

U.S. Firms at glasstec 2016

Company	State	Product Description
ABC HARDWARE INC.	CA	<p>ABC Hardware has been active over in the manufacturing business for Architectural Hardware since the 1960s. They're a direct manufacturer who specialized in Architectural Hardware and OEM high end Doors/Windows Hardware & Plumbing Hardware. Sales office base in CA(USA), and their factory (ISO 9001) located at Dong Guan, China. ABC specialize in forging, die casting, sand casting, wax casting, CNC machining, bending, polishing, anodizing, plating, liquid/powder coating on all materials such as aluminum, brass, zinc alloy, stainless steel and steel.</p> <p>ABC Hardware has a wide variety of product lines. Their expertise is in high end OEM products line such as brass shower doors hinge, brass decorative handle set, brass locks, latches, sliding door handle sets, multipoint locks, handicap grab bars and plumbing accessories, continuous gear hinges, panic devices, cylinders, various material's pull handles, window operators, gears, end-caps and so on. Please feel free to contact them for any question you may have: alicec@abchardwareinc.com</p>
ADVANCED CONTROL SOLUTIONS, INC. (ACSI)	OH	<p>As a leading integrator of information and control system solutions, ACSI engineers in both the United States and Europe are able to provide customers with quality technical engineering, system design, factory acceptance, installation supervision, commissioning services, and training. Their knowledge can be applied to Float Glass, Fiberglass, Container Glass, Tableware, Lighting, Tubing, and Specialty systems. Types of solutions they provide are temperature control, DCS replacement, batching control, glass level control, model predictive control, packaging & sortation control, and production tracking. ACSI has commissioned projects in over 40 countries.</p>
AGR INTERNATIONAL INC.	PA	<p>Agr International, Inc. offers a complete line of equipment and services to the glass container industry. As an industry leader for over 80 years, Agr is committed to provide the glass container industry with the most technologically advanced products available for quality control and productivity improvement.</p>
AMETEK SURFACE VISION	CA	<p>AMETEK Surface Vision (formerly known as the Cognex Surface Inspection Systems Division) is the world's leader in automated online surface inspection solutions. They have a broad product portfolio that is optimized for web and surface inspection and monitoring and process surveillance applications. Their portfolio includes three distinct product lines: SmartView®, SmartAdvisor®, and VisionGear™, and each uniquely enables their customers to inspect the surfaces of materials processed in a continuous fashion across the Metals, Paper, Plastics, Nonwovens and Glass industries. Their robust and flexible surface inspection solutions have now become a vital part of the industrial process when it comes to producing, converting, or processing flat goods, helping to increase efficiency and streamline operations, improve product quality, and reduce costs and waste. With hundreds of unique customers and over 2,000 installations worldwide, AMETEK Surface Vision continues to innovate with world-class technologies and customer support to offer combined hardware and software solutions that provide you some of the most accurate defect data, high-definition video, grading, archiving and detailed reporting you'll find out in the industry today. Let AMETEK Surface Vision be your Vision Partner to meet all your quality needs. Their headquarters is located in Hayward, California, with regional offices and sales representatives located throughout North</p>

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America, Japan, Europe, Asia, South America and Latin America. AMETEK Surface Vision is part of AMETEK, Inc. – a leading global manufacturer of electronic instruments and electromechanical devices. AMETEK, Inc. Surface Vision is part of the Process and Analytical Instruments Division of AMETEK, Inc., a global manufacturer of electronic instruments and electromechanical devices.

[ARGIL](#)

CA Argil is a silicon valley based start-up developing breakthrough smart window technology that delivers superior performance at a fraction of the cost of alternate smart window technologies. It is an electrochromic film laminated between Glass, for Automotive, Architectural and Wearable Applications.

[COREVA LLC](#)

FL Coreva has taken traditional films off the table. As technology advances so does Coreva. Coreva produces an optically clear lamination film that is setting new industry standards. Their product uses the highest quality resins designed to create an optically clear safety glass. They have combined their research and development as well as advanced testing to create excellent cross-linking capabilities and a bond second to none.

[DIAMON FUSION INTERNATIONAL](#)

CA Since 1997, Diamon-Fusion International (DFI) has been making people's lives easier and more beautiful by developing, manufacturing and distributing protective coatings, application machinery and restoration products for architectural and transportation surfaces such as glass, granite, tile, porcelain and quartz. DFI's coatings significantly reduce maintenance costs, are impact, scratch and graffiti resistant, and can keep surfaces looking and performing like-new forever. DFI's product offering ranges from award-winning, patented, professional-quality products available through authorized applicators and distributors to easy-to-use highly-effective, do-it-yourself products for consumers. Headquartered in Southern California, DFI holds patents and patents-pending worldwide and has a global sales and distribution network spanning North, Central and South America, Europe, Asia, South Africa, Australia and New Zealand.

[DURA TEMP CORPORATION](#)

OH Dura Temp Corporation is an industry-leading supplier of hot ware handling solutions for glassmakers worldwide. From the gob forming area through thelehr loader, Dura Temp offers superior materials, quick-change parts and assemblies, and technical experience that allow glassmakers to achieve optimum results in the hot-end. With a global network of agents and distributors, Dura Temp is continuously evaluating the changing needs of the glass industry and adapting the solutions it offers to best meet these needs. Partnering with Dura Temp means Improved Pack Rates Through: Proper Ware Handling, Reduced Downtime, Enhanced Product Output, Constant Innovation, Rapid Order Deliveries, Exceptional Service. Dura Temp's product lines include: Sweepout Pockets and Assemblies, Ware Guides, Transfer Paddles, Lehr-Stacker Bars, Pockets and Insulators, Transfer and Lehr Deadplates, Contact Pads and Fingers, Sheet Materials, Vacuum Pads and Platens

[EAE TECH, INC.](#)

OH For over 20 years the professionals at EAE Tech have been dedicated to providing high quality Industrial Automation Products, Engineering Services, and Custom Control Systems. Their focus is to provide you with a solution that meets not only your technical and functional needs, but your economic ones as well. Their combination of standard products, and an experienced engineering staff guarantee the right solution every

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time - from simple controls to a turnkey system. EAE Tech's engineering staff brings a depth of industrial experience, combined with state of the art technical knowledge to your project. Whether you need supplemental engineering services, or a turn key system they have the skill sets in project management, power engineering, control engineering, PC/PLC/DCS programming, HMI, data bases, and networking to handle it. Check out all they can do for you under their services category.

[FENETECH INC](#)

OH Since 2010 FeneTech is also represented in Europe through its sister company FeneTech Europe SARL, located in Luxembourg. From there a large team of very experienced software technicians implement and service the world's most integrated and modern software ERP solution for the flat glass industry. FeneTech commenced operation in 1996 to provide software automation products and services to the glass, window and door fabrication industry. The rapidly changing business environments of their clients require automation software that is modern, reliable and flexible.

[FRANKLIN BRONZE & ALLOY CO., INC.](#)

PA A World Leader in the Supply of Nickel Alloy Castings for the Glass Mould Industry. Franklin Bronze Precision Components, LLC. is a world leader in the manufacturing of Nickel-Boron Alloy castings for the glass mould industry. Established in 1878, Franklin Bronze is one of the oldest continually operating foundries in Pennsylvania. Franklin Bronze's Investment Casting production was founded in 1985 for the targeted supply of castings to the glass mould industry. Parts manufactured include guide rings, baffles, plungers, inserts, thimbles, blowheads, and top-plates. Franklin Bronze provides a high-quality, consistent product due to technical expertise, in-house tooling & machining, and automated processing.

[GLASSTECH, INC.](#)

OH Glasstech, Inc., is the world's leading manufacturer of glass bending and tempering technology for the solar, automotive and architectural glass markets. Automotive Systems: Glasstech automotive systems are the products of inventive minds, creative thinking and innovative problem solving. Time and production have proven, beyond a doubt, that their equipment is the most rugged, dependable and versatile. Engineered to advance as the industry evolves, Glasstech auto glass systems feature flexible, modular designs to permit progress from innovative ideas to just-in-time production, and keep customers on the cutting edge. Glasstech auto glass systems are designed to meet industry demand for greater productivity, economical tooling and energy conservation. A user-friendly PLC controller simplifies system regulation of conveyers, bending motion, shuttle movement, parts setup and instant diagnostics. System features and options include electric radiant or forced convection heating; pre-forming fan rolls, reheated convection and stripe heating; a high-efficiency quench; Quick Change and Fast Cycle capabilities; roll-in roll-out press bend stations; a modular cooler that eliminates ductwork, and more. Architectural Systems: Glasstech architectural systems are renowned for producing everything from high performance coated glass to large, gracefully bent lites to tight radius tempered panels for creative interior designs. Glasstech architectural glass systems are designed to meet industry demand for greater productivity, economical tooling and lower energy usage. System features and options include electric radiant or forced convection heating, Profiled Convection™ surface heating systems, a high-efficiency quench, computer-controlled bending with no part-dedicated tooling. A cooler that eliminated ductwork and more. Solar Systems: Glasstech provides precisely bent or curved glass equipment

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solutions for concentration solar power (CSP) and concentration photovoltaic (CPV) markets, as well as equipment solutions for fabrication of extremely flat glass for the photovoltaic (PV) market. Glasstech systems provide tempered or heat-strengthened glass solutions that offer significant advantages, as tempered glass accounts for fewer installation failures and in-service failures from wind, hail and debris, less collateral damage in the event of an in-service failure, and lower hardware costs compared to annealed glass installations. Inspection Systems and Predictive Software: To ensure automotive customers get optimum performance from their Glasstech systems, Glasstech has developed 2 innovative, proprietary software products. The AutoGlassInspector can be used online or in a laboratory setting to evaluate transmitted distortion in glass parts and measure sidelites, backlites and windshields. This is a computer-based system that checks to determine if a glass part meets all existing automotive transmitted distortion standards. The Shape Modeler™ software package lets processors analyze data to predict and determine how to produce the highest quality glass parts without cutting glass or using bending equipment. Aftermarket Services: Retrofits – Enhancements to existing Glasstech systems include extensions to increase capacity, options to accommodate a wider range of products or glass thicknesses, hardware and software updates, replacements for obsolete components and drives, and energy-conservation packages. Retrofit services can provide increased capacity, expanded capability, technology updates to address component obsolescence and energy conservation upgrades important in today's marketplace. Replacement (Spare) Parts – Using genuine replacement parts for original Glasstech systems ensures compatibility and optimum performance. Aftermarket Service – Glasstech offers technical service and support to keep systems running at top performance levels. This includes advising customers on options for increasing productivity, conserving energy and improving the flexibility of the Glasstech system, plus providing access to Glasstech's technical experts. New operator training is available as well. Tooling – Glasstech offers comprehensive tooling design, manufacturing prove-out and on-site assistance services. Prototype Services – Allows customers to evaluate glass parts which have been produced on a Glasstech system before the equipment or tooling is purchased and delivered to the site. For more information on Glasstech systems, please go to the Product Information tab. Please visit Glasstech at the Glasstec exhibition Hall 13, Stand D75 for additional details.

[H.C. STARCK CO.](#)

MA Worldwide there is hardly any other company that can meet your material needs as competently as H.C. Starck. With almost 100 years of experience, H.C. Starck is a leading premium supplier of the technology metals tungsten, molybdenum, tantalum, niobium, and rhenium, high-performance ceramics, and thermal spray powders. H.C. Starck is working on the innovative products of tomorrow and beyond with intensive research and development. Over 140 R & D employees around the world work on developing new materials, products, and innovative applications with promising future potential. H.C. Starck holds over 900 patents worldwide, from innovative high-tech materials to process-controlled production and customer-specific product solutions. Core Competence: Customer-Specific Particle and Component Design: Their core competence in powder metallurgy is the customer-specific design of chemical and physical properties, including particle size, surface structure, granularity, and consistency of the technology metals (also called refractory metals) tungsten, molybdenum, tantalum, niobium, and

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rhodium. They then mechanically condense, press, sinter, and roll the powders into metal bars. Using special metalworking techniques, they turn these metal bars into customer-specific components, whose unique chemical and physical properties make them virtually indispensable in many key technologies.

[HARBISON WALKER REFRACTORIES COMPANY](#)

PA North American Refractories Co. is part of the ANH Refractories Family of Companies. ANH Refractories is one of the world's largest and most respected suppliers of refractory materials. With lineage that dates back over 100 years, ANH Refractories is the leading provider of refractory solutions to the global industrial market. ANH Refractories operates more than 17 production facilities spread over 3 continents and manufactures materials under the world recognized brands of A.P. Green, North American Refractories Company, and Harbison-Walker Refractories Company. North American Refractories Company engineers, manufactures, and supplies a full-line of refractories to support the most demanding glass making applications. Their Glass Support Team is located in Pittsburgh, PA and Cincinnati, OH with Sales Representatives that cover the United States, Latin America, South America, Europe and Asia. Their Glass Support Team works closely with each customer to ensure the best possible refractory solutions are met.

[INDUSTRIAL CONTROL DEVELOPMENT INC.](#)

WA ICD is an industry leader in: high performance coatings where environment and health have to meet performance breakthroughs in technology cutting edge coatings that achieve color and performance Architectural Flat Glass (Spandrel & Screen Print on Glass), metals and plastics such as polycarbonate. ICD's coatings are created to fit market needs and always be "Green". The ICD coating story began over twenty years ago with the invention of OPACICOAT-300® a coating that became a flat glass industry standard for spandrel applications; including exterior curtain wall and interior wall cladding applications. As new technology arises in silicone chemistry and its derivatives, ICD is in the marketplace filling a need and solving a problem; always with an eye toward products that add value to green and sustainable building practices. Today's marketplace changes very quickly, with one of ICD's core development values being "problem-solving", they can help create that paint or coating that meets any demand.

[INTRACO CORPORATION](#)

MI Intraco Corporation is head-quartered in Troy, Michigan, with offices and operating centers across the globe. They are a diversified export and brand management service provider focused on long-term brand and market development. With their global network and expertise, they can help build your brand and increase the customer's marketshare worldwide. They specialize in high performance, energy efficient, technologically advanced architectural glass from North America and Europe to the Middle East, Latin America and across the globe. They add greater value to both their suppliers and customers by managing in house, ALL international logistics services, owning and operating Intraco truck fleets, global warehouse and distribution centers.

[KEY COMMUNICATIONS INC.](#)

VA USGlass Metal and Glazing is the largest magazine in the world covering the architectural glass industry exclusively. Free subscriptions to USGlass, Architects' Guide to Glass & Metal, Door and Window Market (DWM), Auto Glass Journal, AGRR and Window Film magazines, e-newsletters and apps available at glass.com/subcenter or visit stand 13A102 in Hall 13. Contact info@glass.com with ideas/questions. View daily news and videos at usgmn.com or usglassmag.com.

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[KTG SYSTEMS](#)

PA Part of the TECO Group. Glass plant engineers and contractors, designing and constructing electric, fossil fuel and oxy-fuel furnaces. Providing melting technology, engineering, contracting and consulting to all sectors of the glass industry.

[LITSENTRY CORPORATION](#)

MN Glass Inspection and measurement systems for quality + process control. Introducing the new Osprey 7 Distortion + Flatness Inspection for tempered + laminated glass including Osprey Process Control Adviser for automatic furnace adjustment recommendations based on glass quality. Introducing the new Raven 12 Sensor for measurement of glass thickness, IG space thickness, LowE coating detection and coated surface identification. Inspect Scratches, Blemishes + Coating Defect with the Hawk 4 scanner platform for IG / Double Glaze, Coating + Laminatin lines.

[MAGNECO/METREL INC](#)

IL In 1981, Magneco/Metrel was formed by a merger of two small companies, Magneco who made fired shapes and Metrel who made monolithic refractories. The concentration was to be on innovation and the creation of value to the customer by lowering the cost of his production. Early product combinations of Magneco/Metrel were refractory stool inserts with Metrel mortars, coatings and patch materials; Magneco dams, weirs and baffles combined with Metrel low cement castables and tundish veneers. Blast Furnace Cast House Refractories which evolved from: Fast drying shovel set and rammable materials using colloidal silica as a binder; to resin bonded ramming Mixes and shapes made from low cement castables licensed from Kawasaki's Refractories, starting in 1983. Starting in 1989 Magneco/Metrel, recognizing the insurmountable shortcomings of low cement castables, made a total commitment to a new technology utilizing the latest versions of colloidal silica combined with other chemical additives to form a unique binding system. Nanotechnology had come to the Cast House. The first products utilizing the unique colloidal silica binding system were pumpables, which could, of course, be cast but could also be moved through hoses at a considerable distance. The second round of complimentary colloidal silica bonded products was capable of being shotcreted to rebuild surfaces without the use of forms. The great success of the Nanotechnology approach in Iron making Cast Houses led to other Iron making applications for a family of products built on the common base of the colloidal silica binder system. At the present time these products are used throughout cast houses and also: In shotcrete reprofiling of the stacks and boshes of Blast Furnaces; Hearth leveling and cooling course; sStave backfill; Arrester courses; Artificial Skulls; and Protection of new staves on their hot faces. The unique characteristics of the Refractories made with the colloidal silica binder system developed by Magneco/Metrel, caused Magneco/Metrel to experiment with a number of other formulas to create value for customers by providing quick repairs and therefore equipment availability. To date, there has been great success with monolithic materials in Reheat Furnaces, Glass making Furnaces, Frit making Furnaces, Sodium Silicate Furnaces and in the Aluminum, Copper and Ferro Alloys Industries. Products using the binder system are also finding success in Power Plants and throughout Industries in general, wherever heat and corrosive elements must be contained by material which can be endlessly repaired, providing fast turnarounds coupled with outstanding physical properties such as hot modulus of rupture, thermal shock and thermal cycling resistance and resistance to corrosive attacks.

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<u>MAUL TECHNOLOGY</u>	IN	Maul Technology has served the needs of the worldwide glass container industry for more than 50 years. Manufacturing facilities in the United States provide new machinery, rebuilt machinery and components and spare parts to virtually every nation in the world. Having first established a clear understanding of the individual customer aims and preferred methods of working, Maul design engineers will readily apply their substantial innovative abilities to adapt standard production components and systems to fit exactly what the customer wants. Design and production work closely together ensuring modification from standard manufacture is instinctively handled within tight costing control and where essential, Maul Technology will use their ingenuity to design and manufacture an individual part unique to the customer brief. In these circumstances, as in all other circumstances of working with Maul Technology, all aspects of customer confidentiality will be fully safeguarded.
<u>MERKLE INTERNATIONAL, INC.</u>	IL	Merkle International, Inc. is the world's leading supplier of suspended refractory systems and related furnace equipment. Merkle supplies suspended backwalls, tin bath roofs, and other furnace components as well as blanket batch chargers.
<u>NEW HUDSON CORPORATION</u>	MI	John T. Sukenik founded New Hudson Corporation in 1962. NHC has served the float glass industry since 1965, offering innovative products and services that assist our customers in improving quality and reducing costs. Their complete line of proprietary lehr roller products are well recognized as proven performers by all of the major glass producers worldwide. New Hudson Corporation is located in New Hudson, Michigan, which is 45 miles northwest of Detroit. In addition to their manufacturing facility in New Hudson, they operate a near-by vertical heat treating facility in Milford, Michigan and by partnership arrangement, float glass lehr roll refurbishing facilities in Chauny, France and Shandong, China.
<u>PANERATECH, INC.</u>	VA	Their team is focused on finding new and innovative solutions to challenging problems using cutting edge technology. Their specific core solutions include:portable and integrated sensors for industrial asset life optimization; sensors for industrial process monitoring and quality inspection; material characterization systems; Antenna on Touch sensor for consumer wireless devices; Innovative, out-of-the box wearable and miniature antenna solutions.PaneraTech strives to be one of the most innovative Radio Frequency (RF) technology companies in the world, developing unique solutions. Their Smart Furnace Technology is the first of its kind. Their material characterization solutions expand the capabilities of specialty material research and manufacturing industries. Their out of the box antenna solutions reshape the wireless devices industry. They solve the most challenging problems. Their product development always begins with industry and customer engagement. They take time to learn about and understand the challenges their customers face so that they can create useful and relevant solutions.
<u>PAUL WISSMACH GLASS COMPANY, INC.</u>	WV	Since 1904, The Paul Wissmach Glass Company's customers have provided an endless source of inspiration, resulting in some of the industry's finest glasses. Wissmach glass is incredibly well tempered. There are no internal stresses, so scoring and breaking are extremely easy. Colors can flow from one area to the next in transitions that are virtually seamless. For example, you can move from a grey background

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to dark blue and purple to blue-green, a wonderful ground cover. Wissmach offers plenty of vivid colors for flowers, greens for all types of foliage, and subtle colors to join them together. The glass looks beautiful in reflected light, making it ideal for mosaic work. Wissmach colors are indistinguishable from the glass employed in early Tiffany Studios mosaics. Over the years, Wissmach has consistently developed new glasses to meet its customers' demands such as Corella Classic, English Muffle and Mystic. For the fusing market, Wissmach Glass makes COE 90 and COE 96 products. Wissmach 90 and Wissmach 96 come in thicknesses of 2mm, 3mm, 4mm, 5mm, and 6mm. Initially introduced at Glasstec 2012 are 11 Wissmach colors that can be tempered in 18 different textures. Please contact Wissmach Glass for additional information or stop by the Wissmach stand while attending Glasstec to discuss this unique temperable art glass product. Although new glasses are continually introduced into the company's line, many of the batches used by Wissmach in the early 1900's are still used today. The highest product quality and customer service are hallmarks of The Paul Wissmach Glass Company.

[PILKINGTON -- NORTH AMERICA](#)

OH

The NSG Group is one of the world's leading manufacturers of glass and glazing systems in three major business areas: architectural glass, automotive and technical glass. The mission of the NSG Group is to be the global leader in innovative high performance glass and glazing solutions, contributing to energy conservation and generation, working safely and ethically. Founded in 1918, NSG acquired the leading UK-based glass manufacturer Pilkington plc in June 2006. Today, the Company has combined sales of just over JPY 629 billion, with manufacturing operations in 28 countries and sales in 130 countries, employing some 27,000 people worldwide. They operate in three main sectors. Architectural supplies glass for architectural and solar energy applications. Automotive serves the original equipment, aftermarket replacement and specialized transport glazing markets. Technical Glass products include very thin glass for displays, lenses and light guides for printers, and glass fiber, used in battery separators and engine timing belts. They have major market shares in most building and automotive product markets of the world, with a broad geographic reach, enabling us to respond to customers whose operations, particularly in the case of Automotive OE, are increasingly global. Geographically, 40 per cent of the Group's sales are in Europe, 26 per cent in Japan and 16 per cent in North America, with the remaining 18 per cent being generated mainly in South America, China and South East Asia.

[POCO GRAPHITE, INC. \(AN ENTEGRIS COMPANY\)](#)

TX

Poco Graphite's precision ware handling solutions and unique GLASSMATE® graphite materials can improve performance in container glass production, reduce machine downtime and increase yields. POCO is known for its designs, particularly precision holders and inserts that allow fast accurate machine setup and insert replacement. Standard steel holders are available in several types and sizes. POCO offers a dual function holder that allows for the use of fixed or floating inserts saving you the time of changing the holder when you change the style of insert. Inserts are available as semi-finished blanks, or can be precision machined to a specific finish. GLASSMATE dead plate assemblies combine the strength of a metal support plate with the container compatible surface of a GLASSMATE insert. POCO's Lehr stacker bars are available to meet all of your container-handling needs in open, semi-closed, or closed Lehr applications. The pocketed design of interlocking pads, coupled with steel mounting channels, create a bar that resists

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warping and is extremely durable. Application specialists can assist in the selection of the optimum graphite grade based on pickup, application, and length of the production run.

[PROCESS MATERIALS, INC.](#)

CA Process Materials, Inc. believes that their future rests on its corporate values and company culture. They have maintained these values as part of our daily operations since 1997. Process Materials is a leading manufacturer and supplier of consumable materials serving the thin film industry. Products include sputtering targets for flat panel displays, data storage devices, architectural glass, automotive glass, photovoltaic, optical media, decorative coating, AR, LCD's, hard coatings, etc. They also carry a full line of evaporation materials and have access to all types of precious metals for your coating requirements. Process Materials, Inc. has earned a global reputation for its commitment to quality and service – where trust is as important as technical knowledge.

[PYROTEK, INC.](#)

WA Pyrotek is a global engineering leader and innovator of technical solutions, integrated systems design and consulting services. Container glass manufacturers worldwide trust Pyrotek to help them improve product quality and process performance, from the furnace to thelehr. Their products and solutions are in use globally in pharmaceutical and consumer packaging, automotive, aerospace, transportation and high-tech manufacturing. Improve quality and performance, lower costs and achieve vendor consolidation within the glass manufacturing process with Pyrotek. Based in North America, Pyrotek has experienced product application engineers around the world who will work with you and your production team to decrease valuable time lost due to poor performance of expendable fore hearth refractories, I.S. machine parts and hot glass ware handling products: expendable refractory feeder parts; I.S. machine parts; take-out holders with DuPont™ Vespel® inserts; Sweep-outs; transfer wheel parts; stacker bars; stainless steel fabrics, tapes, ropes and sleeve materials for tempering and bending; hot glass contact rollers; insulation materials; custom high-temperature gaskets and seals.

[RAMSEY PRODUCTS CORP](#)

NC Manufacturer of Silent Conveyor Chain used on IS and Cross Conveyors for Precision Hot End Bottle Handling. Over 79 years of experience. Single pin and two pin design available.

[ROVISYS](#)

OH Since it's founding in 1989 as one of the first control systems integrators in North America, RoviSys has evolved to become a leading independent provider of comprehensive process automation solutions and services. The company has completed more than 2,500 projects for more than 300 companies in nearly 100 industries. RoviSys delivers value to your company by consistently: Bringing to each initiative the vision and perspective required to imagine the most beneficial solution for your needs Maintaining your independence by recommending effective combinations of technology and services to achieve that vision. Intently focusing on producing meaningful results. With the resources, experience and skills to solve and support practically any process automation and integration challenge, the company's more than 160 engineers, developers and project managers make RoviSys an excellent choice for companies of all sizes looking for real solutions. RoviSys divisions and services: Process control system engineering and integration. Pharmaceutical and biotechnology automation and validation. Product development creation, management and engineering services for the entire product lifecycle, featuring Modular Product Development. Information integration, including Make-Smart intelligent

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manufacturing, Overall Equipment Effectiveness, Manufacturing Execution Systems as well as plant floor and plant/business integration. Software engineering and project management. GrandView Business Systems, which sells and supports the GrandView projects collaboration and management system. Spanning generations of technology: RoviSys is a control system integrator and product development company with a foot planted firmly in the old and the new worlds of technology. Their engineers and developers know proprietary systems: Before joining RoviSys, many of them created some of the most successful large-scale control systems of the last decade. But more than a decade ago, these same engineers and product developers recognized that companies investing in the most proprietary of systems wanted something more--the freedom to choose the best available technologies and solutions with alternatives for support and upgrades. In short, they wanted open systems. RoviSys was founded in 1989 to fulfill those wants. The RoviSys commitment is simple: provide clients with world class information integration and process controls using the best available components and platforms, regardless of who makes them. In short, give clients choices. Do open markets require open systems? No. But the benefits of open systems make their own case-- The ability to choose the best solution from all alternatives, multiple sources of support, including in-house, better performance, more features and lower costs to implement and own. They founded RoviSys as an independent control system integrator because they felt systems owners wanted those freedoms, to be enabled, not restrained. And the best way to provide truly independent solutions? Be truly independent.

[SHIMADZU PRECISION INSTRUMENTS, INC](#)

CA

Shimadzu is the #1 Turbo Pump in the Coating Industry! Whether for glass coating or for solar applications, Shimadzu Magnetically Levitated Turbo Molecular Pumps are your solution for high vacuum requirements. With high precision machined components coupled with strict quality requirements, Shimadzu Turbo Molecular Pumps have set the standard around the world for high reliability, performance, and low cost of ownership. Shimadzu complies with European WEEE and RoHS Directives, and strives to create environmental friendly products.

[SONO-TEK CORPORATION](#)

NY

Sono-Tek Corporation is the world leader in ultrasonic spray systems for applying precise, thin film coatings. They are a green technology company, creating patented high performance ultrasonic spray coating technology for float glass manufacturing, electronics manufacturing, medical, industrial and nanotechnology industries, supplying superior coating solutions to companies globally. Their environmentally friendly ultrasonic spray coating systems result in superior performance coatings, with dramatic reductions in overspray, savings in raw material, water and energy usage, improved process repeatability and transfer efficiency, greater uniformity and reduced emissions.

[SPUTTERING COMPONENTS](#)

CA

Products: Sputtering Components, Inc. (SCI) is a leading manufacturer of internal and external rotary cathodes and related components. They specialize in highly reliable and user friendly designs with the highest power ratings available. Their products are known for their process stability and ease of maintenance, ensuring the lowest cost of ownership in the industry. SCI magnetics are designed to ensure high quality, uniform coatings for your application. SCI can provide components or turnkey solutions to meet your requirements. Simulation, Testing, R&D: They use advanced software to model magnetic fields and low pressure

gas flow dynamics. Gas manifolds models are optimized using molecular and transition flow analysis software. Target tubes and other mechanical parts are designed for long-term operation by reducing the stress concentrations to safe levels. SCI also has state of the art thermodynamic flow simulation capability to model heat transfer within sputtering targets. Using their in-house test chamber, SCI can perform quick-turn prototyping and test customized results. Customers can evaluate their process in SCI's test system to verify key parameters such as deposition rate, process stability, and film properties. Manufacturing: SCI has the most modern machining equipment, using the latest technology available. By manufacturing in-house, they have direct control over their quality and their schedule. Their manufacturing operation uses high precision CNC machining centers to fulfill a variety of needs. All equipment is regularly maintained and calibrated to ensure 100% repeatability and accuracy. All lid systems are programmed by trained personnel and fully tested prior to shipping. Components are cleaned and assembled to ensure each order is built according to the customer requirements. Final assemblies are bagged and packaged with care to ensure they arrive safely at the customer site. Quality: They employ a coordinate measuring machine (CMM), which allows exact measurement of manufactured parts to accuracies of 0.0003 inches. SCI uses an ISO compliant quality system which governs all aspects of their design and manufacturing process. Every product is quality-checked before leaving SCI; magnet assemblies are characterized using their 3-D magnetic mapping tool, and cathode components are water and vacuum leak checked. Service and Support: Their staff walks with the customer through every step of the process to ensure a quality product that meets their needs. They provide service and support worldwide through their in-house service technicians and their conveniently located sales and service representatives.

[STEWART
ENGINEERS &
ASSOCIATES, INC.](#)

NC Stewart Engineers is a full-service General Contractor for the Glass Manufacturing Industry. Their multi-discipline team can plan, design, engineer, and manage a broad range of integrated project solutions. Feasibility Studies and Economic Analysis; Turnkey Float Glass Lines; StewartFloat® tin bath furnaces engineered to produce standard, ultra-thin, ultra-thick, ultra-clear, and borosilicate glass products. AcuraCoat® high performance CVD systems capable of producing reflective, low E/low E Pro, Solar Control, PV-TCO, Anti-Reflective, and self clean hard coatings; Float Line Rebuilds and Trouble Shooting; Emission Control Systems for Float Lines and Coating Systems; They are committed to meeting any challenge. Through their dedication to innovation, honoring their commitments, providing results, and striving for the highest quality, they ensure that their customers receive the best products and services in the industry.

[STRAINOPTICS, INC.](#)

PA Manufacturer of non-contact, non-destructive stress measurement instrumentation to the glass and plastics industries. In addition to the internationally recognized GASP® surface polarimeter, their product line encompasses a complete range of instruments, from simple strain viewers and polarimeter systems to specialized on-line and off-line equipment for measuring stress and other optical properties in a wide range of materials, including: Float glass, Architectural glass, Automotive glass, Electronic glass, Container glass, Optical/scientific glass, Plastic film, Molded products, Medical packaging, Medical devices.

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<u>TECO INTERNATIONAL-TOLEDO ENGINEERING CO.,INC.</u> <u>TUFF TEMP CORPORATION (NARRICOT INDUSTRIES)</u>	OH	TECO design and construct on a turn-key basis float glass furnaces including fuel-fired regenerative, recuperative, oxy-fuel and electric. TECO also supply electric boost systems, forehearths, batch plants, emission and process control systems.
	PA	Manufacturers and suppliers of high temperature, heat resistant, abrasion resistant textile conveyor belts, Kevlar Oven Roller Tapes for Glass Tempering machines, Endless Belts and Pads for aluminum extrusion handling systems. Kevlar and other high temperature resistant Pads, Tapes, Ropes, Gaskets, Tubing, and Roller Covers for the glass making industry and aluminum extrusion handling systems as well as for any industry that requires high quality, heat resistant and abrasion resistant textile products. Also have a complete fabrication department to custom manufacture Kevlar pads.
<u>TYFLONG INTERNATIONAL</u>	CA	Reliable Excellent in Surfacing Materials. Since 2001, Tyflong has been supplying high quality and consistent cerium oxide glass polishing powders for the flat glass/mirror, precision optics, electronics, ophthalmic, automotive, and ceramics industries. They have been developing customized surfacing products and solutions for their customers to help them with their manufacturing processes. From meeting tighter surface flatness requirement to reducing production cycle time. All their products are engineered in the U.S. Supported by an in-house state-of-art lab, they conduct analysis of chemical and physical properties, as well as polishing test, to ensure the consistency and performance of each batch. They provide application specific solutions to the polishing and planarization of materials such as soda lime, borosilicate, quartz, silica, etc. Their research and development work over the years has allowed us to address issues such as stock removal rate, suspension and dispersion, slurry re-circulation, slurry re-dispersibility, surface roughness, etc. They are committed to working with customers on specific needs and welcome the opportunity to provide you with high quality products at competitive prices.
<u>ZIRCAR REFRACTORY COMPOSITES, INC.</u>	NY	ZIRCAR Refractory Composites, Inc. produces a comprehensive line of advanced high performance ceramic, ceramic composite materials, and related products. Their materials are used around the world in the most demanding thermal, structural and electrical insulating applications ranging in temperatures from 600°C (1112°F) to 1650°C(3002°F). For over thirty years, they have been a problem-solver working with their customers to resolve their thermal management problems. They have developed products that have become industry standards for induction melting, forging and heat treating applications, investment casting, glass processing, hot pressing, as well as many high temperature electrical applications.
<u>ALGAS - SDI</u>	WA	Algas-SDI is a manufacturer of products and systems for the reliable deployment of clean hydrocarbon fuels worldwide. They design and manufacture a wide variety of LP-Gas Vaporizers, LP-Gas-Air mixers for replacing or augmenting the supply of Natural Gas, Natural Gas-air mixers for augmenting the supply of digester gas, Natural Gas-air mixers for combustion process pre-mixing, and Ammonia vaporizers for thermal de-NOx and industrial processes. Algas-SDI, together with its partners world-wide, offers its customers an excellent single source for design, installation, and service for total system needs, supported by expert application engineering services.
<u>ALTERNATE ENERGY</u>	GA	Alternate Energy Systems, Inc. manufactures LPG Vaporizers, LPG

[SYSTEMS, INC.](#)

Vapor / Air Mixers (Blenders), and completes Systems for use as standby plant, for peak shaving, and as primary gas supply. Since the company was founded in 1974, they have manufactured a wide variety of individual components and packaged systems. These components and packages, complete with interconnecting piping, wiring, and control and monitoring equipment, are thoroughly factory tested, and are ready for connection to liquid LPG supply, properly sized electrical supply, and gas outlet. In addition to LP and LP/Air Systems, AES also manufactures gas/gas blenders for applications such as Natural Gas Stabilization; Landfill Gas Replacement/Backup; Digester Gas Replacement and Enrichment; Coke Gas Replacement/Backup; Air/Nitrogen Blending; etc. Alternate Energy Systems (AES) is a small company with a world-wide presence, located in Peachtree City, just outside Atlanta/USA. The size of their company allows us to focus on a small section of the energy industry, and to respond to new challenges faster than any other organization. Innovation as a means for improvement is more important to us than innovation that only affects the outward appearance of a product. Over the course of their 40-year company history, they have introduced innovations that are now industry-standards, and innovations that are still unique to AES. They strive for continuous improvement and for being recognized as the most innovative and the most responsive manufacturer of vaporization and gas blending equipment worldwide. All equipment manufactured by Alternate Energy Systems is available in various sizes and configurations, and with various options. Please consult with your area distributor or with the factory for your specific requirements.

[CASSO SOLAR TECHNOLOGIES LLC](#)

NY Casso-Solar Technologies LLC has over 50 years combined experience in concept and design of industrial heating systems for the glass industry. Glass Laminating Systems - Batch without Autoclave, Continuous Press with and without Autoclave, Continuous Vacuum Laminating with and without Autoclave - Interlayer materials including PVB, DuPont SentryGlas, EVA, Urethane and more. Architectural, Automotive, Noise Reduction, Ballistic and Photovoltaic Applications. NEW CONVEYORIZED NON-AUTOCLAVE LAMINATING SYSTEM WILL BE INTRODUCED AT THE SHOW. Glass Decorating Systems - May incorporate screen printing, roll coaters for spandrel, digital printing with IR, combination IR/Convection or UV drying/curing. Complete package with cooling. Compatible with water miscible and solvent ceramic inks, silicone inks such as ICD Opaci-Coat, epoxy and other inks. Architectural, Automotive, Appliance and Photovoltaic Applications. Bending Systems - Annealed, Multizone, shuttle or indexing systems. Architectural, Automotive Ballistic, and Aircraft Applications. Custom Furnaces - Vertical and horizontal, rolling hearth, anneal and more Replacement and Retrofit oven and furnace heaters.

[E.W. BOWMAN INC.](#)

PA Since 1959, a company known worldwide for developing Annealing Technologies and Decorating Systems. Today, 1,200 Bowman lehrs are operating on six continents, in over 56 countries. Bowman is the preferred lehr for glass containers, tableware and lighting manufacturers worldwide. That's a responsibility they take very seriously. And they support their customers with value-added services worldwide. That includes their ability to upgrade lehrs to increase their productivity and fuel efficiencies. And regardless of the make of the lehr, Bowman has developed a highly efficient system for lehr relocation or upgrade that ensures fast turnaround to restore production in minimal time.

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[GLASSLINE CORPORATION](#)

OH Glassline Corporation is a premiere global supplier for the flat glass processing markets of automotive, appliance, furniture, architectural and specialty glass. They are a full service company, including custom engineering, machinery, and diamond tooling manufacturing, working in collaborative partnerships with their Customers. They are significantly vertically integrated, with large fabrication, machining, and assembly areas. This allows us maximum control over quality, cost, and schedule to provide their Customers with optimum value. Their broad product line provides their Customers with a wide range of choices in order to meet their needs for fabricating flat glass, including Glass Handling Equipment, CNC Cutting (also with Edge Deletion), Auto-Breaking, CNC Grinding, Double Edging, Automated Drilling Systems, Screen Printing and Drying, Waterjet Cutting, Lamination Equipment, Centrifugal Filtration, Wheel Redressing Equipment, and more, all meeting high quality standards set by their customers. Their equipment can be installed as stand-alone machines, or can be integrated into complete lines. They are known for producing heavy-duty, high performance equipment that will provide many, many years of service. If you require a special machine to solve production issues or to give you an advantage over your competition, their engineering team can work with you to create a solution and/or their manufacturing team can produce it to your specifications. They are more than just a supplier. They strive to become their Customers' partner, presenting them with innovative equipment solutions to their production problems or future requirements through cooperation and customization.

[HENRY F. TEICHMANN](#)

PA Since 1947, Henry F. Teichmann, Inc. has grown and progressed on the theme: "Satisfied clients are their most important asset." Their employees are practical, conscientious, and experienced in every phase of the glass industry. As a result of their clients successes, they have become recognized worldwide as one of the largest independent Engineers and Contractors to the Glass Industry. They take great pride in their reputation and expect to continue to improve and innovate as contractors and engineering specialists. They promise to be worthy of the position they have earned and achieved within the glass industry. Henry F. Teichmann, Inc. engineering, technical service, purchasing, construction and project management team is committed to providing turnkey services for batch plants, complete glass plants, electric furnaces, container glass furnaces, float glass furnaces, fiber glass furnaces, foam glass furnaces, sodium silicate furnaces, pressed glass melting services, TV glass furnaces, hand glass processes, tableware and lighting products. In their 69 years they have serviced over 1,000 projects worldwide. Their engineering staff has provided furnace designs utilizing regenerative package furnace, cross-fire furnace, end-fire furnace, electric furnace and oxy-fuel melter technologies. In addition to successfully converting to oxy-fuel firing for TV glass furnaces and fiberglass furnaces, HFT has worked with PPG in converting three PPG float furnaces into oxy-firing. Three new oxy-fuel float glass lines using HFT/PPG technology have been successfully built in China. Henry F. Teichmann, Inc. has teamed up with PPG in providing turnkey solutions and up-to-date technologies to the float glass industry worldwide.

[NATIONAL GLASS ASSOCIATION](#)

VA Founded in 1948, the National Glass Association (NGA), www.glass.org, is the largest trade association serving the architectural glass and metals industry, and represents the interests of glazing contractors, glass retailers, glass fabricators, primary glass manufacturers and architects. Its sister organization, the Window & Door Dealers Alliance (WDDA), www.wddalliance.org, represents the interests of retail, wholesale and

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installing dealers of new and replacement windows, doors, skylights and related building products. The NGAWDDA provides education and training programs and services for its member companies through manuals and the online training site, www.MyGlassClass.com, and keeps them informed through the Glass Magazine (www.glassmagazine.com) and Window & Door (www.windowanddoor.com) family of print and electronic publications. The NGAWDDA also produces the industry's largest annual trade show in the Americas, GlassBuild America (www.GlassBuildAmerica.com) and hosts the Glazing Executives Forum and Window & Door Dealer Days, bringing together thousands of industry professionals to help them build more profitable businesses.

[PACIFIC CONSOLIDATED INDUSTRIES](#)

CA PCI manufactures ruggedized onsite liquid and gaseous oxygen and nitrogen generators for a variety of markets; including Military, Medical, Water & Wastewater Treatment, Industrial, and Oil & Gas markets. PCI was founded in 1984 to manufacture cryogenic air separation devices for operation in extreme and remote environments. Since then, PCI has continually expanded its technology platforms to include membrane and adsorption (VSA) technology. They have built thousands of systems that are actively operating and supported in over 25 countries worldwide. Their products enable their customers to produce oxygen and nitrogen at the point of use, effectively eliminating the logistical supply chain associated with delivered product. PCI's corporate headquarters is located in Riverside, California. The company also maintains a service facility under PCI Canada in Fort Saskatchewan, Alberta to support their oil & gas customers. PCI's Quality Management System meets the requirements of ISO 9001:2008 and ISO 13485:2003:

[PPG INDUSTRIES INC - FLATGLASS INTERNATIONAL](#)

PA Since 1883 PPG Industries, Inc. has operated on the leading edge of new technologies and solutions in the glass industry. Recognized for their high performance, solar control, low-e Solarban® products, as well as the renowned Starphire® Ultra-Clear Glass, they continue as a frontrunner of global glass products & services. They are a streamline, efficient glass manufacturer. Combined with their distinguished strength in Research and Development, it is their vision to continue to be a world-leading global glass producer!

[PRAXAIR, INC.](#)

NY At Praxair, 27,000 employees in 50 countries are working together towards a common goal: making their planet more productive. For more than 100 years, Praxair has taken something as fundamental as air and turned it into ways to make plants operate cleaner and more productively, food taste better, breathing easier and manufacturing processes more efficient -- in short, to make all their lives better.

[QUANTUM ENGINEERED PRODUCTS INC.](#)

PA Quantum is dedicated to the long term success of the glass container industry. Their passion is in helping glass container manufacturers achieve optimal production efficiency. They specialize in improving the critical process of blank side forming. They are committed to helping glassmakers keep glass the best packaging choice. At Quantum they have been solving container forming problems for nearly four decades. The Quantum Forming System can operate on any IS machine and be used in any container forming process. Throughout the glass container industry the Quantum name is synonymous with innovation and quality.

[SPECIAL SHAPES REFRACTORY](#)

AL Wally Evans, President, Special Shapes Refractory Company, discusses the company's 25-year history. Special Shapes Refractory Company is a

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COMPANY

privately-held, family-owned business founded in 1987. From the very beginning, they set a goal to be a refractory company that could skillfully craft pre-cast refractory shapes quickly without sacrificing quality. This fundamental goal continues to be the cornerstone for the successful growth of their company. Today, SSRC operates a 150,000 square foot manufacturing facility with sales representatives located in Bessemer, AL, Baltimore, MD and Pittsburgh, PA. Their company's number one capability is vibrocasting unique engineered pre-cast refractory shapes. They offer quick turnaround times and short lead times for emergency hot and cold repairs. They cast shapes for all of the major glass producers here in the United States, NAFTA region and overseas markets. While their focus is on glassmakers, they offer products for use in any heat processing industry including aluminum and steel foundries and petrochemical manufacturers.

STRUTZ INTERNATIONAL INC.

PA In the early 1950's Carl Strutz Sr., a German immigrant and his two sons, Frank and Carl Jr. began operation of a small machine shop near Pittsburgh, Pennsylvania. They provided customers with job shop machining and custom assembly services. The company incorporated in 1953 as Strutz Fabricators, Inc. Their involvement in the glass industry began when a local glass factory contracted them to build a special machine to print labels on glass beverage bottles. The collaboration yielded the first STRUTZ glass decorating machine. It was a semi-automatic screen decorator, requiring the operator to manually load a glass container onto the machine. Labels were transferred onto the container's surface through an ink filled screen tray bearing a graphic design. Image quality depended on how well the label design could be transferred onto the glass container without smearing or smudging, and with good color-to-color registration. Sharp images depended on precise synchronization between the glass container and the screen. This remains the key to high quality images that STRUTZ machines produce today. In the early 1960's, Strutz Fabricators developed the CS100, the first STRUTZ automatic glass decorator. It operated with other machines in a glass factory using a system of interconnected conveyors. Glass bottles were loaded onto the automatic decorating machine from a conveyor, screen decorated in multiple colors, and then unloaded onto another conveyor. Speeds exceeding 100 bottles per minute could be achieved using this process. Today's STRUTZ glass decorators can operate at speeds exceeding 150 bottles per minute and can decorate bottles in four colors with excellent color-to-color registration. The level of performance and quality found in their decorators are not available on any other glass decorator product in the world. Additionally, they offer six color, high speed tumbler decorators capable of speeds of 75 bottles per minute; lehr cross conveyors; single liners; stackers and specialty container decorators. They even offer an improved version of the original semi-automatic decorator that revolutionized the glass industry in the early days of the company's history. Today, Strutz International, Inc. is owned and operated by Carl Strutz Jr. and Frank Strutz, Sr.* Their decorators are machined and assembled by experienced craftsmen as they were over 40 years ago. They continue to progress as the world leaders in the glass decorating industry through their commitment to their customers and by the quality of their machines.

UTAH REFRATORIES CORP.

UT Owners Ray Worthen and Dennis Williams operate Utah Refractories Corp. as an independent refractory manufacturer. They strive to ensure that all of their customers receive: Quality, One Brick at a Time. Gen-Sil: Silica brick grades are A.S.T.M. Type "A", designed for primary glass

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melting tanks. GREFCO: Silica brick grades are designed for coke ovens and other industrial applications. Quality begins with high purity quartzite rock from company owned mines. Manufacturing at 4,500 feet above sea level and utilizing ten periodic kilns produces volume stable brick with very low residual quartz.