration required

**Held at the Omni Atlanta CNN Center

Exhibiting companies have spent the previous year developing new product solutions to address their customers' top concerns, and these innovations will take center stage at GlassBuild. "For the last two years, companies like us have been developing new products, new services, new processes and new technologies," says Robert Struble, brand and communications manager, Vitro Architectural Glass.

"During this difficult period, we have never stopped, and we are proud to show the fruits of our labor," adds Lattuada.

The following pages present Glass Magazine's official GlassBuild America preview, with a look at the schedule, education opportunities, the official exhibitor list, and, most notably, an extensive product showcase that highlights the innovations on display on the show floor.

"GlassBuild will be the one place glaziers, fabricators and window makers can go to catch up on all changes [to the industry] at once, saving themselves a tremendous amount of time and reducing the risk of lost opportunity. I believe this is one show that can't be missed," says Struble.

EDUCATION

Glazing Executives Forum

NGA's Glazing Executives Forum is back at GlassBuild America on Sept. 13 for its 16th edition. The Forum offers an opportunity for leaders of contract glazing and full-service glass companies to come together to learn and share best business practices.

Programming highlights include a presentation on supply chain challenges, a roundtable discussion on best practices to avoid legal headaches, the exclusive industry-focused economic forecast, presented by Connor Lokar of ITR Economics, and more.

A beer break and tour of the GlassBuild America tradeshow floor will conclude the Forum.

Separate registration is required. Visit glassbuildamerica.com for more.

NGA Glass Conference

The NGA Glass Conference will be held Sept. 13-15, 2021. This in-person meeting will refocus on the traditional core values of the conference: an oppor-

tunity for participants to be among peers from across the supply chain and time for collaborative discussions.

- Topics include building and school security, bird-friendly glazing options, standards and codes updates, global warming potential, anisotropy, shower enclosures and more.
- Conversations will focus on engaging stakeholders to promote, educate and advocate for glazing and glass building products in design, as well as identify areas to elevate and expand research and advocacy for the betterment of the industry.
- The conference will conclude with hands-on action steps applicable to each of NGA's committees.

NGA Glass Conference registrants will also be able to attend a special economic outlook presentation, and a registrant-only tour and networking reception at the Mercedes Benz Stadium.

Separate registration is required. Learn more at glassbuildamerica.com.

Ask the Experts

Get top codes and technical questions answered at GlassBuild America. The NGA's team of code experts will be on hand at the Industry Pavilion to respond to questions about energy codes, glass safety requirements, the next big moves coming at the code and regulatory level, and more.

Joining Ask the Experts at the Industry Pavilion: Urmilla Sowell, NGA technical director, Karen Wegert, NGA associate director of advocacy and technical services, and NGA code consultants Tom Culp, owner of Birch Point Consulting, and Thom Zaremba, Roetzel & Andress.

More information about the Ask the Experts schedule will be available at glassbuildamerica.com.

GlassBuild TV at the Industry Pavilion

The NGA joins forces with other glass industry groups around the globe to present GlassBuild TV, an educational video project showcased at the Industry Pavilion on the GlassBuild show floor. Learn about ongoing industry initiatives, leading market trends to watch, upcoming industry events and more on GlassBuild TV.

REDEFINE PERFORMANCE

WITH  **KODIAK**



Kodiak is a new line of high-quality glass edging equipment exclusively brought to you by HHH Equipment Resources. From glass edging machines to polishing and mitering machines, Kodiak offers the best in edge quality, competitive production speeds and proven track design to help you redefine performance.

Developed after more than 125 years of glass industry experience, Kodiak glass edging machines from HHH are designed specifically with the needs of North American fabricators in mind. **The difference is clear.**

- Long-lasting track elements
- Intuitive 10" displays
- Automatic lubrication
- UL certified
- Industry-leading warranty

hhhglassequipment.com/kodiakedging

A division of Salem Fabrication Technologies Group, Inc.

**ADDITIONAL KODIAK EQUIPMENT
LAUNCHING LATE 2021!**

See us at GlassBuild, booth 1731.

Industry



“GlassBuild is the event for the North American glass industry. It’s the perfect venue to showcase all the new features, machineries, improvements, etc., developed during the previous 12 months.”

**NICOLA LATTUADA, PARTNER,
ADELIO LATTUADA SRL, PRESIDENT,
LATTUADA NORTH AMERICA INC.**



“GlassBuild allows us to talk to people who have a variety of perspectives. This gives us valuable insights on how we can continue to improve, expand, and make glass handling safer.”

**BARRY WOOD, VP OF MARKETING,
WOOD'S POWR-GRIP**



“Nothing is better than getting face-to-face with our customers to show our appreciation for them and to share firsthand what we are doing that is new or different—and, for our leadership team to visit with customers and prospective buyers to learn what their needs are.”

**STEPHEN BALIK, DIRECTOR OF
ARCHITECTURAL SALES AND
MARKETING, GGI**

Insights



“Attend [GlassBuild] for the educational value of the NGA, and the opportunity to see new and improved tooling and machinery ... to see and discuss new trends in the glass market and frankly, to get an overall feel about how our industry has handled the events of 2020 and 2021.”

DAN REINHART, PRESIDENT/OWNER,
SALEM FABRICATION SUPPLIES



“After such an extended time apart, we look forward to coming together as an industry to connect with customers and partners, showcase new ideas, and learn from each other’s successes over the past couple of years.”

BARBARA HAAKSMA, SENIOR VICE
PRESIDENT, MARKETING, C.R.
LAURENCE



“[At GlassBuild], we want to hear from our customers and dig deeper into their challenges and how we can tailor our products and services to meet their needs now and into the future.”

LARRY JOHNSON, VICE PRESIDENT
OF SALES, NORTH AMERICAN
FENESTRATION, QUANEX BUILDING
PRODUCTS

Industry Insights



“Attending GlassBuild America allows DFI to collaborate with industry leaders on how to bring more awareness to the glass industry.”

SYNDI SIM, VICE PRESIDENT,
MARKETING AND BUSINESS
DEVELOPMENT, DIAMON-FUSION
INTERNATIONAL



“GlassBuild 2021 will be the show not to be missed. In a couple of years from now, companies may look back at this year’s event as one of the major landmarks for the industry.”

DANIK DANCAUSE, MARKETING
OPERATIONS MANAGER, WALKER
GLASS



“It is the best place to make connections, deepen those existing connections, and see new products from a diverse group of companies.”




CHRIS KAMMER, MARKETING
COORDINATOR, A+W SOFTWARE
NORTH AMERICA

YOU ASKED. WE ANSWERED.

Best-In-Class Protection for a Dangerous Job



AeroDex® Technology | Lighter, more comfortable PPE that stands up to your needs!

-  Cut A9 Garments up to 30% Lighter
-  Gloves that Last 6X Longer
-  Unmatched Service & Savings



H.B. Fuller

Certified

Glass Manufacturers
TRY IT FREE!

Visit booth #3215
magidglove.com/glass-mag
800-989-8422

MAGID

Safety at work™

56

Machinery & Equipment

76

Glass & Components

84

Metals, Systems
& Hardware

GlassBuild Product Showcase

Research, development and new product investments didn't miss a beat during the pandemic. Suppliers from all segments of the glass and fenestration industries are poised to introduce and promote recent innovations and essential solutions during the return of North America's largest glass and fenestration industry event, GlassBuild America, set for Sept. 13-15 in Atlanta.

"We spent the last year working to provide better solutions for our customers with respect

to increasing productivity and reducing downtime and are eager to share with the industry. For fabricators looking to grow, this show is a must-see event or they will be left behind," says Mike Willard, CEO and owner, Salem Fabrication Technologies Group Inc.

The following pages highlight trends that are driving development in all segments of the industry, and showcase a selection of products, machinery, equipment and other industry solutions set for display in Atlanta.



Visit [GlassBuild.com](https://www.glassbuild.com) for

- A complete product preview from GlassBuild America exhibitors
- Videos and additional photos of new innovations
- A sortable, searchable database of products

Purpose Built

Products for your unique application from
a company invested in your success.

LOW FRICTION COATING

Low friction coatings solve installation or performance challenges, such as abrasion resistance in a cyclical application or reducing friction during assembly.



Co-extruded materials create a profile with excellent compression set and a kerf base that is easily inserted into a channel.

DUAL & TRI DUROMETER

VULCANIZED CORNERS

Vulcanized or transfer-molded corners improve joint strength, meet aesthetic requirements and ensure material compatibility.

This co-polymer design features an EPDM bulb and rigid plastic base that offers excellent compression set, easily slides into a channel and minimizes stretch.

iDea® SEAL

BUILT TO SERVE

Cooper Standard ISG designs seals and gaskets for commercial and residential windows and doors, storefronts, curtain wall systems and other building applications. Our engineers work with you to develop solutions that perform in demanding environments while satisfying architectural design specifications.

WWW.COOPERSTANDARD-ISG.COM

For a FREE sample kit email: ISG-NorthAmerica@cooperstandard.com

See us at GlassBuild America, booth 1713!



Machinery & Equipment



Trending

- LABOR-SAVING SOLUTIONS
- AUTOMATION
- FLEXIBILITY
- LOW MAINTENANCE

The past 18 months presented glass fabricators with a bevy of production challenges, from health and safety concerns on the factory floor, to difficulty getting parts and service, to rapidly changing market demands. To address those challenges and more, many fabricators looked to accelerate the already-driving trends toward increased factory automation and integra-

tion, and improved production efficiencies.

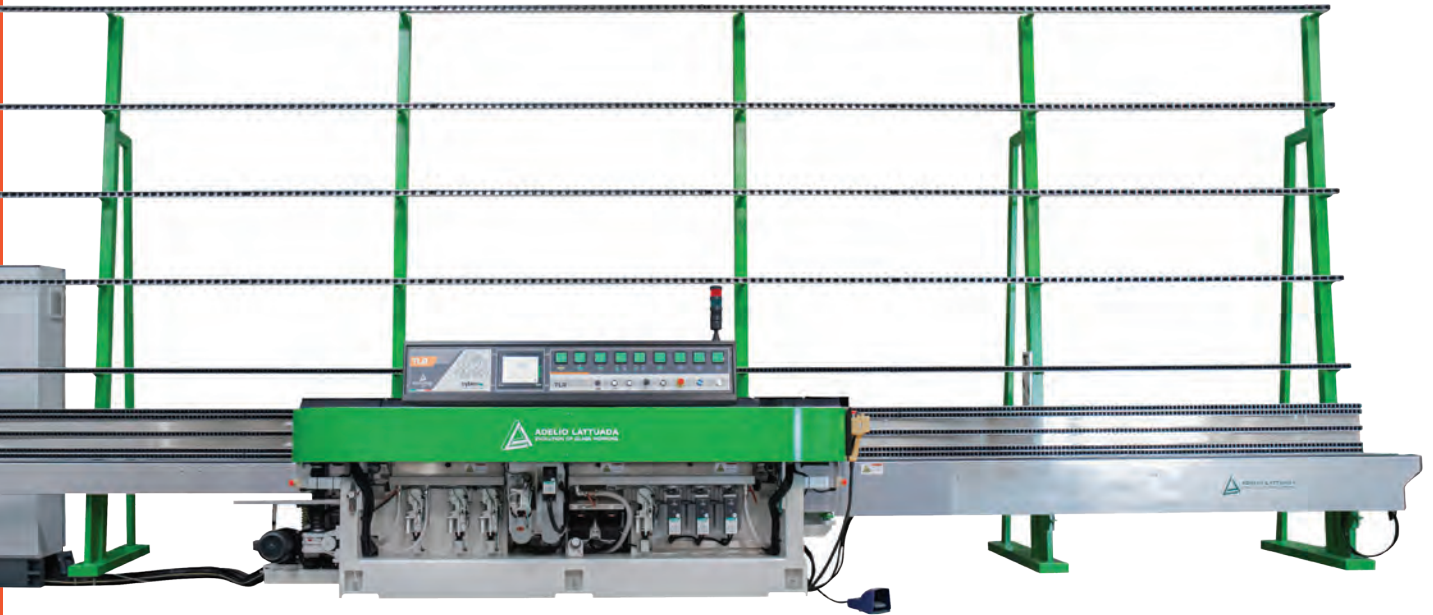
“The pandemic leaves us with an even greater conviction that automation applied intelligently and wisely to production can offer valuable help,” says Nicola Lattuada, partner Adelio Lattuada Srl, president, Lattuada North America Inc. “Everyone now is looking for reliable, strong, solid, flexible, trustworthy, easy, low-maintenance, fast, high-production machineries. In these times of uncertainty, being able to rely on such products gives the company the possibility to better plan their production, to shorten and keep good delivery times, and [keep costs] under control.”

Machinery and equipment suppliers at GlassBuild America are promoting their range of solutions for smarter factories to help customers address their top challenges—chief among them, labor. Customers are looking “to improve efficiency and throughput without adding labor,” says

Chris Kammer, marketing coordinator, A+W Software North America.

“Besides the obvious shortage of glass and the international shipping headaches, everyone needs people,” says Dan Reinhart, president/owner, Salem Fabrication Supplies. “Businesses and production staffs are being taxed with lack of qualified people willing to work in the manufacturing sector.”

In the face of such labor challenges, fabricators are being pushed to increase productivity and quality to help accelerate production times, reduce remakes and avoid costly delays. “The top needs of our customers due to the labor shortage are automation and equipment that can produce quality glass at high speed,” adds Mike Willard, CEO/owner, Salem Fabrication Technologies Group Inc. “We are working on and offering automation solutions that will help repurpose head count.”



02



03

01

Adelio Lattuada

Adelio Lattuada will exhibit its fully automatic mitering machine, model TLR 11 AV C PC with Lattuada's cyberAL. The mitering machine features: the A-WR system, with completely automatic wheels setting management; i-AL, a comprehensive pack of mechanical, electronic and software systems; digital ammeters and an automatic alert system for the polishing wheels' wear; motorized glass removal setting with portable push-button panel; and brakes on all polishing spindles for flat edge and arris. Booth #1547. +(39) 0331 832713, adeliolattuada.com

02

Bottero S.p.A.

Bottero will promote its range of integrated glass handling, storage and cutting systems that incorporate Industry 4.0 and AI technologies. The company's solutions include: an automatic warehouse equipped with aerial overhead gantry systems; shuttle system for the automatic feeding of cutting lines; automatic stocking system of rest pieces; high-performing cutting line 548LAM X-Y for laminated glass; automatic cutting lines for laminated glass and float glass; and automatic robotized area with automatic unloading on A-racks, L-racks and harp racks. Booth #2824. 336/992-5623, bottero.com

03—NEW AT GLASSBUILD

Bovone

The ELB 11/45 Automatic Straight-line Edger from Bovone offers a high degree of automation, speed, ease of use, and consistent quality of finish on both the flat edge and the miter. The machine allows the operator greater ease of use, automating the adjustment of the grinding wheel. The technological focus of the innovation is an active control system for the wear of all the grinding wheels, made possible through an actuation on each motor. Booth #3331. 336/894-0676, bovone.com

03



02



01

01—NEW AT GLASSBUILD

Bürkle North America

Bürkle North America will introduce a new glass laminating concept with its Platen Style Flat Glass Lamination System design. The IFL Lamination System replaces the current conventional autoclave process. The Bürkle IFL System is a multi-step process providing high-quality in-line lamination using a vacuum process in the first stage, and regular platen heating and platen product cooling in subsequent stages. The easy IFL lamination system provides uniform thermal oil heating to both sides of the glass simultaneously. Booth #2141. 336/660-2701, burkleamerica.com

02—NEW AT GLASSBUILD

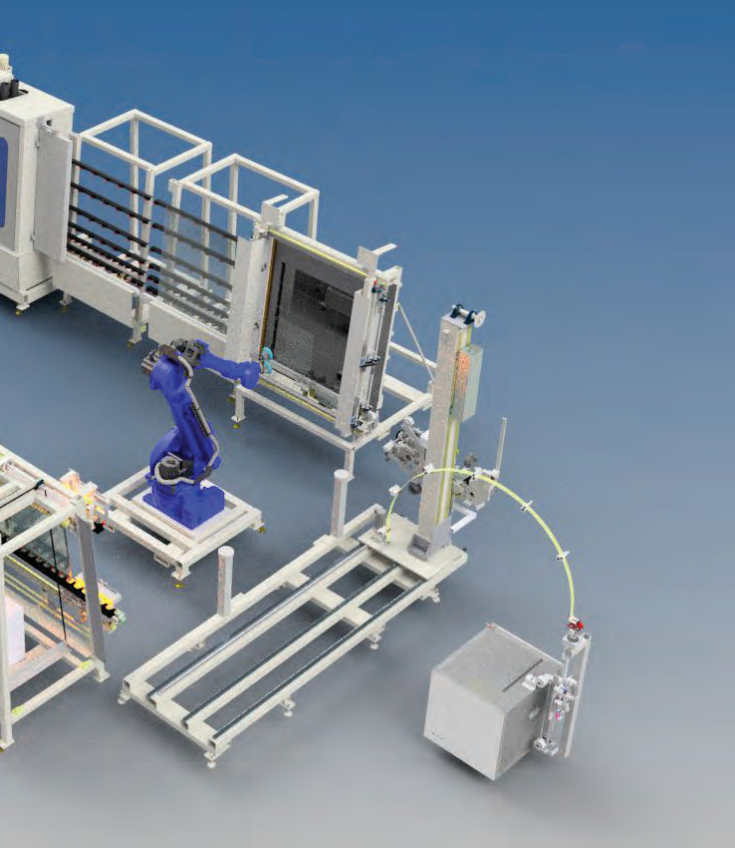
Diamon-Fusion International

The FuseCube Express is DFI's newest coating machine that applies Diamon-Fusion protective coating onto both sides of the glass. The coating is applied through a chemical vapor deposition process, transforming ordinary glass into a high-performing, water-repellent surface. The FuseCube Express can treat 1-5 lites in under 10 minutes, using a minimal footprint, 5 feet by 6 feet, that can meet the demands of both small and larger-sized fabricators. Booth #2131. 949/529-3029, dfisolutions.com

03

Erdman Automation

The Erdman OMRC (One Man Robotic IG Cell) line has been designed to require only one operator and to allow for maximum social distancing, safety and IG output. The company reports grid application adds roughly 20 seconds per unit. Booth #2231. 763/389-9475, erdmanautomation.com



04



04

Eastman Machine Co.

The Eastman Eagle C125 conveyor system, an automated interlayer cutter, boasts capabilities for single- to low-ply cutting requirements. It has the ability to continuously convey rolled material goods with consistent speed and control. Eastman's gantry and tool head design are engineered to cut a variety of interlayer materials while exceeding industry standards for accuracy. The robust conveyor design delivers unrivaled levels of material utilization and is often capable of cutting multiple layers without plastic overlay. Booth #3139. 716/856-2200, eastmancuts.com

05—NEW AT GLASSBUILD

Forel

Forel will reveal the "High Tech" IG line with thermoplastic spacer. The range is capable of processing double, triple and quadruple IG units; IGUs with offset panes or shaped panes; and units up to 130 inches by 236 inches, weighing 275 pounds per linear foot (assembled panel), in thicknesses up to nearly 4 inches. Equipped with a flat plate coupling press with gas filling and sealing machine, the line can process rigid or flexible spacers and can use up to three different sealing products. Booth #231. 651/493-4378, forelspa.com



01



02



03

01—NEW AT GLASSBUILD

HHH Equipment Resources

HHH Equipment Resources will introduce a new standard in glass fabrication with the Kodiak machinery line, featuring high-quality, heavy-duty edgers, edger/miterers and bevelers. The Kodiak line offers exceptional edge quality, competitive production speeds and a proven track design. Built for continuous operation, the Kodiak machinery line, along with HHH's robust premium tooling setups, is designed to help fabricators improve productivity. Booth #1731. 336/201-5388 ext. 215, salemdist.com

02

Gemata/Rollmac

ColorGlass is a new single-roller machine, suitable to the enameling and design printing of glass sheets using an engraved cylinder. ColorGlass fabricators can easily enamel and print any kind of flat glass on the market with sheet thicknesses from 2 millimeters to 25 mm, and sizes from 600 mm to 2,600 mm. ColorGlass is suitable for applications in small dimensions, such as tiles and decorations, to big sizes, such as internal walls, doors and façades. Booth #2931. +(39) 0445 492711, rollmac.it

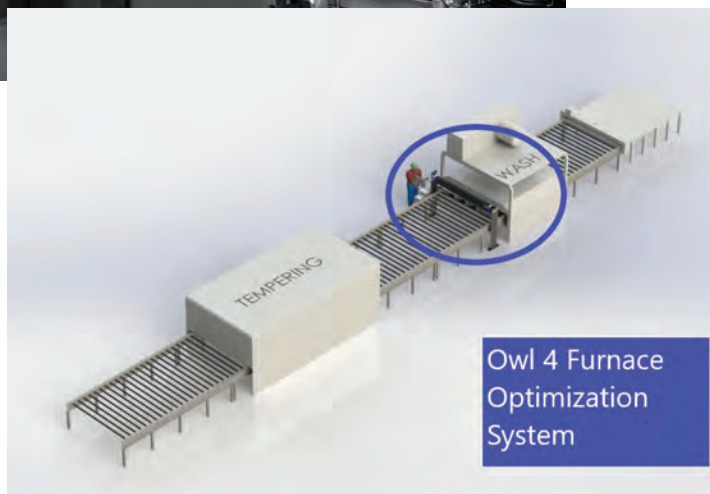
03

Glaston

Glaston's advanced architectural glass TPS, Thermo Plastic Spacer, technology provides processors with end products to satisfy the toughest warm-edge demands. Insulating glass units made with TPS improve energy efficiency in buildings, increase durability and reduce energy costs. A major advantage of TPS is its production flexibility. Directly applying the Thermo Plastic Spacer onto the glass lite significantly simplifies the processes for IG manufacturers, as the entire production mix can be manufactured on one line. Booth #2650. 856/840-4736, glaston.net



05



06

04

Keraglass Industries Srl

The Vision 800 oscillating tempering furnace from Keraglass features a high-pressure blowing system inside the heating chamber, with a preheating air system that runs at 700 degrees Celsius. It includes a new complete graphical interface supervision system, available with a large touch screen TV monitor with total control of the furnace, that provides continuous display of the heating cycle and all control tools. It includes a power consumption monitoring system and user manual with automatic problem-solving system, thus minimizing the downtime of the machine. Booth #2431. +(39) 0522 993027, keraglass.com

05—NEW AT GLASSBUILD

LandGlass/IGE

The LandGlass UltraJet Tempering Furnace, available from IGE Solutions, features OptiFlow Technology via a splitter in the convector of the heating oven that ensures convection evenness. Additionally, intelligent isoControl Technology provides an upgraded built-in heat control system that offers a smooth heating curve. The UltraJet dramatically reduces the edge kink defects occurring in the heating chambers, which significantly improves the flatness of the tempered glass. Booth #3121. 561/741-7300, igesolutions.com

06

LiteSentry

The Owl 4 Furnace Optimization System offers recipe selection, a load Validator and, new to the Owl 4, a missing part notifier. The system provides a check for losses in the furnace and communicates with an Osprey to confirm all parts in a load are present. If not, it will alarm the operator. Additionally, it collects data in real-time. The furnace recipe is defined, and heat time is optimized for the load as it enters the furnace. Booth #2509. 507/645-2600, litesentry.com

01—NEW AT GLASSBUILD

Matodi USA

The Battellino SRM 2000 is a sealing robot designed for small to medium-sized businesses looking to add more automation to their insulating glass production capabilities. Windows continue to get larger and heavier, making hand-sealing much more difficult, time-consuming and costly. The sealing robot provides an easy and safe solution for sealing double- or triple-glazed units with a maximum glass size of 3,000 millimeters by 2,000 mm, and in thicknesses of 3 mm to 12 mm. Booth #2441. 336/668-2300, matodi.biz



01

02

02—NEW AT GLASSBUILD

Mazzaroppi Engineering Srl

The TP Compact tempering machine can temper any type of flat glass, from reflective to screen-printed. Users are able to easily tweak parameters, such as glass thickness, during production. The system heats quickly, reaching an operating temperature of 680 degrees Celsius in 60 minutes when it is first switched on and in 30 minutes at each subsequent session. Additionally, TP Compact's heating section is entirely managed by the company's software, which independently regulates the zone in the furnace. Booth #2937. +(39) 0692 854602, mazzaroppi.com

03

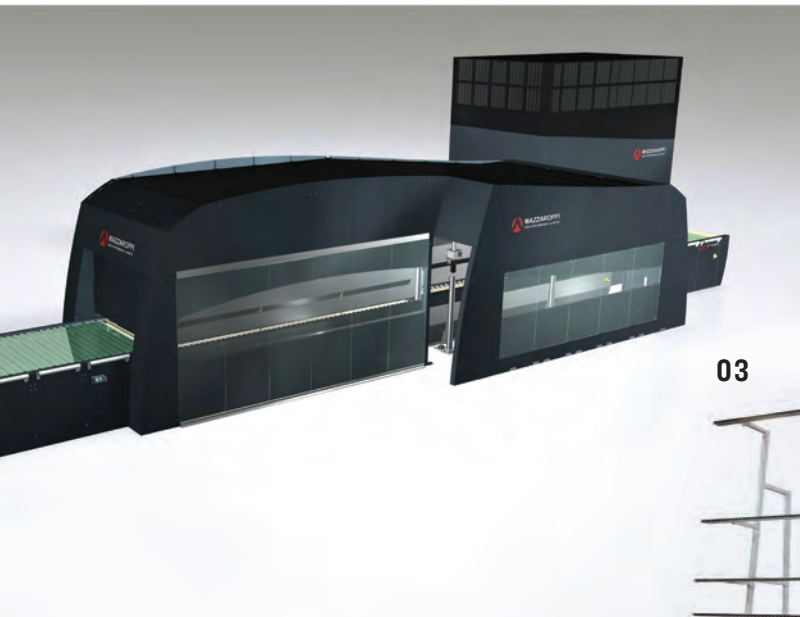
Schiatti Angelo Srl

Schiatti model TFV 200 vertical drilling/milling machine can operate independently or in line with other machines. The machine's drilling capacity is 3 millimeters to 85 mm diameter, while milling shapes on glass in thicknesses of 3 mm to 19 mm. The machine is composed of three independent sections: entry conveyor; enclosed open top central chamber for glass processing; and exit conveyor. It is completely automated by the dedicated program installed in the internal PLC, which manages all the machine functions. Booth #2731. +(39) 0362 238496, schiattiangelosrl.com

04

Schiavo

The FV1000 machine is specifically designed for drilling, milling and counter-sinking operations required to fabricate holes and notches of the door hinges and fittings. The machine bay consists of a high-speed 3-axis single spindle driven by ball screws controlled by a CNC. It is equipped with customer-friendly software that allows for the loading of a series of different working programs. Additionally, the machine features motorized glass positioning and fast tool changing. Booth #2822. +(39) 0331 897904, schiavotech.it



03



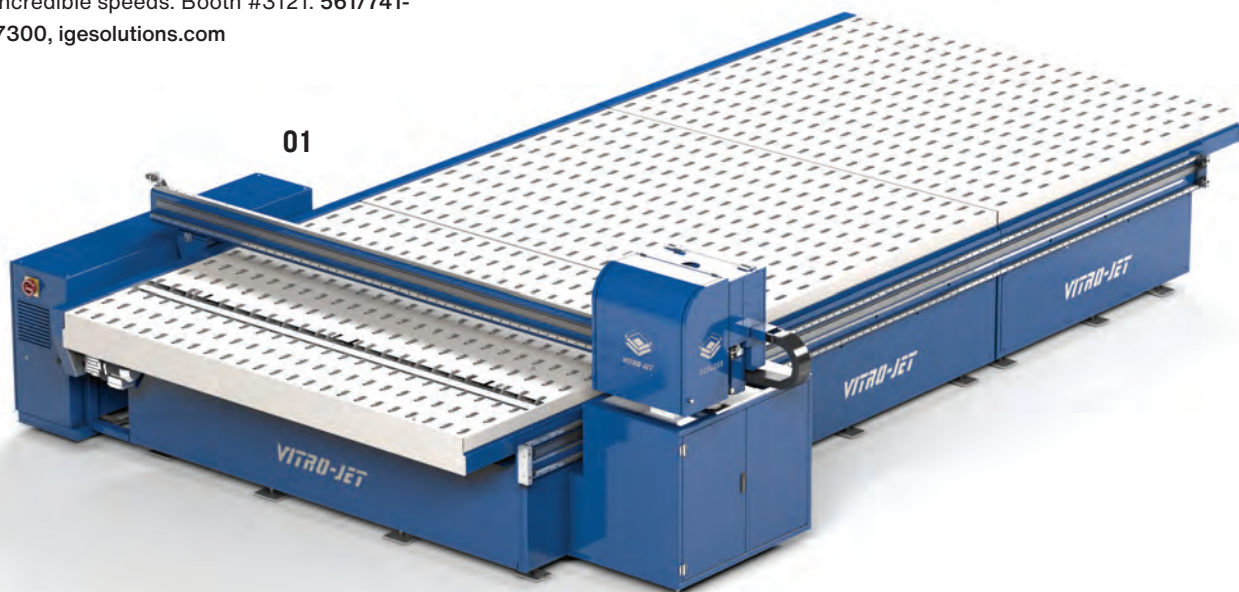
04



01—NEW AT GLASSBUILD

Tecglass/IGE

The Tecglass Vitro-Jet MultiFlex, available from IGE Solutions, is a compact, innovative and multi-purpose digital printer, conceived as a direct replacement for traditional screen-printing machines. Powered with Tecglass' exclusive Side Kinetix and Fast Frame Printing technology, the Vitro-Jet MultiFlex has become a distinctive concept to print all kinds of serigraphy patterns, lines, dots and frames for architectural glass at incredible speeds. Booth #3121. 561/741-7300, igesolutions.com



02

Skill Glass

E-D 101 is a vertical CNC center that combines multiple types of processing in one system, while carrying out processing operations with a high level of speed and precision. The machine permits any type of processing on shaped or straight flat sheet glass, and features all drilling and milling technology with the characteristics of a vertical grinding machine. Complete processes include grinding, polishing, drilling, countersinking and milling. Booth #3025. +(39) 0445 500202, skillglass.it



TPA

best in glass processing

LiSEC

Visit us @ GlassBuild America
13 - 15 September
Booth 1931

High Speed and High Quality

New standards for the production of insulating glass units with thermoplastic spacers

- Most accurate TPA material application
- Permanent support of all center glasses
- 20% higher output due to vertical lift over

www.lisec.com

LiSEC

01



02



01

Triulzi

Triulzi Cesare Special Equipments will show its horizontal washer for flat glass. The washing section of the machine features a conductivity kit for osmosis water savings and automatic monitoring, and a cascaded water system that guarantees clean water. The tanks are mounted on wheels for easy maintenance and are double insulated to provide energy savings. The drying section features three pairs of air knives and one high-pressure fan, which is acoustically insulated to meet noise level requirements. Booth #3031. +(39) 0299-6399-1, triulzi.com

02—NEW AT GLASSBUILD

US Centrifuge

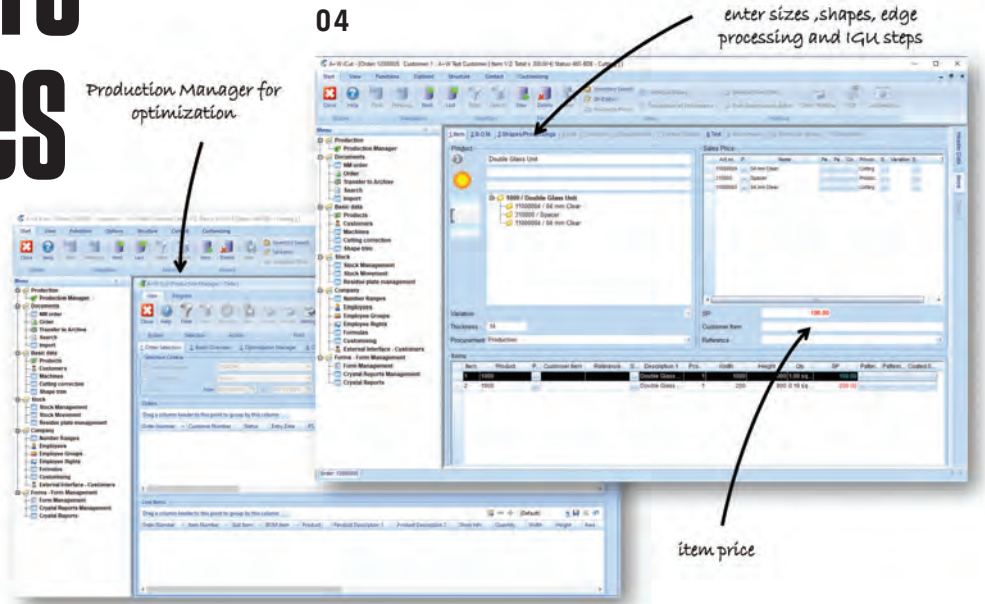
Model GO-512S-280 provides coolant processing and filtration for the glass industry. The GO-512S-280 continuously cleans process coolant, removing particulate as small as 0.5 micron in size, while a flow of 110 percent capacity provides constant filtering even when the coolant flow from the process is stopped. The large capacity basket has a removeable stainless steel liner for ease of cleaning, and the continuous circulation and cleaning improves process stability while prolonging the life of the coolant and grinding pads. Booth #1247. 315/682-8815, uscentrifuge.com

03—NEW AT GLASSBUILD

Xinglass

The Xinglass QX-GTH glass tempering furnace features advanced automatic functions to reduce production and labor costs, while improving heating performance and glass quality. It is designed for a wide range of glass types, including clear, patterned, sandblasted, coated and bent. The control system features an intelligent heating control algorithm that offers more reliability and flexibility in the heating process. The quench section uses the inertia of blower impellers for cooling the glass, which minimizes energy use. Booth #1948. 800/868-0307, xinglassamerica.com

Software + Services



06



05



04—NEW AT GLASSBUILD

A+W

The A+W iCut provides a solution for smaller fabricators seeking to better automate/optimize and manage their cutting function without the higher cost of a full ERP solution. The software manages glass storage, provides multiple optimization options, efficiently and accurately steers cutters, and synchronizes glass for downstream processes. Additionally, A+W iCut provides a system to manage residuals, which considers valuable residual plates in order to achieve the best yield. Booth #2421. 847/220-5237, a-w.com

05

FeneTech

FeneTech will exhibit their FENml—Fenestration Manufacturing Language—initiative. FENml is a baseline standard of communication that allows fenestration stakeholders to “speak” the same language. FENml combines data from the user’s ERP system directly with the machines on the shop floor. With FENml, users can: leverage historical data to make automatic decisions during production planning; trigger maintenance actions based on sensor values; and use the data collected to better plan for maintenance. Booth #2221. 330/995-2830, fenetech.com

06—NEW AT GLASSBUILD

Glaziers Online

Glaziers Online is the latest software solution from Kimzey Software, the developers of GlassTrax. Glaziers Online is an affordable software package for glazing companies of all sizes. The internet-based software allows users to access data and create quotes from anywhere. Features include: quote/order entry; job scheduling and tracking; integration with QuickBooks, Google Calendar, GlassTrax and more; a “send to fabricator” button to export orders directly to vendors; customer database management; template designer; and more. Booth #2504. 435/652-8330, glaziersonline.com

Software + Services

01



03



02



01

Smart-Builder

Smart-Toolbox is a glass job management system that makes it easy to quote, schedule, order and invoice. Smart-Toolbox has been purpose-built for the glass industry and understands glass job pricing. With integrations to the industry's most popular fabrication systems, machinery and accounting platforms, users can eliminate double entry. Smart-Toolbox can be integrated with Showers Online and the free Smart-Glazier App to provide the ultimate shower design package. Booth #1910. 628/226-2017, smart-builder.com

02

True Contractor

True is a web-based software for commercial, over-the-counter and field service glazing contractors to handle the entire construction management workflow. True allows managers in the office to connect and share information with workers in the field via any mobile device or computer. Users are able to manage leads, generate quotes, issue work tickets, schedule personnel, track inventory, job cost labor, reconcile purchase orders with bills, and tackle financial accounting with the True all-in-one solution. Booth #613. 833/438-8783, constructtrue.com

03

Blackwater Technical Services Inc.

Blackwater Technical Services Inc. offers ISO 17025 certified laboratory testing. The company specializes in product certification testing of building envelope and fenestration systems, for products such as windows, doors, curtain walls, window walls, railings, structural wall panels and hurricane protection products. Booth #2506. 561/508-2830, blackwatertesting.com



See us at GlassBuild, booth 2221.

“We shouldn’t have to conform our business to fit the software, and FeneVision allows us that flexibility.”

Joyce & Mike Cully
United Plate Glass



25 *Celebrating 25 years of excellence*

FeneVision is the world's preeminent software provider for the glass fabrication and window & door manufacturing industries

330.995.2830 | info@fenetech.com | fenetech.com

Tools + Supplies



01

01—NEW AT GLASSBUILD

GlasWeld Scratch Removal

For over 15 years, GlasWeld’s distortion-free scratch removal system has saved companies by reducing wasted glass and time. Now, the company aims to make the process easier with the new Gforce Max. Engineered specifically for scratch removal, the Max features an integrated water feed system, ergonomic rubber grip and self-leveling backer pad. Even beginner techs can use the Max to remove scratches in minutes without causing distortion. With Max, users can save 90 percent of scratched glass. Booth #3018. 541/388-1156, glasweld.com



02

02—NEW AT GLASSBUILD

Salem Fabrication Supplies

The new EF5 line of premium diamond peripheral wheels from Salem Fabrication Supplies combines high operating speeds with excellent durability. As part of the company’s Storm Series of products, these wheels use the most advanced diamond tool technology to create the optimum matrix, enabling them to operate at speeds of up to 10 meters per minute without sacrificing longevity. The wheels feature lightweight composite or aluminum bodies, which provide better balance and help to reduce unnecessary spindle wear. Booth #1731. 336/201-5388 ext. 215, salem-dist.com

03

Argon Filling Systems

The Argon Check Analyzer is a low-cost, handheld and rapid feedback gas fill analyzer that provides an accurate reading of initial fill percentage. The sample probes provide point-of-fill readings to quickly determine manufacturing accuracies. Real-time reading and small sample size provide a single reading accuracy that should not require another fill cycle after testing. The analyzer offers an easy user interface with one-touch control for rapid and reliable results. Booth #1115. 612/597-0014, argonfillingsystems.com

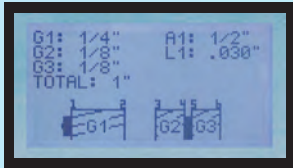


03

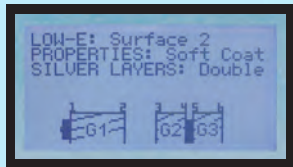


Model # GC3200

Easy to Read Display



Glass Thickness Results



Low-E Location & Type Results

Make Sure Every Order is Correct - You Must Accurately Measure Glass Thickness & Identify the Low-E Coating Type!

Glass-Chek ELITE Model # GC3200 - Features:

- Identify & Measure Laminated Glass in a Window
- Determine Glass Thickness & Identify Low-E Coating Type
- Easy enough for experienced or new glaziers to use.
- Graphical Display with Window Illustrations

Triple Pane Glass Thickness Measurement	YES
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 versus 4	YES
Modes for Bullet Resistance, Reflective, Suspended Film, and More!	YES
Ability to Store 30 Measurements	YES



Come Visit Us At GBA and Get A Hands-On Demo in Booth # 1103

Digital Tin Side Detection

Digital & definitive results with no bulb replacement headaches!

The TS2300 is designed for efficiently testing float glass that has not had value added-features applied (i.e. coatings, tempered, laminated, etc.). Simply place the rugged meter on both sides of the clear float glass, and instantly read the results on the DIGITAL display. Because of its DIGITAL detection circuitry, glass processors no longer have to use a lamp style detector and make subjective guesses as to which surface is the tin side.



Model # TS2300

- **Backlit LCD Display** - Can be used in any light environment
- Powered by a standard 9-volt alkaline battery
- Includes an **automatic power-down feature** to further extend the battery life of the product.
- No expensive / fragile lamps to replace
- Less frequent battery replacement

Low-E Detectors *You Can Trust*

Consistent and reliable meters with patented technology & quality electronics



Model # AE1601

- The "ETEKT+" Double Pane Low-E Detector has been the industry standard detector for over 28 years.
- Detect coatings on double pane windows in the field.



AE2250 Low-E CARD+ Brandable Label on 100 Piece Orders!

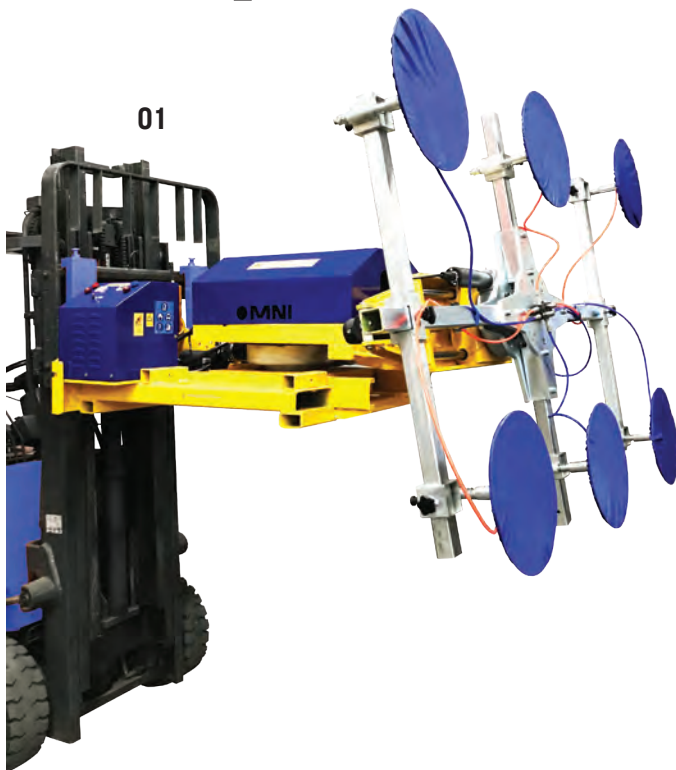
- Replaceable Battery - Can be Used Indefinitely
- Differentiate if Low-E Coating is on Surface 1, Surface 2, or Uncoated
- Size & Shape of a Credit Card

For our whole Low-E product line, visit edtm.com



Visit us at Booth # 1103

Handling + Transportation



01



03

01

Quattrolifts

The Omni 1800 is easily attached to a forklift and can be used inside and outside a building envelope to allow for safe and efficient glazing of glass and windows weighing up to 1,800 pounds. It offers six degrees of movement, with wireless remote. They include: 360-degree rotation, a 12-inch side shift; a 40-degree pivot (20 degrees left and 20 degrees right), a 12-inch vertical lift, a 100-degree forward tilt to horizontal and a 12-inch forward extension. Booth #923. 301/748-7127, quattrolifts.com

02— NEW AT GLASSBUILD

Winlet

The Winlet 915 is the newest addition to the Winlet glass manipulator lineup of six self-propelled models offering capacity from 770-2,200 pounds. The Winlet 915 meets established domestic and international crane standards. Equipped with rough-terrain tires and hydraulic-powered features, users also have the choice between either proportional or multiple speed/function control. The new manipulator offers 100 percent linear side shift movement at the manipulator head. Booth #631. 281/358-7088, winletusa.com

03

Spider by BrandSafway

Spider's Dual Monorail System is a complete solution for challenging curtain wall applications, providing continuous, horizontal mobility for swing stages and material hoists around a structure's perimeter. The system is easy to assemble with rotating, pinned connections between each monorail beam and outriggers, and is configurable for a single or double monorail. The system also offers precise horizontal and vertical positioning of large curtain wall panels, while simultaneously providing access for workers on a swing stage. Booth #1444. 206/577-0133, spiderstaging.com

PHOTO COURTESY OF
HARMON INC



REACHING NEW HEIGHTS

IN GLASS-HANDLING SAFETY
AND EFFICIENCY, DRIVEN BY
INTELLI-GRIP® TECHNOLOGY



SEPT 13-15, ATLANTA
VISIT US AT BOOTH #1009



P1 CHANNEL LIFTER
CAPACITY: 700 LBS



**MRT4 MANUAL
ROTATOR/ TILTER**
CAPACITY: 700 LBS



**MRTA8 - MANUAL
ROTATOR/ ASSISTED TILT**
CAPACITY: 1,400 LBS



**MRPT16 MANUAL
ROTATOR/ POWER TILTER**
CAPACITY: 2,800 LBS

VACUUM LIFTERS AVAILABLE FOR EVERY SIZE OF GLASS OR CURTAIN WALL

Original. Trusted. Powr-Grip®.

For information on these products and many more, go to wpg.com

Share your Powr-Grip photos with us    @woodspowrgrip

Handling + Transportation

01

Weldco Sales Inc.

Weldco's hybrid rack-toolbox utility body provides an alternative setup for glaziers and contractors. These glass racks are mounted to the chassis of the truck and can haul the glass and tools needed for each job. Since all of the company's glass trucks are custom-built, the specifications of a customer's toolbox can be determined around their needs. The rack can be built as an A-frame, allowing for more space to carry glass. Booth #1353. 818/506-5490, glastrk.com



01

02—NEW AT GLASSBUILD

Wood's Powr-Grip Co.

The MRT Dolly allows for the easy transport and storage of Wood's Powr-Grip model MRT4 and MRTA Lifter Series. The lifter and extension arm mounts hold equipment in place securely with cotterless hitch pins. The product's compact design allows for storage of the lifter in tight spaces. Other features include solid-core tires which hold up to the rigors of regular use and require minimal maintenance, and built-in handles that make it easier to lift into or out of a vehicle when not in use. Booth #1009. 406/628-8231, wpg.com

02





We've Solved the Glass Rack Problem

Rack location and inventory. In facility or in the field.

Racks used to ship glass are a mission critical asset for any glass manufacturing operation, yet often hard to manage. SMART Logistics offers an easily implemented, cost-effective solution to gain control over your glass racks and track their location in any environment. By saving lost racks, plants using our system have experienced a **400%+ ROI**, plus gains in productivity and reductions in shipping costs. We are glass industry specialists who understand the manufacturing and logistics dynamics you face. **For a demo or to learn more, email sales@smartlogisticsinc.com**

See us at GlassBuild, booth 1307.

smartlogisticsinc.com

A map of Iowa showing major cities and highways. A blue location pin is placed near Dubuque. A white popup box with a red border and a close button (X) is overlaid on the map. The popup contains the following text:

ASSET TYPE: 84" A-Frame
SMART Tag 71
LAST CONNECTED: 07-22-21, 2:19 PM
CURRENT LOCATION: New Lisbon, WI
STATE OF ASSET: In-Transit

Map labels include Mason City, Fort Dodge, Dubuque, Marshalltown, Cedar Rapids, Des Moines, West Des Moines, Iowa City, and Columbus. A red factory icon is visible near Waterloo.

Glass & Components



Trending

- OCCUPANT COMFORT
- ENERGY EFFICIENCY
- ECOLOGICAL RESPONSIBILITY
- OPERABLE SYSTEMS

Industry experts say that glass and components are being asked to do more, in terms of design flexibility and sustainability.

After a year that required us to rethink interior spaces, Stephen Balik, director of architectural sales and marketing, GGI, says designers are reimagining functionality and flexibility, opting for moving glass walls to allow for an adaptable working space. “We are seeing more and more office buildings being designed with op-

erable glass wall systems incorporated in the building envelope to allow the building occupants larger views and ease of access to the outdoor environment.”

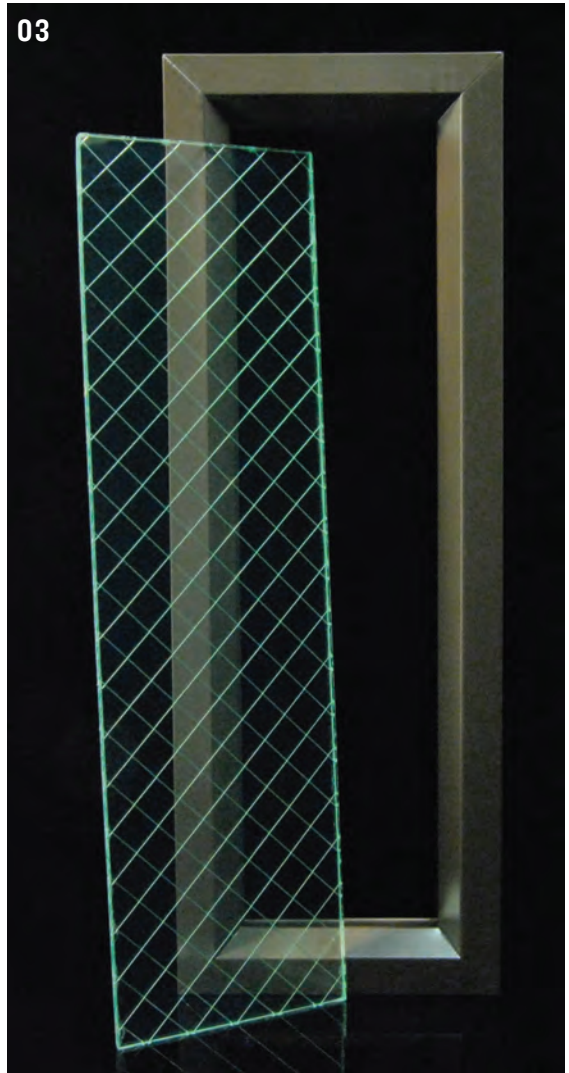
Complex glass continues to be critical, says Tim Nass, Safti First’s vice president of sales. “Code compliance, design flexibility, and additional performance [criteria] like acoustical, thermal, security. The architects want a product that can provide all of these features and do it in a manner that provides aesthetic continuity with the building components that comprise the entire design.”

Increased glass performance may also come in the form of glass coatings, says Syndi Sim, vice president, marketing and business development, Diamon-Fusion International, who sees the potential for a rise in the commercial applications of the company’s coatings, which help prevent water damage and environmental stains.

Major among glass performance requirements will be energy efficiency, says

Mark Seeton, vice president, sales, Vitro Architectural Glass. “Increasingly stringent energy codes and the drive to achieve Net Zero status are ... pushing overall building performance targets forward—and glass will be part of that solution, from [Building Integrated Photovoltaics] glass to highly insulated building envelopes.”

Bird-friendly glazing continues to grow, says Danik Dancause, marketing operations manager, Walker Glass, largely pushed by legislation passed at the local level in North America. Ecological responsibility will increasingly include green manufacturing as well, he says, spurred in part by LEED regulations. “Under LEED v4.1 projects may earn an additional point under option 2 of the credit if the selected material has EPD documentation that shows improvement over the previous version. This gives an incentive to architects to select material from manufacturers who are improving their manufacturing process.”



01

GGI

GGI now offers commercial insulating glass units designed for stunning aesthetics and multi-functionality. The company's IGUs offer energy-efficient low-emissivity glass combined with Alice direct-to-glass printing, bird protection glass, satin-etched, patterned and other decorative glass solutions. Offerings include double and triple IGUs from 3-4 inches up to 2 1/4 inches in overall thickness. Units are dual sealed for commercial applications, and feature super spacer T-Spacer warm-edge technology. Booth #1402. 201/553-1850, generalglass.com

02

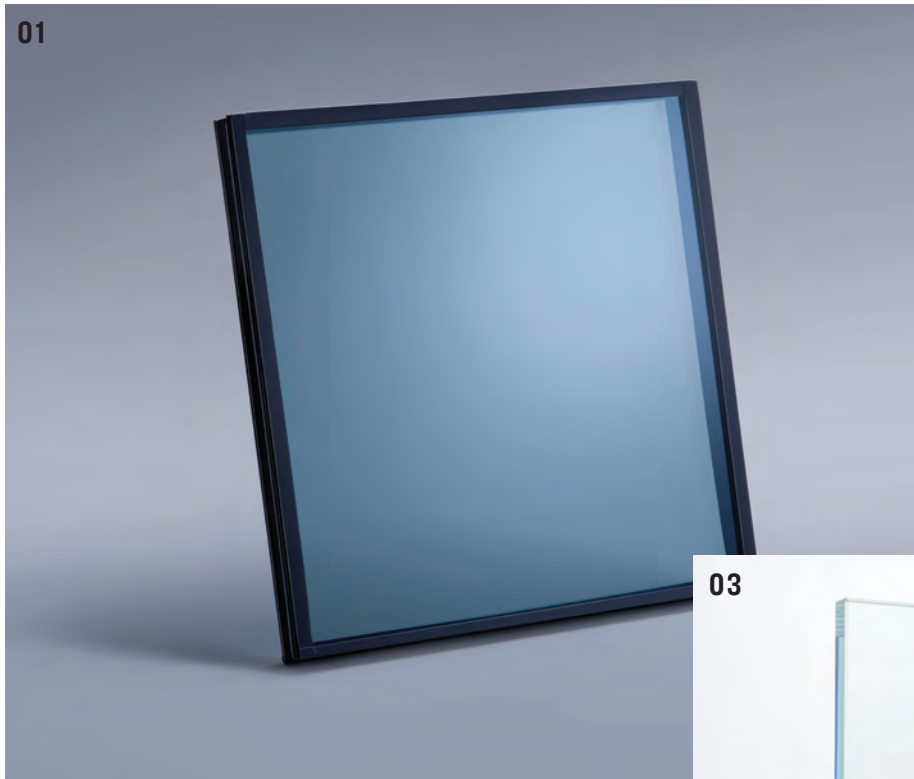
Glasslam

Sudden Impact is an insulating glass unit that features a Polylam resin coating on surface No. 3, 0.09-inch in thickness. The resin is applied via a large gas filling hole, and cured with IR heat within 15 minutes for making an instant impact-rated IGU passing and exceeding Miami-Dade testing protocols. Sudden Impact glazing and IGUs can pass large missile and cycling tests with all types of glass, including annealed, heat-strengthened or even fully tempered glass. Booth #1415. 954/975-3233, glasslam.com

03

Glassopolis Specialty Glass

Protect3 Safety Glass is a UL-certified custom lamination that passes all building codes and provides three levels of protection: fire, impact safety and forced entry. Applications include school stairwells and entry doors, and the product fits in all hollow metal door and frame systems. Protect3 meets all building code requirements. Booth #2202. 800/262-9600, glassopolis.com



02



03

01

Guardian Glass

Guardian SunGuard SNE 50/25 HT is a high-performance, low-emissivity coated glass that gives architects a subtle, blue-gray color and mid-reflectivity aesthetic. The product has a visible light transmission of 48 percent and a low solar heat gain coefficient of 0.25. Designed to be used on the No. 2 and No. 3 surface of a standard insulating glass unit, SunGuard SNE 50/25 HT coating is available on multiple Guardian Glass substrates, including UltraClear low-iron glass, in 6-millimeter, 8-mm and 10-mm thicknesses. Booth #1205. 248/340-2141, guardianglass.com

02—NEW AT GLASSBUILD

Interlayer Solutions

Evalayer High Density Level D-380 is a full cross-linked thermoset EVA film for glass lamination that offers the highest density level of EVA component, according to the company. By having higher density, the adhesion on the laminated glass edges will be stronger, the rejection of UV rays and the moisture resistance will be higher and the soundproofing performance will be better, making the final product very stable over time. Booth #2804. 514/326-4003, interlayersolutions.com

03

Safti First Fire Rated Glazing Solutions

SuperClear 45-HS-LI is an optically clear, low-iron fire-rated glass product for all 45-minute applications with hose stream. It is approved for glazing in all 45-minute doors, sidelites, transoms and openings in large sizes. SuperClear 45-HS-LI meets strict fire, hose stream and safety requirements without wires, tints, films or laminates. The product is made in the U.S. for fast lead times, and has better VLT, STC and OITC performance values. UL listed and labeled. Booth #2417. 415/230-6758, safti.com

Introducing EX Series Surface One Ceramic Glass Enamel



**Newly developed innovative enamel product line by
Glass Coatings and Concepts for surface one applications.**

- Gives building architects unique tools to create new decorative glass designs
- Creates visual markers visible to birds for Bird Friendly glass, deterring collisions
- Standard and custom color matching capabilities available

Protect your investment with Glass Coatings & Concepts.

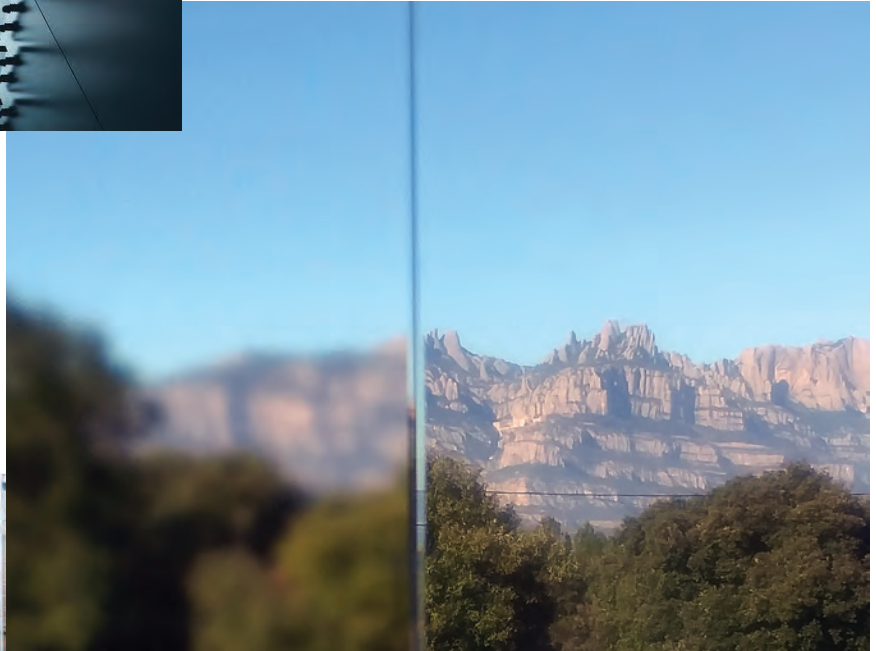
www.gconcepts.com | sales@gconcepts.com | 513.539.5300





02

01



03



01—NEW AT GLASSBUILD

Satinal

Satinal launched Strato Rigido, its first structural laminating interlayer. The product is compliant with EN 16613 certification, and its certified structural characteristics make it suitable to withstand large loadings without losing its rigidity. Strato Rigido provides maximum protection against strong impacts: the breakage of the glass component does not affect the whole laminated structure. This interlayer also provides other properties, such as color, transparency, UV protection, sound insulation, solar control and bird safety. Booth #2815. +(39) 031-8705-73, satinalgroup.com

02—NEW AT GLASSBUILD

Sevasa

LuxPrint See-Through is a new anti-glare and anti-reflective glass for vision-through façades or windows, with anti-glare acid-etched side No.1 glass that end-users can see through, even miles away at a distance, with good image definition and no blurs, says the company. Available in standard size 126 by 88 inches in glass sheets and also oversized glass up to 354 inches long, the product is composed of three finishes: LuxPrint 6, LuxPrint 8 and LuxPrint 10, with different anti-glare and transparency results. Booth #1512. +(34) 9382-8033-3, sevasa.com

03

SWM International

SWM International's diverse Argotec interlayer film product line is custom-engineered to offer precision extrusions for a variety of glass lamination applications. SWM films feature optical clarity, hot and cold characteristics and offer overall quality in the glass lamination industry. Argotec EVA Interlayer Film is custom engineered from copolymer resin and is used as an interlayer sandwiched between two pieces of glass or plastic sheet. The product is ideal for use in smart glass applications like privacy for conference rooms. Booth #2204. 302/563-6550, swmintl.com



Booth 2141

GlassBuild
AMERICA. 
THE GLASS, WINDOW & DOOR EXPO

Autoclave-free Lamination System for Flat Glass Production

easy-LAM IFL: Energy- and cost-efficient
inline production of laminated glass

- Fast lamination due to contact heat transfer under vacuum
- No pre-nip, no vacuum bagging or rack preparation necessary
- Low energy and manufacturing costs compared to autoclaves
- High flexibility for different product build-ups
- Two powerful partners: Made-in-Germany quality and North American parts, service and support



Your personal contact:
Sales Manager Kyle Lindersmith:

+1 (336) 660-2701

burkleamerica.com



01

01

Vitro Architectural Glass

Solarvolt building-integrated photovoltaic glass modules allow companies to use Vitro Glass products to produce CO₂-free power, and even potentially replace conventional building components like wall cladding. To meet design and environmental performance objectives, Solarvolt BIPV modules can be used with Solarban low-emissivity coatings, Starphire Ultra-Clear glass, Acuity low-iron glass, Vitro's full range of tinted glasses and virtually any other Vitro Glass product. Applications include building façades, sunshading, overhead glazing and balustrades. Booth #1719. 855/887-6457, vitroglazings.com



02—NEW AT GLASSBUILD

Walker Glass Co.

Architects now have the choice between two full surface finishes from Walker Textures on surface No.1, with Solarban high-performance coatings from Vitro Glass on surface No.2. This combination provides multiple benefits such as privacy,

energy performance and a uniquely appealing aesthetic. Walker Textures Satin and Opaque finishes offer exemplary wear-, stain- and scratch-resistance properties. These products offer high visible light transmittance and glare control, with no significant impact on solar performance. Booth #2203. 514/352-3030, walkerglass.com

SOFTSOLUTION

NORTH AMERICA INC.

WE MAKE QUALITY
VISIBLE.



See us at GlassBuild, booth 2109.

Trending

- MINIMAL FRAMING
- INDOOR-OUTDOOR DESIGN
- EASY INSTALLATION

Metals, Systems & Hardware

The trend of larger and more complex glass is leading to innovations in metal, systems and hardware. “The larger the glass size, the sleeker the design,” says Barbara Haaksma, senior vice president, marketing, C.R. Laurence Co. “Whether used wall to wall or floor to ceiling—or both—large glass panels are paired with increasingly narrow frames, stiles and rails that suit the intended purpose while also maximizing design and performance.”

Similar to architectural glass suppliers, Haaksma says the drive for more indoor-outdoor design elements, prioritizing unobstructed views for occupants, is driving the trend for minimal framing.

Systems by Q-Railing, Wagner Companies, and Frameless Hardware Co. also underline the continued importance of ease of installation, as well as the potential for prefabrication, to improve lead times.

Looking toward what comes next, Mirjana Komadina, vice president, product design and development for C.R. Laurence Co., says an increased focus on NFRC-certified energy-efficient products will be important, in addition to prioritizing materials that are naturally resistant to bacteria, and the rise of minimal touch or touchless smart hardware.



01

01— NEW AT GLASSBUILD

C.R. Laurence

With an ultra-slim 3/4-inch face trim, the new CRL Metropolis Post Windscreen System produces expansive glass spans that meet code requirements. Its purposeful, low-profile aesthetic lets the view take center stage while providing wind protection and safety. An 8-foot maximum system height offers the option to create a glass wall. The system meets the wind load requirements set forth in IBC 2018 and ASCE-7/16. 316 stainless steel construction adds stability and durability, which makes Metropolis well-suited for higher elevations. Booth #1921. 800/421-6144, crlaurence.com



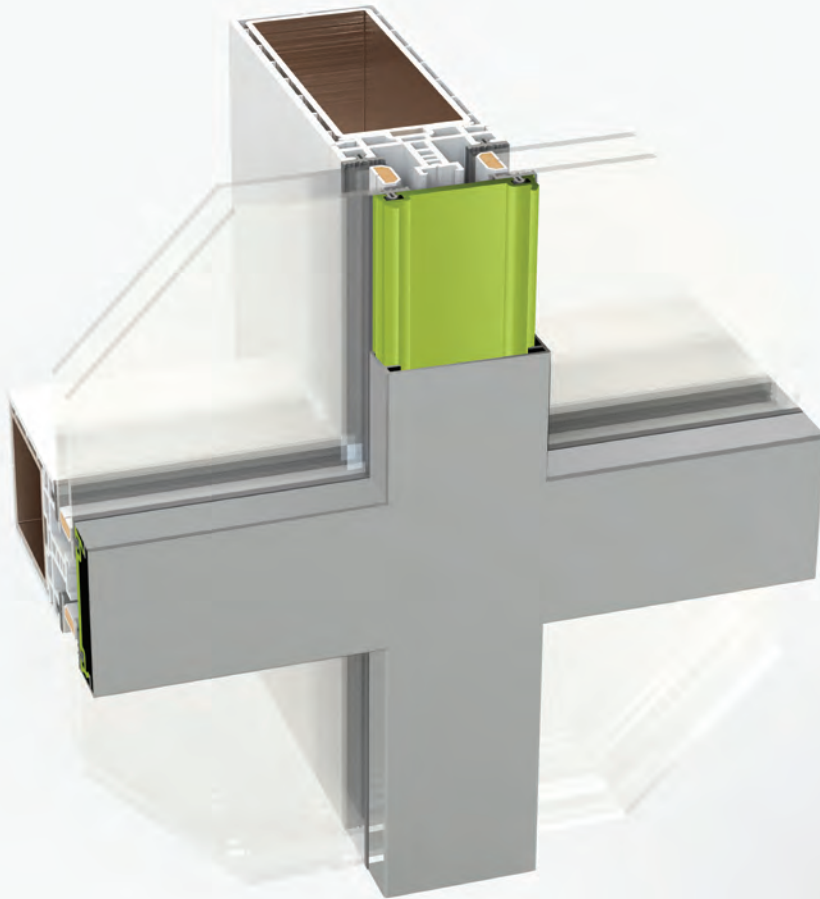
02

02

All Your Hardware

All Your Hardware introduces its new 3/8-inch, aluminum single bar double and single slide top roller shower door. The product is 66 inches wide and can be customized in finishes including chrome, brushed nickel and matte black. Booth #1411. 702/303-2179, allyourhardware.com

01



01

Deceuninck North America

Innergy Architectural Products is a line of fiber-reinforced polymer parts custom designed for curtain wall systems, windows, door and storefront systems. Components are designed to fit into existing commercial fenestration products, and include pressure plates, structural thermal struts, reinforcements and curtain wall components. The company reports Innergy AP parts deliver up to 900 times more energy efficiency when compared to traditional materials like aluminum. Booth #1603. 513/539-5505, deceuninckna.com

02—NEW AT GLASSBUILD

dormakaba USA Inc.

Uniquin is a new interior, demountable multifunctional wall system for room configuration and access application. It offers the possibility to individually design and separate interior space with glass. The product features flush-fitting profiles complemented by hardware and locking systems in the same coordinated design. Uniquin can be fitted with fixed elements made of glass, or other materials in thicknesses between 3/8 inch and 7/8 inch. It is ideal for virtually any location requiring separate spaces. Booth #517. 317/618-5913, dormakaba.us

03— NEW AT GLASSBUILD

FHC – Frameless Hardware Co.

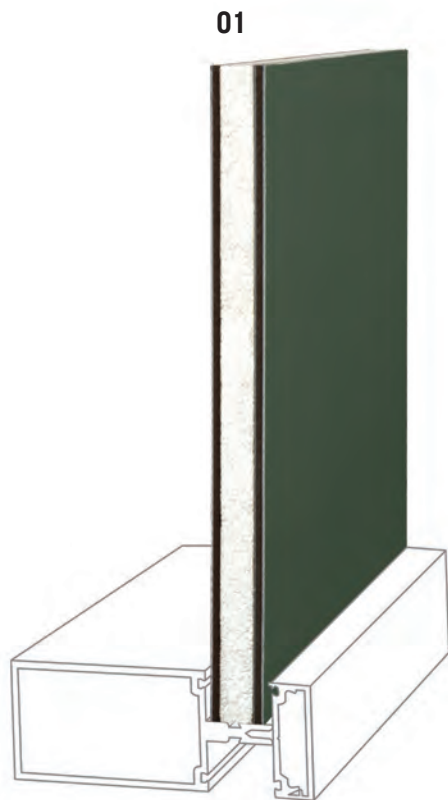
FHC introduced the FHC Advance Series Herc-Door frameless door rail system. Designed, engineered and manufactured in the U.S., the Herc-Door rail and patch fittings present glaziers and fabricators with an innovative solution that provides faster, easier installation with accelerated lead times. Features include an innovative unitizing gasket and dual inclined control system, as well as new, modern crisp corner design, Class 1 anodizing UV stable finishes and solid forged brass plated end caps with premium finishes. Booth #803. 888/295-4531, fhc-usa.com



04—NEW AT GLASSBUILD

Indital US

Whether it's clinics, airports, kindergartens, schools or private homes, IAM+ handrail systems help to maintain a high hygiene standard, eliminating 99 percent of the pathogens present on their surfaces, making them effectively antibacterial. Handrails treated with IAM+ slowly release silver ions which, in a few minutes, kill more than 650 species of germs, including *Escherichia coli*, *Legionella pneumoniae* and *Salmonella enteritidis*, among others. Silver ions are absolutely safe for humans, as they only attack bacteria and inhibit their ability to reproduce. Booth #2712. 713/694-6065, indital.com



01

Mapes Panels

Mapes Panels developed a large-missile and bullet impact-resistant line of laminated panels, MapeShield, for use in curtain wall, storefront and window applications where design elements require high-impact and/or high load materials. MapeShield panels can be used in any framing system design for this type of application. The panels can match any architectural finish including Kynar, Anodized and Baked Enamel. Custom applications, including bullet-resistant panels, are also available. Booth #2408. 800/228-2391, mapespanels.com

02

Morse Industries

Precision Lock Adjustable Railing allows the installer to adjust the glass in a glass railing up to two full inches for plumb quickly and easily with no specialized tools. This product provides a solution to the real-world installation conditions encountered at all construction sites. Features include over 2 inches of adjustment to plumb glass, and a rotating pressure plate. The product is available in several popular drilling patterns. Booth #714. 253/234-2395, morseindustries.com

03—NEW AT GLASSBUILD

Q-Railing USA

Easy Alu is a top- or fascia-mounted aluminum system with glass mounting rails for optional pre-fabrication, unitized units and simple installation. Users can preassemble the components to complete railing sections in their own workshop, and can order ready-to-install modules, custom-made to user specifications. The product features components in anodized, mill or powder-coat finish, with a glass thickness of 8-10.76 millimeters. Applications include indoor and outdoor settings, for light and medium use. Booth #1811. 714/259-1372, q-railing.com



ORCHARD
LOCK DISTRIBUTORS

We have the best industry pricing on door hardware

We quote door hardware for big and small glass jobs everyday.
Send your hardware take-offs to us at estimating@orchardlock.com
and we will take care of the rest.

See us at GlassBuild, booth 2613.

Orchard Lock has direct access to all of the premier brands including

ASSA ABLOY ARCHITECTURAL DOOR ACCESSORIES™
Markar | McKinney | Pemko | Rockwood

ASSA ABLOY ELECTRONIC SECURITY HARDWARE
HES | Securitron

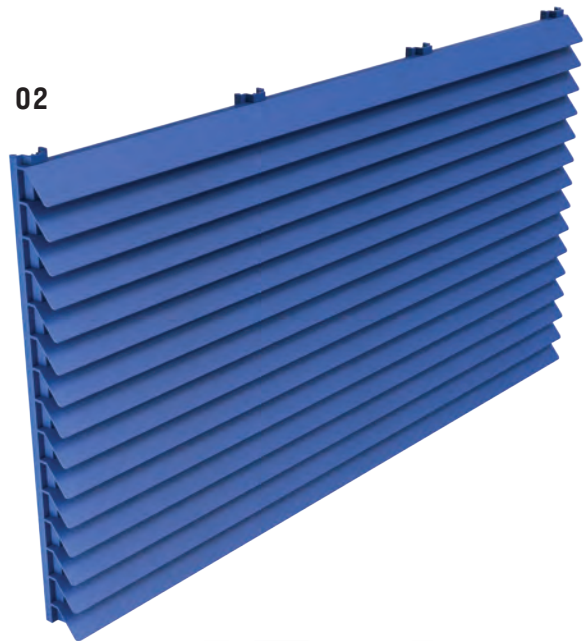
ADAMS RITE | ALARM CONTROLS | CORBIN RUSSWIN | MEDECO | NORTON | RIXSON | SARGENT | YALE

www.orchardlock.com | 800.233.2146



01

02



03



01—NEW AT GLASSBUILD

Quanex Building Products

Quanex added its popular inset handle option to its 1350 patio door screen series that will allow customers to order the model with an inset handle and choose from locking and nonlocking options. These options are also intended to provide added safety and security. Configurations include standard color options and various mesh options, including BetterVue and UltraVue. Booth #2519. 800/233-4383, quanex.com

02—NEW AT GLASSBUILD

Reliable

The AEL-42 louver is a 1.122-inch deep thinline stationary louver that is primarily used for PTAC, glazing mechanical screen and other aesthetic applications where water penetration is not a concern. Architectural PTAC louvers enhance the outside appearance of any facility that uses Packaged Terminal Air Conditioners and Heat Pumps. With a Reliable louver, users are assured that a PTAC unit's performance will not be hindered due to incorrect intake/exhaust placement or incorrect A/C unit attachment. Booth #1513. 913/523-6660, reliablelouvers.com

03— NEW AT GLASSBUILD

SpeedybyCasma

Frenum is a hydraulic hinge for interior applications and showers. It is a door closer, completely manufactured in Italy, suitable for doors up to 220 pounds. Frenum can be installed on frameless glass, aluminum frame or wood doors. Suitable for glass thicknesses of $\frac{3}{8}$ inch and $\frac{1}{2}$ inch, and for a max door width of 39.4 inches, it has a factory present strength of EN 1154 - 2 and takes less than 10 minutes to install. Booth #1015. +(39) 0297-2984-18, casma.it

WE'LL EASE



Our team of glass experts will assist you in upgrading your openings with ASSA ABLOY door hardware solutions. From designing an opening from the ground up to providing a full submittal package and complete hardware schedule for your order, Banner Solutions can help clear things up.

To see how Banner Solutions delivers, visit:

BannerSolutions.com/Glass

See us at GlassBuild, booth 2508.

banner[™]
SOLUTIONS

ASSA ABLOY

UPGRADE YOUR OPENINGS WITH SOLUTIONS FROM THESE PREMIER ASSA ABLOY BRANDS


**Adams
Rite**
ASSA ABLOY


**Corbin
Russwin**
ASSA ABLOY


Norton[®]
ASSA ABLOY


ROCKWOOD[®]
ASSA ABLOY


SARGENT
ASSA ABLOY

01



02



01—NEW AT GLASSBUILD

Tag Railing

The Concealed Hydraulic Door Closer by Tag Hardware is a bottom patch fitting for doors. Unlike the conventional floor spring, the hydraulic door closer requires no cavity on the ground for installation, making the process quick and creating an aesthetically appealing seamless doorway. The absence of an opening on the floor allows for a cleaner surface with minimal accumulation of dust or water, making this product ideal for places requiring extra hygiene such as hospitality and health care. Booth #2307. 905/760-2000, taghardware.ca

02—NEW AT GLASSBUILD

Wagner

Wagner's Level Lock Plus base shoe moulding system has an intuitive locking mechanism that allows the glass to tilt up to 2 degrees in either direction to ensure an easy, precise glass alignment. Alignment tabs are available in various angles to ensure base shoes are seamlessly positioned at the beginning of install. The product's grooved, symmetrical inner channel allows the mechanisms to be installed from either side of the shoe—providing additional safety when installing on elevated surfaces. Booth #2606. 414/214-0444, wagnercompanies.com

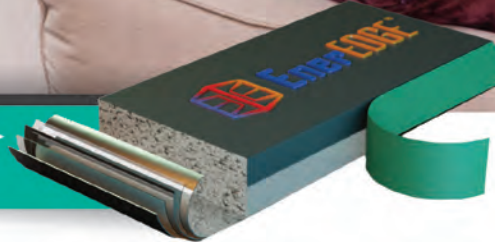
Tremco is now a proud part of



See the difference at tremcocpg.com

YOUR COMPLETE, COMPATIBLE WEATHERPROOFING SYSTEMS

ENEREDGE® WARM-EDGE SPACER ▶
PRE-DESICCATED, READY-TO-APPLY, CELLULAR SILICONE SPACER



Preventing air and moisture intrusion is critical to energy efficiency in a building and creating a comfortable environment for its occupants.

Tremco provides the industry's only single-source, comprehensive glazing systems for in-plant and in-field applications, along with flexible insulating glass spacers and sealants for residential and commercial markets.

Visit us to learn about our full product line offering.



Booth #1523

Learn more at ▶ TREMCOSEALANTS.COM



Exhibitor List

Exhibitors as of June 28. Visit GlassBuildAmerica.com for the most up-to-date listing.

Booth	Exhibiting As
2421	A+W Software
2810	Accurate Lock & Hardware Co., LLC.
1404	Adfast
3142	Airtho- Modular Process Isolator
1714	Aldora Aluminum & Glass Products Inc.
2816	Alloy Fasteners, Inc.
1411	Allyourhardware
2405	Alumax Bath Enclosures
1345	Aluro

Booth	Exhibiting As
1505	American RENOLIT Corp.
1321	AmesburyTruth
911	Anthony Innovations (NA), LLC.
1514	AquaSurTech OEM
1718	North American Contractor Certification
1115	Argon Filling Systems, Inc.
1805	Arizona Shower Door, Inc.
2907	Arkema, Inc.
1913	Armor-Guard Protective Coatings, Inc.

Booth	Exhibiting As
1548	Ascentium Capital
743	Ashton Industrial
1614	ASSA ABLOY Opening Solutions
2913	Astro Plastics
606	ATAS International, Inc.
2253	ATech Machine, Inc.
1845	AutoMak Assembly, Inc.
843	Bailey Specialty Cranes & Aerials
2508	Banner Solutions

Latest Technology In Laminating - Infrared and Convection FAST & EFFICIENT FOR COATED & UNCOATED, ELECTROCHROMIC & PHOTOCROMIC GLASS



Casso-Solar Technologies' Glass **Laminating Systems** for high speed, high volume requirements, fully automated, special handling of low-e reflective glass, custom configurations. Full Convection Top & Bottom. Full Infrared top & Bottom. PLC Controls.



Laminated SENTRYGLAS® Trim Tables - softens the interlayer for easy trimming. Sizes up to 96" X 120" as standard.



Casso-Solar Technologies' **Vacuum Bag Lamination System** for bringing your low volume laminated glass production in-house. Combination Infrared & Convection heating for fast cycle times. PLC Controlled.



MULTI-STATION BENDING & CASTING OVEN SYSTEMS

Casso-Solar Technologies' **Single & Multi-Station Glass Bending & Casting Ovens** provide reduced cycle time, precision PLC control with 120" x 180" x 30" chambers

CALL 845-354-2010 for Problem Solving Details - SEE US AT GLASSBUILD AMERICA - STAND 2123

CASSO-SOLAR
TECHNOLOGIES
www.cassosolartechologies.com

cyberAL

A CHOICE THAT GIVES YOU MORE

A-WR SYSTEM
SERVICE AR

< **AUTOMATIC MACHINES**
ROBOTIC SOLUTIONS
IOT



ADDELIO LATTUADA
EVOLUTION OF GLASS WORKING

AUTOMATION

THE ADVANTAGES OF A PERFECT SYNERGY WITH TECHNOLOGY



- ✓ Diamond/resin wheels presetting in less than 1 min.
- ✓ Simple to use
- ✓ Reduced machine set-up time
- ✓ Constant quality/productivity throughout the day
- ✓ Preventive maintenance
- ✓ Remote management

LATTUADA
NORTH AMERICA

ADDELIO LATTUADA®
EVOLUTION OF GLASS WORKING
Since 1970

LATTUADA NORTH AMERICA, INC.
6967 Wales Road, Suite F - 43619 Northwood (OH)
P. 567 249 4486 - info@lattuada-na.com
www.lattuada-na.com

ADDELIO LATTUADA Srl
Via Abbondanza, 11/1- 22070 Carbonate (CO) IT
Tel. +39 0331.832713 - info@adeliolattuada.co
adeliolattuada.com | cyberal.adeliolattuada.com

See us at GlassBuild, booth 1547.

Exhibitor List

Booth	Exhibiting As
1943	Bavelloni America, Inc.
3731	BENTELER Glass Processing Equipment
641	Billco Manufacturing, Inc.
2506	Blackwater Technical Services, Inc.
2824	Bottero S.p.A.
3331	Bovone
3116	BSI Group America
2141	Burkle North America, Inc.
1040	Better Vacuum Cups, Inc
1921	C. R. Laurence
1903	Caldwell Mfg., Co., N.A., LLC.
2123	Casso-Solar Technologies, LLC.
1044	Trucent

Booth	Exhibiting As
1403	Chelsea Building Products, LLC.
806	ClearShield Technologies, LLC.
2919	Cline Aluminum Doors, Inc.
221	CMS North America, Inc.
1251	CoolTemper USA
1713	Cooper Standard ISG
2514	Coroplast Tape Corporation
1610	Creative Millwork
1515	Crimsafe North America
1944	Daubert Chemical Company, Inc.
1603	Deceuninck
2731	DeGorter Inc.
3431	DeMichele Group
2131	Diamon-Fusion International

Booth	Exhibiting As
2015	Direct Hardware. Inc.
808	Profile Laminating - DMOC
613	TRUE Contractor Software
3008	Door & Window Market [DWM] Magazine
2003	Door Controls USA, Inc.
517	dormakaba USA, Inc.
403	Dri-Design, Inc.
1940	Duespohl Maschinenbau GmbH
2917	Eastern Glass & Aluminum
3139	Eastman Machine Company
1552	EDDA Wrapping Machines
1103	EDTM, Inc.
2531	Elumatec North America, Inc.

EVA film




Glass Machinery






www.satinal.it | info@satinal.it

See us at GlassBuild, booth 2815.



Glass Machinery & EVA Film Manufacturer



DISCOVER THE SOLUTION for Processing Glass

Glass Fabrication Equipment, Tooling & Supplies that **GO BEYOND THE EDGE**

Salem provides high-performing tooling such as our:

- **SUPERIOR wheel line:** Unique "S" pattern on the cutting band for edging laminated glass
- **Storm Series product lines:**
 - **Thunder Cut premium diamond core drills:** Self-dressing drills that offer 2x the speed and 3x the life
 - **EF5 elite diamond peripheral wheels:** Operate at speeds up to 10 m/min without sacrificing life

Contact Us Today



SPONSOR

GlassBuild
AMERICA 
THE GLASS, WINDOW & DOOR EXPO
September 13-15, 2021 | Atlanta, GA

Visit Us: **BOOTH #1731**

800.234.1982 | info@salemftg.com | www.SalemFTG.com

Salem Fabrication Supplies is a division of Salem Fabrication Technologies Group, Inc. | We Are 100% Employee Owned

Exhibitor List

Booth	Exhibiting As
1331	Emmegi USA, Inc.
1014	EnduroShield
2231	Erdman Automation Corp.
623	Ergo Robotic Solutions, LLC.
1541	F. Barkow Inc.
2602	Faulkner Fabricating, Inc.
3625	Fenestration & Glazing Industry Alliance
2221	FeneTech, Inc.
3241	Ferro/Dip-Tech
803	FHC Frameless Hardware Company, LLC.
810	Flexijet North America
431	FomUSA
231	Forel S.p.A. / Forel North America
2421	Friedman Corporation

Booth	Exhibiting As
915	FrontLine Bldg. Products, Inc.
819	FUX Maschinenbau und Kunststofftechnik GmbH
813	Dreamwalls Innovative Glass Products
1739	GED Integrated Solutions, Inc.
1402	GGI
1303	Glass Coatings & Concepts
711	Glass Lamination of America, LLC.
1550	Glass Machinery Direct
1415	GLASSLAM
2202	Glassopolis Specialty Glass
1510	glasstec 2022 / Messe Dusseldorf
2650	Glaston America, Inc.
3018	GlasWeld Scratch Removal

Booth	Exhibiting As
2303	Glazier Nation
3016	Global Security Glazing
551	Graf Synergy Srl
1831	Groves Incorporated
1205	Guardian Glass
2404	Gulf Rubber Industries, LLC.
1511	Gunther Mirror Mastics
3422	H.B. Fuller KÖMMERLING
1047	Haffner North America
2811	Hawaii Hinges
1031	Hegla Corporation
2725	Helios Quartz America, Inc.
1731	HHH Equipment Resources
1010	Horst Klaes GmbH & Co. KG



HARP RACK - HR-4860
SMARTER GLASS STORAGE SOLUTIONS

WWW.GROVES.COM | SALES@GROVES.COM | 800.991.2120

See us at GlassBuild, booth 1831.

THE GEA

SEE THIS MACHINE AT GLASSBUILD 2021 **BOOTH 221**
GEORGIA WORLD CONGRESS CENTER, SEPT 13 - 15

(616) 698-9970
CMSSALES@CMSNA.COM

3 -4 AXES HORIZONTAL MACHINING CENTER

NEW GENERATION FOR GLASS FABRICATION

3 or 4-axis (optional) Numerically Controlled machining center to machine both thin and thick flat glass as well as laminated glass and bullet-proof glass. This machine can perform:

grinding
polishing
drilling
milling
V-Grooving
engraving
5° bevelling

sawing with diamond blade



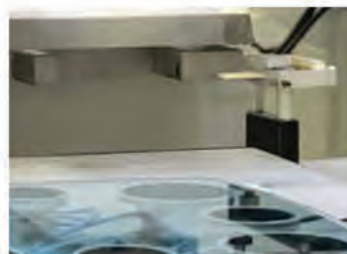
Cms
glass technology

KEY BUYER BENEFITS

- + **LIMITLESS MAGAZINES:** the extensive modularity of the magazines means the machine can be adapted for any requirement. The magazines can be installed at the back, on the sides, or even under the bridge for a 9.5 second tool change.
- + **SOLID ALUMINIUM SURFACE:** 18mm, duraluminum worktable for greater stability and durability. The table can be re-surfaced over 10X times.
- + **EASY LOADING:** the worktable's height of 780 mm (31 in) and reduced distance of the table from the operator, places CMS Gea at the top of its class for loading ergonomics.



UNDER-BEAM TOOL HOLDER
with up to 24 cone positions.



Pre-setting is integrated into the tool magazine as to not infringe on the working area of the table. **DIAMOND AND POLISHING TOOL DRESSING UNIT** to ensure top performance of tools at all times.



AUTOMATIC LUBRICATION SYSTEM.

Exhibitor List

Booth	Exhibiting As
1315	HP3 Software, Inc.
2413	Hydro Extrusion North America
1613	Hygrade Metal Components
2805	IDN-Acme, Inc.
3121	IGE Glass Technologies
3322	IGE Glass Technologies/Forvet
2315	IGT Glass Hardware
2712	Indital US, Ltd.
3131	Integrated Automation Systems
417	Interglass
2804	Interlayer Solutions, Inc.
2543	Intermac America
2843	IUPAT

Booth	Exhibiting As
2915	JEI Structural Engineering Design Calculations
802	JLM Wholesale, Inc.
1346	Joe's Refrigeration, Inc. / CleanRoom Solutions
3007	Jordahl USA Inc.
1531	Jordon Glass Machinery
731	Joseph Machine Company
713	Jura Films North America, LLC.
2431	Keraglass Industries S.r.l.
1516	Keystone Certifications, Inc.
2504	GlassTrax and Glaziers Online
941	Kleiberit Adhesives USA, Inc.
3010	KMR Research
819	CONTINENTAL

Booth	Exhibiting As
709	Laminators Incorporated
3009	Larson Engineering Inc.
1202	Laser Products Industries
1213	Leading Edge & Deltarack USA
1931	Lisec America, Inc.
2509	LiteSentry, LLC.
1115	Loeffler Supply, LLC.
2904	M3 Glass Technologies
3238	Machines and Wheels, Inc.
2904	Magid
1617	Mainstreet™
2408	Mapes Panels, LLC.
2831	Mappi America, Inc.
2441	Matodi

THE WORLD OF GLASS

Serving the glass industry for over 50 years

DEPENDABLE GLASS WORKS
custom fabrication services include:

TEMPERED GLASS -

*sizes 6"x 6" up to 60"x 120"
thicknesses 1/8" up to 3/4"*

TEXTURED GLASS

LAMINATED GLASS

ANTIQUE MIRRORS

INSULATED GLASS

IMPACT RESISTANT GLASS

ICED GLASS

GLASS STAIR TREADS & FLOORING

COUNTER TOPS /TABLE TOPS

SHELVING

BEVELED GLASS AND EDGEWORK

WATER-JET CUTTING

DEPENDABLE
Glass Works

Call us today! 800-338-2414

www.dependableglass.com



See us at GlassBuild,
booth 2831.



iford.it

MAPPI ATS 4.0: THE POWER (IN FULL CONTROL)



Powered by
SIEMENS

The new generation of ATS 4.0 confirms Mappi on the forefront of innovation: a strong collaboration with Siemens has produced a series of features based on MindSphere, "the 4.0 operating system". **Mappi implements new possibilities for**

analysis, management and forecasting which help the entrepreneur to organize production, plan and achieve results, optimize energy consumption. **A powerful improvement for the new generation of Mappi furnaces.**



MAPPITM
BEYOND GLASS PERFECTION

For further information: +1 239 234 5028 | www.mappi.us

Exhibitor List

Booth	Exhibiting As
2512	McKeegan Equipment & Supply
1746	MECAL USA
905	Millet Glass Industry
714	Morse Industries an M-D Company
1823	My Glass Truck
2415	National Fenestration Rating Council
3625	National Glass Association (NGA)
2409	Grabo / Nemo Power Tools, Ltd.
1114	Novagard
2215	NuCoat North America, LLC
1223	Blink Blinds + glass
2613	Orchard Lock Distributors, LLC.
1003	Orgadata / LogiKal

Booth	Exhibiting As
2043	Oz Machine
511	Ozone India
2311	Palmer Products Corporation
2717	Paradigm
617	PDS IG Equipment, LLC.
1849	Perfect Score Technologies
1623	PH Tech, Inc.
2421	PMC Software
1712	Podium
715	PrefSuite - Preference North America Inc. (PrefNA)
912	Press Metal North America
1544	Prodim USA
2705	The WeaveX Company

Booth	Exhibiting As
1811	Q-railing - North America
3305	Quality Enclosures, Inc.
2519	Quanex Building Products
923	Quattrolifts USA, Ltd.
3439	Quick Fabrication
1448	Ray-Bar Engineering Corp.
1513	Reliable
2507	Rochester Specialty Products
2812	RiteScreen
1406	Rockwell Security, Inc.
631	Winlet
1309	Synergy NA
2103	SAF - Southern Aluminum Finishing Co.

**POWERFUL SOFTWARE...
POWERFUL RESULTS**

Mainstreet™ has the business management tools you need for success!

Glas-Avenue™ Flat Glass Point of Sale software:
invoicing, accounting, scheduling

MobilePRO™ tech app:
estimates, measure sheet, pictures, signatures, payments

Shower Door Pricer™:
glass configurations, hardware, parts, pricing

Glas-PAY™ credit card processing:
software, online, email, mobile payments

LEARN MORE ABOUT OUR COMPLETE SET OF SOLUTIONS. WE ARE HERE TO HELP!

mainstreetcomputers.com
sales@mainstreetcomputers.com

Mainstreet™

734.699.0025

See us at GlassBuild, booth 1617.

RELIABILITY
QUALITY
EXPERIENCE

yes!



The full range of tools for glass processing

The complete range of Bavelloni tools represents **reliability** and **quality** achieved through decades of **experience** combined with continued research and development.

First class tooling is the key to superior glass processing.



See us at GlassBuild,
booth 1943.

BAVELLONI AMERICA, INC.
4361 Federal Drive, Suite 160
Greensboro, NC 27410
Ph. 336-299-8300 - Fax 336-299-8388
usa@bavelloni.com

www.bavelloni.com - info@bavelloni.com



SCAN
TO DISCOVER
MORE

Exhibitor List

Booth	Exhibiting As
2417	SAFTI FIRST Fire Rated Glazing Solutions
1731	SALEM Fabrication Supplies
2815	Satinal USA, Inc.
2402	Saw Trax Mfg. Co., Inc.
2715	RA Workshop Software
2713	Schlegel PolyFab
2209	Screenco Manufacturing, Ltd.
814	Sika Corporation
615	Sky Glass Aluminum
1307	SMART Logistics, Inc.
1910	Smart-Builder Glass Software
2321	Smartlift US, Inc.
1512	SEVASA
721	Soft Tech Group

Booth	Exhibiting As
2109	Softsolution North America, Inc.
2406	Soudal
1015	CASMA - All Door Closers
2513	Protectapeel
1444	Spider by BrandSafway
2711	Sprayway, Inc.
602	Spray-X, LLC
712	Stainless Structurals America
2615	Standard Bent Glass Corporation
1455	Strainoptics
913	Stretch Solutions, LLC.
2503	Strybuc Industries
3115	Sullivan Hardware
2204	SWM Intl.

Booth	Exhibiting As
2307	Tag Railing, Inc.
2513	TBP Converting, Inc.
3017	Techno Rubber Industries
1639	Tecnoglass, Inc.
2353	Tenon Beijing Equipment - TSS Sales & Service
1523	Tremco Construction Products Group
24	Trojan Architectural Coaters
605	Turkish Glass
703	Tsubaki KabelSchlepp
2115	Ultrafab, Inc.
2017	Unelko Corp.- Invisible Shield
423	Unruh Fab, Inc.
1247	US Centrifuge
3006	USGlass Magazine

At GlassBuild America
2021 we are proud
to commemorate our
past...



Founded 1982



MORSE
ARCHITECTURAL

Innovated 2021

Visit our experts at booth #714 and ask us about our new Vision

morseindustries.com | 800.325.7513

glass technology



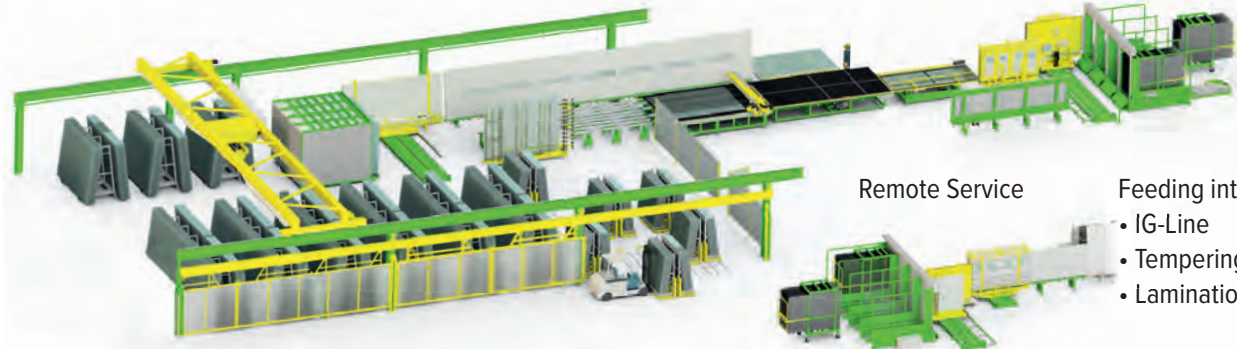
Customized Solutions with HEGLA.

Loading Systems

Remnant Handling

Float Glass Cutting

Sorting Systems



Remote Service

- Feeding into
- IG-Line
- Tempering
- Lamination

Automatic Batch Building / Optimization

Auto Break-out

Laser Marking

ERP-Systems

Handling and Storage

Laminated Glass Cutting

Shuttle Storage

Optimization Software

Combined Expertise for Your Future Solutions

With machines and integrated systems from HEGLA, you can achieve maximum precision, quality and automation. Efficient software solutions from HEGLA-HANIC optimize your production control and planning. Innovations such as laser-assisted glass finishing and laser marking from HEGLA boraident further increase your added value. The high-performance tempering furnace technology of HEGLA-Taifin offers you superior quality for optimum production results for maximum customer satisfaction.



Join us at GlassBuild!
 September 13-15, Atlanta
 Booth 1031
 Free Pass: **EX21NGA**



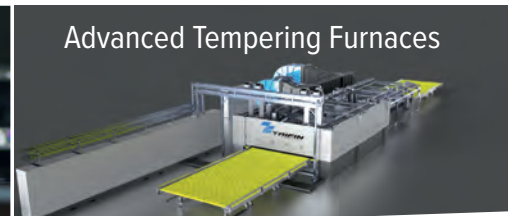
Laser Marking &
 Value Added Products



Robust Software Solutions



Advanced Tempering Furnaces



Exhibitor List

Booth	Exhibiting As
1021	VEKA Inc.
707	Vicone High Performance Rubber
1841	Viprotron North America
1231	Vision Hardware, Inc.
1719	Vitro Architectural Glass
2606	Wagner
2203	Walker Glass Company, Ltd.
949	Water Treatment Solutions
1353	Weldco Sales, Inc.
1631	Winpro
2421	Winsys
1009	Wood's Powr-Grip Co., Inc.
2309	Wrisco Industries, Inc.
1948	Xinglass America, LLC.

Booth	Exhibiting As
ITA PAVILION	
2923	Italian Trade Agency (ITA)
1547	Adelio Lattuada S.r.l.
2823	ADI SRL / IGP INC.
3124	Bovone Diamond Tools S.r.l.
2723	Diamant SAS
2837	FARAONE
3023	Horizon SRLS
3122	Italcarrelli SpA
2937	Mazzaroppi Engineering S.r.l.
1445	Oemme S.p.A.
3030	Optima S.r.l.
2931	Rollmac
2731	Schiatti Angelo S.r.l.

Booth	Exhibiting As
2822	Schiavo Glass Machinery SGM S.r.l.
3025	SKILL GLASS
3031	TRIULZI CESARE SPECIAL EQUIPMENTS SRL
BEIJING LEAD-TOP INTERNATIONAL FAIR CO., LTD <i>Booth Nos. at GlassBuildAmerica.com</i>	
	All Glass (Suqian) Limited.
	Anhui Yinrui Intelligent Technology Co.,Ltd.
	Beijing Hanjiang Automatic Glass Machine Equipments Co., Ltd.
	Beijing Jeffoptics Co.,Ltd.
	Beijing Northglass Technologies Co., Ltd
	China Liaoning North Glass Machine Co., Ltd.
	Fangding Technology Co., Ltd
	Foshan Mingstar Intelligent Materials Co., Ltd.



ACHIEVING NEW HEIGHTS TOGETHER.

Together, BETA MAX Hoists and LGH will provide customers with increased availability of premium hoists and industry-leading lifting knowledge for successful Lifts of any height.

Please visit www.rentlgh.com/gm for more info.



INVITATION GLASSBUILD 2021

Come and join us! September 13-15, 2021 | Atlanta | Booth 3631

BENTELER GLASS PROCESSING EQUIPMENT

PROCESSING LINES

BENTELER is one of the largest suppliers of complex and customized **PROCESSING LINES** from a single source. We can integrate glass loading automation to grinding, drilling, waterjet cutting, CNC processing, washing and unloading into a complete and very efficient turn key solution.

SEAMING-AUTOMATIC BATCHING-WASHING LINES

SEAMING-AUTOMATIC BATCHING AND WASHING LINES can integrate glass loading automation, laser marking and edge deleting functions. With glass width measurement and automatic adjustment, long lasting diamond grinding wheels (fast, precise and almost dry glass) it batches automatically to feed the tempering oven.

WASHING MACHINES

BENTELER offers a wide range of **WASHING MACHINES** for flat and curved glass and for all industry applications including float and coating processes. All BENTELER Washing Machines convince due to its excellent washing quality and are available on different and customizable washing/drying configurations.

LAMINATING LINES

BENTELER **LAMINATING LINES** offer a solution for many different glass laminating needs. From manual to a fully automatic operation for all common types of foil (PVB, SGP and EVA). Because of our long experience and a continuous development we offer lines which are state-of-the-art, energy-optimized and in proven quality.

BENTELER Glass Processing Equipment has 2 sales and Service offices in USA including spare parts inventory.



Exhibitor List

Booth	Exhibiting As
	Goldstar Hardware Co., Ltd.
	Guangdong Enkong Machinery Co., Ltd.
	Guilin Champion Union Diamond Co., Ltd.
	Haining Lijialong Pile Weather Strip Co. Ltd.
	Hangzhou jinglass Machinery Co., Ltd.
	Hardwood Door Control Tech (Ningbo) Co., Ltd.
	Huainan Rongshunxiang Glass Co., Ltd.
	Jiangyin Haida Rubber And Plastic Co., Ltd.
	Jinan Weili Machine Co., Ltd.
	Jinan Wondec Machinery CO., Ltd.
	Jinzhou Fortune Spring Glass Co., Ltd.
	Lewei Science & Technology Development Co. Ltd.
	Loire Hardware Co., Ltd

Booth	Exhibiting As
	Mountain Intelligent Equipment Co., Ltd.
	Ningbo MOGB Bearing Co., Ltd.
	Panjin Chuangduobao Insulating Glass Material Co., Ltd.
	Qingdao HongHai Glass Co.,Ltd.
	Qingdao Jinfer International Co., Ltd.
	Qingdao Kingdom Glass Co., Ltd.
	Qingdao Laurel Glass Technology Co.,Ltd
	Rider Glass Co., Ltd.
	Rizhao Huaye Glass Co., Ltd.
	SGU Technologies
	Shandong Paneu Glass Co., Ltd.
	Shandong Taishan Huayue Glass Co., Ltd.
	Shandong Jinjing Science & Technology Stock Co., Ltd.
	Shanghai Refine Machinery Co., Ltd.

Booth	Exhibiting As
	Shanghai Zhihe Industrial Co., Ltd.
	Shixing Glass (Fujian) Co., Ltd.
	Southtech (Guangdong) Glass Technology Co., Ltd.
	Sun Design Hardware Factory Ltd.
	Tengzhou Fenghua Glass Co., Ltd.
	Tengzhou Jinming Glass Co Ltd
	Tengzhou TechHi Glass Co., Ltd.
	Unex Building Complex Co., Ltd.
	Wuning Honghui New Material Co., Ltd.
	Xiamen Shiner Industrial Co., Ltd
	Xiamen Tider Import & Export Corporation
	Zhejiang Zhongli Energy Efficient Glass Manufacturing Co., Ltd
	Zhengzhou Zhongyuan Silande High Technology Co., Ltd.

NGA Glazing Executives Forum

GLAZING
EXECUTIVES
FORUM

SEPTEMBER 13, 2021

GlassBuild
AMERICA
THE GLASS, WINDOW & DOOR EXPO

THE TRADITION CONTINUES
SEPT. 13-15, 2021 ATLANTA

glassbuild.com



IT'S HARMLESS.

Unless your sealant process fails.

Moisture protection. Thermal and acoustic performance.

Aesthetics. These are just a few of the reasons to make certain there is an International Union of Painters and Allied Trades glazier on the job. With hundreds of hours of classroom training, thousands of hours of on-the-job training and ongoing advanced training in every aspect of glass selection, cutting, installation and replacement, they're the clear choice for safety, performance and durability.



Learn more at IUPAT.org



See us at GlassBuild, booth 2843.

PRODUCTS

SPONSORED CONTENT



SOLUTION: SUPERCLEAR 45-HS-LI BY SAFTI FIRST

SAFTI FIRST's SuperClear 45-HS-LI (hose stream low-iron) is a new, affordable, patent-pending 45-minute glazing product that replaces unsafe wire glass and expensive ceramics, considered obsolete by SAFTI FIRST, in all 45-minute applications.

Proudly USA-made, SuperClear 45-HS-LI is listed by both UL and Intertek, and meets NFPA 252, NFPA 257, UL 9 and UL 10C for fire and CPSC Cat. II, which includes the 400 foot-pound test, for safety. It does not need any films or laminates to meet impact safety requirements. SuperClear 45-HS-LI is a durable product that is more likely to survive an impact compared to filmed or laminated ceramics, which means lower replacement costs over time.

Clarity

SuperClear 45-HS-LI does not have any wires or amber tints, making it the only true CLEAR SOLUTION for 45-minute doors, sidelites, transoms and openings. It has an approximate visible light transmission of 90 percent, compared to 88 percent for premium filmed ceramic and 85 percent for premium laminated ceramic. This makes SuperClear 45-HS-LI the clearest 45-minute fire-protective glazing product in the market today.

Performance

SuperClear 45-HS-LI also performed



KEY FEATURES

MOST ECONOMICAL
45-MINUTE GLAZING

MEETS ALL FIRE AND
SAFETY REQUIREMENTS,
INCLUDING HOSE STREAM

SUPERIOR CLARITY WITH
LOW-IRON GLAZING

PROUDLY USA-MADE

better in an independent, third-party acoustical lab test against filmed and laminated ceramic in standard hollow metal frames. SuperClear 45-HS-LI has a 37 STC/35 OITC rating in standard hollow metal framing, compared to 29 STC/28 OITC for filmed ceramic in standard hollow metal framing and 31 STC/30 OITC for laminated ceramic in standard hollow metal framing.

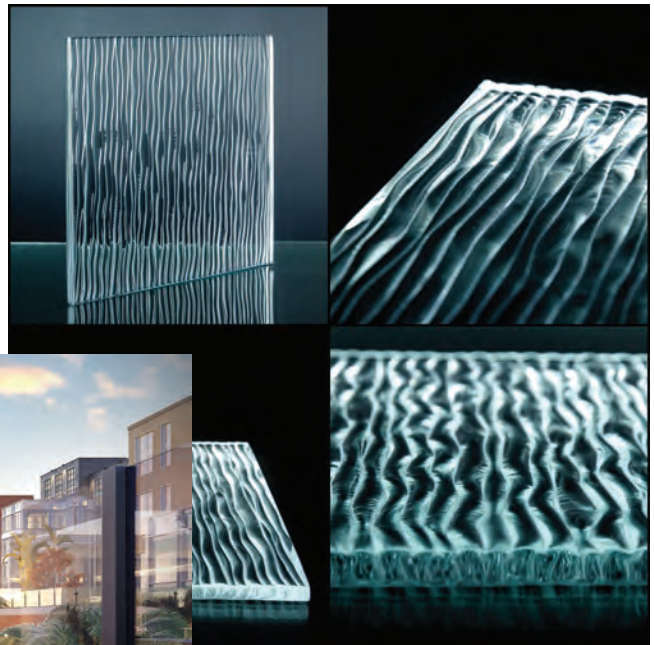
Certification:

SuperClear 45-HS-LI is also listed as an approved glazing component in the National Fenestration Rating Council's

Component Modeling Approach Software Tool database. Architects, consultants, builders and other NFRC CMAST users can now simulate the U-factor, solar heat gain coefficient and visual light transmission of 45-minute exterior window assemblies that incorporate SuperClear 45-HS-LI, GPX Framing and any other glazing or spacer component available in the CMAST database.

All of these benefits listed above, at a more affordable price than filmed or laminated ceramics used in the same application.

02



02

01

01. Windscreen

The CRL Cielo Post Windscreen enhances outdoor experiences by combining key performance and aesthetic features. A slim 3-¼-inch post width and 4-½-inch post depth delivers optimal structural capacity and virtually unobstructed views. Horizontal extrusions aren't required for support, resulting in expansive post-to-post glass spans. Cielo can withstand 80 pounds-per-square-foot wind loads, making it ideal for high elevations. Applications include rooftop swimming pools, dining areas, terraces and other high-altitude exteriors. 800/421-6144 | CRLAURENCE.COM

02. Textured glass

Nathan Allan Glass Studios' Rush Textured glass is designed to simulate the stirring flow of moving water. This new design is the result of a unique custom mold creation. The glass can be produced in clear, low-iron, bronze or black glass. Panels can be produced as large as five feet by 10 feet, in whatever thickness of glass is required. All glass options, up to ¾-inch, can be safety tempered. Applications include partitions, wall panels and doors. 604/535-8849 | NATHANALLAN.COM

03



03. Mirror

GlasPro Inc. released its new Specialty Reflections – Antique & Colored Mirrors collection, which includes eleven antique and seven colored/tinted mirrors, featuring an optional safety film for added impact protections. GlasPro's mirrors give a sense of depth and elegance to walls, partitions, doors, displays, ceilings, furniture and elevators. The mirrors offer a completely lead-free top coat, and an <0.15 percent lead in the wet basecoat. GlasPro Antique & Colored Mirrors are resistant to natural atmospheric corrosion. 800/776-2368 | GLAS-PRO.COM

PRODUCTS



01



03

01. Storefront system

St. Cloud Window Inc. introduced its SCW4500SF Storefront and Entrance system. Ideally suited for all new construction, renovation and replacement projects, this system incorporates advanced thermal strut technology to provide optimal thermal efficiency and enable dual finish/color options and is engineered to deliver high acoustic attenuation. Doors are suitable for standard and ADA-compliant installations, operate on a continuous geared hinge that is fully adjustable yet minimally exposed, and accommodate most commercial hardware setups. 320/251-9311 | STCLOUDWINDOW.COM

02. Column covers

SAF enhanced its column cover fabrication capabilities to produce longer, taller covers, giving customers additional design options when selecting covers. By adding an enhanced roller machine, SAF can now produce conical, elliptical and inclined column covers that are up to 16 feet long, three feet longer than the previous maximum of 13 feet. For many architectural projects, this eliminates the need for additional horizontal reveals when stacking sections, which also eases installation and increases the aesthetic impact of the columns. 404/355-1560 | SAF.COM

03. Blinds

Privacy Glass Solutions moved all design, engineering and assembling of its BetweenGlassBlinds to the U.S. BetweenGlassBlinds are double-glazed units, complete with fully integrated Venetian blinds, hermetically sealed between two panes of glass. They are simple to maintain, as the blinds contained within the sealed unit are safe from dust and dirt. Popular applications include health care, commercial, education and high-security environments throughout North America. Privacy Glass Solutions services all North America. 866/466-9525 | PRIVACYGLASSOLUTIONS.COM

VIRACON VRE - 3117

VIBRANT AESTHETICS. REMARKABLE PERFORMANCE.

DON'T BE FOOLED BY ITS BEAUTY.

THE NEWEST ARCHITECTURAL LOW-E COATING FROM VIRACON IS BEAUTIFUL AND POWERFUL.

When it comes to meeting all of your aesthetic and high performance requirements, Viracon just introduced another stunning option: VRE-3117 is the newest Low-E coating to be added to Viracon's most popular VRE family of coatings. VRE-3117 is not only a beautifully vibrant gray, it is also one of the highest performing Low-E coatings on the market. Offering a neutral appearance with low reflectivity and optimal performance, it will soon become an energy saving favorite. VRE-3117 delivers a VLT of 31% and a SHGC of 0.17 when coated onto clear glass. Learn more at viracon.com




VIRACON®

PEOPLE



Funyak

Vitro Architectural Glass

Vitro Architectural Glass named *Joanne Funyak* director of the Vitro Certified Network and project management, and promoted *Paul Di Cesare* to manager, architectural quality assurance.



Di Cesare

In this new role, Funyak will oversee the Vitro Certified Network, which provides high-performance coated glass through regional fabricators. Through Funyak and her team, members of the Vitro Certified Network have access to some of the industry's most advanced training and education on glass handling and fabrication, say officials.

In his new role, Di Cesare will oversee Vitro's field service team and contacts and provide technical services

and field support across commercial construction, residential window and specialty markets. He also will be the company stakeholder for Vitro across several glass industry and regulatory organizations. Di Cesare has been with Vitro since 1994.



Cox

Eastman Co.

Eastman Chemical Co. made changes to its executive leadership.



Crawford

Mark K. Cox, currently senior vice president, chief manufacturing, supply chain, and engineering officer, made the decision to retire. He will continue as senior vice president,

chief manufacturing and engineering officer until his retirement in 2022.

Chief Technology & Sustainability Officer *Stephen G. Crawford*, currently a

senior vice president, has been named an executive vice president. In addition to his responsibilities for technology and sustainability, Crawford will assume executive leadership of manufacturing and worldwide engineering and construction upon Cox's retirement in 2022. He and Cox will work closely together to ensure an orderly transition.

Eastman also announced the new appointments of *Julie A. McAlindon* and *Christopher M. Killian* to the executive team. McAlindon, who was chief procurement officer and vice president, transformation, is now senior vice president, supply chain, regions and transformation. McAlindon joined Eastman in 2016, bringing more than 25 years of marketing, sales and business leadership experience.

Killian is now senior vice president and chief technology officer. Killian most recently served as vice president, additives and functional products, chemical intermediates and corporate technology.

Viracon

Viracon added to its external sales team with new hires and reassignments in several key territories.

Jack Kneeland and *Jeff Johnson*, Viracon's 2020 recruits for its field sales trainee program, are being assigned their own sales territories. Kneeland accepted the responsibility for greater Illinois, key cities within southern Wisconsin, and the Eastern Quad Cities area. He will team with Lisa Honaman, the current Viracon sales representative in Chicago. He will reside in the Chicago area.

Johnson accepted the responsibility for Tennessee, Alabama, Mississippi, Louisiana, Arkansas and the Florida Panhandle. He will reside in the Nashville area.

Allen Davidson, ADD & Associates, joined Viracon's sales team as an independent representative, and *Brian Stephens* will be taking over architectural field sales responsibilities for the states of Utah, Idaho, Montana and parts of Washington.



Bacon's Architectural Muntins

- Designed for Storefront & Curtain Wall
- Finished & built to your exact specifications
- Easily replicate divided lites without all the hassle
- Screw-In, Glaze-In, & Tape-On applications available
- Ships fully assembled, ready for quick & easy installation
- Fast, simple, elegant... BAM, you're done!

BAM MUNTINS MADE EASY

(877) 315-1624 | www.bamuntins.com | info@bamuntins.com

SentryGlas® ionoplast interlayers

When seconds count

...count on Trosifol®
and SentryGlas®

**BENEFITS OF LAMINATED
GLASS CONSTRUCTIONS
WITH TROSIFOL® PVB INTER-
LAYERS AND SENTRYGLAS®
IONOPLAST INTERLAYERS**

Forced entry and ballistic resistance for schools, businesses and government buildings

Blast mitigation

Hurricane & tornado impact protection

Safety glazing



Photo: © Achat /
sytters.dk.com

PEOPLE

The company also reassigned several employees. *Matt Krier* will relocate from Utah to the Minneapolis/St. Paul area to serve the Iowa, North and South Dakota and northern Wisconsin territory. *Nicole Martineau*, formerly a Viracon employee sales representative, and her husband Jeff, have created a new independent representation team, Martineau and Co. *Mitch Hawkins*, also formerly employed by Viracon as a sales representative, will be joining Martineau and Co. The Martineau team will have territory responsibility for all of New York, New Jersey, Connecticut and Pennsylvania, excluding Pittsburgh.

Finally, *Ryan Hoffman* has accepted the responsibility of sales leadership of Viracon's key window and specialty OEM accounts.

YKK AP

YKK AP America appointed *Jim Zester* as northeastern regional manager.



Zester

He will lead branch sales, production and distribution operations for Baltimore and Boston.



Wilke

Zester brings more than 20 years of direct sales and operations experience to YKK AP. He has successfully led teams to achieve revenue, productivity and financial results in the building and construction products industry.

YKK AP America also promoted *Jason Wilke* to sales representative for the Northern Kentucky and Greater Cincinnati region. Wilke will play an integral role in expanding the company's efforts, providing sales support and resources for architects and glazing contractors.

Additionally, YKK AP appointed *Stirling Morris*, CDT, as sales representative for the state of Arizona.

Morris will play an integral role in supporting and growing YKK AP's customer base of glazing contractors and architects in the southwest United States.



Herman

Tubelite Inc.

Tubelite Inc. welcomed *Josh Herman* as a client development manager serving western Pennsylvania and northeastern Ohio. Based in Ohio, he previously served in this role from 2018-19.



Heredia R.

The company also welcomed *Erika L.*

Heredia R. as the company's continuous improvement director based in Walker, Michigan. Reporting to Dean Seger, vice president of integrated supply chain, Heredia's focus will be to lead the implementation of lean manufacturing initiatives for Tubelite's six locations. ■

SEPTMBER 13-15, 2021

ATLANTA, GA WITH GLASSBUILD AMERICA

NGA GLASS CONFERENCE™

Focused Discussions on Industry Hot Topics
Collaborative Advocacy to Elevate the Industry
Exclusive Access to Economic Outlook
& Mercedes Benz Stadium

REGISTER AT GLASS.ORG

NGA
NATIONAL GLASS ASSOCIATION with GANA

I am a GLAZIER.

Take them from
trainee to glazier with
MyGlassClass.com.



14 COURSES NOW AVAILABLE IN SPANISH!

¡14 cursos ahora disponibles en español!

In partnership with the Friese Foundation

MYglassclass.com

An initiative of the **NGA**

**LEARN MORE AT
MYGLASSCLASS.COM**

- Quickly and affordably get new hires up to speed
- Manage coursework for each employees' needs & skill level
- Complement—and shorten—hands-on training

60+ courses for glazier trainees

- **50% discount for NGA members**

Classifieds

Glass Magazine®'s classified ad section provides a convenient, cost-effective way to reach our unique and verified print and digital subscribers. The deadline for the Nov./Dec. issue is Sept. 20, 2021. For more information or to submit your ad for a price quote, e-mail: classifieds@glassmagazine.com. New equipment/product ads are prohibited.

BUSINESS FOR SALE

Commercial/residential glass business in NW Pennsylvania. Turnkey including 2 trucks, tools, equipment and inventory. Annual sales of \$425K plus. Established 19 years. \$135,000. Negotiable building lease. Sale of building with additional rentals possible. 814-366-9899 or brucewg67@gmail.com.

FOR SALE

FIRE-RATED GLASS

McGrory Glass, Inc. is a national manufacturer and fabricator of cut-to-size fire-protective and fire-resistive glazing products, stocked for immediate availability. E-mail: fire@mcgrory.com Ph: 800/220-3749 Fax: 856/579-3233 www.mcgrory.com

X-RAY LEADED GLASS

McGrory Glass, Inc. can provide x-ray leaded glass products cut to size within 24 hours. Laminated/safety x-ray glass is also stocked for immediate availability. E-mail: xray@mcgrory.com Ph: 800/220-3749 Fax: 856/579-3233 www.mcgrory.com

BUSINESS SERVICES

Established: 1996

Services: Highly detailed and accurate, shop drawings and engineering exclusive to the contract glass and aluminum industry. Any manufacturer's products drawn.

Hours/address: M-F, 8 am to 5 pm, 8126 Foxdale Drive, Norfolk, VA 23518



Contact: 757-407-2885, adisales@accuratedrafting.com

More information: www.accuratedrafting.com (drawing examples available there)

Pricing: Contact ADI for a no cost, formal quotation with completion date.

Principals: Bill Pilcher and Tony Wood

KS DRAFTING & DESIGN, LLC

High quality, accurate, on-time shop drawings and engineering services.

Kyle Schneck 717-228-7114

kyle@ksdraftingdesignllc.com

New website: ksdraftingdesignllc.com

HELP WANTED

PROJECT MANAGER / ESTIMATOR

Mid-size commercial glazing company in the Dallas/Fort Worth area; 2 to 4 year of commercial glazing project management experience; strong communication skills; team player; competitive compensation. Send resume to: dgriffin@dgbglass.com

EMPLOYMENT SERVICES

Give us a call for the results you deserve!

5825 Ellsworth Ave.
Pittsburgh, PA 15232

1-800-875-6268
412-954-0000
FAX 412-954-0030

www.holampcoresources.com

patti@hlcinternational.com
gary@hlcinternational.com

MANAGER

Northeast PA full-service family-run glass co. that has been in business for 91 years is seeking management trainees or experienced people well-versed in glass business. We service auto, residential and commercial accounts. We also are contract glaziers, always looking for professional glaziers. We offer health benefits, vacations, holidays and 401k plans. Plenty of advancement opportunities. Send resume to: joe.mesko@mesko.com

WANTED

WANTED: GLASS

...used, surplus, or obsolete inventories of tempered and insulated glass panels. Call Damon w/repurposed MATERIALS, 303/321-1471.

CONSULTANT SERVICES

Full Service Consulting Programs

- Marketing
- Sales
- Codes
- Operations
- Research
- & so much more!

solesourceconsultants.com | info@solesourceconsultants.com

USED EQUIPMENT

NEW AND USED GLASS MACHINERY

We manufacture **NEW** stainless glass washers. VERTICAL & HORIZONTAL

www.americanglassmachinery.com

(724) 348-8450

vps@americanglassmachinery.com

Suppliers Guide

ARCHITECTURAL FINISHES

ANODIZING



Stylmark Inc.
6536 Main St. NE
Minneapolis, MN 55432
US: 800/328-2495
Phone: 763/574-7474
Fax: 763/574-1415
E-mail: info@stylmark.com
www.stylmark.com

NGA

COLOR COATING

GlassKote USA
Phone: 866/664-5683
E-mail: info@glasskoteusa.com
www.glasskoteusa.com

NGA

ARCHITECTURAL GLASS/FLAT GLASS

GENERAL



Coniston Products
326 Clay Rd.
Sunnyvale, TX 75182
US: 855/484-5277
Phone: 604/952-6092
Fax: 604/952-6093
Email: sales@conistonproducts.com
www.conistonproducts.com



GGI
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com

ADV



Glassfab Tempering Services, Inc.
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@glassfabUSA.com
www.GlassfabUSA.com

ADV



McGRORYGLASS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com



Oldcastle BuildingEnvelope*
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

ADV
NGA

ANTI-REFLECTIVE



McGRORYGLASS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

BENT

Go to category **BENT GLASS**

BLAST RESISTANT



RAY-BAR
USA
Security, Ballistic Glass and IGU's
US: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.raybar.com

NGA



SAFTI FIRST™ Fire Rated Glazing
100 N. Hill Dr., Ste. 12
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safti.com
www.safti.com

ADV
NGA

Vetrotech Saint-Gobain Fire-Rated Glass and Framing

2108 B St. NW, Ste. 110
Auburn, WA 98001
Phone: 888/803-9533
E-mail: vetrotech.sales@saint-gobain.com
www.vetrotechusa.com

ADV
NGA

BULLET RESISTANT



RAY-BAR
USA
Security, Ballistic Glass and IGU's
US: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.raybar.com

NGA

Vetrotech Saint-Gobain Fire-Rated Glass and Framing

2108 B St. NW, Ste. 110
Auburn, WA 98001
Phone: 888/803-9533
E-mail: vetrotech.sales@saint-gobain.com
www.vetrotechusa.com

ADV
NGA

Oldcastle BuildingEnvelope*
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

ADV
NGA



SAFTI FIRST™ Fire Rated Glazing
100 N. Hill Dr., Ste. 12
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safti.com
www.safti.com

ADV
NGA



Technical Glass Products
8107 Bracken Place SE
Snoqualmie, WA 98065
Phone: 800/426-0279
Fax: 425/396-8300
E-mail: sales@fireglass.com
www.fireglass.com

NGA

BURGLARY RESISTANT



RAY-BAR
USA
Security, Ballistic Glass and IGU's
US: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.raybar.com

NGA

Oldcastle BuildingEnvelope*
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

ADV
NGA

CHEMICALLY STRENGTHENED



Precision Glass Bending Corp.
P.O. Box 1970
3811 Hwy. 10 West
Greenwood, AR 72936-1970
US: 800/543-8796
Phone: 479/996-8065
Fax: 800/543-8798
E-mail: sales@e-bentglass.com
www.e-bentglass.com
(See our ad on page 121)

ADV
NGA

COLOR COATED

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

DECORATIVE

Go to category
DECORATIVE GLASS

DISTRIBUTORS



Coniston Products
326 Clay Rd.
Sunnyvale, TX 75182
US: 855/484-5277
Phone: 604/952-6092
Fax: 604/952-6093
Email: sales@conistonproducts.com
www.conistonproducts.com



GGI
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com

ADV

SGC International Inc.
6489 Corvette Street
Commerce, CA 90004
US: 866/802-8682
Phone: 323/318-2998
Fax: 323/318-2999
E-mail: sgjames@yahoo.com;
hennysgc@gmail.com
www.sgc-usa.com
(See our ad on page 120)

FIRE-RATED



GGI
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com

ADV



Glassopolis
We Put Glass Contractors First
Fast Quotes. Fast Delivery
Phone: 800/262-9600
Fax: 800/872-9601
E-mail: sales@glassopolis.com
www.glassopolis.com

NGA



McGRORYGLASS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com



RAY-BAR
USA
Fastest Fire Glass and IGU's Available
Phone: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.FireProofGlass.com

NGA



SAFTI FIRST™ Fire Rated Glazing
100 N. Hill Dr., Ste. 12
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safti.com
www.safti.com

ADV
NGA



Technical Glass Products
8107 Bracken Place SE
Snoqualmie, WA 98065
Phone: 800/426-0279
Fax: 425/396-8300
E-mail: sales@fireglass.com
www.fireglass.com

NGA

Vetrotech Saint-Gobain Fire-Rated Glass and Framing
2108 B St. NW, Ste. 110
Auburn, WA 98001
Phone: 888/803-9533
E-mail: vetrotech.sales@saint-gobain.com
www.vetrotechusa.com

ADV
NGA

FIRE-RATED: IMPACT RESISTANT



McGRORYGLASS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com



Glassopolis
We Put Glass Contractors First
Fast Quotes. Fast Delivery
Phone: 800/262-9600
Fax: 800/872-9601
E-mail: sales@glassopolis.com
www.glassopolis.com

NGA



RAY-BAR
USA
Fastest Fire Glass and IGU's Available
Phone: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.FireProofGlass.com


NGA



SAFTI FIRST™ Fire Rated Glazing
100 N. Hill Dr., Ste. 12
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safti.com
www.safti.com

ADV
NGA

Suppliers Guide



**CRYSTAL
ULTRA CLEAR GLASS**

SGC Low iron glass products are the perfect choice for beauty and energy efficiencies



- Ultra Clear Low Iron Glass
- Low Iron Satin Etched Glass
- Low Iron Copper Free Mirror
- Flat Tempered Glass
- Bent Tempered Glass
- Safety Laminated Glass
- Anti-reflective Coated Glass
- Low-e Coated Glass
- Digital Printing Glass
- Silkscreened Glass
- Insulated Glass Units



www.sgc-usa.com
Tel: (323) 318-2998; 1-866-802-8682
Fax: (323) 318-2999 email: sgciusa@gmail.com

GLARE REDUCING, FINISHED

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

HANDRAILS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

HEAT SOAKED



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

HEAT-STRENGTHENED



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

INSULATING

Go to category **INSULATING GLASS, PRODUCTS, COMPONENTS & EQUIPMENT**

LAMINATED

Go to category **LAMINATED GLASS & EQUIPMENT**

LEAD

Amerope Enterprises Inc. **NGA**
150 Commerce Rd.
Boynton Beach, FL 33426
US: 800/327-3320
Phone: 561/737-7370
Fax: 561/737-3721
E-mail: claire@amerope.com
www.amerope.com



Glassopolis
We Put Glass Contractors First
Fast Quotes. Fast Delivery **ADV**
Phone: 800/262-9600
Fax: 800/872-9601
E-mail: sales@mcgrory.com
www.glassopolis.com

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com



RAY-BAR **NGA**
USA
Fastest X-Ray Glass and IGU's Available **ADV**
US: 800/444-XRAY
Fax: 800/333-XRAY
E-mail: sales@raybar.com
www.raybar.com

LOW-EMISSIVITY

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

LOW IRON



Coniston Products **ADV**
326 Clay Rd.
Sunnyvale, TX 75182
US: 855/484-5277
Phone: 604/952-6092
Fax: 604/952-6093
Email: sales@conistonproducts.com
www.conistonproducts.com



GGI **ADV**
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

OVERSIZED



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

PATTERNED



Coniston Products **ADV**
326 Clay Rd.
Sunnyvale, TX 75182
US: 855/484-5277
Phone: 604/952-6092
Fax: 604/952-6093
Email: sales@conistonproducts.com
www.conistonproducts.com

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com



GGI **ADV**
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com

POINT-SUPPORTED SYSTEMS

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

PRIVACY: ELECTRICALLY SWITCHABLE

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

SECURITY



RAY-BAR **NGA**
USA
Security, Ballistic Glass and IGU's **ADV**
US: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.raybar.com

SAFTI FIRST™ Fire Rated Glazing **ADV NGA**
100 N. Hill Dr., Ste. 12
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safti.com
www.safti.com

SILKSCREENED



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

SPANDREL

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

CURVED GLASS CREATIONS

Quality Service Since 1946

SPECIALIZING IN:

- LAMINATED SAFETY GLASS
- HEAT STRENGTHENED
- INSULATED UNITS
- ANNEALED
- EXPEDITED LEAD TIMES

FROM STOCK CURIO CABINET GLASS TO SPIRAL STAIRCASE GLASS WE DO IT ALL

www.CurvedGlassCreations.com
Toll Free (888) 288-9129
Fax (954) 917-0040



PRELCO

Prelco Inc.
94 Cartier Blvd.
Riviere-du-Loup, GQ 65R 2M9
Canada
US: 800/463-1325
Phone: 418/862-2274
Fax: 418/862-8181
E-mail: sales@prelco.ca
www.prelco.ca

TEMPERED

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com



PRELCO

Prelco Inc.
94 Cartier Blvd.
Riviere-du-Loup, GQ 65R 2M9
Canada
US: 800/463-1325
Phone: 418/862-2274
Fax: 418/862-8181
E-mail: sales@prelco.ca
www.prelco.ca

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE
(653-2278) **NGA**
www.obe.com

TRANSLUCENT

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

VARIABLE WIRED



Coniston Products
326 Clay Rd.
Sunnyvale, TX 75182
US: 855/484-5277
Phone: 604/952-6092
Fax: 604/952-6093
Email: sales@conistonproducts.com
www.conistonproducts.com



Glassopolis
We Put Glass Contractors First
Fast Quotes, Fast Delivery
Phone: 800/262-9600
Fax: 800/872-9601
E-mail: sales@glassopolis.com
www.glassopolis.com

RAY BAR

RAY-BAR
USA
Fastest Fire Glass and IGU's Available
Phone: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.FireProofGlass.com

X-RAY SHIELDING

Amerope Enterprises Inc. **NGA**
150 Commerce Rd.
Boynton Beach, FL 33426
US: 800/327-3320
Phone: 561/737-7370
Fax: 561/737-3721
E-mail: claire@amerope.com
www.amerope.com



Glassopolis
We Put Glass Contractors First
Fast Quotes, Fast Delivery
Phone: 800/262-9600
Fax: 800/872-9601
E-mail: sales@glassopolis.com
www.glassopolis.com



McGRORYGLASS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

RAY BAR

RAY-BAR
USA
Fastest X-Ray Glass and IGU's Available
US: 800/444-XRAY
Fax: 800/333-XRAY
E-mail: sales@raybar.com
www.raybar.com



Technical Glass Products **NGA**
8107 Bracken Place SE
Snoqualmie, WA 98065
Phone: 800/426-0279
Fax: 425/396-8300
E-mail: sales@fireglass.com
www.fireglass.com

BATH ENCLOSURES & RELATED ITEMS

GENERAL



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com



American Shower Door **NGA**
6920 E. Slauson Ave.
Commerce, CA 90040
US: 800/421-2333
Phone: 323/726-2478
Fax: 323/726-7469
E-mail: sales@americanshowerdoor.com
www.americanshowerdoor.com

ENCLOSURES: CURVED



Precision Glass Bending Corp. **ADV**
P.O. Box 1970 **NGA**
3811 Hwy. 10 West
Greenwood, AR 72936-1970
US: 800/543-8796
Phone: 479/996-8065
Fax: 800/543-8798
E-mail: sales@e-bentglass.com
www.e-bentglass.com
(See our ad on page 121)

ENCLOSURES: GLASS STALLS



Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE
(653-2278) **NGA**
www.obe.com

HARDWARE



Frameless Hardware Company
4361 Firestone Blvd.
South Gate, CA 90280
US: 888/295-4531
Fax: 323/336-8307
E-mail: info@fhc-usa.com
www.fhc-usa.com

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE
(653-2278) **NGA**
www.obe.com

SHOWER DOORS

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE
(653-2278) **NGA**
www.obe.com

BENT GLASS

GENERAL

Cristacurva
4822 Southerland Rd.
Houston, TX 77092-3024
Phone: 866/827-6049
Fax: 866/833-0906
E-mail: sales@cristacurva.com
www.cristacurva.com
(See our ad on page 122)

Curved Glass Creations
4100 Powerline Rd., Ste. T-2
Pompano Beach, FL 33073
US: 888/288-9129
Phone: 954/917-0039
Fax: 954/917-0040
E-mail: info@curvedglasscreations.com
www.curvedglasscreations.com
(See our ad on page 121)

The World Leader in Custom Fabricated

BENT GLASS

- SAFETY TEMPERED • INSULATING
- ANNEALED • SAFETY LAMINATED
- HEAT-STRENGTHENED

Radius or Irregular Bends
Sizes up to 96" x 130"
1/8" to 3/4" Thickness

Architectural, Interior,
Solar & Transport

Clear, Tinted, Low-E,
Reflective, Acid-Etch,
Low-Iron or Specialty

Polished Edges, Holes,
Notches, and Cutouts

Precision Glass Bending

(800) 543-8796 • FAX (800) 543-8798
www.e-bentglass.com
Guardian SunGuard Select™ Fabricator

Precision Glass Bending

Precision Glass Bending Corp. **ADV**
P.O. Box 1970 **NGA**
3811 Hwy. 10 West
Greenwood, AR 72936-1970
US: 800/543-8796
Phone: 479/996-8065
Fax: 800/543-8798
E-mail: sales@e-bentglass.com
www.e-bentglass.com
(See our ad on page 121)



Standard Bent Glass Corp.
P.O. Box 469
Butler, PA 16003-0469
US: 800/634-9252
Phone: 724/287-3747
Fax: 724/283-9836
www.standardbent.com

BENT/CURVED GLASS

Precision Glass Bending

Precision Glass Bending Corp. **ADV**
P.O. Box 1970 **NGA**
3811 Hwy. 10 West
Greenwood, AR 72936-1970
US: 800/543-8796
Phone: 479/996-8065
Fax: 800/543-8798
E-mail: sales@e-bentglass.com
www.e-bentglass.com
(See our ad on page 121)

Suppliers Guide



Curved Glass & Specialty

- Curved
- Structural
- Safety
- Over-sized
- Digital Printing
- Silkscreened
- Insulated Units

sales@cristacurva.com

Toll Free: 1-866-827-6049

www.cristacurva.com

LAMINATED



Precision Glass Bending Corp. ADV
P.O. Box 1970 NGA
3811 Hwy. 10 West
Greenwood, AR 72936-1970
US: 800/543-8796
Phone: 479/996-8065
Fax: 800/543-8798
E-mail: sales@e-bentglass.com
www.e-bentglass.com
(See our ad on page 121)



Standard Bent Glass Corp.
P.O. Box 469
Butler, PA 16003-0469
US: 800/634-9252
Phone: 724/287-3747
Fax: 724/283-9836
www.standardbent.com

SAFETY



Precision Glass Bending Corp. ADV
P.O. Box 1970 NGA
3811 Hwy. 10 West
Greenwood, AR 72936-1970
US: 800/543-8796
Phone: 479/996-8065
Fax: 800/543-8798
E-mail: sales@e-bentglass.com
www.e-bentglass.com
(See our ad on page 121)

SPANDREL



Precision Glass Bending Corp. ADV
P.O. Box 1970 NGA
3811 Hwy. 10 West
Greenwood, AR 72936-1970
US: 800/543-8796
Phone: 479/996-8065
Fax: 800/543-8798
E-mail: sales@e-bentglass.com
www.e-bentglass.com
(See our ad on page 121)

TEMPERED



Precision Glass Bending Corp. ADV
P.O. Box 1970 NGA
3811 Hwy. 10 West
Greenwood, AR 72936-1970
US: 800/543-8796
Phone: 479/996-8065
Fax: 800/543-8798
E-mail: sales@e-bentglass.com
www.e-bentglass.com
(See our ad on page 121)

TEMPERED/LAMINATED



Standard Bent Glass Corp.
P.O. Box 469
Butler, PA 16003-0469
US: 800/634-9252
Phone: 724/287-3747
Fax: 724/283-9836
www.standardbent.com

TEMPERED/LAMINATED



Precision Glass Bending Corp. ADV
P.O. Box 1970 NGA
3811 Hwy. 10 West
Greenwood, AR 72936-1970
US: 800/543-8796
Phone: 479/996-8065
Fax: 800/543-8798
E-mail: sales@e-bentglass.com
www.e-bentglass.com
(See our ad on page 121)



Standard Bent Glass Corp.
P.O. Box 469
Butler, PA 16003-0469
US: 800/634-9252
Phone: 724/287-3747
Fax: 724/283-9836
www.standardbent.com

COMPUTER SOFTWARE

ACCOUNTING

Mainstreet Computers Inc. ADV
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail: sales@mainstreetcomp.com
www.mainstreetcomp.com

BUSINESS

Mainstreet Computers Inc. ADV
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail: sales@mainstreetcomp.com
www.mainstreetcomp.com

CALL CENTERS

Mainstreet Computers Inc. ADV
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail: sales@mainstreetcomp.com
www.mainstreetcomp.com

CAPACITY PLANNING



Optima North America Inc. NGA
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail: sales@optima-america.com
www.optima-america.com

ESTIMATING



Optima North America Inc. NGA
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail: sales@optima-america.com
www.optima-america.com

GDS Storefront Estimating NGA
2033 San Elijo Ave. #221
Cardiff by the Sea, CA 92007
Phone: 858/538-4375
Fax: 858/538-4376
E-mail: sales@gdsestimating.com
www.gdsestimating.com
(See our ad on page 123)

FABRICATION



Optima North America Inc. NGA
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail: sales@optima-america.com
www.optima-america.com

GLASS CUTTING



Optima North America Inc. NGA
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail: sales@optima-america.com
www.optima-america.com

INSULATING GLASS



Optima North America Inc. NGA
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail: sales@optima-america.com
www.optima-america.com

INVENTORY



Optima North America Inc. NGA
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail: sales@optima-america.com
www.optima-america.com

Mainstreet Computers Inc. ADV
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail: sales@mainstreetcomp.com
www.mainstreetcomp.com

INVOICING



Optima North America Inc. NGA
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail: sales@optima-america.com
www.optima-america.com

Mainstreet Computers Inc. ADV
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail: sales@mainstreetcomp.com
www.mainstreetcomp.com

MEASURE SHEET

Mainstreet Computers Inc. ADV
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail: sales@mainstreetcomp.com
www.mainstreetcomp.com

MOBILE TECH APP

Mainstreet Computers Inc. ADV
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail: sales@mainstreetcomp.com
www.mainstreetcomp.com



Fenestration software
made simple

EASILY CREATE

- Drawings • Reports
- Quotes • Cut Sheets

FREE TRIAL

858.538.4375
gdsestimating.com/try

OPTIMIZATION



Optima North America Inc.
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail:
sales@optima-america.com
www.optima-america.com



PAYMENT PROCESSING

Mainstreet Computers Inc.
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail:
sales@mainstreetcomp.com
www.mainstreetcomp.com



POINT OF SALE

Mainstreet Computers Inc.
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail:
sales@mainstreetcomp.com
www.mainstreetcomp.com



PRICING



Optima North America Inc.
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail:
sales@optima-america.com
www.optima-america.com



Mainstreet Computers Inc.
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail:
sales@mainstreetcomp.com
www.mainstreetcomp.com



PRODUCTION



Optima North America Inc.
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail:
sales@optima-america.com
www.optima-america.com



QUALITY CONTROL



Optima North America Inc.
7860 Grenache, Ste. 200
Montreal, QC H1J 1C3
Canada
Phone: 514/645-8998
Fax: 514/645-8558
E-mail:
sales@optima-america.com
www.optima-america.com



SCHEDULING

Mainstreet Computers Inc.
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail:
sales@mainstreetcomp.com
www.mainstreetcomp.com



DECORATIVE GLASS

GENERAL



McGRORYGLASS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com



Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States.
US: 866-OLDCASTLE
(653-2278)
www.obe.com



Standard Bent Glass Corp.
P.O. Box 469
Butler, PA 16003-0469
US: 800/634-9252
Phone: 724/287-3747
Fax: 724/283-9836
www.standardbent.com



ACID ETCHED



Coniston Products
326 Clay Rd.
Sunnyvale, TX 75182
US: 855/484-5277
Phone: 604/952-6092
Fax: 604/952-6093
Email: sales@conistonproducts.com
www.conistonproducts.com



GGI
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com



McGRORYGLASS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

**CERAMIC FRIT:
COLORED**



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States.
US: 866-OLDCASTLE
(653-2278)
www.obe.com



**CERAMIC FRIT:
PATTERNED**

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States.
US: 866-OLDCASTLE
(653-2278)
www.obe.com



COLOR COATED

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

**DECORATIVE
INTERLAYERS**



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail:
info@interlayersolutions.com
www.interlayersolutions.com

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com



Standard Bent Glass Corp.
P.O. Box 469
Butler, PA 16003-0469
US: 800/634-9252
Phone: 724/287-3747
Fax: 724/283-9836
www.standardbent.com



DICHROIC

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

**DIGITAL DIRECT
PRINTING**



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com



GGI
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com



Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States.
US: 866-OLDCASTLE
(653-2278)
www.obe.com



Standard Bent Glass Corp.
P.O. Box 469
Butler, PA 16003-0469
US: 800/634-9252
Phone: 724/287-3747
Fax: 724/283-9836
www.standardbent.com



LAMINATED



Coniston Products
326 Clay Rd.
Sunnyvale, TX 75182
US: 855/484-5277
Phone: 604/952-6092
Fax: 604/952-6093
Email: sales@conistonproducts.com
www.conistonproducts.com



McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com



Standard Bent Glass Corp.
P.O. Box 469
Butler, PA 16003-0469
US: 800/634-9252
Phone: 724/287-3747
Fax: 724/283-9836
www.standardbent.com



PAINTED

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

Suppliers Guide



GGI
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com



SAFETY

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

TEXTURED

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

DOOR HARDWARE & RELATED PRODUCTS

GENERAL

JLM Wholesale Inc.
3095 Mullins Ct. **NGA**
Oxford, MI 48371
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

Strybuc Industries **NGA**
2006 Elmwood Ave.
Building 102-C
Sharon Hill, PA 19079-0767
US: 800/352-0800
Phone: 610/534-3200
Fax: 610/534-3202
E-mail: cservice@strybuc.com
www.strybuc.com

ACCESS CONTROL

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

BUMPERS

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

CLOSING DEVICES

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

DEADBOLTS

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

HINGES

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

KICK PLATES

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

LATCHES

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

LOCKS

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

OPENING DEVICES

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

PANIC DEVICES

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

PIVOTS

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

PUSH/PULL

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

SLIDING GLASS DOOR



Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE **NGA**
(653-2278)

STOPS & HOLDERS

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

SWEEPS

JLM Wholesale Inc.
3095 Mullins Ct. **ADV**
Oxford, MI 48371 **NGA**
US: 800/522-2940
Phone: 248/628-6440
Fax: 800/782-1160
E-mail: sales@jlmwholesale.com
www.jlmwholesale.com

VISION PANEL FRAMES



Glassopolis
We Put Glass Contractors First
Fast Quotes. Fast Delivery
Phone: 800/262-9600
Fax: 800/872-9601
E-mail: sales@glassopolis.com
www.glassopolis.com



RAY-BAR
USA **NGA**
Fastest Fire Glass and IGU's Available
Phone: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.FireProofGlass.com

DOORS & RELATED PRODUCTS

GENERAL



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@glassfabUSA.com
www.GlassfabUSA.com



Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE **NGA**
(653-2278)

ALUMINUM

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE **NGA**
(653-2278)

BALCONIES: HIGH-RISE BUILDINGS

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE **NGA**
(653-2278)

BIFOLD

Solar Innovations® Architectural Glazing Systems **ADV**
31 Roberts Rd. **NGA**
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com

BLAST RESISTANT

RAY BAR
USA **NGA**
Security, Ballistic Glass and IGU's
US: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.raybar.com

Come To The Source!

For Doors
Also available:
• Stock Lengths
• Custom Windows
• Custom Entrances

REBCO'S IN FRONT!!!
REBCO
INCORPORATED
TEL: (973) 684-0200 • FAX: (973) 684-0118
(800) 777-0787 • www.REBCOinc.com
1171-1225 Madison Ave., Paterson, NJ 07509-2248

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE **NGA**
(653-2278)

BULLET RESISTANT

RAY BAR
USA **NGA**
Security, Ballistic Glass and IGU's
US: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.raybar.com

ENTRANCE SYSTEMS: METAL

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV**
US: 866-OLDCASTLE **NGA**
(653-2278)

FIRE-RATED

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com



Glassopolis
We Put Glass Contractors First
Fast Quotes. Fast Delivery
Phone: 800/262-9600
Fax: 800/872-9601
E-mail: sales@glassopolis.com
www.glassopolis.com

RAY BAR

RAY-BAR
USA

Fastest Fire Glass and
IGU's Available
Phone: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.FireProofGlass.com



SAFTI FIRST™ Fire Rated Glazing
100 N. Hill Dr., Ste. 12
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safti.com
www.safti.com



Technical Glass Products

8107 Bracken Place SE
Snoqualmie, WA 98065
Phone: 800/426-0279
Fax: 425/396-8300
E-mail: sales@fireglass.com
www.fireglass.com

NGA

Vetrotech Saint-Gobain Fire-Rated Glass and Framing

2108 B St. NW, Ste. 110
Auburn, WA 98001
Phone: 888/803-9533
E-mail: vetrotech.sales@saint-gobain.com
www.vetrotechusa.com



FOLDING

Solar Innovations® Architectural
Glazing Systems
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com



GLASS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States.
US: 866-OLDCASTLE
(653-2278)
www.obe.com



INSULATING GLASS

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States.
US: 866-OLDCASTLE
(653-2278)
www.obe.com



PIVOT

Solar Innovations® Architectural
Glazing Systems
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com



RAILINGS



Frameless Hardware Company
4361 Firestone Blvd.
South Gate, CA 90280
US: 888/295-4531
Fax: 323/336-8307
E-mail: info@fhc-usa.com
www.fhc-usa.com

SECURITY

RAY BAR

RAY-BAR
USA

Security, Ballistic Glass
and IGU's
US: 800/444-9729
Fax: 800/333-9729
E-mail: sales@raybar.com
www.raybar.com



Technical Glass Products

8107 Bracken Place SE
Snoqualmie, WA 98065
Phone: 800/426-0279
Fax: 425/396-8300
E-mail: sales@fireglass.com
www.fireglass.com

NGA

SECURITY GLAZING

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States.
US: 866-OLDCASTLE
(653-2278)
www.obe.com



SLIDING GLASS

Solar Innovations® Architectural
Glazing Systems
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com



STOREFRONTS & ENTRANCES

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

REBCO Inc.

1171-1225 Madison Ave.
Paterson, NJ 07509-2248
US: 800/777-0787
Phone: 973/684-0200
Fax: 973/684-0118
E-mail: sales@REBCOinc.com
www.REBCOinc.com
(See our ad on page 124)

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States.
US: 866-OLDCASTLE
(653-2278)
www.obe.com



Vetrotech Saint-Gobain Fire-Rated Glass and Framing

2108 B St. NW, Ste. 110
Auburn, WA 98001
Phone: 888/803-9533
E-mail: vetrotech.sales@saint-gobain.com
www.vetrotechusa.com



TEMPERED GLASS DOORS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States.
US: 866-OLDCASTLE
(653-2278)
www.obe.com



SAFTI FIRST™ Fire Rated Glazing

100 N. Hill Dr., Ste. 12
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safti.com
www.safti.com



FILMS/COATINGS

ARCHITECTURAL

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

DECORATIVE



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail: info@interlayersolutions.com
www.interlayersolutions.com



McGRORYGLASS

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

ELECTICALLY SWITCHABLE

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

SAFETY & SECURITY



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail: info@interlayersolutions.com
www.interlayersolutions.com

WATER RESISTANT PROTECTIVE



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail: info@interlayersolutions.com
www.interlayersolutions.com



The GM 2000-26

Set
2000 lb.
glass 26'
high, with
control &
precision.

34" wide
to fit
through
a 3' door!

518-796-2179
j.nudi@ergorobotic.com
ErgoRobotic.com

GLASS HANDLING, PACKAGING & STORAGE

CRANES



Microcranes, Inc.
10000 NE 7th Ave Ste 330-A
Vancouver, WA 98685
Phone: (360) 768-5104
Fax: (360) 326-7228
Email: info@microcranes.com
Website: www.smarttrigranes.com

HANDLING EQUIPMENT



Ergo Robotic Solutions
P.O. Box 503
Glens Falls, NY 12801
Phone: 518/796-2179
E-mail: j.nudi@ergorobotic.com
ErgoRobotic.com
(See our ad on this page)

ADV

Suppliers Guide

Si Showcase Innovations

We create products that make your shower door installers more productive and profitable



GlassGadget.com

GLASS TOOLS & SUPPLIES

GENERAL



Frameless Hardware Company
4361 Firestone Blvd.
South Gate, CA 90280
US: 888/295-4531
Fax: 323/336-8307
E-mail: info@fhc-usa.com
www.fhc-usa.com

Showcase Innovations
1970 17th Avenue #C
Santa Cruz, CA 95062
Phone: 831/464-3899
Fax: 831/477-0760
E-mail: chris@glassgadget.net
www.glassgadget.com
(See our ad on this page)

BITS: DIAMOND



Diamut America
4110 Meadow Oak Drive
Charlotte, NC 28208
877/9 DIAMUT
Phone: 877/934-2688
E-mail: tooling@diamut.com
www.diamut.com

Glassline Corp.

28905 Glenwood Rd.
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com



IGP Tools
1477 Connelly Springs Rd.
Lenoir, NC 28645
US: 800/438-7542
Phone: 828/728-5338
Fax: 828/728-9613
E-mail: c.osborne@igptools.com
www.igptools.com

COOLANT



IGP Tools
1477 Connelly Springs Rd.
Lenoir, NC 28645
US: 800/438-7542
Phone: 828/728-5338
Fax: 828/728-9613
E-mail: c.osborne@igptools.com
www.igptools.com

DRILLS



Diamut America
4110 Meadow Oak Drive
Charlotte, NC 28208
877/9 DIAMUT
Phone: 877/934-2688
E-mail: tooling@diamut.com
www.diamut.com

POLISHING COMPOUNDS



IGP Tools
1477 Connelly Springs Rd.
Lenoir, NC 28645
US: 800/438-7542
Phone: 828/728-5338
Fax: 828/728-9613
E-mail: c.osborne@igptools.com
www.igptools.com

TAPES



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail: info@interlayersolutions.com
www.interlayersolutions.com

WHEELS: DIAMOND



Diamut America
4110 Meadow Oak Drive
Charlotte, NC 28208
877/9 DIAMUT
Phone: 877/934-2688
E-mail: tooling@diamut.com
www.diamut.com

Glassline Corp.

28905 Glenwood Rd.
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com

IGP

IGP Tools
1477 Connelly Springs Rd.
Lenoir, NC 28645
US: 800/438-7542
Phone: 828/728-5338
Fax: 828/728-9613
E-mail: c.osborne@igptools.com
www.igptools.com

WHEELS: POLISHING



Diamut America
4110 Meadow Oak Drive
Charlotte, NC 28208
877/9 DIAMUT
Phone: 877/934-2688
E-mail: tooling@diamut.com
www.diamut.com

IGP

IGP Tools
1477 Connelly Springs Rd.
Lenoir, NC 28645
US: 800/438-7542
Phone: 828/728-5338
Fax: 828/728-9613
E-mail: c.osborne@igptools.com
www.igptools.com

INSULATING GLASS PRODUCTS, COMPONENTS & EQUIPMENT

GENERAL



Coniston Products
326 Clay Rd.
Sunnyvale, TX 75182
US: 855/484-5277
US: 866/952-6092
Phone: 604/952-6092
Fax: 604/952-6093
Email: sales@conistonproducts.com
www.conistonproducts.com

Erdman Automation
1603 S. 14th St.
Princeton, MN 55371
US: 866/376-6177
Phone: 763/389-9475
Fax: 763/389-9757
E-mail: eac@erdmanautomation.com
www.erdmanautomation.com



GGI
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com



Glassfab Tempering Services
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com

McKeegan Equipment & Supply
8411 Ronda Dr.
Canton, MI 48187
Phone: 734/459-5870
Fax: 734/459-9837
E-mail: sales@mckeeganequip.com
www.mckeeganequip.com
(See our ad on facing page)



Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com



Prelco Inc.
94 Cartier Blvd.
Riviere-du-Loup, GQ 5R 2M9
Canada
US: 800/463-1325
Phone: 418/862-2274
Fax: 418/862-8181
E-mail: sales@prelco.ca
www.prelco.ca

AIR SPACERS

Helima Helvetion International Inc
P.O. Box 1348
Duncan, SC 29334-1348
US: 800/346-6628
Phone: 864/439-6600
Fax: 864/439-6065
E-mail: tmccall@helimasc.com
www.helima.de

AIR SPACERS: WARM EDGE

Helima Helvetion International Inc
P.O. Box 1348
Duncan, SC 29334-1348
US: 800/346-6628
Phone: 864/439-6600
Fax: 864/439-6065
E-mail: tmccall@helimasc.com
www.helima.de

EQUIPMENT: OVENS

Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

MUNTIN BARS

Helima Helvetion International Inc
P.O. Box 1348
Duncan, SC 29334-1348
US: 800/346-6628
Phone: 864/439-6600
Fax: 864/439-6065
E-mail: tmccall@helimasc.com
www.helima.de

UNITS: DOUBLE

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

UNITS: TRIPLE

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

INTERIOR OFFICE PARTITIONS

DEMOUNTABLE

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

LAMINATED GLASS & EQUIPMENT

GENERAL

Amerope Enterprises Inc.
150 Commerce Rd.
Boynton Beach, FL 33426
US: 800/327-3320
Phone: 561/737-7370
Fax: 561/737-3721
E-mail: claire@amerope.com
www.amerope.com



Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail:
info@interlayersolutions.com
www.interlayersolutions.com



Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States. **ADV**
NGA
US: 866-OLDCASTLE
(653-2278)
www.obe.com



Prelco Inc. **ADV**
94 Cartier Blvd. **NGA**
Riviere-du-Loup, GQ G5R 2M9
Canada
US: 800/463-1325
Phone: 418/862-2274
Fax: 418/862-8181
E-mail: sales@prelco.ca
www.prelco.ca

**EQUIPMENT:
AUTOCLAVE**



Casso-Solar Technologies **ADV**
506 Airport Executive Park **NGA**
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail:
sales@cassosolartechnologies.com
www.cassosolartechnologies.com

**EQUIPMENT:
AUTOMATED**

Casso-Solar Technologies **ADV**
506 Airport Executive Park **NGA**
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail:
sales@cassosolartechnologies.com
www.cassosolartechnologies.com

**EQUIPMENT:
NON-AUTOCLAVE**



Casso-Solar Technologies **ADV**
506 Airport Executive Park **NGA**
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail:
sales@cassosolartechnologies.com
www.cassosolartechnologies.com

**EQUIPMENT:
OVENS & PRESSES**



Casso-Solar Technologies **ADV**
506 Airport Executive Park **NGA**
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail:
sales@cassosolartechnologies.com
www.cassosolartechnologies.com

**EQUIPMENT:
VACUUM SYSTEMS**



Casso-Solar Technologies **ADV**
506 Airport Executive Park **NGA**
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail:
sales@cassosolartechnologies.com
www.cassosolartechnologies.com

**GLASS CLAD
POLYCARBONATE**

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States. **ADV**
NGA
US: 866-OLDCASTLE
(653-2278)
www.obe.com

HURRICANE GLASS

SAFTI FIRST™ Fire Rated Glazing **ADV**
100 N. Hill Dr., Ste. 12 **NGA**
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safiti.com
www.safiti.com

Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and
Distribution Locations in 25 US
States, 4 Canadian Provinces, 3
European Countries and 3
Australian States. **ADV**
NGA
US: 866-OLDCASTLE
(653-2278)
www.obe.com

INTERLAYER



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail:
info@interlayersolutions.com
www.interlayersolutions.com

MIRRORS

Go to category **MIRRORS &
RELATED PRODUCTS**

**NON-REFLECTIVE:
CLEAR**

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

**POLYCARBONATE
LAMINATES**



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail:
info@interlayersolutions.com
www.interlayersolutions.com

SAFETY



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail:
info@interlayersolutions.com
www.interlayersolutions.com

WIRED



Glassopolis **ADV**
We Put Glass Contractors First
Fast Quotes, Fast Delivery
Phone: 800/262-9600
Fax: 800/872-9601
E-mail: sales@glassopolis.com
www.glassopolis.com

MACHINERY & EQUIPMENT

GENERAL



Casso-Solar Technologies **ADV**
506 Airport Executive Park **NGA**
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail:
sales@cassosolartechnologies.com
www.cassosolartechnologies.com

Erdman Automation **ADV**
1603 S. 14th St.
Princeton, NJ 55371
US: 866/376-6177
Phone: 763/389-9475
Fax: 763/389-9757
E-mail:
eac@erdmanautomation.com
www.erdmanautomation.com

ASSEMBLY

Mueller TB Technologies AG **ADV**
Laubisruetistrasse 72 **NGA**
CH-8712 Staefa
Switzerland
Phone: 905/427-3400
Fax: +41-44-926-6774
E-mail: info@ejindustries.ca
www.mueller.ch
(See our ad on this page)

BENDING



Casso-Solar Technologies **ADV**
506 Airport Executive Park **NGA**
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail:
sales@cassosolartechnologies.com
www.cassosolartechnologies.com

BEVELING



Lattuada North America Inc. **ADV**
6967 Wales Rd., Ste. F **NGA**
Northwood, OH 43619
Toll Free: 844/243-4486
Phone: 567/249-4486
E-mail: info@lattuada-na.com
www.lattuada-na.com

CENTRIFUGE

Glassline Corp. **ADV**
28905 Glenwood Rd. **NGA**
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com

**FABRICATING
EQUIPMENT SPECIALIST**

MUNTIIN/SPACER RADIUS
FORMER
COMPUTERIZED/PNEUMATIC
NOTCHERS
SUNBURST LAYOUT TABLE
SYSTEM
SAWS-BLADES
MUNTIN/SPACER PUNCHES
FISHMOUTH EQUIPMENT



EQUIPMENT & SUPPLY
734-459-5870 FAX 734-459-9837
WWW.MCKEEGANEQUIP.COM

CNC CUTTING



Eastman Machine Company **NGA**
779 Washington St.
Buffalo, NY 14203
US: 800/872-5571
Phone: 716/856-2200
Fax: 716/856-1140
E-mail: sales@eastmancuts.com
www.eastmancuts.com

COATING



Casso-Solar Technologies **ADV**
506 Airport Executive Park **NGA**
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail:
sales@cassosolartechnologies.com
www.cassosolartechnologies.com

CUTTING

Glassline Corp. **ADV**
28905 Glenwood Rd. **NGA**
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com

MÜLLER TECHNOLOGIES
EQUIPMENT FOR THE ASSEMBLY OF
THERMAL BREAK PROFILES
For windows, doors, curtain walls

Müller TB Technologies AG
Switzerland www.mueller.ch
Agent for North America:
E.J. Industries Ltd.
Phone: 905 427-3400
info@ejindustries.ca

Suppliers Guide

Jordon Glass Machinery

MACHINES IN STOCK NOW!

Laminated Glass Cutting Machines

Glass Wrappers

Glass Polishers

Drilling Machines

Wheels, Drill Bits & More

Jordon Glass

Jordonglassmachinery

(305) 482-016 - sales@jordonglass.com

DIGITAL TEMPLATES



Prodim USA
7454 Commercial Circle
Fort Pierce, FL 34951
888/229-3328
Phone: 772/465-4000
Fax: 772/465-8700
E-mail: info@prodimusa.com
www.prodim-systems.com

DRILLING



Lattuada North America Inc.
6967 Wales Rd., Ste. F
Northwood, OH 43619
Toll Free: 844/243-4486
Phone: 567/249-4486
E-mail: info@lattuada-na.com
www.lattuada-na.com

Glassline Corp.

28905 Glenwood Rd.
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com

DRYING



Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

Glassline Corp.

28905 Glenwood Rd.
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com

EDGING



Lattuada North America Inc.
6967 Wales Rd., Ste. F
Northwood, OH 43619
Toll Free: 844/243-4486
Phone: 567/249-4486
E-mail: info@lattuada-na.com
www.lattuada-na.com

Glassline Corp.

28905 Glenwood Rd.
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com

FURNACES

Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

GRINDING & POLISHING



Lattuada North America Inc.
6967 Wales Rd., Ste. F
Northwood, OH 43619
Toll Free: 844/243-4486
Phone: 567/249-4486
E-mail: info@lattuada-na.com
www.lattuada-na.com

HEATING ELEMENTS

Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

INSPECTION SYSTEMS

Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

INSULATING GLASS

Go to category **INSULATING GLASS PRODUCTS, COMPONENTS & EQUIPMENT**

LAMINATING

Go to category **LAMINATING GLASS & EQUIPMENT**

LASERS: MARKING

Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

LEHR'S

Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

PAINTING

Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

PHOTOVOLTAIC PANEL EQUIPMENT MFG. SYSTEMS

Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

SCREEN PRINTING

AWT World Trade Inc.
4321 N. Knox Ave.
Chicago, IL 60641
Phone: 773/777-7100
Fax: 773/777-0909
E-mail: sales@awt-gpi.com
www.awt-gpi.com
(See our ad on this page)

Glassline Corp.

28905 Glenwood Rd.
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com

SEAMING

Glassline Corp.
28905 Glenwood Rd.
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com

SPRAYING

Casso-Solar Technologies
506 Airport Executive Park
Nanuet, NY 10954
Phone: 845/354-2010
Fax: 845/547-0328
E-mail: sales@cassosolartechnologies.com
www.cassosolartechnologies.com

TEMPERING



Xinglass (Hangzhou Glass Technology Co., Ltd.)
8831 Blue Royale Ln.
Fairfax, VA 22031
US: 800/868-0307
Phone: 302/489-9583
Fax: 302/231-2195
E-mail: sales@xinglassamerica.com
www.xinglass.com
www.xinglassamerica.com

Jordon Glass Machinery
6320 NW 99th Ave.
Doral, FL 33178
US: 800/833-2159
Phone: 305/482-0116
Fax: 305/482-0119
www.jordonglass.com
(See our ad on this page)

WASHING



Lattuada North America Inc.
6967 Wales Rd., Ste. F
Northwood, OH 43619
Toll Free: 844/243-4486
Phone: 567/249-4486
E-mail: info@lattuada-na.com
www.lattuada-na.com

WATER JET CUTTING

Glassline Corp.
28905 Glenwood Rd.
P.O. Box 147
Perrysburg, OH 43552
Phone: 419/666-5942
Fax: 419/666-1549
E-mail: sales@glassline.com
www.glassline.com



Stylmark Inc.
6536 Main St. NE
Minneapolis, MN 55432
US: 800/328-2495
Phone: 763/574-7474
Fax: 763/574-1415
E-mail: info@stylmark.com
www.stylmark.com

METAL PRODUCTS

GENERAL



Niles Aluminum Products
1434 S. 9th St.
P.O. Box 607
Niles, MI 49120-0607
Phone: 269/683-1191
Fax: 269/683-8664
E-mail: jeff@nilesaluminum.com
www.nilesaluminum.com

ALUMINUM EXTRUSIONS



Oldcastle BuildingEnvelope®
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

Automate Your Screen Cleaning & Emulsion Removing

A.W.T. Glass Screen Cleaning & Reclaiming Systems
Automotive • Architecture • Appliance
Decorative • Electronics

773.777.7100 • sales@awtworldtrade.com
www.glassprintingequipment.com

All Glass & Aluminum Design, including:

- ✓ All types of CW, SF, Windows
- ✓ Guardrails
- ✓ Skylights
- ✓ Blast/Dynamic Analysis
- ✓ ASTM E1300 Glass Analysis
- ✓ Sunshades & Canopies
- ✓ Glass Flooring and Stairs
- ✓ Embed Anchor Design

ANCHOR ENGINEERING
STRUCTURAL ENGINEERS

We are Licensed in 47 States

303.783.4797
info@anchoreng.com
www.anchoreng.com



Stylmark Inc. NGA
6536 Main St. NE
Minneapolis, MN 55432
US: 800/328-2495
Phone: 763/574-7474
Fax: 763/574-1415
E-mail: info@stylmark.com
www.stylmark.com

BENDING EXTRUSIONS



Niles Aluminum Products NGA
1434 S. 9th St.
P.O. Box 607
Niles, MI 49120-0607
Phone: 269/683-1191
Fax: 269/683-8664
E-mail: jeff@nilesaluminum.com
www.nilesaluminum.com

METALS: ARCHITECTURAL



Niles Aluminum Products NGA
1434 S. 9th St.
P.O. Box 607
Niles, MI 49120-0607
Phone: 269/683-1191
Fax: 269/683-8664
E-mail: jeff@nilesaluminum.com
www.nilesaluminum.com

METALS: CURVING



Niles Aluminum Products NGA
1434 S. 9th St.
P.O. Box 607
Niles, MI 49120-0607
Phone: 269/683-1191
Fax: 269/683-8664
E-mail: jeff@nilesaluminum.com
www.nilesaluminum.com



Stylmark Inc. NGA
6536 Main St. NE
Minneapolis, MN 55432
US: 800/328-2495
Phone: 763/574-7474
Fax: 763/574-1415
E-mail: info@stylmark.com
www.stylmark.com

MIRRORS & RELATED PRODUCTS

GENERAL



Coniston Products
326 Clay Rd.
Sunnyvale, TX 75182
US: 855/484-5277
Phone: 604/952-6092
Fax: 604/952-6093
Email: sales@conistonproducts.com
www.conistonproducts.com



Glassfab Tempering Services ADV
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1061
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com

ACID ETCHED

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

ANTIQUÉ



GGI ADV
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com

DETECTION/SAFETY & SECURITY

McGrory Glass Inc.
1400 Grandview Ave.
Paulsboro, NJ 08066
Phone: 800/220-3749
Fax: 856/579-3233
E-mail: sales@mcgrory.com
www.mcgrory.com

WARDROBE DOORS



Stylmark Inc. NGA
6536 Main St. NE
Minneapolis, MN 55432
US: 800/328-2495
Phone: 763/574-7474
Fax: 763/574-1415
E-mail: info@stylmark.com
www.stylmark.com

PERSONAL PROTECTIVE EQUIPMENT

GENERAL



Stylmark Inc. NGA
6536 Main St. NE
Minneapolis, MN 55432
US: 800/328-2495
Phone: 763/574-7474
Fax: 763/574-1415
E-mail: info@stylmark.com
www.stylmark.com

PROTECTIVE GUARDS & BARRIERS

GENERAL

Oldcastle BuildingEnvelope® ADV NGA
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

POINT-OF-PURCHASE DIVIDERS: GLASS/ACRYLIC

Oldcastle BuildingEnvelope® ADV NGA
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

SNEEZE GUARDS

Oldcastle BuildingEnvelope® ADV NGA
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

TRANSACTION SYSTEMS

Oldcastle BuildingEnvelope® ADV NGA
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

SEALANTS & ADHESIVES

SILICONE



Frameless Hardware Company
4361 Firestone Blvd.
South Gate, CA 90280
US: 888/295-4531
Fax: 323/336-8307
E-mail: info@fhc-usa.com
www.fhc-usa.com

SERVICES

ENGINEERING

Anchor Engineering Inc.
2535 17th St., Ste. A
Denver, CO 80211
Phone: 303/783-4797
Fax: 303/830-9133
E-mail: info@anchoreng.com
www.anchoreng.com
(See our ad on this page)

METAL BENDING



Niles Aluminum Products NGA
1434 S. 9th St.
P.O. Box 607
Niles, MI 49120-0607
Phone: 269/683-1191
Fax: 269/683-8664
E-mail: jeff@nilesaluminum.com
www.nilesaluminum.com

TRAINING PROGRAMS



Interlayer Solutions Inc.
6440 Boul. Henri Bourassa E.
Montreal, QC H1G 5W9 Canada
US: 855/873-1404
Phone: 514/326-4003
Fax: 514/326-9982
E-mail: info@interlayersolutions.com
www.interlayersolutions.com

WEB SERVICES

Mainstreet Computers Inc. ADV
330 Charles St.
Belleville, MI 48111
US: 800/698-6246
Phone: 734/699-0025
Fax: 734/697-8228
E-mail: sales@mainstreetcomp.com
www.mainstreetcomp.com

SKYLIGHTS & OVERHEAD GLAZING

GENERAL



Glassfab Tempering Services ADV
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com



Oldcastle BuildingEnvelope® ADV NGA
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

Solar Innovations® Architectural Glazing Systems ADV NGA
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com

COMMERCIAL

Oldcastle BuildingEnvelope® ADV NGA
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

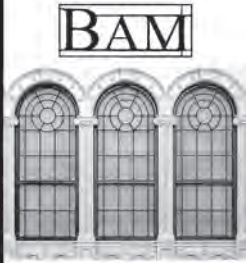
CONSERVATORIES

Solar Innovations® Architectural Glazing Systems ADV NGA
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com

CUSTOM


Oldcastle BuildingEnvelope® ADV NGA
More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States.
US: 866-OLDCASTLE (653-2278)
www.obe.com

BACON'S ARCHITECTURAL PRODUCTS



BAM

Muntins Made Easy
Surface-applied muntin grids for Storefront & Curtain Wall. Fully assembled for fast installation.



SIM STEEL

Elegance for Less
Modern, ultra-narrow aluminum framing, doors, & surface applied muntins... all together in one system.

(877) 315-1624
www.bvbglass.com
haptech@bvbglass.com

Solar Innovations® Architectural Glazing Systems **ADV NGA**
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com

OPENING ROOF SYSTEMS

Solar Innovations® Architectural Glazing Systems **ADV NGA**
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com

SLOPED GLAZING SYSTEMS

Oldcastle BuildingEnvelope® More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**
US: 866-OLDCASTLE (653-2278)
www.obe.com

SOLAR GREENHOUSES

Solar Innovations® Architectural Glazing Systems **ADV NGA**
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com

SUNROOMS

Solar Innovations® Architectural Glazing Systems **ADV NGA**
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com

SPECIALTY GLASS PRODUCTS

GENERAL



Glassopolis We Put Glass Contractors First Fast Quotes. Fast Delivery **ADV NGA**
Phone: 800/262-9600
Phone: 800/872-9601
E-mail: sales@glassopolis.com
www.glassopolis.com

WOOD STOVE REPLACEMENT



Glassopolis We Put Glass Contractors First Fast Quotes. Fast Delivery **ADV NGA**
Phone: 800/262-9600
Phone: 800/872-9601
E-mail: sales@glassopolis.com
www.glassopolis.com



Technical Glass Products **NGA**
8107 Bracken Place SE Snoqualmie, WA 98065
Phone: 800/426-0279
Fax: 425/396-8300
E-mail: sales@fireglass.com
www.fireglass.com

STOREFRONTS & CURTAINWALLS

GENERAL



Glassfab Tempering Services **ADV**
1448 Mariani Ct.
Tracy, CA 95304
US: 800/490-3860
Phone: 209/229-1060
Fax: 209/229-1061
E-mail: info@GlassfabUSA.com
www.GlassfabUSA.com



Oldcastle BuildingEnvelope® More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**
US: 866-OLDCASTLE (653-2278)
www.obe.com

CURTAINWALLS



SAFTI FIRST™ Fire Rated Glazing **ADV NGA**
100 N. Hill Dr., Ste. 12
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safti.com
www.safti.com

Oldcastle BuildingEnvelope® More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**
US: 866-OLDCASTLE (653-2278)
www.obe.com



Technical Glass Products **NGA**
8107 Bracken Place SE Snoqualmie, WA 98065
Phone: 800/426-0279
Fax: 425/396-8300
E-mail: sales@fireglass.com
www.fireglass.com

CURTAINWALLS: UNITIZED

Oldcastle BuildingEnvelope® More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**
US: 866-OLDCASTLE (653-2278)
www.obe.com

CURTAINWALLS: WOOD

Solar Innovations® Architectural Glazing Systems **ADV NGA**
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com

FOLDING GLASS WALLS

Solar Innovations® Architectural Glazing Systems **ADV NGA**
31 Roberts Rd.
Pine Grove, PA 17963
US: 800/618-0669
Phone: 570/915-1500
Fax: 570/915-6083
E-mail: skylight@solarinnovations.com
www.solarinnovations.com

ENTRANCES: CUSTOM



GGI **ADV NGA**
101 Venture Way
Secaucus, NJ 07094
US: 800/431-2042
Phone: 201/553-1850
Fax: 201/553-1851
E-mail: sales@generalglass.com
www.generalglass.com

REBCO Inc. **ADV NGA**
1171-1225 Madison Ave.
Paterson, NJ 07509-2248
US: 800/777-0787
Phone: 973/684-0200
Fax: 973/684-0118
E-mail: sales@REBCOinc.com
www.REBCOinc.com
(See our ad on page 124)

MUNTIN GRIDS

Bacon & Van Buskirk **NGA**
801 S. Neil St.
Champaign, IL 61820
US: 800/747-6471
Phone: 217/356-6471
Fax: 217/352-7267
E-mail: info@bamuntins.com
www.bamuntins.com
(See our ad on this page)

SECURITY GLAZING

Oldcastle BuildingEnvelope® More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**
US: 866-OLDCASTLE (653-2278)
www.obe.com

STOREFRONTS & ENTRANCES



SAFTI FIRST™ Fire Rated Glazing **ADV NGA**
100 N. Hill Dr., Ste. 12
Brisbane, CA 94005-1010
US: 888/653-3333
Phone: 415/824-4900
Fax: 415/824-5900
E-mail: info@safti.com
www.safti.com

Oldcastle BuildingEnvelope® More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**
US: 866-OLDCASTLE (653-2278)
www.obe.com



Technical Glass Products **NGA**
8107 Bracken Place SE Snoqualmie, WA 98065
Phone: 800/426-0279
Fax: 425/396-8300
E-mail: sales@fireglass.com
www.fireglass.com

WINDOW HARDWARE & RELATED PRODUCTS

GENERAL

Strybuc Industries **NGA**
2006 Elmwood Ave.
Building 102-C
Sharon Hill, PA 19079-0767
US: 800/352-0800
Phone: 610/534-3200
Fax: 610/534-3202
E-mail: cservice@strybuc.com
www.strybuc.com

SHIMS

Grove Structural Shims **ADV NGA**
17 Marguerite Ave.
P.O. Box 240
Leominster, MA 01453
US: 800/72-GROVE(47683)
Phone: 978/534-5188
Fax: 978/840-4130
E-mail: sales@groveproductsinc.com
www.groveproductsinc.com

WINDOWS

GENERAL



Oldcastle BuildingEnvelope® More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**
US: 866-OLDCASTLE (653-2278)
www.obe.com

ALUMINUM

Liberty Glass & Metal Industries
339 Riverside Dr.
N. Grosvenordale, CT 06255
Phone: 800/843-2031
Fax: 860/923-9662
E-mail: info@lgm.net
www.lgminc.net
(See our ad on facing page)

Oldcastle BuildingEnvelope® More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**
US: 866-OLDCASTLE (653-2278)
www.obe.com

ARCHITECTURAL

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

BLAST RESISTANT

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

SAFTI FIRST™ Fire Rated Glazing

100 N. Hill Dr., Ste. 12 Brisbane, CA 94005-1010 US: 888/653-3333 Phone: 415/824-4900 Fax: 415/824-5900 E-mail: info@safti.com www.safti.com **ADV NGA**

Vetrotech Saint-Gobain Fire-Rated Glass and Framing

2108 B St. NW, Ste. 110 Auburn, WA 98001 Phone: 888/803-9533 E-mail: vetrotech.sales@saint-gobain.com www.vetrotechusa.com **ADV NGA**

BULLET RESISTANT

RAY BAR

RAY-BAR USA **NGA**

Security, Ballistic Glass and IGU's

US: 800/444-9729 Fax: 800/333-9729 E-mail: sales@raybar.com www.raybar.com

SAFTI FIRST™ Fire Rated Glazing

100 N. Hill Dr., Ste. 12 Brisbane, CA 94005-1010 US: 888/653-3333 Phone: 415/824-4900 Fax: 415/824-5900 E-mail: info@safti.com www.safti.com **ADV NGA**

Vetrotech Saint-Gobain Fire-Rated Glass and Framing

2108 B St. NW, Ste. 110 Auburn, WA 98001 Phone: 888/803-9533 E-mail: vetrotech.sales@saint-gobain.com www.vetrotechusa.com **ADV NGA**

DOUBLE HUNG

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

FIRE-RATED



McGRORYGLASS

McGrory Glass Inc. 1400 Grandview Ave. Paulsboro, NJ 08066 Phone: 800/220-3749 Fax: 856/579-3233 E-mail: sales@mcgrory.com www.mcgrory.com

RAY BAR

RAY-BAR USA **NGA**

Fastest Fire Glass and IGU's Available

Phone: 800/444-9729 Fax: 800/333-9729 E-mail: sales@raybar.com www.FireProofGlass.com



SAFTI FIRST™ Fire Rated Glazing

100 N. Hill Dr., Ste. 12 Brisbane, CA 94005-1010 US: 888/653-3333 Phone: 415/824-4900 Fax: 415/824-5900 E-mail: info@safti.com www.safti.com **ADV NGA**



Technical Glass Products

8107 Bracken Place SE Snoqualmie, WA 98065 Phone: 800/426-0279 Fax: 425/396-8300 E-mail: sales@fireglass.com www.fireglass.com **NGA**

Vetrotech Saint-Gobain Fire-Rated Glass and Framing

2108 B St. NW, Ste. 110 Auburn, WA 98001 Phone: 888/803-9533 E-mail: vetrotech.sales@saint-gobain.com www.vetrotechusa.com **ADV NGA**

FIXED

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

HURRICANE RESISTANT

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

SAFTI FIRST™ Fire Rated Glazing

100 N. Hill Dr., Ste. 12 Brisbane, CA 94005-1010 US: 888/653-3333 Phone: 415/824-4900 Fax: 415/824-5900 E-mail: info@safti.com www.safti.com **ADV NGA**

Vetrotech Saint-Gobain Fire-Rated Glass and Framing

2108 B St. NW, Ste. 110 Auburn, WA 98001 Phone: 888/803-9533 E-mail: vetrotech.sales@saint-gobain.com www.vetrotechusa.com **ADV NGA**

IMPACT RESISTANT

McGrory Glass Inc. 1400 Grandview Ave. Paulsboro, NJ 08066 Phone: 800/220-3749 Fax: 856/579-3233 E-mail: sales@mcgrory.com www.mcgrory.com



Technical Glass Products

8107 Bracken Place SE Snoqualmie, WA 98065 Phone: 800/426-0279 Fax: 425/396-8300 E-mail: sales@fireglass.com www.fireglass.com **NGA**

SAFTI FIRST™ Fire Rated Glazing

100 N. Hill Dr., Ste. 12 Brisbane, CA 94005-1010 US: 888/653-3333 Phone: 415/824-4900 Fax: 415/824-5900 E-mail: info@safti.com www.safti.com **ADV NGA**

Vetrotech Saint-Gobain Fire-Rated Glass and Framing

2108 B St. NW, Ste. 110 Auburn, WA 98001 Phone: 888/803-9533 E-mail: vetrotech.sales@saint-gobain.com www.vetrotechusa.com **ADV NGA**

LEAD X-RAY

Amerope Enterprises Inc.

150 Commerce Rd. Boynton Beach, FL 33426 US: 800/327-3320 Phone: 561/737-7370 Fax: 561/737-3721 E-mail: claire@amerope.com www.amerope.com **NGA**



McGRORYGLASS

McGrory Glass Inc. 1400 Grandview Ave. Paulsboro, NJ 08066 Phone: 800/220-3749 Fax: 856/579-3233 E-mail: sales@mcgrory.com www.mcgrory.com

RAY BAR

RAY-BAR USA **NGA**

Fastest X-Ray Glass and IGU's Available

US: 800/444-XRAY Fax: 800/333-XRAY E-mail: sales@raybar.com www.raybar.com

NUCLEAR SHIELDING

Amerope Enterprises Inc.

150 Commerce Rd. Boynton Beach, FL 33426 US: 800/327-3320 Phone: 561/737-7370 Fax: 561/737-3721 E-mail: claire@amerope.com www.amerope.com **NGA**

McGrory Glass Inc. 1400 Grandview Ave. Paulsboro, NJ 08066 Phone: 800/220-3749 Fax: 856/579-3233 E-mail: sales@mcgrory.com www.mcgrory.com

RAY BAR

RAY-BAR USA **NGA**

Fastest X-Ray Glass and IGU's Available

US: 800/444-XRAY Fax: 800/333-XRAY E-mail: sales@raybar.com www.raybar.com

SECURITY

RAY BAR

RAY-BAR USA **NGA**

Security, Ballistic Glass and IGU's

US: 800/444-9729 Fax: 800/333-9729 E-mail: sales@raybar.com www.raybar.com



Technical Glass Products

8107 Bracken Place SE Snoqualmie, WA 98065 Phone: 800/426-0279 Fax: 425/396-8300 E-mail: sales@fireglass.com www.fireglass.com **NGA**

SINGLE HUNG

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

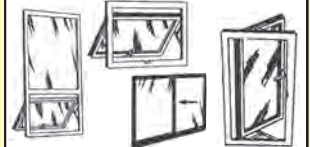
Liberty Glass & Metal Industries



Toll free: 800-843-2031 Fax: 860-923-9662 www.lgminc.net



2" Projected Window Systems Specifically Designed for Commercial Applications



Commercial Rated Windows

SPECIALTY

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

THERMAL BREAK

Oldcastle BuildingEnvelope®

More Than 85 Manufacturing and Distribution Locations in 25 US States, 4 Canadian Provinces, 3 European Countries and 3 Australian States. **ADV NGA**

US: 866-OLDCASTLE (653-2278)

www.obe.com

TILT/TURN

Solar Innovations® Architectural Glazing Systems

31 Roberts Rd. Pine Grove, PA 17963 US: 800/618-0669 Phone: 570/915-1500 Fax: 570/915-6083 E-mail: skylight@solarinnovations.com www.solarinnovations.com **ADV NGA**

Reader Response Center

Advertiser	Page	Phone	Website or email address
A+W Software	24		a-w.com/us
American Insulated Glass	37		aiglass.com
Anchor Engineering, Inc.	129	303/783-4797	anchoreng.com
AWT World Trade Inc.	128	773/777-7100	awt-gpi.com
Azon	20	800/788-5942	azonintl.com
Bacon's Architectyural Muntins	114, 130	877/315-1624	bamuntins.com
Banner Solutions	91	888/362-0750	bannersolutions.com
Bavelloni America Inc.	103	336/299-8300	email: usa@bavelloni.com
Benteler Maschinenbau GmbH	107		benteler-glass.com
Blink Blinds + Glass	2	866/472-0042	blinkodl.com
Bovone North America	7		email: dmangus@bovone.com
Burkle North America Inc.	81	336/660-2701	burkleamerica.com
C.R. Laurence	9	800/421-6144	email: railings.archmetals@crlaurence.com
Casso-Solar Technologies	94	845/354-2010	cassosolartechnologies.com
CMS North America	99	616/698-9970	email: cmssales@cmsna.com
CooperStandard ISG	55		cooperstandard-isg.com
Cristacurva	122	866/827-6049	cristacurva.com
Curved Glass Distributors	121	888/288-9129	curvedglasscreations.com
Dependable Glass Works	100	800/338-2414	dependableglass.com
Diamon-Fusion International	19		dfisolutions.com
Dow Silicones Corp.	45		dow.com/futurescape
EDTM Inc.	71	419/861-1030	edtm.com
Erdman Automation	136	763/389-9475	erdmanautomation.com
Ergo Robotic Solutions	15, 125	518/796-2179	ergorobotic.com
FeneTech Inc.	69	330/995-2830	fenetech.com
FrontLine Building Products Inc.	40	715/748-2288	frontlinebldg.com
GDS Estimating	123	858/538-4375	gdsestimating.com
GED	32	330/963-5401	gedusa.com
GGI	45A	800/431-2042	generalglass.com
Glass Coatings & Concepts	79	513/539-5300	gcconcepts.com
Glassfab Tempering Services	13	800/490-3860	glassfabusa.com
Glasswerks	43	888/789-7810	glasswerks.com
Glazing Executives Forum	108	866/342-5642 x187	glassbuild.com/glazing-executives-forum
Groves Inc.	98	800/991-2120	groves.com
Guangdong Kin Long	16		email: mail@kinlong.com
Hegla Corp.	105	404/763-9700	email: info@heglaus.com
HHH Equipment Resources	49		hhhglassequipment.com/kodiakedging
International Union of Painters and Allied Trades	109		iupat.org
Intertek	39	800/WORLTLAB	intertek.com/building
JLM Wholesale	25	800/522-2940	jlmwholesale.com
Jordon Glass Machinery	128	800/833-2159	jordonglass.com
Kuraray	115		trosifol.com

Advertiser	Page	Phone	Website or email address
Laser Products Industries	38	877/679-1300	laserproductsus.com
Lattuada North America	95	567/249-4486	email: info@lattuada-na.com
LGH	106	800/878-7305	rentlgh.com
Liberty Glass & Metal Industries	131	800/843-2031	lgminc.net
Lisec America Inc.	65		lisec.com
Magid	53	800/989-8422	magidglove.com/glass-mag
Mainstreet Computers Inc.	102	734/699-0025	mainstreetcomputers.com
Mappi America Inc.	101	239/234-5028	mappi.us
McKeegan Equipment & Supply	127	734/459-5870	mckeeganequip.com
Modernfold	33		modernfold.com
Morse Industries Inc.	104	800/325-7513	morseindustries.com
Mueller Technologies AG	127	905/427-3400	muller.ch
MyGlassClass	117	866/342-5642 x164	myglassclass.com
MyGlassTruck	34	800/254-3643	myglasstruck.com
NGA Glass Conference	116	866/342-5642 x178	glass.org
North American Contractor Certification	27		naccprogram.com
Oldcastle BuildingEnvelope®	23		systemselect.obe.com
Orchard Lock Distributors	89	800/233-2146	orchardlock.com
Pilkington	17	800/221-0444	pilkington.com/na
Precision Glass Bending Corp.	18, 121	800/543-8796	e-bentglass.com
Pulp Studio	29	310/815-4999	email: sales@pulpstudio.com
Quanex Building Products	1, 135		quanex.com/solutions
REBCO Inc.	124	800/777-0787	rebcoinc.com
Roto North America	21	800/243-0893	rotonorthamerica.com
SAFTI First	3	888/653-3333	safti.com
Salem Fabrication Supplies	97	800/234-1982	salemftg.com
Satinal Group	96		satinal.it
SCHOTT North America Inc.	41	502/657-4439	us.schott.com/pyran
Schuco USA LP	35		schuco-usa.com
Seclock	31	800/847-5825	seclock.com
SGC International Inc.	120	866/802-8682	sgc-usa.com
Showcase Innovations	126	831/464-3899	glasssgadget.com
SMART Logistics	75		email: sales@smartlogisticsinc.com
SOFTSOLUTION North America	83		softsolution.com
St. Cloud Window	26	800/383-9311	stcloudwindow.com
Tremco	93		tremcosealants.com
U.S. Horizon Manufacturing	34	877/728-3874	ushorizon.com
Unelko	44	800/528-3149	glasscareexperts.com
Viracon	113		viracon.com
Vitro Architectural Glass	5		vitrosolarvolt.com
Wood's Powr-Grip	73		wpg.com

HERE'S AN IDEA

Companies from all parts of the glass and glazing industry have implemented innovative, out-of-the-box ideas to improve business from the ground up. Here's an Idea showcases these sometimes small behind-the-scenes ideas that can make a big impact on a company's bottom line. If you have an idea that you would like to share, contact Norah Dick, ndick@glass.org.

USE DIGITAL TOOLS TO GET THE MOST OUT OF TRADESHOWS

Like every other part of life, technology has changed tradeshow. From lead retrieval devices, to Facebook, there's a wide range of ways that tech can change your show experience. Here are some industry insights regarding how to use the many types of digital tools available to have a successful show.

Make your booth interactive

Instead of shipping brochures, exhibitors can incorporate QR codes into the design of their booths, says Gwynn Breckenridge, CMP, tradeshow logistics manager, National Glass Association. Visitors can scan QR codes using their smartphones to access the company's website or info. "The cost of shipping paper is extremely expensive and most companies have leftovers, which are then trashed so they have wasted money in printing, shipping and paying to trash them," says Breckenridge. In addition to being free to produce, QR codes link to websites that can also be updated if needed, unlike a printed brochure, she says.

Other potential tech to include at the booth includes a touch screen monitor, which can allow visitors to input their contact information, and can also show a video of the company's products. Exhibitors could also consider incorporating a 3D tour of their facility and products with the use of a virtual reality headset, she says.

Use a lead retrieval device

Breckenridge also emphasizes the



benefits of recording leads using a lead retrieval device, such as a badge scanner. "Not enough exhibitors take advantage of the lead retrieval devices they can rent," she says. "By simply scanning badges, the company can collect all the names and addresses of everyone who stops by their booth—or reception or meeting—along with all the demographic questions asked on the registration form."

A lead retrieval device allows exhibitors to customize and add notes for their follow-up plan, she says. "Fewer people are carrying around business cards to exchange and you get a lot more info by scanning a badge."

Post on social media

Other than a lead retrieval device, Breckenridge says exhibitors need to use social media to attract attention. The event company, American Image Displays, also emphasizes the importance of social media as part of a digital marketing plan. Here are some of their recommendations for how to leverage social media throughout the planning and exhibiting process.

Before you go

- Start promoting your participation ear-

ly, at least weeks before. You can post photos or teasers; post event information and your booth number; and drive followers to the show's website, so customers can find you.

- Connect posts to the trade show organization's social media, and make sure to use any relevant hashtags for the show. Review who is following the event through their social media, to help develop a sense of potential attendees.

During the show

- Host a social media contest, on whichever platform helps you reach your targets most effectively. You can use the results of the contest to help improve engagement and traffic for the next time.
- Upload real-time content, including live streaming. This can help engage those who cannot attend the event, and attract the interest of those who are there.

After it's over

- Create curated content summarizing the show's events, such as a compilation video or a blog article posted to your company's blog site. Show your audience what they missed by not being there. ■

Vinyl Systems. IG Systems. Screens.



**Quality solutions for every step
in your journey.**

Quanex is here to help you in all aspects of building your fenestration business with the quality products your customers want, the productivity-enhancing solutions you need and the expert R&D, marketing and technical support to help drive your business forward.

Quanex
building products



Visit [Quanex.com/Solutions](https://www.quanex.com/Solutions) and
visit us at GlassBuild booth #2519.

HEAD-TURNING INNOVATIONS THAT ARE PRACTICAL SOLUTIONS FOR YOUR BOTTOM LINE



ERDMAN® HIGH SPEED IG LINE W/ ROBOTIC IG DIRECT-TO-SASH & IG OFFLOAD

Erdman is your local partner in robotics and automation. We will work with you to innovate and reduce your labor requirements to provide a safer environment at your facility as well as a significant cost savings.

Erdman is unique in that we focus on all facets of window manufacturing and can help you integrate your departments and create a safer, more efficient flow through automation.

For 28 years we have concentrated completely on the North American market. We started small, service focused, nimble and innovative. We continue that focus today even as we are big enough to handle the largest of projects.

Visit www.erdmanautomation.com or call 763-389-9475 for more information.

VISIONARY THINKING. EXCEPTIONAL DOING.

ERDMAN 

See us at GlassBuild, booth 2231.