

GLOBAL POLYMER SUMMIT

PRESENTED BY IEC & ITEC

September 8-11, 2025 | Cleveland, Ohio

ONE WEEK, ONE EVENT FOR THE RUBBER INDUSTRY



Rubber World Magazine's digital edition brought to you courtesy of

GLOBAL POLYMER **SUMMIT**

PRESENTED BY IEC & ITEC

September 8-11, 2025 | Cleveland, Ohio

ONE WEEK, ONE EVENT FOR THE RUBBER INDUSTRY

REGISTER NOW

www.airbossofamerica.com







FULL-CYCLE SERVICE



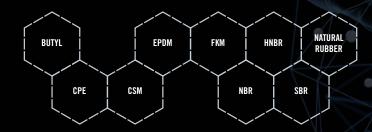
FASTER DEVELOPMENT



FORMULATED FOR YOU

RUBBER REIMAGINED

We reimagine rubber's possibilities every day. For longer-lasting belts and treads. Tighter seals and stronger hoses. Better- performing infrastructure components and tougher oil field equipment. Every compound is custom-formulated, A2LA-tested onsite, and expedited from start to delivery as if your business is our top priority. Which it is.



WWW.AIRBOSSOFAMERICA.COM

AUTOMOTIVE • TIRE & TRACK • BUILDING & CONSTRUCTION • ENERGY & OIL • MINING • AEROSPACE WATER TREATMENT... AND WHEREVER ELSE RUBBER WORKS.



A 1-size-fits-all processing aid for your extrusion?

That's risky business!

Someone else's solutions won't fix your problems – but Struktol's tech team proprietary blends to improve the processability and quality of your thermoplastic polymer.

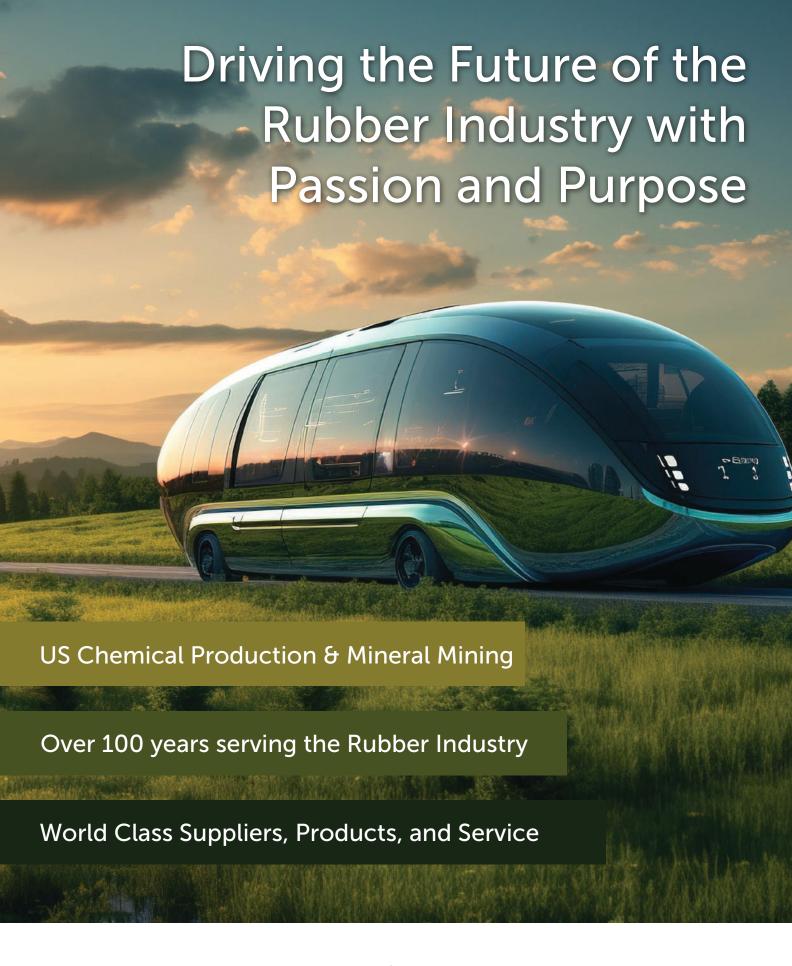
Struktol promises:

- Customized solutions with unique, state-of-the-art aids
- New ways to use aids
- **Overally** Ultra focused targeted functions
- Results = efficiencies and product improvement



Contact us to explore tailored solutions for your applications.

Struktol.com | 800.327.8649



FEATURES

28 Shaping the future of rubber product manufacturing with smart automation

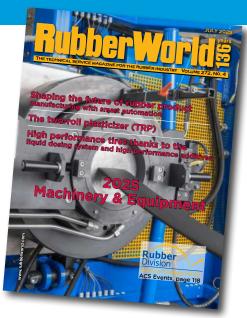
by Soren Blomaard and Ly Ho, Taniq. Automation developments and how they can be applied for the automated design and manufacturing of reinforced rubber products are presented by the authors.

36 The two-roll plasticizer (TRP)

by Peter J. Uth, Julia Uth and Manuel Beßler, Uth GmbH. TRP Reworker process technology combines proven methods in rubber processing, such as cracking, homogenizing and discharging, closing a gap in the processing of rework materials.

40 High performance tires thanks to the liquid dosing system and high performance additives

by Patrick Buder, Zeppelin Systems GmbH, and Sara Liébana Viñas, Evonik Industries AG. A liquid dosing system allows specialized high performance additives to be dosed as pure liquids in their viscous form, without carrier material or waxes, to reduce rolling resistance in EV tires.



Cover photo: Courtesy of UTH GmbH

43 New, used and rebuilt machinery directories

A classified list of rubber machinery and equipment with supplier companies is followed by directories of the companies that supply process machinery to the rubber industry, including both new and used/rebuilt equipment. Company listings include addresses and complete contact information.

DEPARTMENTS

- 4 Editorial
- 7 Business Briefs
- **10** Market Focus
- 12 Silicone/Medical Update
- 14 Tech Service

- 16 Perspective
- 19 Patent News
- 119 Meetings
- **122** Suppliers Showcase
- 133 People in the News

ETRMA proposes simplified regs

The European Tyre and Rubber Manufacturers' Association (ETRMA) has offered proposals to simplify the EU regulatory framework. The industry is fully committed to the EU Green Deal and has been one of the main contributors to the decarbonization of EU transport through low rolling resistance tires, while also improving safety, according to the ETRMA. Euro 7 and its upcoming limits of tire abrasion will further stretch the delicate balance of tire performance. Production of tires in Europe keeps lowering its environmental footprint by shifting towards renewable energy and by increasing the sustainability of its supply chain, both by increasing the percentage of recycled raw materials and by investing heavily to arrive to a fast implementation of the EU Deforestation Regulation.

However, the growing complexity and fragmentation of EU legislation is leading to operational inefficiencies, legal uncertainty and administrative burdens, without delivering tangible benefits for innovation, sustainability or competitiveness in the tire sector, according to the ETRMA. High energy and labor costs combined with the industry's inability to fully capitalize on its investments in better performing, more sustainable products are said to be undermining both the viability and long term sustainability of tire manufacturing in Europe.

Cleveland hosts GPS in September

This year's Global Polymer Summit (GPS), organized by Rubber Division, ACS, will take place at the Huntington Convention Center in Cleveland, OH, September 8-11. The Global Polymer Summit will include the Rubber Division's 208th Technical Meeting, Expo, Educational Symposium, two keynote addresses, theater presentations, awards ceremonies, and more. Registration cost for the GPS increases on August 1, and housing closes on August 15.

Rubber World publishes the Global Polymer Summit Daily tabloid publications, distributed to attendees every day of the conference. News from the show, event schedules, special features and photos from the Expo floor fill the pages

of the *GPS Daily. Rubber World's Pocket Spotlight* lists all GPS Expo exhibitors with their company contact details, booth personnel and details on what they will be exhibiting during the Expo.

There is still time to advertise and have your company featured in these important publications. Contact Mike Dies (mike@rubberworld.com) or Pete McNeil (pete@rubberworld.com) for details.



Nill Rohrer

RubberWorld

EDITORIAL STAFF

Jill Rohrer editor
Joel Neilsen technical editor
Don R. Smith contributing editor
Michele Caprez production director
Matthew M. Raymond creative director

EDITORIAL OFFICES

1741 Akron-Peninsula Rd. Akron, Ohio 44313-5157 Phone: (330) 864-2122 Facsimile: (330) 864-5298 Internet: www.rubberworld.com

CIRCULATION

Richard Jarrett (GCSCS8@gmail.com) Manage or renew online: www.rubberworld.com/subscribe

BUSINESS STAFF

Chip Lippincott publisher

Mike Dies marketing representative

Pete McNeil sales consultant Laura Comstock office manager

LIPPINCOTT & PETO

- · Rubber World
- Blue Book: Materials, compounding ingredients, and services for rubber
- · Blue Book on CD
- Blue Book Online
- · Rubber Red Book
- · Red Book on CD
- Rubber World Digital Edition

RUBBER WORLD, (ISSN-0035-9572), July, 2025, Vol. 272, No. 4, Copyright: Lippincott & Peto, Inc. 2025; all rights reserved. J.H. Lippincott, Chairman. Published monthly at 1741 Akron-Peninsula Rd., Akron, OH 44313-5157 by Lippincott & Peto, Inc. Editorial and Executive Offices at 1741 Akron-Peninsula Rd., Akron, OH 44313-5157. Periodicals postage paid at Akron, OH and at additional mailing offices, POSTMASTER: Please send changes of address to RUBBER WORLD, Circulation Dept., P.O. Box 16123, St. Louis, MO 63105. Publication Mail Agreement Number: 1488902. CPC Publication Agreement Number: 40032646; Canada return address: BleuChip International, P.O. Box 25542, London, ON N6C 6B2. Subscription rates: United States, 1 year \$49; Canada, \$59; International, \$169 in U.S. currency by U.S. bank draft or in-

ternational money order. Single copies \$20.00. July, 2025. All rights reserved.

Alliance for Audited Media



VMI'S CANTILEVER BATCH-OFF

THE VMI CANTILEVER BATCH-OFF IS OUR COMPACT SOLUTION FOR ENDLESS STRIP PRODUCTION AND CAN BE CUSTOMIZED TO MEET CUSTOMER SPECIFIC NEEDS.

- · Easy overview and accessible
- · Operator and maintenance friendly design
- · Removable holding tank for easy cleaning of dip liquid
- Throughput up to 3000 kg/h
- · Optimized handling of strips and slabs up to 400 [mm] wide
- · Combination with multiple types of stackers possible

vmi-rubber.com







ARP MATERIALS

Product Line Card



POLYMERS

Chlorinated Polyethylene (CPE) Chlorosulfonated Polyethylene (CSM) Ethylene Propylene Rubber (EPDM) Styrene Butadiene Rubber (SBR) Nitrile Rubber (NR) Nitrile Powder (NBR) Nitrile/PVC

High Styrene Resin (HSR) Polybutadiene (BR) Polychloroprene (CR) Natural Rubber (NR) Butyl Rubber (IIR) **Butyl Reclaim** Whole Tire Reclaim





















PERFORMANCE

Bonding, Coating and Releasing Solutions Acrylic Impact Modifiers and Process Aids Thermoplastic Elastomers (TPR/TPE)

Engineered Compounds Phenolic Resin Anti-Tack

ADDITIVES

Carbon Black Recovered Carbon Black Chemical Foaming Agents (CFA's) Flame Retardants and Smoke Suppressant TAC/TAIC Chemicals Lubricants

SUSTAINABILTY

Natural Rubber (NR) Recovered Carbon Black Thermoplastic Elastomers (TPR/TPE) **Ecolig Butyl Reclaim** Whole Tire Reclaim





Contact us:







+1.888.611.0220



Business Briefs

Guill Tool expands laboratory capabilities

Guill Tool & Engineering (www.guill.com), has expanded its laboratory capabilities to better serve the global extrusion market with the creation of **Guill Labs**. The laboratories include the

Acquisitions, EXPANSIONS

company's state-of-the-art rheology laboratory and a facility focused entirely on the extrusion process. Supporting extrusion tri-

als, the test laboratory also offers extrusion training, die cleaning services, sample inspection and end-product testing.

Evonik (www.evonik.com), Essen, Germany, decided to localize the final production step of its Polyvest ST-E 60 in Shanghai, China. Increasing the production capacity of silane-functionalized polybutadienes is said to represent a significant advancement in reinforcing Evonik's position as a reliable partner in the specialty chemicals market. Thanks to its rubber based nature, Polyvest is said to provide a natural fit and is highly compatible with the rubber matrix of tire tread compounds.

Ecore International (www.ecoreintl.com), Lancaster, PA, acquired HTI Recycling, a tire collection, recycling, reuse and crumb rubber manufacturer. The acquisition, which includes HTI subsidiaries Edge Rubber Recycling and D&G Heavy Equipment Leasing, is said to unite businesses to deliver high quality products and services that support a circular economy.

Quality registrations

Apollo Tyres (www.apollotyres.com), Gurugram, India, announced that its facility in Hungary has been awarded International Sustainability and Carbon Certification Plus (ISCC+).

Cabot (www.cabotcorp.com), Boston, MA, has earned a platinum rating from **EcoVadis**, the highest recognition available, for the fifth consecutive year.

Continental (www.continental.com), Hanover, Germany, announced that all of the Continental Tires group sector's European production sites where new tires are manufactured have been awarded the internationally recognized International Sustainability and Carbon Certification Plus (ISCC+). In addition to the tire plants in Lousado, Portugal; Puchov, Slovakia; Korbach, Germany; and Sarreguemines, France, the tire plants in Otrokovice, Czech Republic, and Timişoara, Romania, are now also among Continental's ISCC Plus certified production sites. Continental's textile plant Industria Textil do Ave (ITA) in Lousado, which supplies technical textiles and other reinforcing materials for new tire production in Europe, has also been certified.

Smithers (www.smithers.com), Akron, OH, announced that the proving ground at Treadwell Research Park in Pearsall, TX, has earned ISO 17025 accreditation. The scope of accreditation for the site includes wet grip testing and tire buffing. Preparations to add other test methods such as rolling resistance and pass-bynoise to the accreditation are underway.

Flame Retardants

Zinc Borate - Small particle size specific for Wire and Cable

Flame Check - Non Halogen specialty flame retardants and packages

Antimony Oxide

ATH

Magnesium Hydroxide

Phosphate Esters

Chlorinated Paraffin

Give us a call and let us help solve your biggest challenges.

Service you expect.



1665 Enterprise Pkwy, Twinsburg, OH 44087 Ph: (800) 991-2436 F: (330) 920-0971

www.hbchemical.com

Business Briefs

Fornnax collaborates with RPM Automotive

Fornnax Technology Pvt. Ltd. (www.fornnax.com), Gujarat, India, announced a significant project with **RPM Automotive Group Limited**, an Australian automotive parts distributor. This

CONTRACTS,

initiative is said to demonstrate RPM's strong commitment to environmental responsibility within Australia's tire recycling industry. To achieve

its objectives, RPM strategically integrated Fornnax's high capacity SR-200 HD primary shredder into its operations.

ELIX Polymers (www.elix-polymers.com), Tarragona, Spain, a member of **Sinochem** and a manufacturer of ABS (acrylonitrile-butadiene-styrene) resins and derivatives, announced that **Yanfeng China**, a supplier of automotive interior parts for premium OEMs, has selected ELIX Polymers' PC/ABS 5130 for interior parts of the new SGM **Buick** GL8. This follows a collaboration between Yanfeng, Sinochem and ELIX Polymers to develop and industrialize several interior components.

Apollo Tyres (www.apollotyres.com), Gurugram, India, announced the extension of its strategic partnership with **Manchester United Football Club** for an additional three years. This renewed collaboration is said to underscore Apollo Tyres' commitment to excellence, innovation and shared values with Manchester United.

Hallite Seals (www.hallite.com), Hampton, U.K., a provider of premium hydraulic sealing solutions, signed an agreement to acquire Aston Seals. The agreement is subject to regulatory and non-statutory approval and should be finalized in the coming months. Based in Carpi, northern Italy, Aston Seals operates in over 80 countries, with a portfolio featuring hydraulic, pneumatic and custom made seals designed for a wide range of applications.

Bellofram Elastomers (www.belloframelastomers.com), Newell, WV, named Garnett Component Sales as its official manufacturer's representative for the southeastern United States, covering Alabama, Florida, Georgia, Kentucky, North Carolina, South Carolina, Tennessee and Virginia. Bellofram Elastomers is a unified entity created by joining Bellofram Diaphragm, maker of the original rolling diaphragm, and Bellofram Silicones.

HB CHEMICAL KNOWS MEXICO



HB Chemical Mexico has different warehouses in Monterrey, Querétaro, Leon, Toluca and Vallejo. With a team of industry experts to help Mexican companies do their jobs easier and make their products better. Call HB Chemical and see how we can help you.



Carlos Sanchez Mariana Calderon Contreras Operations Manager

Armando S Garcia S Sales Llame a uno de nuestros expertos hoy.

Servicio que usted espera.

HB Chemical Mexico S.A. de C.V., Av. Paseo Colon No. 311-A, Col. Residencial Colon, Toluca, Mexico 50120 Tel. +52 (722) 212 1800 www.hbchemical.com.mx

Business Briefs

Orion earns carbon black safety awards

Orion S.A. (www.orioncarbons.com), Luxembourg, has received ten safety awards from the International Carbon Black Association, which each year recognizes companies

CORPORATE, FINANCIAL NEWS

that have superior safety records at their manufacturing sites. The ICBA said Orion "set the benchmark"

for the carbon black industry for employee health and safety. Orion has also announced plans to discontinue production at three to five of its carbon black lines at multiple facilities in the Americas and EMEA by the end of 2025.

Prism Worldwide (www.prismww.com), Kirkland, WA, announced a trio of innovations poised to transform the recycling and sustainable materials industries, including key advancements in odor reduction, sustainable thermoplastic vulcanizates (TPV) development and high-content ethylene propylene diene monomer (EPDM) reuse.

Zochem (www.zochem.com), Dickson, TN, a producer of zinc oxide, was honored with the Excellence in Manufacturing Award by the **Brampton** (Ontario, Canada) **Board of Trade**.

Smithers (www.smithers.com), Akron, OH, a provider of testing, consulting, information and compliance services, celebrates its 100th anniversary this year.

Ashland (www.ashland.com), Wilmington, DE, announced the closure of its manufacturing facility in Parlin, NJ, and the transfer of its hydroxyethyl cellulose (HEC) production from Parlin to its Hopewell, VA, plant.

ARPM honors 2025 safety award winners at annual EHS Summit

The **Association of Rubber Products Manufacturers** (www. arpminc.org), Indianapolis, IN, announced the recipents of the 2025 Safety Awards during its annual Environmental Health and Safety (EHS) Summit.

The Safety Achievement Award recognizes facilities that have demonstrated exemplary safety performance based on data from their OSHA 300 log of work-related injuries and illnesses. Gold Safety Award winners included Mechanical Rubber Ohio, LLC; Mechanical Rubber; Akron Rubber Development Laboratory (Akron and Barberton, OH); Zochem, LLC; and Zeon Chemicals (Hattiesburg, MS, and Louisville, KY). A Silver Safety Award was given to Hamilton Kent LLC. Honorable Mentions went to Specification Rubber Products and Cascade Gasket & Manufacturing.

The Safety Best Practice Award highlights innovative safety initiatives implemented by ARPM members. First Place went to **Hamilton Kent**; Second Place went to **Zeon Chemicals**; and Third Place went to **Blachford RP**.

PRODUCTS YOU NEED. PRICES YOU WANT.

HB Chemical was founded in 1985 and has grown to be a distributor of quality rubber chemicals and products throughout North America. With 10 warehouses located in the US, Mexico and Canada, HB Chemical provides the most economical products to meet customer needs and quality requirements while providing the very best in customer service.

In 2006 our Northeast Ohio warehouse expansion was completed to serve our distribution warehouses in California, Georgia, Illinois, Massachusetts, Missouri, North Carolina, Texas, Virginia, Ontario, Canada and several locations in Mexico.

HB Chemical is certified to ISO 9001 standards and is recognized as one of the top 30 US Chemical Distributors and among the top 80 in the world by ICIS Magazine.

- Accelerators
- Antioxidants & Inhibitors
- Biocide
- Carbon Black
- Dispersions
- Fatty Acids
- Flame Retardants
- Lubricants

- Magnesium Oxide
- Nitrile, SBR, Natural Rubber
- Plasticizers
- · Process Aids
- Stearates
- Sulfur
- TiO²
- Waxes

Service you expect.



1665 Enterprise Pkwy, Twinsburg, OH 44087 Ph: (800) 991-2436 F: (330) 920-0971

www.hbchemical.com

Non-automotive belts see sustained growth

Polaris Market Research reported Europe's non-automotive rubber transmission belts market will witness sustained growth in the coming years. The market for non-automotive rubber transmission belts in Europe was valued at \$1.25 billion in 2023, and is expected to reach \$1.68 billion by 2032. It is anticipated to exhibit a robust compound annual growth rate (CAGR) of 3.6% from 2024 to 2032.

Non-automotive rubber transmission belts are flexible mechanical components used to transfer power between rotating shafts in industrial machinery. These belts are primarily made from high quality rubber compounds, often combined with reinforcing fibers such as polyester, aramid or fiberglass.

Non-automotive rubber transmission belts are designed to withstand significant

stress and abrasion. They are also said to exhibit excellent resistance to environmental factors like heat, oils and chemicals. These belts come in different types, including v-belts, flat belts and timing belts. These belts are said to be crucial to ensuring the seamless operation of conveyors, pumps, compressors and other machinery.

Several factors contribute to shaping the market landscape. The rising adoption of automation across Europe's manufacturing and industrial sectors has led to increased demand for reliable and low-maintenance power transmission components. The ability of non-automotive rubber transmission belts to absorb shocks, operate quietly and support varying torque requirements makes them ideal for modern mechanical systems.

Europe's agriculture sector is undergoing a technological transformation. Modern agriculture machinery relies on high-performance belts to ensure continuous operation. The ability of non-automotive rubber transmission belts to resist various environmental factors supports precision farming practices and maximizes equipment uptime.

Rubber transmission belts are known for their strength, flexibility and resistance to extreme conditions. This makes them indispensable in applications that need consistent performance.

Some of the most commonly used non-automotive rubber transmission belt types include raw edged belts, v-belts and timing belts.

Raw edged belts feature a raw edged or cut edge design. The inner materials of these belts, including the cogs, are exposed to the sides. This design increases the belt's grip on the sheaves and allows it to transmit more power and operate at higher speeds.

V-belts are characterized by their trapezoidal cross-section. The v-shape of these belts provides more contact area with the pulley, and increases friction and grip. This, in turn, leads to more efficient power transmission.

Timing belts are flexible belts with teeth designed to mesh with toothed pulleys or sprockets. They are used to transmit power and synchronize movement between shafts without slipping.

Germany leads the market for non-automotive rubber transmission belts across Europe, according to the report, but the market is witnessing the fastest growth in Italy.

The report says regulatory authorities and businesses across Europe are placing significant emphasis on sustainability. This has led to increased interest in renewable energy infrastructure and construction activities. Equipment used in these sectors frequently depends on rubber belt systems to ensure safe and efficient transfer of power.

ETRMA urges action on EoW criteria

The European Tyre and Rubber Manufacturers' Association (ETRMA) and EuRIC, the European Recycling Industries' Confederation, have issued a joint paper calling on the European Commission to urgently develop EU-wide end-of-waste (EoW) criteria for rubber derived from end-of-life tires (ELTs) to facilitate crossborder trade in the EU and increase the use of recycled materials in manufacturing.

In the paper titled, "Harmonized endof-waste (EoW) criteria: A key step to strengthening Europe's tire recycling market," EuRIC and ETRMA stress that the lack of harmonized EoW criteria creates legal and administrative barriers across member states, undermining market confidence and limiting recycled materials uptake.

Despite being identified by the Joint Research Center in 2021 as a top candidate for EoW criteria, progress has stalled. The establishment of harmonized EoW rules would clarify when ELT derived rubber is no longer considered waste, ensuring compliance with product legislation, im-

proving quality assurance and enabling circular procurement at scale.

"Technical conditions for ELT rubber to cease being waste are well defined. What's missing is legal certainty. EU-wide EoW criteria are essential to unlock intra-EU trade, investment and circular use of recycled rubber," said Julia Ettinger, secretary general of EuRIC.

"Standardized end-of-waste criteria will boost demand for high quality secondary raw materials and reduce dependence on virgin resources," said Adam McCarthy, secretary general of ETRMA. "These standards will support the uptake of recycled inputs in tire manufacturing, thus supporting the objectives of the Ecodesign for Sustainable Products Regulation (ESPR)."

The tire value chain is aligned and ready to support the commission in defining workable, enforceable EoW rules under the Waste Framework Directive to safeguard valuable resources and ensure the development of a well-functioning internal market for recycled materials in the EU.



From Product Selection to Your Front Door



How much time do you spend managing your chemical and raw material purchases?

Buying from multiple vendors means dealing with multiple sales representatives, purchase orders, invoices, shipments and sometimes multiple headaches.

At Harwick, we consolidate all of this into **one** transaction, while providing you with technical expertise and world-class materials.

Discover the Harwick Difference





Silicone & Medical Update

Ceramifying silicone rubber for e-mobility

Ceramifying silicone rubber for e-mobility and electroactive silicone laminates for sensors are among Wacker Chemie's recent innovations. At a recent press conference for the K 2025, the 23rd International Trade Fair for Plastics and Rubber, to be held in October, the company said it will be showcasing innovations in the areas of grid expansion, e-mobility, sensors and lifestyle applications.

In the area of grid expansion, Powersil 1900 A/B, Wacker's new high consistency silicone rubber (pictured), facilitates the low cost, high precision production of composite insulators via spiral extrusion processes. The focus is on addition curing solid silicone rubber for the cost-effective production of hollow core insulators.

The product is supplied as a 2K system and is suitable for manufacturing processes that involve spiral extrusion. In contrast to other production methods, this is said to make the manufacturing of even large scale insulators with variable diameters easier and more cost-effective. Thanks to their comparatively low weight, hollow core insulators are much easier to install than rod insulators with a solid core. Weight savings may add up to 80%, according to Wacker.

For electromobility applications, Wacker is introducing Elastosil R 531/60, a silicone product for busbars. Busbars are basically aluminum or copper rails that distribute the current between battery cells and modules. As nominal battery voltages in electric vehicles are already in the range of 300 V to 900 V, the reliable insulation of busbars is a must. Elastosil R 531/60 ceramifies in the event of fire, thereby protecting the traction battery in electric cars from short circuits. It makes the sheathing of busbars cost-effective. In the event of fire, the product ceramifies and forms an electrically insulating protective layer that reliably prevents short circuits.

Wacker recently began producing Nexipal Sense silicone laminates on a commercial scale. They are electroactive and can, for example, be used as sensors in the field of digitalization. Silicone laminates are said to take the production of flexible printed electronics to the next level. Nexipal Sense laminates consist of highly stretchable silicone elastomers and electrically conductive silicone films that jointly work as a flexible and stretchable capacitor. Pressure or flex movements change the electrical capacitance of the component. Different voltage states thus provide precise sensor signals for applications in medical technology, robotics and sports.



Wacker is also introducing its new "eco" grade Elastosil eco LR 5003. The non-post-cure liquid silicone rubber is particularly suitable for the large scale manufacture of products in the food industry and other sensitive areas. As far as the volatiles content is concerned, molded parts made from such silicones comply with the limits stipulated by the German Federal Institute for Risk Assessment (BfR), even without post-curing. They also meet the requirements of the U.S. Food and Drug Administration (FDA) for food contact products.

"Silicones are true all-rounders. In addition to being easy to process, extremely robust and versatile, they have very good mechanical properties. For this reason, they are increasingly being used for applications that place high demands on the materials required. This is what makes technical innovations in important industries possible in the first place; for example, in electromobility, medical technology or digitalization," said Martin Bortenschlager, head of the Engineering Silicones business team.

Bortenschlager, an expert in silicones, cited the use of silicone products in energy transmission as an example. According to estimates by the European Commission, the refurbishment and expansion of energy networks in Europe will require investments of over €580 million. "As an insulation material, silicone plays an important and sustainable role in the safe operation of the energy grid. They insulate well, are resistant to both weathering and UV radiation and, unlike porcelain and glass insulators, do not normally need to be cleaned. They are therefore used in practically all areas of energy and transmission technology, especially in outdoor applications," said Bortenschlager.

Silicone & Medical Update sponsored by AGC Chemicals Americas, Inc.



Improve efficiency and reduce downtime for critical food contact applications by using AFLAS® FDA compliant fluoroelastomer grades when failure is not an option.







WWW.AGCCHEM.COM AGCCHEMICALS.INFO@AGC.COM +1 (610) 423-4300

Kurita America's EZ Feed system improves tire manufacturing plant safety and chemical control

A tire manufacturer in the southern United States was facing issues in its eight water baths that are used to cool the rubber after it has been extruded. The water chemistry in the baths must be maintained within the machine and equipment standards (MES), so that the finished rubber maintains its strength. Historically, the manufacturer had been trying to maintain these parameters manually, which presented challenges in keeping the components consistent, such as the water baths being maintained according to MES.

To reach suitable cooling water quality, the process includes chemical treatment to combat microbiological growth, water filtration to control total suspended solids (TSS), pH control and automatic water exchange to effect conductivity. Per the MES, microbiological growth can be confirmed visually and should not surpass 100 relative light units (RLU). The acceptable TSS is at 30 milligrams per liter (mg/L) after flowing through a filter trap, pre-filter and final filter. The conductivity must be under

Figure 1 - Kurita America's EZ Feed drumless delivery chemical storage system



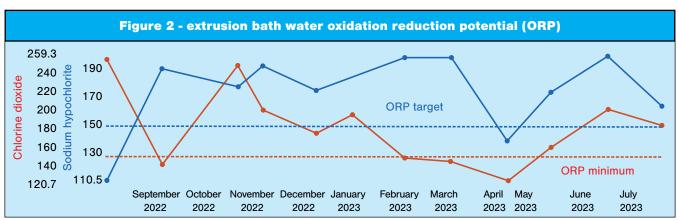
1,000 microsiemens per centimeter (μ S/cm) to maintain an acceptable level of water discharge and replacement. The water baths include sprays that contact the rubber as it comes out of the extruder, and then the section where the rubber is submerged in the bath water for further cooling.

The third party company, Enkrott, had developed an automated equipment package that included sensors and other monitoring equipment, and asked Kurita America to provide both the chemistry and on-site support.

Kurita and the equipment provider's goal was to filter the water and reduce suspended solids, control pH, and limit bacteria and oxidation reduction potential (ORP) to control growth in the extrusion baths. Facilities that deal with microorganism growth within the cooling circuit can see it in two forms: free-floating (planktonic bacteria) and anchored (sessile bacteria or biofilm).

The Enkrott system utilized various components to meet the MES. Two of the components required the use of chemistry: pH and ORP. It is essential to maintain the pH of the cooling water within the given quality limit values in order to preserve a certain tackiness of the rubber components for further downstream processing. Also, it is required that the ORP of the water be monitored, and the disinfectant automatically dosed into the system, depending on the set ORP value. As a general rule, the base ORP of the water should be measured, and then 150 to 200 millivolts (mV) added. This range is an indication or starting point and can be adjusted, depending on the observed condition after a longer period of consistent dosing. If there is already good control, then it can also be possible to reduce the target values to optimize dosing and minimize cost.

In order to reach the pH value, an acid dosing system is employed for the water station. The pH of the water is monitored



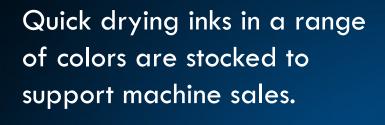
Leading the industry in



1390 Firestone Parkway Akron, Ohio 44301 USA www.apvcoatings.com sales@apvcoatings.com 800.772.3452 Call one of our technical sales reps today!

SPRINTER MARKING

Offering a full range of ink codemarking machines.



Mark:

Porous/Non-porous
Stationary/Moving
Flat/Curved

On:

Rubber/Plastic
Metal/Glass
Paper/Cardboard
Flexible/Rigid
Films/Belts

www.SprinterMarking.com Ph: (740) 453-1000

Tech Service

Figure 3 - Kurita America's EZ feed delivery of sodium hypochlorite



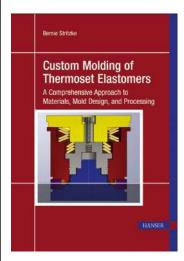
by two pH measuring probes, which then send a signal to the acid dosing pump. The acid dosing system should be dosed automatically and continuously based on the readings from the pH probes to the required value. Kurita America was able to quickly solve the pH issue with the use of AcidPro. Instead of the plant personnel having to handle this product without specific training, Kurita America introduced the EZ Feed delivery system (figure 1). Kurita America's EZ Feed is a drumless delivery, hands-free chemical storage system that is an operator-friendly solution designed to reduce the hazards and liability associated with chemical programs. Kurita America provides

base tanks that are built to Department of Transportation UN Standards by an ISO 9001 certified manufacturing plant, which are filled by trained Kurita America delivery specialists. Overall, the EZ Feed system prevents loss of product feed, removes drum disposal costs, eliminates operator handling and increases operational efficiencies.

After the facility selected the EZ Feed system for chemical delivery and pH control, Kurita America began looking for chlorine dioxide alternatives. Chlorine dioxide is very reactive, and handling and storage of this material is very challenging. After approval from the tire manufacturer, Kurita America initiated a comparison of chlorine dioxide and sodium hypochlorite with a focus on employee safety. After running the line for four months using chlorine dioxide and collecting data, the systems were transitioned to Biotrol 12.5, which is a fast-acting biocide solution for cooling water and evaporator condensers, wastewater and food washing applications. During the evaluation period, Kurita America's representative was on-site every two weeks to ensure the evaluation was meeting expectations and maintaining MES.

Immediate results were apparent during the comparison of the chlorine dioxide and the Biotrol 12.5 (figure 2). The overall bacteria count remains consistent with Kurita America's Biotrol 12.5 treatment. With both acid and biocide in the EZ Feed delivery system, the plant can maintain MES with no chemical handling by plant personnel (figure 3). This ensures that continuous feed is maintained, and no facility employees are exposed to chemicals. Because of the EZ Feed system, there has been a significant improvement in plant safety from potential spills or chemical burns. Kurita America continues to work with the company to meet its parameters.

Kurita America will continue to provide the necessary chemicals, support and monitoring to ensure the water in the baths are always within the specified MES.



Custom Molding of Thermoset Elastomers \$140.00

This comprehensive reference book incorporates the latest developments in the synthesis, production, characterization, and application of various types of polymeric nanocomposites. It outlines the various preparation techniques using different types of nanoparticles and polymer matrices with emphasis on clay nanoparticles. All fundamental issues such as thermodynamics, kinetics, and rheology are discussed. Also, the structure and the characterization of polymeric nanocomposites, including their molecular characteristics, thermal properties, morphology, and mechanical properties, are covered in detail.

www.rubberworld.com/book-store

Perspective

Prevent factory fires with essential monitoring equipment

In the rubber and elastomer industry, as well as other industries that produce the materials and goods essential to the nation, supply chain issues have continued to accelerate since 2020. However, factory plant managers and production line workers may not realize that the industry experienced even greater disruptions in 2024 than in previous years. By one account, there was a 38% increase in supply chain disruption last year.

Factory fires are the leading cause of these disruptions. Factory fires threaten the facility, disrupt productivity and endanger the entire workforce. Consequently, taking the necessary precautions, which includes using equipment capable of detecting and preventing fire prone conditions, is essential to mitigate the growing risk of fire and ensure a safe working environment for the rubber and elastomer industry.

The urgent need to minimize fire risk

In 2024, there were 2,299 recorded factory fires worldwide. The majority of these fires occurred in facilities within the United States, followed by incidents in India and Germany. Many of these fires took place in manufacturing focused factories.

A range of operational and supply chain challenges has contributed to the increased fire risk. In recent years, global disruptions have led to labor shortages, regulatory delays and reduced oversight in some facilities. As a result, many factories operated with fewer skilled workers on-site, while employees were often required to take on additional responsibilities with limited support.

At the same time, some factories quickly adapted their operations, such as introducing new chemical processes or expanding existing production lines, without fully assessing the associated risks. This often resulted in gaps in critical safety protocols, driven by short staffing or shifting priorities, which in turn increased the likelihood of undetected hazards.

In some cases, insufficient training resulted in the mishandling of chemicals, posing serious safety risks to both workers and the facility. Additionally, delays in maintaining critical equipment or systems increased the risk of operational failures, safety incidents and costly disruptions.

Machinery issues were a significant factor in factory fires in 2021, as well. According to Resilinc, a supply chain risk management company, 59% of the factory fires analyzed that year were linked to faulty equipment. Common causes included improper installation, operation or maintenance; inadequate safety and cleaning procedures; and failure to replace outdated or worn out equipment on time. Additionally, insufficient employee training, particularly a lack of awareness of key risks, was often a contributing factor.

Specific conditions on or around the production line can also increase the risk of a fire.

It is important to note that combustible dust can contribute to fires when sparking occurs, and that almost every material can be combustible in dust form, including wood, metal, dyes, food and chemicals.

Chemical plants are especially vulnerable to increased fire risk when excessive friction occurs. Similarly, mechanical equipment can become a fire hazard if it is not properly cleaned, maintained and lubricated, leading to overheating and, in some cases, ignition.

Since many of these issues are largely preventable, industry professionals emphasize the importance of awareness and proactive measures.

By prioritizing equipment maintenance, providing comprehensive training and conducting regular safety inspections, even during periods of disruption, factories in the rubber and elastomer industry can significantly reduce the risk of fires, and safeguard both employees and assets.

In addition, it is recommended that factories be equipped with instruments that can detect hazardous conditions on the production line, which is essential for preventing fires and improving overall safety.

To address this need, industry OEMs like Kett (www.kett. com) have developed a variety of equipment specifically designed to prevent the hazardous conditions that can lead to factory fires. For example, pulp and paper moisture meters can prevent over drying, leading to higher fire risk, when producing paper related products.

To keep friction, overheating and sparking from causing machinery related fires, portable friction testers like the H94 handheld portable friction tester can evaluate machinery for friction and wear on-site.

Engineers assist manufacturers in the rubber and elastomer industry in selecting portable and inline laboratory quality instruments to enhance factory safety and reduce fire risk. These instruments are designed for fast, efficient operation, and are user-friendly, ensuring effective monitoring by any operator, regardless of who is on-site.

Factory fires pose a serious risk to workers, equipment and overall operations, yet many are preventable with the right precautions. Equipping facilities with advanced monitoring instruments ensures early detection of hazardous conditions, allowing for quick intervention before a fire can start.

By investing in reliable safety equipment, manufacturers in the rubber and elastomer industry can reduce fire risks, maintain productivity, and protect both personnel and assets. Proactive safety measures, including proper training and routine maintenance, combined with the right detection tools, are essential for ensuring a safer, more resilient production environment.

Automatic Hardness Check - Drive

DIFFERENT STYLES, ONE MEASURE

A single hardness tester for each standard **and** A device with nine different plug-in heads

An advanced multifunctional software **and** An integrated display for live hardness reading









NEW FOR 2025

ALPHAJET5X

MORE THAN JUST A PRETTY INTERFACE

The new alphaJET 5X is now available to satisfy the industry's toughest marking requirements. With the new HMI user interface & modern housing design, the alphaJET 5X sets new standards in terms of performance, user-friendliness and connectivity.

Gem has remained committed to providing the best automated marking solutions since 1952.

OUR PRODUCTS INCLUDE:

- Continuous Inkjet Printers
- Continuous Inkjet Ink
- Custom Software
- Custom Accessories
- Contact Markers
- Contact Ink
- Print Wheels
- World Class Service



Scan the code to contact GEM about ordering an alphaJET 5X

VISIT US ONLINE AT GEMGRAVURE.COM



GEM

Patent News

Silicone rubber composition

U.S. patent: 12,162,986 Issued: December 10, 2024

Inventors: Matsutaka Maeda and Yuji

Kitano

Assigned: Canon Kabushiki Kaisha Key statement: A liquid silicone rubber composition contains metallic silicon particles. The content of the metallic silicon particles is 35% by volume or more and 45% by volume or less. The volume average particle diameter of the metallic silicon particles is 1 μm or more and 20 μm or less. The ratio A/B of viscosity A at a shear rate of 0.02/sec to viscosity B at a shear rate of 1/sec of the composition is 2.0 or less.

Modified conjugated diene based polymer and rubber composition including the same

USA: (615) 375-5058 • Canada: (905) 453-4100 • zochem.com

U.S. patent: 12,162,964

Issued: December 10, 2024

Inventors: Jung Hwan Oh, He Seung Lee, Hyeon Jong Park and Hye Jung Shin

Assigned: LG Chem

Key statement: A modified conjugated diene based polymer and a rubber composition including the same are disclosed herein. The modified conjugated diene based polymer has excellent processability and good tensile strength and viscoelasticity. In some embodiments, a modified conjugated diene based polymer includes a derived unit from a modifier, the modifier including three or more alkoxy groups bonded to silicon, a non-functional chain forming a silicon-carbon bond at one side of the derived unit from a modifier and including a repeating unit derived from a conjugated diene based monomer and a functional chain forming a silicon-carbon bond at the other side of the derived unit from a modifier and including two or more derived units from an N-functional group-containing monomer, wherein the rate of change of Mooney viscosity is 20% or less.

Nitrile rubber condoms and methods of making them

U.S. patent: 12,163,027 Issued: December 10, 2024

Inventors: Fook Peng Leng, Yi Yee

Loh and Lai Peng Lim

Assigned: Karex Holdings Sdn. Bhd. Key statement: This invention provides a method of making an elastomeric article and the method comprises dipping a mold into a first dip tank containing a compounded nitrile rubber formulation to produce an elastomeric film layer on the mold, the compounded nitrile rubber formulation



ChemSpec (Safic Alcan) • 800-200-4753 • chemspecltd.com

HM Royal • 800-257-9452 • hmroyal.com **R.E. Carroll, Inc. •** 609-695-6211 • recarroll.com

Patent News

comprising nitrile butadiene copolymer; a crosslinking agent; a metal oxide; a vulcanization accelerator; an antioxidant; an alkali agent; and a heat sensitizer; then drying and curing the elastomeric film layer to form the elastomeric article. The heat sensitizer may be an organopolysiloxane. Elastomeric articles prepared according to this invention may have a film thickness in a range of 0.020 mm to 0.050 mm; such films are suitable for medical examination gloves, surgical gloves or condoms.

Additive manufacturing method for producing a silicone elastomer item

U.S. patent: 12,162,213 Issued: December 10, 2024

Inventors: Mickael Muller, Jean-Marc Frances, Perrine Theil and Geoffray

Meffre

Assigned: Elkem Silicones

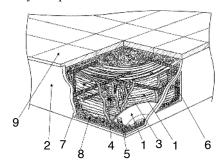
Key statement: The invention relates to an additive manufacturing process for producing a silicone elastomer item. In particular, the invention relates to an additive manufacturing method for producing a silicone elastomer item from a photocrosslinkable silicone composition. The invention also relates to a photocrosslinkable silicone composition.

Method of recycling tires

U.S. patent: 12,162,191 Issued: December 10, 2024 Inventor: Mark Molloy

Key statement: A method of recycling tires places tires and/or pieces of tires within a casing or mold. A binder (e.g., adhesives and/or pining with screws, nails, nuts and bolts, pins, wire and steel or nylon bands, etc.) is applied to the tires and/or pieces of tires so that

the tires are bound together. A reinforcing means is applied to the tires and/or pieces of tires (e.g., fitting the reinforcing means around, in between and/or through the tires, etc.). An encapsulating means is melted and poured over the top of the tires and reinforcing means to encapsulate them inside the casing or mold and the encapsulating means. The encapsulating means is allowed to set such that a recycled product is formed.







Innovative Solutions for Critical Applications

Delivering **Premium Raw Materials** for the Medical and Silicone Industries

Products

XNBR Latex NBR Latex XSBR Latex VP Latex Solutions for Silicone Rubber Curing Agents Blowing Agents

Applications

Medical Gloves
Catheters
Gaskets and Seals
Tubing and Hoses
Medical Devices
Silicone Molded Components
Lightweight Rubber Products



Patent News

Resin rubber composite, tire and method of producing resin rubber composite

U.S. patent: 12,163,028 *Issued:* December 10, 2024

Inventors: Hiroyuki Fudemoto, Atsushi Fukushima, Masahiro Homma, Yuji Ohkubo and Kazuya Yamamura Assigned: Bridgestone and Osaka University

Key statement: A resin-rubber composite includes: a resin member that has a treated surface, to which a surface treatment by means of a plasma treatment has been applied; and a rubber member that is disposed in contact with the treated surface of the resin member and includes a rubber, a filler having a silanol group and a silane coupling agent, with a filler content of from 30 phr to 100 phr with respect to 100 phr of the rubber and a silane coupling agent content of from 2 parts by mass to 15 parts by mass with respect to 100 parts by mass of the filler.

Acrylic rubber, acrylic rubber composition, crosslinked acrylic rubber, seal material and hose material

U.S. patent: 12,162,969 *Issued:* December 10, 2024

Inventors: Fumiaki Bando and

Susumu Sato Assigned: Zeon

Key statement: An acrylic rubber containing acrylate monomer units, methacrylate monomer units and crosslinkable monomer units, wherein a glass transition temperature is -20°C or less, a change ratio in volume after a crosslinked rubber of the acrylic rubber is immersed in IRM903 oil at 150 ± 2 °C for 72 hours is 0 to 100% and a change ratio in weight after a crosslinked rubber of the acrylic rubber is immersed in hot water at 150 ± 2 °C for 96 hours and dried is -5.0 to 0%

Process for producing polyurethanepolyisocyanurate elastomers, sealing

materials and adhesives having a long pot life

U.S. patent: 12,162,973 Issued: December 10, 2024

Inventors: Julia Liese, Andre Kamm

and Hendrik Wagner *Assigned:* BASF SE

Key statement: Described herein is a process for preparing a polyurethane elastomer including the steps of (A) preparing an isocyanate prepolymer (a), where the isocyanate prepolymer has an isocyanate content in the range of ≥ 1 wt.% to ≤ 9 wt.% and (B) preparing a reaction mixture by mixing at least one epoxy compound (b) with the isocyanate prepolymer (a) in presence of at least one catalyst (c) and where the amount of the alkali metal or alkaline earth metal salt is 0.00001 to 0.1 mol per kg of the total weight of the isocyanate prepolymer (a), the epoxy compound (b) and the catalyst (c) and heating the mixture to at least 80°C to obtain the polyurethane elastomer. Also described herein are a polyurethane elastomer obtained by the process and a method of using the polyurethane elastomer as part of a roller or as a sealant.

Polymer coated sulfur cured rubber composition

U.S. patent: 12,163,059 *Issued:* December 10, 2024

Inventors: Philip Roberts, Adam Don-

ley and Paul Cannon Assigned: Sublino

Key statement: There is disclosed a method of forming a polymer coated sulfur cured rubber composition wherein the bond strength between the polymer coating and the sulfur cured rubber is surprisingly great. The method includes providing a sulfur curable rubber composition comprising a compound including at least one thiol group and/or contacting a sulfur curable rubber composition with a compound including at least one thiol group and contacting the sulfur curable composition with a second polymeric precursor including a diallyla-



100 YEARS

of Reliable Elastomer, Additive & Adhesive Distribution



For a century, chemists have trusted H.M. Royal to provide the materials they need for high-performance elastomer formulations. We carry top-quality brands of silicone rubber, adhesive bonding systems, organic peroxides, electroconductive carbon black and more. We have the technical expertise to help select the ideal grades for rubber parts and components used in many industries, including aerospace, medical, specialty equipment and infrastructure.

Need help with your next formulation?

Get in touch with our experts today.

Visit hmroyal.com or call to speak with a materials specialist.



Patent News

mide group. The compound including at least one thiol group and the second polymeric precursors are reacted together to form a polymeric layer; and the sulfur curable rubber composition is cured to form a polymer coated sulfur cured rubber composition.

Pneumatic tire

U.S. patent: 12,168,371 Issued: December 17, 2024

Inventors: Momoka Misaki, Dong

Miao and Hiroki Kawai

Assigned: Sumitomo Rubber Industries Key statement: To provide pneumatic tires with excellent ride quality during high-speed driving, a pneumatic tire having a tread portion with a circumferential groove and a belt layer, wherein a monofilament cord is used as a reinforcing cord for the belt layer; and the number of arrangements e (lines/5 cm)

of the monofilament cords per 5 cm in the tire width direction in the tire radial cross section of the belt layer, the distance G (mm) from the surface of the land portion closest to the equatorial plane among land portions separated by the circumferential groove to the monofilament cord and the loss tangent (30°C tan δ) when the rubber composition constituting the surface of the tread portion is measured satisfy (30°C tan δ ×G)/e>0.015 is provided.

Rubber composition and molded article manufactured therefrom

U.S. patent: 12,168,710 Issued: December 17, 2024

Inventors: Youk Reol Na, Jin Young Kim, Jae Sun Choi and No Ma Kim

Assigned: LG Chem

Key statement: A rubber composition having excellent abrasion resistance

and improved viscoelasticity properties and a tire manufactured using the same are disclosed herein. In some embodiments, a rubber composition includes a first synthetic rubber and a second synthetic rubber and has an interaction parameter (xblend) defined by Mathematical Formula 1 at room temperature is 2.0×10^{-3} or more. The first synthetic rubber is a solution-polymerized modified conjugated diene based rubber which has a 1,2-vinyl bond content of 50 wt.% or more and includes a functional group bonded to at least one terminal and the second synthetic rubber is a conjugated diene based rubber which has a 1,2-vinyl bond content of less than 50 wt.%.

Modified high cis polydiene polymer, related methods and rubber compositions



Our expertise and dedicated focus mean we deliver fast and cost-effective silicone mixing and compounding solutions, no matter the scale.

STANDARD MATERIALS

High Strength • Thermal Transfer • High Resilience Anti-Static • High Temperature • Flame Retardant

CUSTOM MATERIALS

Color • Catalyst • Special Properties

Packaging Options: Strip Form • Slab • Calendered

+1 989-435-7400

laursilicone@laursilicone.com

laursilicone.com





Leader in vision inspection machines for the rubber industry



Patent News

U.S. patent: 12,168,705 *Issued:* December 17, 2024

Inventors: Zengquan Qin and Yuan-

Yong Yan

Assigned: Bridgestone

Key statement: Disclosed herein are a modified high cis polydiene polymer, processes for preparing the modified high cis polydiene polymer and tire rubber compositions containing the modified high cis polydiene polymer. The processes make use of a functionalizing compound of formula I or formula II and a coupling agent to prepare the modified high cis polydiene polymer from a quantity of conjugated diene monomer polymerized using a lanthanide based catalyst system. The modified high cis polydiene polymer includes at least one polymer chain having a residue from the functionalizing compound and a residue from the coupling agent and can be utilized in tire rubber compositions in combination with other ingredients such as fillers.

Functional diene elastomer and rubber composition

U.S. patent: 12,168,708 Issued: December 17, 2024

Inventors: Emma Moreso, Kahina Mammeri and Anne-Frédérique Salit

Assigned: Michelin

Key statement: A diene elastomer and a rubber composition comprising the diene elastomer is provided. The diene elastomer bears pendent imidazole functions in a molar content of at most 4% of the constituent repeating units of the diene elastomer, which diene elastomer is a copolymer of ethylene and of a 1,3-diene comprising ethylene units, the ethylene units representing at least 50 mol % of the constituent repeating units

of the diene elastomer, the 1,3-diene being 1,3-butadiene or isoprene. Such an elastomer confers improved uncured properties on the rubber composition.

Silicone rubber molded body and production method for the same

U.S. patent: 12,168,724 Issued: December 17, 2024

Inventors: Hiroaki Yasuda, Takehiro Hamamura, Susumu Yonezawa, Jae-Ho Kim, Fumihiro Nishimura, Mitsuo Kurumaya, Takeshi Kamiya and Tsunetoshi Honda

Assigned: Mitsubishi Cable Industries Key statement: A silicone rubber molded body (10) has an article contact surface (11). The article contact surface (11) has a coefficient of rolling resistance lowered by a fluorination treatment on the article contact surface (11).

Maynards SINCE 1902

SPECIAL OPPORTUNITY - MAKE YOUR OFFERS NOW! COMPLETE CLOSURE OF MICHELIN TIRE FACTORIES, GERMANY TIRE & RUBBER PRODUCTION EQUIPMENT AVAILABLE



INITIAL OFFERING AVAILABLE UNTIL 31 st AUGUST, SUBJECT TO PRIOR SALE!

COMPRISING: RUBBER AND TIRE PRODUCTION MACHINES, MIXING SYSTEMS, GRAND SCALE RUBBER MIXING LINE, OVER 80 TIRE PRESSES, AUTOMATION, GENERAL PROCESSING, STORING, HANDLING EQUIPMENT & FACTORY UTILITIES

CONTACT: INQUIRY@MAYNARDS.COM | ONLY AVAILABLE AT MAYNARDSEUROPE.COM



Performance Elastomers

FKM & FFKM

Copolymer
Terpolymer
Cure Incorporated
Peroxide Curable
Low Temp Grades
Perfluorinated

HNBR

High & Low ACN Content Various Saturation Levels Very Low Viscosity Grades Advanced Catalyst Technology Expanding Capacity

Our team of dedicated commercial and technical staff and 3000 sq ft fully equipped lab are ready to provide solutions and bridge the gap between our customers and principals.

Contact Lianda Corporation or visit our website to find out more · ISO 9001:2015

Shaping the future of rubber product manufacturing with smart automation

by Soren Blomaard and Ly Ho, Taniq

In industries where reliability under pressure is non-negotiable, such as dredging, mining, marine and heavy industrial sectors, reinforced rubber components serve as vital building blocks. From expansion joints and inflatable pipe plugs to high performance hoses, the growing demand for durability, precision and scalable production is reshaping how rubber products are engineered and manufactured.

The manufacturers of these products typically know their applications and markets well. They locally produce custom solutions with added value for their clients. However, their production processes rely on skilled manual labor. As global competition intensifies, these manufacturers face pressure to improve cost efficiency, yet many struggle to do so effectively. This raises a key question: Why is it so difficult to reduce the cost of these products through automation and scaled up production?

A closer look at the manufacturing of rubber products like pipe plugs, rubber expansion joints and rubber hoses reveals shared characteristics of many of these products:

- They are mandrel built, making them non-continuous in production
- They come in a wide variety of sizes
- They are available in a large variety of types and different designs

These characteristics make these products skill and labor intensive to manufacture. Workers must undergo significant training to master the necessary techniques, and the availability of employees for this type of work in the rubber manufacturing industry is becoming more challenging every year. As experienced workers retire and fewer young people enter the field, this leads to capacity issues, long lead times, and a loss of in depth product and manufacturing know-how.

The conclusion is that in order to scale up and become costefficient, the process should no longer depend on manual labor, and the availability of expensive and scarce skilled personnel.

Dutch engineering company Taniq supports manufacturers with optimization and automation of their reinforced rubber products, making them less dependent on skill and labor intensive production, and enabling them to scale their production locally and improve their profitability (figure 1). This article will focus on automation developments, and on how these developments can be applied for the automated design and manufacturing of reinforced rubber products.

Challenges and opportunities to automate: New (CAD/CAM) technologies introduce flexible automation solutions
Becoming less dependent on skill intensive and labor intensive processes requires digitalization and automation. This means developing tools with embedded engineering knowledge that can support employees in performing more efficiently, and im-

plementing automated systems to increase the capacity while improving product quality and lead times.

In the rubber industry, automation is already widely applied in many areas, especially in small diameter hose and tire manufacturing, where standardized and high volume production makes it easier to automate. For example, in a project for the automotive industry, Taniq developed a robotic hose wrapping system capable of wrapping one hose every 80 seconds continuously, 24 hours per day. Although these types of projects are challenging in terms of takt time optimization, the limited number of product variations allows for the development of robust automation solutions.

In contrast, there are very few automation solutions for mandrel built products like pipe plugs, rubber expansion joints and mining hoses. Many of these products are often designed using basic calculations in Excel, and are manually manufactured by a worker following a paper worksheet. Some manufacturers use semi-automated lathes with which they can control the winding angle on a traverse moving carrier. But that is as far as automation goes. The large variety in product sizes and designs, along with the skill dependent nature of their manufacturing, makes them difficult to automate.

Figure 1 - different rubber components designed and manufactured with Taniq technology



Regarding other industries, automation platforms like 3D printing have been optimized for making a large variety of designs efficiently. This is achieved by a combination of user-friendly design software making it easy to design new parts, and a flexible machine capable of printing various materials of various dimensions. By integrating 3D print heads with robotic arms, large parts can now be made fast and accurately. Although there were doubts about its industrial applicability, in recent years the 3D printing industry has evolved into a game changing technology for the manufacturing of high performance specialty components in demanding industries, by printing complete ship hulls and critical parts for rockets and other space components.

Taniq takes a similar approach, and even one step further, towards the design and manufacturing of reinforced rubber products. In 2006, the company started developing a technology platform for digitalizing the design of reinforced rubber products and automating the material application processes using robotic arms.

This platform has evolved into dedicated CAD/CAM solutions for the design and manufacturing of reinforced rubber products. Additionally, Taniq has developed "wizards" for various applications like pipe plugs, rubber expansion joints and mining hoses, providing application specific knowledge embedded in the software, enabling the user to make quality designs and production programs efficiently, without requiring a deep understanding of engineering or robot programming.

Flexible automation solutions for reinforced rubber products

To develop a generalized automation solution for reinforced rubber products, Taniq investigated the designs and production processes of a wide range of products, like pipe plugs, rubber expansion joints, pinch valve sleeves, air springs, and dredging and mining hoses. Despite their different applications, these products share a basic structural composition: a rubber inner liner, cord reinforcement layer(s) and a protective rubber outer layer. And nylon wrapping tape is used to apply the required pressure for vulcanization.

This results in the following three main material layers:

- Rubber
- Cord reinforcement
- Pressure tape

For each material layer, a dedicated material application tool is required to store, guide and control the material parameters during processing. In 2006, Taniq was the first company in the world to develop such dedicated material application tools for the automated application of rubber layers, cord reinforcement layers and pressure tape layers. Taniq programmed an industrial robot arm to accurately place the material layers, following machine trajectories programmed with the in-house developed software TaniqWind (figure 2). The industrial robot can manufacture parts within the reachability of the arm, which can be extended further by placing the robot on a pedestal and track. This flexibility allows the robot to manufacture both small sized parts and large parts on the same system, bringing a solution to the large variety in sizes commonly seen within many rubber products.

The high level of automation, combined with the flexibility, makes this solution suitable for cost-effective manufacturing of commodity products, and for specialty products produced as a one-off or in small series.



THE DESIGN OF A PRINCIPLE STATE OF THE STATE

Figure 3 - a screenshot of Taniq's software developed for designing large diameter hoses showing the design of a metal coupling

Design software for reinforced rubber products

The development of reinforced rubber products using an automated robotic system required having dedicated CAD/CAM software. This software must provide functionalities to design the different product layers (rubber, cord reinforcement and wrapping tape), and include a post-processor for the production machine to generate production programs.

Initially, Taniq searched for existing software solutions that could meet these requirements, but none existed. The closest available option at the time was a filament winding software for designing fiber reinforcements for manufacturing on CNC winding machines. After six months of use, Taniq concluded that this software was not developed for rubber products, and it lacked the required functionalities, and was also not fully compatible with robots. The Dutch company decided to develop its own CAD/CAM software, TaniqWind, dedicated to reinforced rubber products. From a software platform with basic functionalities in 2007, TaniqWind has evolved to a professional CAD/CAM software solution with unique features dedicated to the design and manufacturing of rubber components with reinforcement layers.

As both developers and expert users of TaniqWind, Taniq's engineering team has used the software to develop a large variety of different products, ranging from small-sized automotive hoses to 15 meter long, large diameter mining hoses (figure 3). Each development project brought more experience and insights, resulting in continuous improvements and expanding functionality of the software.

The software platform, therefore, does more than automate; it encapsulates nearly two decades of engineering expertise.

This embedded intelligence enables less experienced users to design complex products with minimal dependency on tribal knowledge or trial-and-error approaches.

Software wizards for clients

While TaniqWind is a generic software platform used in-house by Taniq's engineers to develop a wide range of products, many of their clients focus on manufacturing a single specialized product. During the development of such products, an optimal design workflow is established, and consistent design rules for that product are developed.

To assist the client with designing new products efficiently, Taniq develops custom "wizards" that incorporate product and client specific know-how, and have a customized, intuitive user interface that requires only parametric input (e.g., length, diameter, pressure, etc.) based on which new designs will be automatically generated (figure 4). By following the intuitive workflow, the user is guided through the process step-by-step, and a new design can be made in 15 minutes.

The foundation of this approach lies in the in-depth knowledge of the construction of the product and its production process, and how to translate that knowledge into a system that can adapt to changing customer requirements. Instead of relying on skilled personnel, this approach involves capturing this knowledge into a system where it is structured, accessible, reusable and available upon request.

During this process, it is not uncommon to discover that nobody in the company can explain why a certain construction or process is the way it is; often because it was originally designed by someone who has since left the organization. By document-



ing and systematizing this knowledge, companies can convert it into standardized design and production protocols, safeguarding it for future use.

Once these design rules and calculations are captured, they can be embedded and programmed into a system that automatically applies them. The result is a design tool which requires only parametric input, such as length, diameter and burst pressure, to automatically generate new designs.

Taniq develops such custom wizards in close collaboration with clients, embedding their specific know-how in the wizard. This includes custom functions tailored to client specific requirements (e.g., embedding RFID tags in the product or incorporating colored rubber layers to indicate wear in a liner). This simplifies their development process, providing a parametric design tool to generate designs and production programs efficiently, with guaranteed quality. Because the underlying design knowledge is embedded in the software, engineers can typically be trained in a single day, after which they are able to independently create complete designs and production programs.

An integral approach to optimization and automation

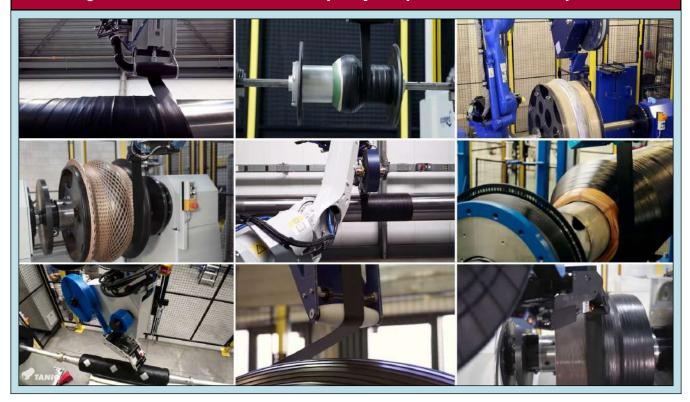
Instead of automating the existing manual production process, Taniq follows an integral approach of optimizing specifically for automation (figure 5). Most current reinforced rubber products have been developed and designed with a manual production process in mind. While one option is to retain the same product design and automate the manual tasks, this does not fully leverage the potential of modern design software and automation technologies.

One of the most critical structural elements in engineered rubber components is the cord reinforcement layer. These cords

are typically applied in sheet form, where the cords are evenly spaced in parallel and embedded within a thin layer of rubber. The sheets are precut in the desired lengths and angles, and are manually wrapped on the product mandrel. These sheets are applied in pairs with opposite angles, resulting in even numbered ply counts. During this process, a skilled worker is responsible for steering the sheet at the desired angle, and manually attaching and folding loose ends. Although some technicians have turned this work into an art form, which is truly amazing, the quality of the final product can vary significantly, depending on the person performing the work, leading to undesired quality and consistency issues. This also partly results in over-dimensioning of these products to compensate for the quality differences over the range, to ensure even the least optimal part still meets functional requirements. It also contributes to having very high safety margins for the burst pressure, being three to four times the working pressure. By contrast, composite pressure vessels used for the storage of compressed gases like hydrogen have typically low safety factors of 2.35, since these are made using automated winding equipment, guaranteeing a consistent, high quality production process.

Taniq was founded at the Aerospace faculty of Delft University of Technology, the Netherlands. At the time, the company was working on the development of a fiber reinforced flexible composite part. To improve precision and reproducibility, the team decided to purchase an industrial robot and program it for the accurate placement of reinforcement fibers onto a product mandrel. Their projects on air springs and turbocharger hoses demonstrated the benefits of continuous cord winding. Unlike traditional methods that rely on overlapping reinforcement sheets, which often result in seams, Taniq's robotic system al-

Figure 5 - automation solutions developed by Taniq for various rubber components



lowed for seamless construction. Because the cords were placed at precisely calculated positions, material usage was reduced by 50% to 80% without compromising structural integrity.

A second major improvement emerged in parts requiring metal couplings or flanges to be integrated with the cord reinforced rubber body. In the manual process, these connections are typically made by folding the reinforcement sheets in these flanges or over the metal couplings, and securing them with metal wires. This is a very labor intensive process, also resulting in high stress concentrations in these transition areas. To include these flanges and couplings in the continuous reinforcement structure, Taniq developed an integral winding technology in which the flanges and couplings are integrally overwound together with the hose body. This has resulted in a continuous process and eliminated the labor intensive manual work.

Case in focus: Transforming the manufacturing of large diameter hoses

The design and production of large diameter rubber hoses, particularly those used in dredging, mining and marine industries, have demonstrated significant benefits from Taniq's technology.

In traditional settings, manufacturing these hoses involves a highly manual, labor intensive process by skilled employees. These manual processes and high dependency on skill result in inconsistent product quality, long lead times and a process that is difficult to scale. Skilled labor shortage and the high costs of manual production only compound the challenge.

These hoses are critical components, and their failure can lead to costly downtime and environmental risks. The inconsistent quality, due to variations in skill, manual placement inaccuracy and variable pulling force, leads to inconsistencies in product performance and early failure. As a result, many manufacturers are over-dimensioning the hose design to compensate for these inconsistencies, leading to further cost increases.

Taniq addresses these challenges through a more digital and automated approach:

Capturing hose engineering know-how in software

A key challenge is that much of the knowledge required for designing and manufacturing quality hoses often resides with a limited number of experienced individuals. This expertise is typically the result of years of trial and error; and in many cases, it is undocumented. Transferring know-how to new employees, as a result, requires prolonged training to learn all the variants and exceptions incorporated into the different designs. This lack of accessible documentation presents significant risks to information retention, operational scalability and long term continuity.

To tackle these issues, Taniq has developed a mathematically defined design and manufacturing methodology, made easily accessible to engineers through a CAD/CAM software program called TaniqWind. Within this software program, engineers can input hose specifications, such as dimensions, material specifications, layer thickness and burst pressure. Based on these inputs, the software automatically generates the design, and production programs for the automated hose building machine. Additionally, the software can be customized for each manufacturer to embed their specific know-how, design rules and production practices in their design and processes. By capturing this knowledge into the software using programmed design rules,

Figure 6 - one of Taniq's robotic systems for the manufacturing of large diameter hoses up to 15 m in length



these will be automatically applied to the design under the specified conditions.

This technology means that manufacturers are less dependent on skilled labor. For large diameter hoses, manufacturers can create customized hose designs, complete with reinforcement layouts and material specifications, in as little as 15 minutes. This system enables engineers to explore multiple configurations, evaluate performance parameters and prepare manufacturing files efficiently. This approach drastically reduces the reliance on manual calculations, and speeds up the quotation and production preparation process, making it feasible to handle both large orders and custom one-offs with equal ease, turning expert level knowledge into a repeatable, scalable process embedded within the software.

Consistent and scalable hose production by robotic automation. The manual production of large diameter hoses relies heavily on the skills and strength of the worker, who controls the angles and pulling force on the materials and must master the complex construction in the flange and coupling areas. This results in an inconsistent quality depending on who builds the hose, and the physical demands of the task raise occupational health and safety concerns.

To address these issues, Taniq has developed an automated production system based on industrial robotic arms with custom material application heads to automatically apply the materials with great precision at high speeds (figure 6). With a production program made using the TaniqWind software for large diameter hose, the operator follows step-by-step instructions on the machine's touchscreen, which requires basic knowledge that can be learned via training in a few days. Imagine that an operator can now be trained to manufacture high quality hoses in a consistent manner in just a few days. This level of simplicity not only makes onboarding more efficient, but also enables quick scaling: For example, a second operator can be trained within days to double machine capacity by running an additional shift.

The manufacturing of a large diameter hose begins with the operator loading the mandrel into the machine. From there, the

operator follows the instructions on the touchscreen to run the programs to apply the different material layers, starting with the rubber liner. The robot automatically retrieves the rubber application tool from the tool station, attaches the rubber to the mandrel and starts applying the rubber liner. When a rubber spool is empty, the robot automatically pauses the process, picks up a full tool and resumes its program. During the application, the operator can access the tool station to reload materials as needed. After the rubber liner is finished, the operator manually places the couplings (if any). Next, a sequence of rubber and cord reinforcement layers will be applied to form the hose construction. To achieve optimal precision, the cords are applied separately from the rubber in a continuous cord winding process, forming a continuous and seamless layer with precisely placed angles predetermined by the design software. This method optimizes and increases the material efficiency up to 30%. Additionally, this precision allows for optimization of multi-reinforcement structures by varying cord angles throughout the layers, increasing the total efficiency by an additional 20%. Another important advantage is the integral reinforcement of the flanges and couplings. This means the reinforcement cord applied to the hose body continues over the flange or coupling and returns to the body until the entire hose and flanges are fully overwound with reinforcement cords. This eliminates loose ends, folds, seams, etc., in these coupling areas that often contribute to high stress concentrations seen with traditional methods. Every flange or coupling is integrally wound with the product in the same manner, providing a proven and reliable solution. Finally, another critical factor in the manufacturing of large diameter hoses is the tension applied to the materials during production. Instead of relying on varying manual force, the robotic system accurately controls the tension during the winding processes. To prevent air pockets and voids, the system can pull the nylon pressure tape with a 200 kg force, ensuring a constant high quality.

Reported outcomes from implementation include increased production speed (improved lead times), material savings, high product uniformity and reduced reliance on manual, skilled labor.

Dutch legacy, global relevance

As a Dutch company, Taniq draws from the Netherlands' longstanding leadership in dredging and marine engineering. Dutch dredging technology is renowned worldwide, and large bore rubber hoses are a central component in these operations. Taniq builds on this foundation by introducing technologies that enable cost efficient production of custom designed hoses with short lead times, offering competitive advantages against low cost alternatives from low wage countries and offering added value to the end users.

Looking forward

The manufacturing of reinforced rubber products is entering a new era, one characterized by captured know-how, software assisted engineering and robotic manufacturing. As industries demand more complex, durable and customizable rubber components, traditional approaches are becoming too reliant on manual, skilled labor which challenges manufacturers in maintaining consistent quality, reducing costs and scaling production efficiently.

Taniq's integrated platform reflects broader trends in the rubber industry, including increased automation and digital design integration. By combining advanced simulation tools, knowledge embedded software and robotic automation, the company enables manufacturers to move from dependency and inconsistency to flexibility and reliability.

For producers of large diameter hoses and other high performance rubber parts, the benefits are substantial: reduced development time, more consistent quality and a foundation for scaling without losing product integrity. As the global market continues to evolve, the ability to deliver custom solutions with short lead times may well define the next generation of rubber engineering.











cryo@cryosystemsusa.com
techsupport@cryosystemsusa.com
3965 E. La Palma Avenue, Anaheim, CA 92807 | Ph: 714.241.7793

The two-roll plasticizer (TRP)

by Peter J. Uth, Julia Uth and Manuel Beßler, Uth GmbH

The TRP Reworker is a resource saving technology for the economical processing of rework materials based on the two-roll plasticizer (TRP) with integrated Roll-ex gear pump. In an automatic process, unvulcanized rubber compounds are processed particularly gently and continuously in order to return this rework material to the production process. In tire production, compound waste is unavoidable due to the process. This material should be reworked with regard to the issues of sustainability and the economical handling of valuable resources, and not least because of the high raw material costs. Based on the Uth TRP technology, the company has developed the TRP Reworker. This new process technology combines the proven methods in rubber processing such as cracking, homogenizing and discharging, thus closing a gap in the processing of rework materials. The concept is based on TRP technology and comprises three zones along the length of the roll, resulting in a continuous, reproducible and fully automated process.

The tire is a complex, high tech product consisting of over 10 different rubber compounds and over 20 components. For this reason, tire production is a very complex and high precision process. During the individual process steps, a considerable amount of base material residues falls to waste. This so-called rework material consists of high quality raw materials. In terms of sustainability and the economical handling of valuable resources, and not least because of the high raw material costs, it should not be disposed. Tire manufacturers are pursuing the worthwhile aim of processing this material as gently as possible into a high quality intermediate product so that it can be returned to the production process. A material-friendly preparation process is crucial: The better the quality, the higher the return rate. With smaller and smaller batch sizes for a larger number of specialized tires, the absolute amount of rework material is in-

creasing worldwide. This creates a need to collect this material in order to be able to return it to the production line by means of a reproducible and economical rework process.

State-of-the-art

During the rework process the material is first plasticized, homogenized and then discharged so that it can be blended with fresh material. Today, the reprocessing steps often take place cyclically in the same production lines in which the preliminary products are also manufactured, e.g., internal mixer or open mill lines (figures 1 and 2). The use of open mills has been proven to ensure good temperature control, and is therefore particularly well suited for a material-friendly reprocessing process.

Due to the cyclical accumulation of rework material, the entire process has to be carried out manually, which increases the risk potential for the operator. In addition, reproducible quality is difficult to ensure, as it depends on the operator's experience and skills in controlling the open mill process.

The reprocessing of a rubber compound in the internal mixer line is better to control than the open mill lines, and causes less risk for the operator. However, on the process technology side, the rework material experiences relatively high shear forces, and thus increased temperatures which can further harm the material

Process requirements

- Feeding of rubber compound or rework material with different specifications and shapes
- Sufficient plasticization and homogenization with gentle material treatment
- Good access to the processing area for cleaning and material change
- Reproducible and automated processing with minimum of operator workload

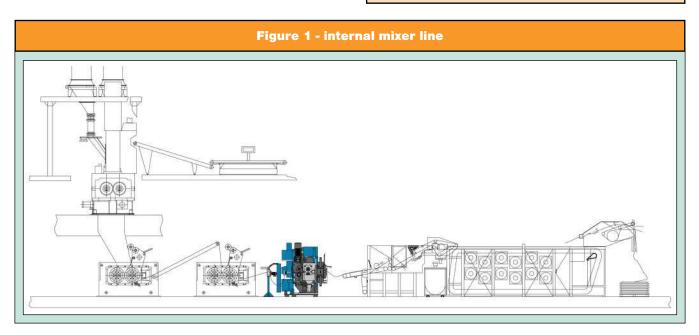
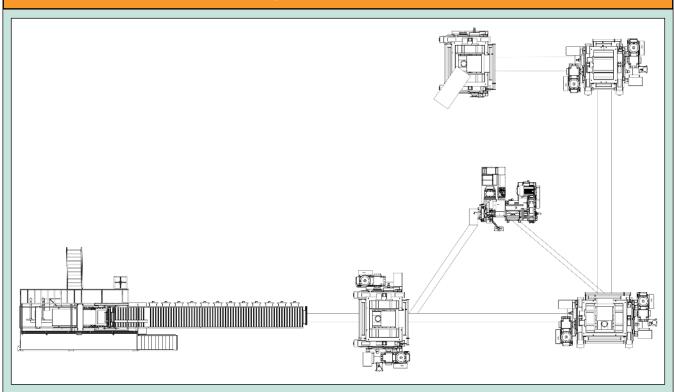
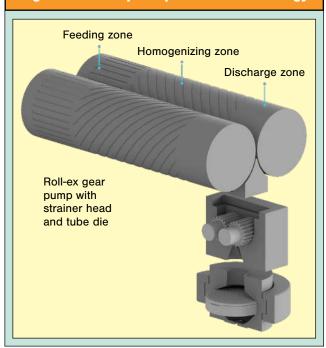


Figure 2 - open mill line



that is already under stress. To ensure a gentle process, the internal mixer must be set at quite a slow rotor speed, which results in comparatively long mixing times. The cost efficiency of the cyclic reprocessing process is also lessened by high energy and space requirements, as well as the cost of machine minutes for the entire mixing line.

Figure 3 - basic principle of TRP technology



Basic principles of TRP technology

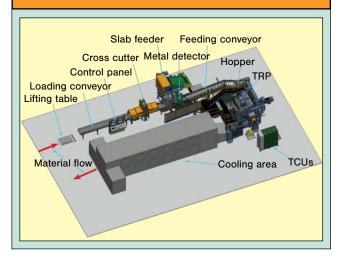
The two-roll plasticizer (TRP) with integrated gear pump from Uth has been established as a solution which meets these requirements. The automatic and continuous process combines proven technologies in rubber processing, such as cracking, homogenizing and discharging. The basic principle is based on an open-roll system combined with the Roll-ex gear pump technology.

The compact system consists of three zones located along the length of the roll (figure 3). In the feeding zone, materials of various types and shapes, such as slabs, sheets or shaped profiles, can be fed by a conveyor. During the process, a mechani-

Figure 4 - homogenization of the compound on the nip of the open mill



Figure 5 - complete solution: TRP reworker



cally effected transformation takes place in the nip of the homogenization zone in which the material is plasticized and homogenized (figure 4). According to the Roll-ex TRF principle, the material is then directly extruded in the discharging zone. The manual intervention of an operator in the process area is therefore no longer required, and is also prevented by a full housing of the processing area. The final outcome is a safe, controlled and continuous homogenization process with reproducible results. Due to the modular concept, the TRP offers the option of an integrated gear pump extruder for the gentle finemesh straining of the material.

The basis for a gentle rework process is a controlled temperature development (figure 5). In TRP process technology, this is guaranteed by temperature zones that can be set differently across the entire length of the rolls. Good homogenization and plastification performance is achieved by mechanical transformation of the compound. The required friction, which in-

Advantages of the TRP Reworker

- During the rework process, the material is processed particularly gently and continuously with very good temperature control
- Automated processes for reproducible results
- The system has a modular design: An integrated Roll-ex gear pump with the option of fine-mesh straining allows discharge of the material in different shapes
- The process area is completely enclosed and thus ensures a high level of work safety
- Due to the compact, space saving design, space costs can be reduced
- Good access to the system components for cleaning and compound changes
- Up to 50% energy savings compared to existing processes
- At least 5% of raw materials in tire production can be saved by using the TRP technology
- 98% of the process related waste can be returned to the tire manufacturing process

Figure 6 - temperature profile along the rolls 100 Material 90 Temperature (°C) 80 70 60 50 40 30 20 10 500 1.000 1.600 2.200 2.800 Straining Processing area (mm)

creases the plasticizing performance, can be optimized for the respective process by means of different roller speeds and gap adjustments. A roll design, which is especially designed for the rework process, also enables an axial material transport from the feeding zone to the discharging zone.

Design of the TRP Reworker system

Based on the two-roll plasticizer, a system solution has been developed to meet the demands of the rework process in the tire industry (figure 5). In addition to the core component, the plasticizing unit, the modular concept consists of several system components, and thus enables application specific solutions.

Feeding unit

Rework materials such as treads, sidewalls or profiles usually are varying in geometry and piece weight. A continuous homogenization process is, however, necessary for a controlled process and reproducible results. The discontinuous feeding is coupled with a continuous process by the feeding unit. The material is first transported to a weighing and cutting device via a horizontal belt conveyor before it passes through the metal detector and is then fed to the plasticizing unit via an ascending conveyor. Alternatively, slabs can be fed directly from a pallet using a slab feeder and cutting device.

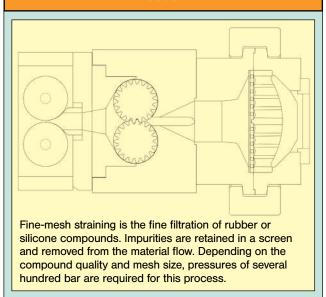
Plasticizing unit

The plasticizing unit of the TRP Reworker is based on the process technology of the two-roll plasticizer. A feeding zone, specially tailored to the rework process, enables the processing of materials with different rheological properties. Common rework materials in the tire industry are, for example, truck or car tread compounds with a hardness of 60-70 durometer A and a Mooney viscosity of 50-60 units, sidewall compound with a hardness of 40-55 durometer A and a Mooney viscosity of 50-60 units, or apex material with a hardness of 60 durometer A and a Mooney viscosity of 75 units. All the rework materials deriving from these components can be easily reworked in the plasticizing unit. The same also applies to ply or inner liner compound.

TRP discharging zone

The discharging zone of the plasticizing unit is based on the proven Roll-ex TRF principle (two-roll feeding unit). The fol-

Figure 7 - gear pump extruder with two-roll feeder



lowing gear extruder is actively fed by two temperature controlled rolls. When the material leaves the roll nip, the feed pressure is generated, which is necessary to completely fill the teeth of the gear pump. In the material discharge zone, the temperature of the material can be modified by means of a separate temperature controlled zone (figure 6), which provides additional temperature variations for subsequent processes.

The strainer gear pump unit

In the standard configuration a Roll-ex gear pump strainer unit is positioned under the TRP discharging zone. The gear pump and the strainer head can be hydraulically swivelled away from the TRP for cleaning and screen changing purposes. Temperature sensors record the temperature in the discharging zone of the plasticizing unit (in front of the gear pump) and in the strainer head to allow monitoring of the temperature development. The gear extruders work on the principle of positive displacement pumps. At the entering side of the pump, the material

Figure 8 - TRP Reworker 2800 with integrated gear pump



is retracted, transported in the space width of two inter-combing gears and then displaced from these spaces by the inter-locking of the gears. This displacement results in the building of pressure and further material transport (figure 7).

The cooling section

The rubber compound can be cooled in conventional cooling systems. Depending on the form of the discharged compound, cantilever cooling sections or classic batch-off systems are suitable for palletizing sheets. Since the temperatures of the batches are approximately 100°C, and due to the relatively slow speeds, e.g., between 5-9 m/minute in the case of a sheet extrusion, the cooling sections can be of relatively compact dimensions.

State of development and future outlook

The TRP technology has established itself in the tire industry as an alternative solution for the processing of rework materials. The TRP Reworker the same size as the 2800 model has a throughput of 2,500 kg/hour, and thus meets the usual rework requirements in a tire factory (figure 8). Other sizes and designs can provide options for other processing tasks in rubber and silicone processing, such as preheating, mixing and discharging.



Cost Reduction in Rubber Processing

www.rubberworld.com/book-store

High performance tires thanks to the liquid dosing system and high performance additives

by Patrick Buder, Zeppelin Systems GmbH, and Sara Liébana Viñas, Evonik Industries AG

Electric cars are heavier than vehicles with combustion engines. This results in a higher rolling resistance, which increases energy consumption and reduces range. Another effect is increased wear on the tire, which is caused by the electric motor's higher torque. There are also new requirements for tire rolling noise, since this is more noticeable in electric vehicles. At the same time, research is being carried out on more sustainable raw materials, such as recycled rubber or recovered plastic from plastic bottles, to reduce the environmental impact of tire production. In a nutshell: With the new requirements for tires, the demands on the raw materials used, their processing and the related material handling are also increasing.

The focus is on high performance additives in the rubber compound, which can be used to reduce rolling resistance, improve traction on wet roads or increase the durability of tires. Forerunners include products from Evonik's Polyvest ST-E range (figure 1). These are liquid polybutadienes with terminal silane groups. While standard plasticizers migrate out of the tires

over time, the Polyvest ST-E polymer chains remain in the tire matrix and improve durability. There are now specialized products, such as Polyvest ST-E 60, that can significantly reduce the rolling resistance of tires, and by doing so, extend the vehicle battery's range. Polyvest 130 S, on the other hand, improves the abrasion properties. In addition, the Polyvest eCO variants are made from renewable raw materials and save up to 62% in $\rm CO_2$ emissions compared to the fossil based grades.

Although the innovative liquid polybutadienes offer significant advantages, they place very high demands on the dosing and injection system. The relatively high viscosity and its special rheological properties make precise and fast handling challenging. Zeppelin Systems, therefore, developed a liquid dosing system a decade ago which allows these additives to be dosed as pure liquids in their viscous form, without carrier material or waxes. In close partnership with Evonik, a successful solution was developed for the customer, in which the system was adapted to optimally handle Evonik's additives. This enables the best solution for the customer to be achieved, which also reflected the new requirements for a modern tire mixture on the market. Over the years, Evonik and Zeppelin Systems have

Figure 1 - Polyvest products improve the performance indicators of silica-silane reinforced tire tread compounds for winter and summer tires

Polyvest 130 S

Rolling resistance

Polyvest ST-E

Rolling resistance

Polyvest ST-E

Silica-silane reference

Abrasion resistance

Snow/ice grip

Snow/ice grip

continued to work closely together on further improvement.

All required liquids for the mixing room are provided in tanks, IBCs, drums or storage containers, taking into account the ideal temperature range. The volumetric dosing system doses the liquid raw materials extremely precisely and ensures consistent formulation properties. This enables precise dosing, which increases reproducibility and prevents high quality additives overdosing.

How to achieve precise dosing

An online density measurement in the loop takes into account density fluctuations, and thus the filling quantity before filling the cylinder. When filling the dosing cylinder, care is taken to ensure that the cylinder absorbs the medium without cavitation. The system is also kept at a constant temperature in the pre-tank, lines and dosing cylinders to avoid the effects of temperature fluctuations. After the filling process, the air check is carried out again: A sensor in the cylinder checks that a predefined amount of air in the liquid is not exceeded during filling by compressing the medium. This is followed by fine dosing. During the subsequent injection process, the medium is injected into the mixer via the injection valve. In the case of a Cpk measurement (calculation of the process capability), a sample point is used for testing which enables a check using a high resolution scale. This means the quantity that arrives later in the mixer can be weighed to the nearest gram, and deviations can be detected immediately.

With just one injection valve on the mixer, up to six liquids can be injected in a row (both low and high viscosity) with virtually no mixing. The design prevents back mixing in the injection valve and line. The liquid dosing system also offers several advantages in terms of safety, as the liquids are contained in a closed system. Cross-contamination or employee contact with the liquids and their aerosols can therefore be ruled out. This offers the user a very high level of safety in the process, and simultaneously protects them from aerosols in their working environment.

Extensive tests are carried out beforehand to find the right settings for the respective application. For example, Cpk tests (process capability index) at the Zeppelin Technical Center with various setting parameters are an integral part of every liquid dosing test. These provide meaningful results on the dosing accuracy and repeatability of the system at different target weights. The tests were also carried out with Polyvest ST-E and showed that it is possible to precisely dose the additive and inject it into the mixer without problems. Flow rates of up to 90 l/minute can be achieved with a single injector.

Optimized additive dosing

The liquid dosing system (LDS) has proven its worth in recent years, and the LDS dosing cylinder has now been optimized once again in line with customer requirements. The compact LDC (liquid dose cylinder), with the connection for hydraulics, power supply and network at the top, is fully pre-assembled, installed and tested (figure 2). The dimensions (footprint and height) of the dosing cylinder have been reduced; even the largest 90 liter cylinder is well below three meters in height. Given the generally dusty environment of the dosing cylinder, a rotat-

ing cover in the form of two half shells is provided around the cylinder to prevent the buildup of dirt on attachments, such as valves and filters. The half shells can be rotated and moved to any desired position. This allows easy access to the components for maintenance. The system has also been improved once again with regard to commissioning.

Reduced commissioning and maintenance effort

The compact liquid dosing system is available as a skid system (modular frame mounted industrial system). This not only reduces assembly time, it also ensures easy relocation to another site by forklift truck. The electrical control cabinet can be rotated by 90° to cover different site requirements. Since the control cabinet can also be mounted in a 180° position, it can be installed in any 90° position.

This makes maintenance particularly easy, since the control cabinet can be rotated away if necessary. In addition, a door with a viewing window has been integrated into the control cabinet so that the LED indicators of the I/O

Figure 2 - liquid dosing cylinder (LDC), the core of the liquid dosing system for precise dosing of liquids



boards can be seen at a glance. It is, therefore, no longer necessary to call in an electrically trained person to open the control cabinet for the inspection.

The system can also offer additional improvements: With the redesign of the base frame, the hydraulic feed of the floor valves has been rearranged and accessibility improved. This allows the drip tray to be easily pulled out of the base frame for emptying and disposing of contents. A visual check for leaks can also be carried out quickly. In addition, the cylinder base was lowered so that the pipeline lengths for product infeed and product outfeed were shortened. This optimizes the aspiration of the highly viscous liquids into the dosing cylinder and makes it easier to handle temperature sensitive products.

Non-binding tests possible

Users can experience the advantages of the new liquid dosing system for themselves at the Zeppelin test center. The starter package includes a module that is compatible with any mixer. The plug-and-play system can be installed quickly and easily, and the high quality additives (such as Polyvest ST-E 60) can be dosed swiftly, safely and with high precision. Tire compounds for electric vehicles, in particular, benefit from the use of a performance enhancing additive, as rolling resistance, abrasion and power consumption are optimized.



Testing lab located in Richfield Ohio.

• Intermeshing rotor mixers

• Tangential rotor mixers

• Sheet Preformers

- 2 Roll mills
- PelletizersBatch-Off



sales@kneaderusa.com

Following this information is a directory of companies that supply process machinery to the rubber industry. Addresses and phone numbers of the companies are included.

Assembly machines, special

Akron Special Machinery, Inc. Amacoil Inc. Berran Industrial Group, Inc. Burton Press Co., Inc. Charles Ross & Son Co., Inc. Comerio Ercole S.p.A. Conceptromec Inc. Dabsco Equipment Inc. Dake - a Laguna Company G3 United States of America Corp. Gomaplast Machinery, Inc. Haumiller Engineering Co. Lamac Systems Inc. Menzel LP MK Kubitza USA RAK Machine, Inc. RMS Equipment LLC Rogers Industrial Products Inc. RRR Development Company, Inc. Sprinter Marking, Inc. West Coast Rubber Machinery, Inc. Williams, White & Co.

Autoclaves

Akron Steel Fabricators Co. Inc. American Autoclave Co. Anchor Autoclave Systems **Buflovak Products** Dabsco Equipment Inc. Davey Industries Inc. Deguma-Schuetz GmbH Eagle Polymer Equipment, Inc. Gomaplast Machinery, Inc. Industrial Rubber Machinery Inc. JM Machinery Inc. Machinery Products U.K. Ltd. McGill AirFlow LLC Passaic Rubber Co. Patterson Industries (Canada) Limited Pebsco, LLC Rubber City Machinery Corp. SP Industries Taricco Corp. United Feed Screws Ltd. Ventilex USA Inc. WSF Industries, Inc.

Bale cutters

Akron Steel Fabricators Co. Inc.
Batson Inc.
CCS Instruments Inc.
Dabsco Equipment Inc.
Davey Industries Inc.
Deguma-Schuetz GmbH
Eagle Polymer Equipment, Inc.
Erie Mill & Press Co. Inc.
The Fitzpatrick Co., an IDEX Corp.

G3 United States of America Corp. G.F. Goodman & Son, Inc. Gomaplast Machinery, Inc. Industrial Rubber Machinery Inc. JJB Engineering Co. JM Machinery Inc. Machinery Products U.K. Ltd. Midlands Millroom Supply, Inc. MonTech USA Pebsco, LLC Polymer Machinery Co., Inc. RAK Machine, Inc. Reliable Rubber and Plastic Machinery RRR Development Company, Inc. Rubber City Machinery Corp. Spadone Machine Inc. West Coast Rubber Machinery, Inc. Zeppelin Systems USA, Inc.

Balers

Danieli Corporation
Davey Industries Inc.
Encore Systems, Inc.
International Baler Corporation
Kempler Industries Inc.
Machinery Products U.K. Ltd.
Ohio Blow Pipe Co.
Pebsco, LLC

Band building machines

Akron Special Machinery, Inc. JM Machinery Inc. RJS Corporation RRR Development Company, Inc. Soberay & Sons Ltd.

Batch off systems

Akron Steel Fabricators Co. Inc. Birch Bros. Southern, Inc. Buzuluk a.s. Dabsco Equipment Inc. Davey Industries Inc. Deguma-Schuetz GmbH G3 United States of America Corp. HF Rubber Machinery, Inc. Industrial Rubber Machinery Inc. JJB Engineering Co. JM Machinery Inc. Kayton Industry Co., Ltd. LWB Machinery N.A. LP Machinery Exchange Corp. Mid-American Machine & Equipment Midlands Millroom Supply, Inc. MK Kubitza USA Polymer Machinery Co., Inc. RAK Machine, Inc. Reliable Rubber and Plastic Machinery Rubber City Machinery Corp.

Rubber Trade Machinery S.r.l. Soberay & Sons Ltd. Sterling Systems & Controls, Inc. West Coast Rubber Machinery, Inc. Zeppelin Systems USA, Inc.

Bead making machines

Akron Special Machinery, Inc. Bartell Machinery Systems Corp. Buzuluk a.s. JM Machinery Inc. PHI The Steelastic Co. LLC Wyko Tire Technology

Belt cutters

Alcon Tool Co.
Azco Corp.
Davey Industries Inc.
Everhard Products, Inc.
Helro Corp.
Hyde Industrial Blade Solutions
JM Machinery Inc.
Maimin Technology Group, Inc.
Mesnac Americas Co. Ltd.
Mitchell, Inc.
Soberay & Sons Ltd.
Troester Machinery Ltd.
Tung Yu Hydraulic Machinery Co., Ltd.
VMI Americas, A Div. of VMI Group

Belt making machines

Comerio Ercole S.p.A.
G3 United States of America Corp.
Gomaplast Machinery, Inc.
JM Machinery Inc.
JP Conveyors S.A. de C.V.
KraussMaffei Berstorff
Mesnac Americas Co. Ltd.
Passaic Rubber Co.
Polymer Machinery Co., Inc.
Shaw Almex Industries
Siempelkamp LP
Soberay & Sons Ltd.
The Steelastic Co. LLC
Troester Machinery Ltd.
Tung Yu Hydraulic Machinery Co., Ltd.

Bias cutters

Akron Special Machinery, Inc.
Alcon Tool Co.
Azco Corp.
Buzuluk a.s.
Davey Industries Inc.
Eastman Machine Co.
Everhard Products, Inc.
Heinemann Saw Co.
Helro Corp.
Hyde Industrial Blade Solutions
International Knife & Saw
JM Machinery Inc.
Maimin Technology Group, Inc.

McNeil & NRM. Inc. Mesnac Americas Co. Ltd. Mitchell. Inc. MK Kubitza USA RRR Development Company, Inc. Soberay & Sons Ltd. Spadone Machine Inc. The Steelastic Co. LLC VMI Americas, A Div. of VMI Group

Blast equipment, abrasive

Abrasive Supply Company, Inc. Clemco Industries Corp. Cold Jet - Dry Ice Cleaning and **Production Systems** Cryogenic Deflashing Systems Inc. Empire Abrasive Equipment Co. Friess Equipment Guyson Corp. Hull Industries, Inc. Leonard Enterprises Maxi-Blast Inc. Pangborn Group Park Thermal International Passaic Rubber Co. Pressure Blast Mfg. Co., Inc.

Blenders Paul O. Abbe, Inc. Acrison, Inc. Akron Steel Fabricators Co. Inc. Axon Plastics Machinery AB Battaggion S.p.A. Cyclonaire Corp. Dabsco Equipment Inc. Davey Industries Inc. Dynamic Air Inc. Edge-Sweets Co. Erie Mill & Press Co. Inc. Ferry Industries. Inc. Flexicon Corp. Franklin Miller, Inc. Glacier Machinerys Sales Corporation

IKA Works, Inc. Industrial Rubber Machinery Inc.

Jaygo Incorporated JJB Engineering Co. JM Machinery Inc.

Lightnin

Louisiana Chemical Equipment Co. Machinery Products U.K. Ltd. Mid-American Machine & Equipment Midlands Millroom Supply, Inc.

Morse Mfg. Co., Inc.

Patterson Industries (Canada) Limited Polymer Machinery Co., Inc.

Pope Scientific, Inc.

Reliable Rubber and Plastic Machinery Soberay & Sons Ltd.

Union Process, Inc.

Zeppelin Systems USA, Inc.

Braiders

Commission Brokers Inc.

JM Machinery Inc.

Kara Corp.

Knitting Machinery Corp. of America

Kokubun Ltd.

Machinery Products U.K. Ltd.

Soberay & Sons Ltd.

Wardwell Braiding Co.

Calenders

Akron Special Machinery, Inc. Akron Steel Fabricators Co. Inc. Axon Plastics Machinery AB

Battaggion S.p.A.

Birch Bros. Southern, Inc.

Buzuluk a.s.

Colmec USA, Inc.

Comerio Ercole S.p.A.

Dabsco Equipment Inc.

Danieli Corporation

Davey Industries Inc. Deguma-Schuetz GmbH

Eagle Polymer Equipment, Inc.

Edge-Sweets Co.

Entex. Rust & Mitschke GmbH

Erie Mill & Press Co. Inc.

Facts Inc.

G3 United States of America Corp.

Gomaplast Machinery, Inc.

HF Rubber Machinery, Inc.

Holvoke Machine Co.

Icon Industries, Inc.

Independent Machine Company Industrial Rubber Machinery Inc.

IR Engraving, LLC

JJB Engineering Co.

JM Machinery Inc.

KraussMaffei Berstorff

Leistritz Extruder Corp.

Machinery Exchange Corp.

Machinery Products U.K. Ltd.

McNeil & NRM, Inc.

Menzel LP

Mesnac Americas Co. Ltd.

Mid-American Machine & Equipment

MK Kubitza USA

Nerpco USA, LLC

NFM Iddon Limited

Passaic Rubber Co.

Pebsco, LLC

Pelmar USA, LLC

Polymer Machinery Co., Inc.

RAK Machine, Inc.

Reliable Rubber and Plastic Machinery

Rodolfo Comerio S.r.l.

Rubber City Machinery Corp.

Soberay & Sons Ltd.

The Steelastic Co. LLC

Troester Machinery Ltd.

West Coast Rubber Machinery, Inc. Wire & Plastic Machinery Corp.

Wyko Tire Technology

Control systems Acrolab Ltd.

Akron Steel Fabricators Co. Inc. Automation Products. Inc. - Dynatrol

BST North America

Budzar Industries, LLC

Buzuluk a.s.

Charles Ross & Son Co., Inc.

Chromalox, Inc.

Cleveland Motion Controls, a Lincoln

Electric Company

Computer Age Engineering

Cyclonaire Corp.

Dabsco Equipment Inc.

Doss Visual Solution USA Corp.

Drying Technology, Inc.

Durant Tool Company

Dynamic Air Inc.

Erhardt + Leimer Ltd.

Erie Mill & Press Co. Inc.

ESI - Extrusion Services Inc.

Facts Inc.

Flexicon Corp.

French Oil Mill Machinery Co.

G3 United States of America Corp.

HF Rubber Machinery, Inc.

JJB Engineering Co.

Lamac Systems Inc.

Leonard Enterprises

LMI Technologies Inc.

McGill AirFlow LLC

Mesabi Control Engineering, Ltd.

Mesnac Americas Co. Ltd.

MK Kubitza USA

Mokon

NFM Welding Engineers, Inc.

Parker Hannifin Corporation

Reliable Rubber and Plastic Machinery

Rexroth Bosch Group

Rogers Industrial Products Inc.

RRR Development Company, Inc.

Soberay & Sons Ltd.

Sterling Systems & Controls, Inc.

Taricco Corp.

Technico Inc.

Testek Solutions

Troester Machinery Ltd.

West Coast Rubber Machinery, Inc.

Zeppelin Systems USA, Inc.

Controllers

Acrison, Inc.

Admet Inc.

Ametek/Controls Div.

Anchor Autoclave Systems

Associated Environmental Systems

Atlas Material Testing Technology LLC

Avery Weigh-Tronix

Barksdale, Inc.

Barwell Global Ltd.

Budzar Industries, LLC

Chromalox, Inc. Cleveland Motion Controls, a Lincoln

Electric Company

Dynisco Instruments

Eagle Polymer Equipment, Inc.

Eaton

Electronic Development Labs, Inc.

Emery Winslow Scale Co.

Erhardt + Leimer Ltd.

Erie Mill & Press Co. Inc.

Facts Inc.

Galco Industrial Electronics

Gomaplast Machinery, Inc.

Horton, Inc.

Hunt Engineering

Icon Industries, Inc.

IMS Co.

Jordan Valve Div., Richards Industries

Kaeser Compressors, Inc.

Liquid Controls

LMI Technologies Inc.

Max Machinery Inc.

McCoy Machinery Corporation

Mid-American Machine & Equipment

MK Kubitza USA

Mokon

NDC Infrared Engineering

Norgren

OEM Press Systems

Parker Hannifin Corporation

Princo Instruments, Inc.

Pyrometer Instrument Co., Inc.

Regloplas Corporation

RJS Corporation

Selco Products Company

Signature Control Systems

Sikora

Sterling Systems & Controls, Inc.

Taricco Corp.

Tempest Inc.

Tensitron

Testek Solutions

Textile Rubber & Chemical Co.

TMP, A Division of French

H.O. Trerice Co.

United Feed Screws Ltd.

Venango Machine Co., Inc.

Williamson Corp.

Zenith Pumps

Zumbach Electronics Corp.

Coolers

AEC, Inc.

Air Products & Chemicals, Inc.

Akron Steel Fabricators Co. Inc.

Budzar Industries, LLC

Buhler Aeroglide Corp.

C.M.P. Corp.

Colmec USA, Inc.

CPM Wolverine Proctor LLC

Dabsco Equipment Inc.

Edge-Sweets Co.

Glacier Machinerys Sales Corporation

JJB Engineering Co.

Mesnac Americas Co. Ltd.

Midlands Millroom Supply, Inc.

NFM Iddon Limited

Polymer Machinery Co., Inc.

Reliable Rubber and Plastic Machinery

Sandvik Process Systems, LLC

Soberay & Sons Ltd.

SPX Thermal Product Solutions

Sterling, Inc., ACS Group

Tempest Inc.

I.J. White Systems

Creel systems

McCov Machinery Corporation **RJS** Corporation

The Steelastic Co. LLC

Cutters. extrusions

Barwell Global Ltd.

Barwell Global USA

Batson Inc.

Boston Matthews, Inc.

Burton Press Co., Inc.

CF Extrusion Technologies

Computer Age Engineering

Conair

Conceptromec Inc.

Cumberland

Dabsco Equipment Inc.

Davey Industries Inc.

ESI - Extrusion Services Inc.

G.F. Goodman & Son, Inc.

HF Rubber Machinery, Inc,

Hyde Industrial Blade Solutions

Industrial Rubber Machinery Inc.

JJB Engineering Co.

JM Machinery Inc.

Lamac Systems Inc.

Midlands Millroom Supply, Inc.

Mitchell, Inc.

MK Kubitza USA

MK Maschinenbau Kubitza GmbH

Nerpco USA, LLC

Polymer Machinery Co., Inc.

Reliable Rubber and Plastic Machinery

Soberay & Sons Ltd.

The Fitzpatrick Co., an IDEX Corp.

Troester Machinery Ltd.

United Feed Screws Ltd.

Cutting equipment

Akron Steel Fabricators Co. Inc.

Alcon Tool Co.

Altman Manufacturing Co.

Arntz, Inc.

August Strecker GmbH & Co. KG

Axon Plastics Machinery AB

Azco Corp.

B&W Environmental Solutions LLC

Bardons & Oliver, Inc.

Barwell Global Ltd.

Barwell Global USA Barwell Machinery USA Inc.

Batson Inc.

Bepex International LLC Berran Industrial Group, Inc. Birch Bros. Southern, Inc.

Burton Press Co., Inc.

Buzuluk a.s.

C.M.P. Corp.

Calemard by Spoolex Group

Carter Day Jacobson

Clauss Tools

Colmec USA, Inc.

Comerio Ercole S.p.A.

Computer Age Engineering

Conair

Conceptromec Inc.

Cumberland

Dabsco Equipment Inc.

Dake - a Laguna Company

Davey Industries Inc.

Eastman Machine Co.

Edge-Sweets Co.

Emerson

Erhardt + Leimer Ltd.

Erie Mill & Press Co. Inc.

ESI - Extrusion Services Inc.

Fecken-Kirfel America, Inc.

Ferry Industries, Inc.

The Fitzpatrick Co., an IDEX Corp.

Flex Machine Tools Franklin Miller, Inc.

Freeman Schwabe Machinery

Friction Coating Corp.

G3 United States of America Corp. G.F. Goodman & Son, Inc.

Gomaplast Machinery, Inc.

Helro Corp.

HF Rubber Machinery, Inc.

Hosokawa Polymer Systems

Icon Industries. Inc.

Industrial Rubber Machinery Inc.

JJB Engineering Co.

JM Machinery Inc. Jordan Reduction Solutions

Klein Cutlery KMT Waterjet Systems

Kornylak Corp.

KraussMaffei Berstorff

Lamac Systems Inc.

Lever Manufacturing Corp.

Long Chang Mechanical Co. Ltd.

Maimin Technology Group, Inc.

Menzel LP Mesnac Americas Co. Ltd.

Midlands Millroom Supply, Inc.

Midwest Brake

Mitchell, Inc. Mitsubishi Heavy Industries America

MK Kubitza USA MK Maschinenbau Kubitza GmbH

MonTech USA

Nerpco USA, LLC Parker Hannifin Corp., Stratoflex

Products

Parker Hannifin Corporation

Passaic Rubber Co. Pebsco, LLC Polyad Company Inc. Polymer Machinery Co., Inc. Reliable Rubber and Plastic Machinery RJS Corp. RRR Development Company, Inc. Rubber City Machinery Corp. Rubberhog Silico Sp. z oo Simmons Knife & Saw Simplex Cutting Machinery Company Sivon Manufacturing Co. Soberay & Sons Ltd. Spadone Machine Inc. SSI Shredding Systems, Inc. Testing Machines Inc. Textile Rubber & Chemical Co. The Steelastic Co. LLC Thwing-Albert Instrument Co. Troester Machinery Ltd. Tunco Mfg., Inc. Tung Yu Hydraulic Machinery Co., Ltd. U.S. Molding Machinery, Co. United Feed Screws Ltd. UTH GmbH VMI Americas, A Div. of VMI Group Wardjet, Inc. West Coast Rubber Machinery, Inc.

Deflashing equipment Abrasive Supply Company, Inc. AES Rubber Equipment, LLC Air Products & Chemicals, Inc. Altman Manufacturing Co. Barwell Global Ltd. Barwell Global USA Barwell Machinery USA Inc. Cold Jet - Dry Ice Cleaning and **Production Systems** Computer Age Engineering Cryogenic Deflashing Systems Inc. Cryogenic Systems & Parts Davey Industries Inc. Edge-Sweets Co. Feedscrews.com Gomaplast Machinery, Inc. Hull Industries, Inc. Icon Industries, Inc. JM Machinery Inc. Leonard Enterprises Linde North America Inc. Mass Finishing Maxi-Blast Inc. Mitchell. Inc. Oxco. Inc. Polymer Machinery Co., Inc. Rampart Finishing Equipment Co. Soberay & Sons Ltd.

Altman Manufacturing Co.

Tung Yu Hydraulic Machinery Co., Ltd.

West Coast Rubber Machinery, Inc.

Azco Corp. Barwell Global Ltd. Berran Industrial Group, Inc. Buzuluk a.s. CCS Instruments Inc. **CF Extrusion Technologies** Colmec USA. Inc. Computer Age Engineering Conair Conceptromec Inc. Cryogenic Deflashing Systems Inc. Dabsco Equipment Inc. Dek-Tron Scientific Instruments Eastman Machine Co. ESI - Extrusion Services Inc. Feedscrews.com Guill Tool & Engineering Indusco International Mold Steel Lamac Systems Inc. Melrose Mold & Machining Co. MK Kubitza USA MK Maschinenbau Kubitza GmbH MonTech USA NFM Welding Engineers, Inc. Passaic Rubber Co. Polymer Machinery Co., Inc. Porth Products Co. RMS Equipment LLC Sivon Manufacturing Co. The Steelastic Co. LLC Testing Machines Inc. Thwing-Albert Instrument Co. United Feed Screws Ltd.

Axon Plastics Machinery AB

Dipping machines

Lamac Systems Inc. Polymer Machinery Co., Inc. Ronci, P. Machine Co. United Feed Screws Ltd.

Drive systems (for coated fabrics)

Cleveland Motion Controls, a Lincoln **Electric Company** Facts Inc.

Mesabi Control Engineering, Ltd.

Drives

Amacoil Inc. Cleveland Motion Controls, a Lincoln **Electric Company** Davey Industries Inc. Delroyd Worm Gear Erie Mill & Press Co. Inc. Feedscrews.com Galco Industrial Electronics Gates Corporation Guspro Inc. HF Rubber Machinery, Inc. The Horsburgh & Scott Co. Mesabi Control Engineering, Ltd. MK Kubitza USA

O.A. Newton Nuttall Gear Oilgear Co. Parker Hannifin Corporation Renold Torque Transmission Rexnord Industries LLC Rexroth Bosch Group Rubber City Machinery Corp. Schold Machine Co., Midwest Facility Testek Solutions Textile Rubber & Chemical Co. United Feed Screws Ltd. Zenith Pumps

Extruders

AES Rubber Equipment, LLC Akron Steel Fabricators Co. Inc. American Kuhne, Inc. Anderson International Corp. Axon Plastics Machinery AB **B&W Environmental Solutions LLC** Bartell Machinery Systems Corp. Barwell Global Ltd. Barwell Global USA Batson Inc. Berlyn Extruders Boston Matthews, Inc. C.W. Brabender Instruments, Inc. Carter Bros (Rochdale) Ltd CF Extrusion Technologies Charles Ross & Son Co., Inc. Colmec USA, Inc. Commission Brokers Inc. Computer Age Engineering Coperion Corporation CPM Wolverine Proctor LLC Cryogenic Deflashing Systems Inc. Dabsco Equipment Inc. Davey Industries Inc. Davis-Standard, LLC Deguma-Schuetz GmbH Eagle Polymer Equipment, Inc. ENTEX, Rust & Mitschke GmbH Entwistle Co. Erie Mill & Press Co. Inc. ESI - Extrusion Services Inc. Facts Inc. Feedscrews.com French Oil Mill Machinery Co. G3 United States of America Corp. Genca Glacier Machinery Sales Corporation Gneuss, Inc. Gomaplast Machinery, Inc. HF Mixing Group, Farrel Corporation HF Rubber Machinery, Inc. Icon Industries, Inc. Industrial Rubber Machinery Inc. Jaygo Incorporated JJB Engineering Co. JM Machinery Inc. Kayton Industry Co., Ltd. Kiffer Industries, Inc.

KraussMaffei Berstorff Legg Co., Inc. Leistritz Extruder Corp. Long Chang Mechanical Co. Ltd. Louisiana Chemical Equipment Co. Machinery Exchange Corp. Machinery Products U.K. Ltd. Maris S.p.A. Mesnac Americas Co. Ltd. Mid-American Machine & Equipment NFM Welding Engineers, Inc. Park Thermal International Passaic Rubber Co. Pelmar USA, LLC Polymer Machinery Co., Inc. RAK Machine, Inc. Reliable Rubber and Plastic Machinery Remco RMS Equipment LLC Rubber City Machinery Corp. Silico Sp. z oo Soberay & Sons Ltd. Spaltech International The Steelastic Co. LLC Troester GmbH & Co. KG Troester Machinery Ltd. United Feed Screws Ltd. UTH GmbH Videx Equipment Corp. VMI Americas, A Div. of VMI Group West Coast Rubber Machinery, Inc.

Extrusion equipment

Akron Steel Fabricators Co. Inc. American Kuhne, Inc. Axon Plastics Machinery AB Barwell Global Ltd. Barwell Machinery USA Inc. Batson Inc. Berlyn Extruders Boston Matthews, Inc. C.W. Brabender Instruments, Inc. Canadian Feed Screws Mfg. Ltd. Canterbury Engineering Company, Inc. **CF Extrusion Technologies** Cober, Inc. Colmec USA, Inc. Computer Age Engineering Dabsco Equipment Inc. Davey Industries Inc. Davis-Standard, LLC Deguma-Schuetz GmbH **Dynisco Instruments** Eagle Polymer Equipment, Inc. Entex, Rust & Mitschke GmbH Entwistle Co. Erie Mill & Press Co. Inc. ESI - Extrusion Services Inc. Facts Inc. Feedscrews.com G3 United States of America Corp.

G.F. Goodman & Son, Inc.

Glacier Machinerys Sales Corporation Gomaplast Machinery, Inc. Guill Tool & Engineering HF Mixing Group, Farrel Corporation HF Rubber Machinery, Inc. Icon Industries, Inc. IKA Works, Inc. Industrial Rubber Machinery Inc. Javgo Incorporated JJB Engineering Co. JM Machinery Inc. Kiffer Industries, Inc. KraussMaffei Berstorff Leistritz Extruder Corp. Machinery Exchange Corp. Machinery Products U.K. Ltd. Mid-American Machine & Equipment Mix Head Repair & Sales MK Kubitza USA NFM Welding Engineers, Inc. **Nuttall Gear**

RMS Equipment LLC Starrett-Bytewise Measurement Systems Soberay & Sons Ltd. The Steelastic Co. LLC Troester Machinery Ltd. United Feed Screws Ltd. **UTH GmbH** Videx Equipment Corp. VMI Americas, A Div. of VMI Group Wire & Plastic Machinery Corp. Wyko Tire Technology Xaloy Incorporated

Park Thermal International

Polymer Machinery Co., Inc.

Reliable Rubber and Plastic Machinery

Gears

Zenith Pumps

Zumbach Electronics Corp.

Delroyd Worm Gear Erie Mill & Press Co. Inc. Gomaplast Machinery, Inc. HF Rubber Machinery, Inc. The Horsburgh & Scott Co. IR Engraving, LLC JLS International, Inc. Louisiana Chemical Equipment Co. Lufkin Industries, LLC Mid-American Machine & Equipment Milton Roy Co., Flow Control Div. NFM Welding Engineers, Inc. Renold Torque Transmission Rogers Industrial Products Inc. Rubber City Machinery Corp. United Feed Screws Ltd. Zenith Pumps

Gears, reduction Delroyd Worm Gear

Erie Mill & Press Co. Inc. Gomaplast Machinery, Inc. HF Rubber Machinery. Inc. The Horsburgh & Scott Co. Lufkin Industries, LLC Machinery Exchange Corp. Renold Torque Transmission Rogers Industrial Products Inc. Rubber City Machinery Corp. United Feed Screws Ltd.

Granulators

AEC. Inc. American Pulverizer Co. **B&W Environmental Solutions LLC** Barwell Global Ltd. Batson Inc. Bepex International LLC C.W. Brabender Instruments, Inc. Carter Day Jacobson Charles Ross & Son Co., Inc. CM Tire Recycling Equipment Solutions Cumberland Dabsco Equipment Inc. Davey Industries Inc. Dynisco Instruments Eagle Polymer Equipment, Inc. Eco Green Equipment The Fitzpatrick Co., an IDEX Corp. Franklin Miller, Inc. Glacier Machinerys Sales Corporation Granutech-Saturn Systems Corp. Icon Industries, Inc. IMS Co. Industrial Rubber Machinery Inc. International Knife & Saw Jordan Reduction Solutions Legg Co., Inc. Machinery Exchange Corp. Machinery Products U.K. Ltd. Marathon Equipment Pebsco, LLC Polymer Machinery Co., Inc. Sterling, Inc., ACS Group Tire Recycling Consultants (TRC, LLC) Wire & Plastic Machinery Corp.

Grinders Air Products & Chemicals, Inc. Alcon Tool Co. American Pulverizer Co. **B&W Environmental Solutions LLC** Batson Inc. Bepex International LLC C.W. Brabender Instruments, Inc. Carter Day Jacobson Cold Jet - Dry Ice Cleaning and **Production Systems** Cumberland Curtin-Hebert Co., Inc. Dabsco Equipment Inc. Eagle Polymer Equipment, Inc.

Eco Green Equipment
Erhardt + Leimer Ltd.
Feedscrews.com
The Fitzpatrick Co., an Idex Corp.
Foremost Machine Builders, Inc.
Franklin Miller, Inc.
Glacier Machinery Sales Corp.
Granutech-Saturn Systems Corp.
Hosokawa Polymer Systems
IKA Works, Inc.
IMS Co.

Industrial Rubber Machinery Inc. IR Engraving, LLC Jordan Reduction Solutions Linde North America Inc. Marathon Equipment

Mitchell, Inc.

Mitsubishi Heavy Industries America Montgomery Industries International Ohio Blow Pipe Co.

Park Thermal International

Passaic Rubber Co.

Pebsco, LLC

Reliable Rubber and Plastic Machinery

Remco Rubberhog Shred-Tech

SSI Shredding Systems, Inc.

TerraSource Global
Timesavers, Inc.
Tryco International
Union Process, Inc.
Wallen, Inc.

Heaters

Acrolab Ltd.
AEC, Inc.
Armstrong International
Bell & Gossett
Budzar Industries, LLC
Chromalox, Inc.

Cober, Inc.

Colmec USA, Inc.
Dabsco Equipment Inc.

Dalton Electric Heating Co., Inc.

ESI - Extrusion Services Inc. Everhard Products, Inc.

Gerlach Machinery Corp.
Glacier Machinery Sales Cor

Glacier Machinery Sales Corp. Hix Corporation

HotSet America Icon Industries, Inc. Kempler Industries Inc.

Lamac Systems Inc.

Long Chang Mechanical Co. Ltd.

Menzel LP MK Kubitza USA

Mokon

NFM Welding Engineers, Inc.

OEM Press Systems Patterson-Kelley Regloplas Corporation

Reliable Rubber and Plastic Machinery

Schutte & Koerting Spaltech International Sterling, Inc., ACS Group Tempest Inc. Thermal Care, Inc. TMP, A Division of French United Feed Screws Ltd. Vapor Power International

Volcanic Heater Inc. Waage Electric, Inc.

Hose making machines

Axon Plastics Machinery AB
Colmec USA, Inc.
Commission Brokers Inc.
ESI - Extrusion Services Inc.
G3 United States of America Corp.
Gerlach Machinery Corp.
Gomaplast Machinery, Inc.
JM Machinery Inc.
Kiffer Industries, Inc.
Knitting Machinery Corp. of America
KraussMaffei Berstorff
Machinery Products LLK Ltd.

Machinery Products U.K. Ltd. Magnatech International, Inc. Remco

Soberay & Sons Ltd. Troester Machinery Ltd. United Feed Screws Ltd.

Hydraulic systems

Akron Steel Fabricators Co. Inc. ASB Industries/Hannecard Roller Coatings

Budzar Industries, LLC Dabsco Equipment Inc. Davey Industries Inc.

Eagle Polymer Equipment, Inc. Erie Mill & Press Co. Inc.

Facts Inc.

French Oil Mill Machinery Co. Gomaplast Machinery, Inc.

HF Rubber Machinery, Inc.

Hull Industries, Inc. Hunt Engineering

Icon Industries, Inc.

JJB Engineering Co.

JM Machinery Inc. Lamac Systems Inc.

Long Chang Mechanical Co. Ltd.

Mix Head Repair & Sales Nerpco USA, LLC

OEM Press Systems

Pacific Press Technologies, L.P. Parker Hannifin Corp., Stratoflex

Products

Parker Hannifin Corporation

Pebsco, LLC

PHI

RAK Machine, Inc.

Reliable Rubber and Plastic Machinery

Rexroth Bosch Group

Rogers Industrial Products Inc. Soberay & Sons Ltd. TMP, A Division of French Tung Yu Hydraulic Machinery Co., Ltd. United Feed Screws Ltd.

West Coast Rubber Machinery, Inc. Williams, White & Co.

Knife blades

Alcon Tool Co.
Burton Press Co., Inc.
Conceptromec Inc.
Eastman Machine Co.
Erie Mill & Press Co. Inc.
Everhard Products. Inc.

Everhard Products, Inc. Heinemann Saw Co.

Helro Corp.

Hyde Industrial Blade Solutions International Knife & Saw

McNeil & NRM, Inc.

Midlands Millroom Supply, Inc.

Mitchell, Inc.

MK Kubitza USA

MK Maschinenbau Kubitza GmbH RRR Development Company, Inc. Saginaw Machine Systems, Inc.

Shred-Tech

Simmons Knife & Saw Textile Rubber & Chemical Co.

The Steelastic Co. LLC United Feed Screws Ltd.

Knife extension blades Alcon Tool Co.

Davey Industries Inc.
Everhard Products, Inc.
Hyde Industrial Blade Solutions
International Knife & Saw

Knife handles

Davey Industries Inc. Everhard Products, Inc. Hyde Industrial Blade Solutions

Knives

Akron Steel Fabricators Co. Inc.

Alcon Tool Co.

American Pulverizer Co.

Arntz, Inc. Azco Corp.

Batson Inc.

Bepex International LLC

Butler

Carter Day Jacobson

Clauss Tools

Computer Age Engineering

Conceptromec Inc.

Cumberland

Dabsco Equipment Inc.

Dessau Diamond

Eastman Machine Co.

Emerson

Erie Mill & Press Co. Inc.

Everhard Products, Inc. Facts Inc. Fecken-Kirfel America. Inc. G3 United States of America Corp. G.F. Goodman & Son. Inc. Heinemann Saw Co. Helro Corp. HF Rubber Machinery, Inc. Hyde Industrial Blade Solutions International Knife & Saw Lamac Systems Inc. Lever Manufacturing Corp. Machinery Products U.K. Ltd. Maimin Technology Group, Inc. Midlands Millroom Supply, Inc. MK Kubitza USA NFM Iddon Limited Parkinson Technologies, Inc. Polymer Machinery Co., Inc. RAK Machine, Inc. Reliable Rubber and Plastic Machinery RRR Development Company, Inc. Rubber City Machinery Corp. Simmons Knife & Saw Simplex Cutting Machinery Company Spadone Machine Inc.

Let-off machines

The Steelastic Co. LLC

Akron Steel Fabricators Co. Inc.

Bartell Machinery Systems Corp. Birch Bros. Southern, Inc. Buzuluk a.s. Colmec USA, Inc. Comerio Ercole S.p.A. Dabsco Equipment Inc. Entwistle Co. Erhardt + Leimer Ltd. Erie Mill & Press Co. Inc. ESI - Extrusion Services Inc. Gomaplast Machinery, Inc. Industrial Rubber Machinery Inc. JJB Engineering Co. Menzel LP Mesnac Americas Co. Ltd. Midlands Millroom Supply, Inc. MK Kubitza USA RAK Machine, Inc. Reliable Rubber and Plastic Machinery RRR Development Company, Inc. Soberay & Sons Ltd. Spadone Machine Inc. The Steelastic Co. LLC Troester Machinery Ltd.

Materials handling equipment

Akron Special Machinery, Inc. Akron Steel Fabricators Co. Inc. Amacoil Inc. B.A.G. Corp. Bardons & Oliver, Inc. Barwell Global Ltd. Batson Inc.

BST North America Carrier Vibrating Equipment, Inc. Cincinnati Industrial Machinery Co. Comerio Ercole S.p.A. Computer Age Engineering Curtin-Hebert Co., Inc. Cyclonaire Corp. Dabsco Equipment Inc. Dynamic Air Inc. Eastman Machine Co. Edge-Sweets Co. ESI - Extrusion Services Inc. Everhard Products, Inc. Flexicon Corp. Freeman Schwabe Machinery Glacier Machinerys Sales Corporation **Hunt Engineering** Independent Machine Company Jaygo Incorporated JJB Engineering Co. Menzel LP Mesabi Control Engineering, Ltd. Midlands Millroom Supply, Inc. Midwest Brake Morse Mfg. Co., Inc. O.A. Newton

Orbis Perpetual Machine Company Puritan Magnetics, Inc. Renold Torque Transmission Rogers Industrial Products Inc. Root, G.M. Inc. Sage Automation Inc. Sterling Systems & Controls, Inc. Sweet Manufacturing Co. Taylor-Winfield Technologies Technico Inc. Union Process. Inc. United Feed Screws Ltd. Webber Manufacturing Co. Zeppelin Systems USA, Inc.

OEM Press Systems

Dynisco Instruments

Facts Inc.

Measuring equipment A&D Europe GmbH A&D Weighing Akron Special Machinery, Inc. Amacoil Inc. Automation Products, Inc. - Dynatrol Division Avery Weigh-Tronix B.C. Ames Inc. Basler, Inc. **BST North America** Butler CCS Instruments Inc. Computer Age Engineering Conceptromec Inc. **Dek-Tron Scientific Instruments** Doss Visual Solution USA Corp.

Electronic Development Labs, Inc.

Fagus GreCon, Inc. Forte Technology, Inc. Lawson Hemphill, Inc. LMI Technologies Inc. Mahr Inc. Malvern Panalytical Ltd. Mesabi Control Engineering, Ltd. Micro-Poise Measurement Systems Mitutoyo America Corp. MK Kubitza USA MK Maschinenbau Kubitza GmbH MonTech USA Mount Hope Machinery Co. NDC Infrared Engineering O.A. Newton Princo Instruments, Inc. **PTC Instruments** Spirax Sarco Inc. The L.S. Starrett Co. Starrett-Bytewise Measurement Systems Sterling Systems & Controls, Inc. TA Instruments **Testek Solutions** Testing Machines Inc. Textile Rubber & Chemical Co. The Steelastic Co. LLC Thwing-Albert Instrument Co. Union Process, Inc. United Testing Systems, Inc. Willrich Precision Instrument Co., Inc. Zumbach Electronic AG Zumbach Electronics Corp. Zwick USA

Metering, mixing and dispensing units for epoxies, polyurethanes, etc.

2KM North America Metering & Mixing Systems Axon Plastics Machinery AB Cleveland Mixer Cyclonaire Corp. Edge-Sweets Co. Elmet Glacier Machinery Sales Corp. Graco Inc. Kornylak Corp. Lewa Liquid Controls

Max Machinery Inc. Mesnac Americas Co. Ltd. Milton Roy Co., Flow Control Div. Mix Head Repair & Sales O.A. Newton E.T. Oakes Corp. Pope Scientific, Inc. Charles Ross & Son Co., Inc. Spirax Sarco Inc. Sterling Systems & Controls, Inc. **Testek Solutions**

Zenith Pumps

Mills

Paul O. Abbe, Inc.

Akron Steel Fabricators Co. Inc.

Asbury Graphite Mills

Battaggion S.p.A.

Bepex International LLC

Buzuluk a.s.

C.W. Brabender Instruments, Inc.

Carter Bros (Rochdale) Ltd

Carter Day Jacobson

Charles Ross & Son Co., Inc.

Dabsco Equipment Inc.

Danieli Corporation

Davey Industries Inc.

Deguma-Schuetz GmbH

Eagle Polymer Equipment, Inc.

Erie Mill & Press Co. Inc.

Franklin Miller, Inc.

G3 United States of America Corp.

Gomaplast Machinery, Inc.

Greerco Products, Chemineer, Inc.

HF Rubber Machinery, Inc.

Hydratecs Injection Equipment Co.

Icon Industries, Inc.

IKA Works, Inc.

Indco, Inc.

Industrial Rubber Machinery Inc.

Javgo Inc.

JJB Engineering Co.

JM Machinery Inc.

Kempler Industries Inc.

Kobelco Stewart Bolling Inc.

KraussMaffei Berstorff

Legg Co., Inc.

Louisiana Chemical Equipment Co.

M.R. Mold and Engineering Corp.

Machinery Exchange Corp.

Machinery Products U.K. Ltd.

McNeil & NRM, Inc.

Mesnac Americas Co. Ltd.

Mid-American Machine & Equipment

Nerpco USA, LLC

NFM Iddon Limited

NFM Welding Engineers, Inc.

Passaic Rubber Co.

Patterson Industries (Canada) Limited

Pebsco, LLC

Pelmar USA, LLC

Polymer Machinery Co., Inc.

Processall Inc.

RAK Machine, Inc.

Reliable Rubber and Plastic Machinery

Rubber City Machinery Corp.

Schold Machine Co., Midwest Facility

Silico Sp. z oo

Soberay & Sons Ltd.

Sterling Systems & Controls, Inc.

Tema Systems, Inc.

TerraSource Global

TMP, A Division of French

Union Process, Inc.

West Coast Rubber Machinery, Inc.

Wire & Plastic Machinery Corp.

Wyko Tire Technology

Wyssmont Co., Inc.

Zeppelin Systems USA, Inc.

Mixers

Paul O. Abbe, Inc.

AES Rubber Equipment, LLC

Axon Plastics Machinery AB

B&P Littleford

Battaggion S.p.A.

Bepex International LLC

Bramley Mixers USA

Buzuluk a.s.

C.W. Brabender Instruments. Inc.

Canadian Feed Screws Mfg. Ltd.

Carter Bros (Rochdale) Ltd

Charles Ross & Son Co., Inc.

Chemineer, Inc.

Cleveland Mixer

Colmec USA, Inc.

Comerio Ercole S.p.A.

Conn & Co., LLC

Dabsco Equipment Inc.

Davey Industries Inc.

Deguma-Schuetz GmbH

Dynamic Air Inc.

Eagle Polymer Equipment, Inc.

Edge-Sweets Co.

Elmet

Entex, Rust & Mitschke GmbH

Erie Mill & Press Co. Inc.

FlackTek, Inc.

Flexicon Corp.

Franklin Miller, Inc.

French Oil Mill Machinery Co.

G3 United States of America Corp.

Gomaplast Machinery, Inc.

Greerco Products, Chemineer, Inc.

HF Mixing Group, Farrel Corporation

Icon Industries, Inc.

IKA Works, Inc.

IMS Co.

Indco, Inc.

Industrial Rubber Machinery Inc.

Jaygo Incorporated

JJB Engineering Co.

JLS International, Inc.

JM Machinery Inc.

Kneader Machinery USA Ltd. Kobelco Stewart Bolling Inc.

Kornylak Corp.

Legg Co., Inc.

Leistritz Extruder Corp.

Lightnin

Machinery Products U.K. Ltd.

Max Machinery Inc.

Mid-American Machine & Equipment

Mitsubishi Heavy Industries America

Morse Mfg. Co., Inc.

Myers Mixers

Nerpco USA, LLC

E.T. Oakes Corp.

Passaic Rubber Co.

Patterson Industries (Canada) Limited

Patterson-Kellev

Pebsco, LLC

Pelmar USA, LLC

Perpetual Machine Company

Polyad Company Inc.

Polymer Machinery Co., Inc.

Pope Scientific, Inc.

Processall Inc.

RAK Machine, Inc.

Readco Kurimoto, LLC

Reliable Rubber and Plastic Machinery

Rubber City Machinery Corp.

Rubber Trade Machinery S.r.l.

Schold Machine Co., Midwest Facility

Schutte & Koerting

Soberay & Sons Ltd.

TMP, A Division of French

Union Process, Inc.

United Feed Screws Ltd.

West Coast Rubber Machinery, Inc.

Wire & Plastic Machinery Corp.

Zeppelin Systems USA, Inc.

Mixing control systems

Carter Bros (Rochdale) Ltd Charles Ross & Son Co., Inc.

Cyclonaire Corp.

Dabsco Equipment Inc.

Davey Industries Inc. Eagle Polymer Equipment, Inc.

Elmet

Facts Inc. G3 United States of America Corp.

HF Rubber Machinery, Inc.

IKA Works, Inc.

JJB Engineering Co.

Kobelco Stewart Bolling Inc. Mesabi Control Engineering, Ltd.

Mesnac Americas Co. Ltd.

Midlands Millroom Supply, Inc.

O.A. Newton

Nuttall Gear

RAK Machine, Inc.

Reliable Rubber and Plastic Machinery

Soberay & Sons Ltd. Sterling Systems & Controls, Inc.

TMP, A Division of French Zeppelin Systems USA, Inc.

Mold cleaners

Ace Equipment Co. Blue Wave Ultrasonics

CCS Instruments Inc.

Cincinnati Industrial Machinery Co. Cold Jet - Dry Ice Cleaning and

Production Systems

Emerson

Fisa North America Inc.

Friess Equipment Glo-Mold Inc.

Guyson Corp.

IMS Co. Kay Zee, Inc. Maxi-Blast Inc. Mitsubishi Heavy Industries America Raydar Rubber Tekcast Industries, Inc.

Mold cleaning equipment

Abrasive Supply Company, Inc. Ace Equipment Co. Acrolab Ltd. Blue Wave Ultrasonics CCS Instruments Inc. Cold Jet - Dry Ice Cleaning and **Production Systems** Dinamec Systems LLC Emerson Fisa North America Inc. Friess Equipment

Guyson Corp. Laselec Inc. Maxi-Blast Inc. Oxco. Inc.

Regloplas Corporation Root, G.M. Inc.

Mold inserts

Akromold CCS Instruments Inc.

Coi Rubber Products, Inc. David Wolfe Design, Inc. Elmet

Fort Wayne Mold and Engineering Melrose Mold & Machining Co. Rahco Rubber Inc.

Roembke Mfg. & Design, Inc.

Molds

Accumold Acme-Hardesty Co. AES Rubber Equipment, LLC Akromold Asbury Graphite Mills Axel Plastics Research Laboratories

Bartell Machinery Systems Corp.

Batson Inc.

Brenntag Specialties, Inc. CCS Instruments Inc. **CF Extrusion Technologies** Circle Mold & Machine Inc. Coi Rubber Products, Inc.

Cryogenic Deflashing Systems Inc.

Davey Industries Inc. David Wolfe Design, Inc. Desenco, Inc.

Desma USA, Inc. DRP Mold Corp.

E&D Engineering Systems LLC Electronic Development Labs, Inc.

Estee Mold & Die - First Tool Corp.

Feedscrews.com

Fort Wayne Mold and Engineering

Freeman Schwabe Machinery French Oil Mill Machinery Co. Gearhart Machine Co. Glacier Machinery Sales Corp. Greene Rubber Company Greenerd

Herbert Machine Works Inc.

Hull Industries. Inc.

Husky Injection Molding Systems, Inc.

Jaco Products Jemco Corp.

Jing Day Machinery Industrial Co., Ltd.

Kendy Mold Industrial Ltd. Kent Mold & Mfg. Co.

Kipe Molds, Inc.

M.R. Mold and Engineering Corp. Melrose Mold & Machining Co.

Mesnac Americas Co. Ltd. Mid-States Tool & Machine, Inc.

Mix Head Repair & Sales

MK Kubitza USA MonTech USA Morris Bean & Co. Nova International Tools Oil States Industries, Inc. Passaic Rubber Co.

Pebsco, LLC Pfaff Molds L.P.

Polymer Machinery Co., Inc.

Rahco Rubber Inc. Raydar Rubber

Reuther Mold & Mfg. Co.

Rico Elastomere Projecting GmbH

RIF Molds Inc.

Roembke Mfg. & Design, Inc.

Root, G.M. Inc. Sanyu USA, Inc. Sivon Manufacturing Co. Superior Mold & Die Co. Tekcast Industries, Inc. Testing Machines Inc. U.S. Molding Machinery, Co.

Wyko Tire Technology

Ace Equipment Co. Barwell Global USA Barwell Machinery USA Inc. Batson Inc.

Buhler Aeroglide Corp.

CEM Corp.

Cincinnati Industrial Machinery Co.

Cober, Inc. Colmec USA, Inc.

CPM Wolverine Proctor LLC Dabsco Equipment Inc. Davey Industries Inc. Deguma-Schuetz GmbH

Despatch Industries Dinamec Systems LLC

Edge-Sweets Co. Energy Sciences Inc.

ESI - Extrusion Services Inc.

Freeman Schwabe Machinery George Koch Sons, LLC

Gerlach Machinery Corp. Glacier Machinery Sales Corp.

Gomaplast Machinery, Inc.

Grieve Corporation Guspro Inc.

Hanovia Specialty Lighting LLC

Hix Corporation

Icon Industries, Inc.

Industrial Rubber Machinery Inc.

Kiffer Industries, Inc. Lamac Systems Inc. The Lanly Co.

C.A. Litzler Co., Inc.

M.R. Mold and Engineering Corp.

Menzel LP MK Kubitza USA MonTech USA Passaic Rubber Co. Pebsco, LLC

Precision Quincy Radio Frequency Co.

Reliable Rubber and Plastic Machinery

Sandvik Process Systems, LLC

Silico Sp. z oo SP Industries

SPX Thermal Product Solutions

Steelman Industries, Inc.

Taricco Corp.

Tekcast Industries, Inc.

Textile Rubber & Chemical Co.

Troester Machinery Ltd. United Testing Systems, Inc. Webber Manufacturing Co. Xaloy Incorporated

Pelletizers

Alcon Tool Co. Barwell Global Ltd. Berlyn Extruders Buzuluk a.s.

C.W. Brabender Instruments, Inc. Cold Jet - Dry Ice Cleaning and

Production Systems Colmec USA, Inc. Dabsco Equipment Inc. Davey Industries Inc. **Dynisco Instruments**

Entex, Rust & Mitschke GmbH

Feedscrews.com

French Oil Mill Machinery Co.

Glacier Machinerys Sales Corporation

HF Rubber Machinery, Inc. Industrial Rubber Machinery Inc. International Knife & Saw

JLS International, Inc. Kneader Machinery USA Ltd.

LCI Corp.

Leistritz Extruder Corp. Maag Automatik Inc.

Machinery Products U.K. Ltd.

O.A. Newton Passaic Rubber Co. Soberay & Sons Ltd. Tire Recycling Consultants (TRC, LLC) Troester Machinery Ltd. United Feed Screws Ltd. **UTH GmbH**

Platen insulation

Acrolab Ltd. Akromold Albany Engineered Composites, Inc. Davey Industries Inc. Erie Mill & Press Co. Inc. Gomaplast Machinery, Inc. McNeil & NRM, Inc. **OEM Press Systems** Red Seal Electric Co. Reliable Rubber and Plastic Machinery Rogers Industrial Products Inc. Rubber City Machinery Corp. Siempelkamp LP Venango Machine Co., Inc.

Platens

Acrolab Ltd. Akromold Carver, Inc. Circle Mold & Machine Inc. Coi Rubber Products, Inc. Computer Age Engineering Custom Engineering Co. Dake - a Laguna Company Davey Industries Inc. Erie Mill & Press Co. Inc. French Oil Mill Machinery Co. Gomaplast Machinery, Inc. Grimco Presses Inc. **Hix Corporation** Icon Industries, Inc. Industrial Rubber Machinery Inc. JJB Engineering Co. JM Machinery Inc. McNeil & NRM. Inc. Nerpco USA, LLC **OEM Press Systems**

Polymer Machinery Co., Inc. Rahco Rubber Inc.

Pebsco, LLC

Reliable Rubber and Plastic Machinery

Reuther Mold & Mfg. Co. Roemheld North America Rogers Industrial Products Inc. Rubber City Machinery Corp.

Siempelkamp LP Sivon Manufacturing Co. Soberay & Sons Ltd. TMP, A Division of French Venango Machine Co., Inc. Wabash MPI

West Coast Rubber Machinery, Inc. Williams, White & Co.

Presses

AES Rubber Equipment, LLC All Well Ind. Co., Ltd. Altman Manufacturing Co. Arburg GmbH + Co KG

ASB Industries/Hannecard Roller Coatings

Barwell Global Ltd. Barwell Global USA

Barwell Machinery USA Inc.

Batson Inc.

Berran Industrial Group, Inc. Boy Machines Inc.

Brown Machine Group Burton Press Co., Inc. Buzuluk a.s.

Canadian Feed Screws Mfg. Ltd.

Carver, Inc.

CCS Instruments Inc. **CF Extrusion Technologies** Coi Rubber Products, Inc.

Cryogenic Deflashing Systems Inc.

Custom Engineering Co. Dabsco Equipment Inc. Dake - a Laguna Company

Danieli Corporation Davey Industries Inc. Deguma-Schuetz GmbH Desma USA, Inc.

Eagle Polymer Equipment, Inc.

Edge-Sweets Co. Encore Systems, Inc.

Engel

Erie Mill & Press Co. Inc. Erie Press Systems Feedscrews.com Fluid Kinetics, Inc.

Freeman Schwabe Machinery French Oil Mill Machinery Co.

Glacier Machinerys Sales Corporation-

Gluco, Inc.

Gomaplast Machinery, Inc. Greenerd Press & Machine Co.

Grimco Presses Inc.

Herbert Machine Works Inc. HF Rubber Machinery, Inc. Hull Industries, Inc.

Hunter Hydraulics, Inc.

Hydratecs Injection Equipment Co.

Icon Industries, Inc.

Indusco

Industrial Rubber Machinery Inc. International Baler Corporation

JJB Engineering Co. JM Machinery Inc. Kempler Industries Inc. Kendy Mold Industrial Ltd.

Kipe Molds, Inc. KraussMaffei Berstorff Lamac Systems Inc.

Long Chang Mechanical Co. Ltd.

LWB Machinery N.A. LP

M.R. Mold and Engineering Corp. Machinery Exchange Corp. Machinery Products U.K. Ltd. Macrodyne Technologies Inc. Maren Engineering Corp. McNeil & NRM, Inc.

Menzel LP

Mesnac Americas Co. Ltd.

Mid-American Machine & Equipment Mitsubishi Heavy Industries America

MK Kubitza USA MonTech USA

Multiplas Enginery Co., Ltd.

Nerpco USA, LLC NFM Iddon Limited

NFM Welding Engineers, Inc.

OEM Press Systems

Pacific Press Technologies, L.P. Park Thermal International

Passaic Rubber Co. Pebsco, LLC

PHI

Polymer Machinery Co., Inc.

Rahco Rubber Inc. RAK Machine, Inc.

Reliable Rubber and Plastic Machinery

Rep Corp. RJS Corp.

Roembke Mfg. & Design, Inc. Rogers Industrial Products Inc. Rubber City Machinery Corp.

Sanyu USA, Inc.

Schold Machine Co., Midwest Facility

Shaw Almex Industries Shaw Almex Presses Sherdil Precision Inc.

Shibaura Machine Company, America

Siempelkamp LP

Sinoarp Tires Equipment Technology

Sivon Manufacturing Co. Soberay & Sons Ltd.

Sumitomo (SHI) Demag Plastics Machinery North America, Inc.

Taricco Corp.

Taylor-Winfield Technologies Tekcast Industries. Inc. Testing Machines Inc. TMP. A Division of French

Tung Yu Hydraulic Machinery Co., Ltd. U.S. Molding Machinery, Co.

United Feed Screws Ltd. Venango Machine Co., Inc. Wabash MPI

West Coast Rubber Machinery, Inc.

Williams. White & Co. Wyko Tire Technology

Yizumi Rubber Machinery Co., Ltd.

Process control, extrusion

Acrolab Ltd.

Akron Steel Fabricators Co. Inc. American Kuhne, Inc.

Anderson International Corp. Axon Plastics Machinery AB **BST North America** Budzar Industries, LLC **CF Extrusion Technologies** Dabsco Equipment Inc. Davis-Standard, LLC **Dynisco Instruments** Eagle Polymer Equipment, Inc. Facts Inc. Gerlach Machinery Corp. JJB Engineering Co.

Long Chang Mechanical Co. Ltd. Mesabi Control Engineering, Ltd.

MK Kubitza USA

LMI Technologies Inc.

Mokon

NFM Welding Engineers, Inc. Polymer Machinery Co., Inc.

Reliable Rubber and Plastic Machinery

Soberay & Sons Ltd.

Sterling Systems & Controls, Inc.

Troester Machinery Ltd. United Feed Screws Ltd.

Videx Equipment Corp. Zenith Pumps

Zeppelin Systems USA, Inc.

Processing systems, material

Akron Steel Fabricators Co. Inc. Bepex International LLC Best Process Solutions, Inc. **BST North America**

Carrier Vibrating Equipment, Inc. Cincinnati Industrial Machinery Co.

Cober, Inc. Cumberland

Dabsco Equipment Inc. **Durant Tool Company**

Flexicon Corp.

French Oil Mill Machinery Co. Glacier Machinery Sales Corp. Hardy Process Solutions, Inc.

JJB Engineering Co. Kornylak Corp.

Long Chang Mechanical Co. Ltd. Mix Head Repair & Sales

MK Kubitza USA

NFM Welding Engineers, Inc.

Patterson-Kelley

Pope Scientific, Inc. Sandvik Process Systems, LLC

Soberay & Sons Ltd.

Sterling Systems & Controls, Inc.

Taricco Corp.

Trinks

Union Process, Inc.

Zeppelin Systems USA, Inc.

Rollers

Akron Steel Fabricators Co. Inc. ASB Industries/Hannecard Roller Coatings

Axon Plastics Machinery AB Butler

Buzuluk a.s.

C.W. Brabender Instruments, Inc.

Chantland MHS Co.

Charles Ross & Son Co., Inc.

Comerio Ercole S.p.A. Dabsco Equipment Inc.

Danieli Corporation

Entex, Rust & Mitschke GmbH

Erhardt + Leimer Ltd. Erie Mill & Press Co. Inc.

ESI - Extrusion Services Inc.

Franklin Miller, Inc.

G3 United States of America Corp.

Gomaplast Machinery, Inc.

Hayden Corp.

HF Rubber Machinery, Inc.

Holyoke Machine Co.

Industrial Rubber Machinery Inc.

IR Engraving, LLC

JJB Engineering Co. JM Machinery Inc.

JP Conveyors S.A. de C.V.

Kobelco Stewart Bolling Inc.

Menzel LP

Nerpco USA, LLC

NFM Iddon Limited **Pannier Corporation**

Passaic Rubber Co.

Pebsco, LLC

Precision Roll Grinders, Inc.

RAK Machine, Inc.

Reliable Rubber and Plastic Machinery

Robert A. Main & Sons, Inc.

Roll Concept

Rubber City Machinery Corp.

Soberay & Sons Ltd.

Taricco Corp.

Troester Machinery Ltd.

Tunco Mfg., Inc.

United Rolls Inc. A Subsidiary of

Whemco, Inc.

Rotational molding equipment

Acrolab Ltd. Buzuluk a.s.

Coi Rubber Products, Inc. Computer Age Engineering

Ferry Industries, Inc.

Glacier Machinerys Sales Corporation

LWB Machinery N.A. LP

Machinery Products U.K. Ltd.

Rahco Rubber Inc.

Tung Yu Hydraulic Machinery Co., Ltd. Zenith Pumps

Shredders

AEC. Inc.

Alcon Tool Co.

American Pulverizer Co.

B&W Environmental Solutions LLC

Batson Inc.

Bepex International LLC

Berlyn Extruders

Carter Day Jacobson

CM Tire Recycling Equipment Solutions

Dabsco Equipment Inc. Eco Green Equipment

Franklin Miller, Inc.

Glacier Machinery Sales Corp.

Granutech-Saturn Systems Corp.

Hosokawa Polymer Systems

Independent Machine Company

International Baler Corporation

Jordan Reduction Solutions

Machinery Products U.K. Ltd. Marathon Equipment

Maren Engineering Corp.

Montgomery Industries International

Pebsco, LLC

Polymer Machinery Co., Inc.

Reliable Rubber and Plastic Machinery

Shred-Tech

Soberay & Sons Ltd.

SSI Shredding Systems, Inc.

Sterling, Inc., ACS Group

Taylor-Winfield Technologies

TerraSource Global

Tryco International Wendt Corp.

Steelcord belting machines

KraussMaffei Berstorff

Macrodyne Technologies Inc.

Mesnac Americas Co. Ltd.

Shaw Almex Industries

Soberay & Sons Ltd.

The Steelastic Co. LLC

VMI Americas, A Div. of VMI Group

Strainers, rubber

Gneuss, Inc.

JM Machinery Inc.

Machinery Products U.K. Ltd.

Reliable Rubber and Plastic Machinery Rubber City Machinery Corp.

Soberay & Sons Ltd.

Troester Machinery Ltd. United Feed Screws Ltd.

UTH GmbH

Wire & Plastic Machinery Corp.

Wire Cloth Mfgs., Inc.

Slitters

Accraply-Stanford

Akron Steel Fabricators Co. Inc.

Alcon Tool Co.

Altman Manufacturing Co. Arntz, Inc.

Azco Corp.

B&W Environmental Solutions LLC

Batson Inc.

Birch Bros. Southern, Inc.

Calemard by Spoolex Group Comerio Ercole S.p.A.

Dabsco Equipment Inc. Davey Industries Inc. Eastman Machine Co. Edge-Sweets Co. Emerson Erhardt + Leimer Ltd. ESI - Extrusion Services Inc. Everhard Products. Inc. Ferry Industries, Inc. Freeman Schwabe Machinery G.F. Goodman & Son, Inc. Glacier Machinery Sales Corp. Gomaplast Machinery, Inc. Haumiller Engineering Co. Hvde Industrial Blade Solutions Icon Industries, Inc. Independent Machine Company Industrial Rubber Machinery Inc. International Knife & Saw JM Machinery Inc. Kiffer Industries, Inc. Lever Manufacturing Corp. Machinery Exchange Corp. Machinery Products U.K. Ltd. Maimin Technology Group, Inc. Menzel LP Midlands Millroom Supply, Inc. MK Kubitza USA Parkinson Technologies, Inc. Passaic Rubber Co. Pebsco, LLC Polymer Machinery Co., Inc. RJS Corp. RRR Development Company, Inc. Rubberhog Shaw Almex Industries Soberay & Sons Ltd. Spadone Machine Inc. The Steelastic Co. LLC Tire Recycling Consultants (TRC, LLC) Troester Machinery Ltd. Tung Yu Hydraulic Machinery Co., Ltd.

Steelcord belting machines

KraussMaffei Berstorff Macrodyne Technologies Inc. Mesnac Americas Co. Ltd. **Shaw Almex Industries** Soberay & Sons Ltd. The Steelastic Co. LLC VMI Americas, A Div. of VMI Group

Strainers, rubber

Gneuss. Inc. JM Machinery Inc. Machinery Products U.K. Ltd. Pebsco, LLC Reliable Rubber and Plastic Machinery Rubber City Machinery Corp. Soberay & Sons Ltd. Troester Machinery Ltd. United Feed Screws Ltd. **UTH GmbH** Wire Cloth Mfgs., Inc.

Take-off apparatus

Akron Steel Fabricators Co. Inc.

Barwell Global Ltd. Barwell Machinery USA Inc. Boston Matthews, Inc. **BST North America** C.W. Brabender Instruments, Inc. **CF Extrusion Technologies** Commission Brokers Inc. Dabsco Equipment Inc. **Danieli Corporation Durant Tool Company** Erie Mill & Press Co. Inc. ESI - Extrusion Services Inc. Glacier Machinery Sales Corp. Gomaplast Machinery, Inc. Icon Industries, Inc. Industrial Rubber Machinery Inc. JJB Engineering Co. JM Machinery Inc. Karg Corp. Leistritz Extruder Corp. Machinery Exchange Corp. Menzel LP Midlands Millroom Supply, Inc. MK Kubitza USA Nerpco USA, LLC NFM Iddon Limited Pebsco, LLC Polymer Machinery Co., Inc. RAK Machine, Inc. Reliable Rubber and Plastic Machinery Soberay & Sons Ltd. Troester Machinery Ltd. United Feed Screws Ltd. Vanguard Pai Lung West Coast Rubber Machinery, Inc. Wire & Plastic Machinery Corp.

Temperature control Acrolab Ltd. AEC. Inc. Air Products & Chemicals, Inc. Bartell Machinery Systems Corp. Budzar Industries. LLC Chromalox, Inc. Dabsco Equipment Inc. Davis-Standard, LLC Dynisco Instruments Edge-Sweets Co. Electronic Development Labs, Inc. Erie Mill & Press Co. Inc. Facts Inc. Glacier Machinerys Sales Corporation Gomaplast Machinery, Inc. JJB Engineering Co. Machinery Exchange Corp. Mesabi Control Engineering, Ltd. MK Kubitza USA Mokon Passaic Rubber Co.

Patterson Process Equipment Corp. Regloplas Corporation Reliable Rubber and Plastic Machinery Selco Products Company Spaltech International Sterling, Inc., ACS Group Tempest Inc. Testek Solutions Thermal Care, Inc. TMP, A Division of French United Feed Screws Ltd. Venango Machine Co., Inc. Zeppelin Systems USA, Inc.

Tire building machines

Akron Special Machinery, Inc. All Well Ind. Co., Ltd. Bartell Machinery Systems Corp. Buzuluk a.s. HF Rubber Machinery, Inc. Kayton Industry Co., Ltd. Machinery Exchange Corp. Magnatech International, Inc. Menzel LP Mesnac Americas Co. Ltd. Mid-American Machine & Equipment Polymer Industrial Products Co. RMS Equipment LLC RRR Development Company, Inc. Samson Machinery Inc. Soberay & Sons Ltd. Spadone Machine Inc. Taricco Corp. Tung Yu Hydraulic Machinery Co., Ltd. VMI Americas, A Div. of VMI Group

Trimmers

Akron Special Machinery, Inc. Alcon Tool Co. Altman Manufacturing Co. Azco Corp. Batson Inc. Burton Press Co., Inc. Clauss Tools Cryogenic Deflashing Systems Inc. Davey Industries Inc. Edge-Sweets Co. Erhardt + Leimer Ltd. ESI - Extrusion Services Inc. Everhard Products, Inc. Fecken-Kirfel America, Inc. Heat Seal, LLC Hyde Industrial Blade Solutions Icon Industries, Inc. KMT Waterjet Systems Lever Manufacturing Corp. Long Chang Mechanical Co. Ltd. Machinery Exchange Corp. Maimin Technology Group, Inc. Menzel LP Mitchell, Inc. MK Kubitza USA Passaic Rubber Co.

Pebsco, LLC Polyad Company Inc. Polymer Machinery Co., Inc. Soberay & Sons Ltd. Tunco Mfg., Inc. Tung Yu Hydraulic Machinery Co., Ltd.

Unwinding machines and stands

Ace Equipment Co. Akron Steel Fabricators Co. Inc. Altman Manufacturing Co.

Azco Corp. Birch Bros. Southern, Inc.

Butler

Calemard by Spoolex Group

Comerio Ercole S.p.A.

Conceptromec Inc.

Curtin-Hebert Co., Inc.

Dabsco Equipment Inc.

Davev Industries Inc. **Durant Tool Company**

Erhardt + Leimer Ltd.

ESI - Extrusion Services Inc. Freeman Schwabe Machinery

Independent Machine Company

JJB Engineering Co.

Machinery Products U.K. Ltd.

Magnatech International, Inc.

Maimin Technology Group, Inc.

Maxcess

Menzel LP

MK Kubitza USA

MK Maschinenbau Kubitza GmbH

Parkinson Technologies, Inc.

RAK Machine, Inc.

Spadone Machine Inc.

The Steelastic Co. LLC

Troester Machinery Ltd.

Wire & Plastic Machinery Corp.

Used and rebuilt machinery

AES Rubber Equipment, LLC

Azco Corp.

Barwell Global Ltd.

Batson Inc.

Berlyn Extruders

Brown Machine Group CCS Instruments Inc.

Commission Brokers Inc.

Cumberland

Custom Engineering Co.

Dabsco Equipment Inc.

Davey Industries Inc.

Davis-Standard, LLC

Deguma-Schuetz GmbH

Delroyd Worm Gear

Desma USA, Inc.

Durbin Industrial Valve, Inc.

Erie Mill & Press Co. Inc.

Erie Press Systems

F.A.S. Machinery LLC

Farrel Corporation

Federal Equipment Company

Feedscrews.com

Freeman Schwabe Machinery

French Oil Mill Machinery Co. G3 United States of America Corp.

Glacier Machinerys Sales Corporation-

Gluco. Inc.

Gomaplast Machinery, Inc.

Halliburton Systems Inc.

Hull Industries. Inc.

Icon Industries, Inc.

Industrial Rubber Machinery Inc.

Jaygo Incorporated

JJB Engineering Co.

JM Machinery Inc.

Kobelco Stewart Bolling Inc.

Lamac Systems Inc.

Machinery Exchange Corp.

Machinery Products U.K. Ltd.

Marathon Equipment

Micro-Poise Measurement Systems

Mid-American Machine & Equipment

Mix Head Repair & Sales

MK Kubitza USA

Nerpco USA, LLC

NFM Iddon Limited

NFM Welding Engineers, Inc.

Nuttall Gear

OEM Press Systems

Parkinson Technologies, Inc.

Patterson Industries (Canada) Limited

Pebsco, LLC

Perry Videx LLC

Polymer Machinery Co., Inc.

Reliable Rubber and Plastic Machinery

Rodolfo Comerio S.r.l.

Rogers Industrial Products Inc.

Ronci, P. Machine Co.

RRR Development Company, Inc.

Rubber City Machinery Corp.

Soberay & Sons Ltd.

Spaltech International

Tire Recycling Consultants (TRC, LLC)

TMP, A Division of French

U.S. Molding Machinery, Co.

United Feed Screws Ltd.

Wardjet, Inc.

West Coast Rubber Machinery, Inc.

Williams, White & Co.

Wire & Plastic Machinery Corp.

Zeppelin Systems USA, Inc.

Valves

Armstrong International

Cyclonaire Corp.

Dabsco Equipment Inc.

Durbin Industrial Valve, Inc. Dynamic Air Inc.

Erie Mill & Press Co. Inc.

Flowserve

Hunt Engineering

Jaygo Incorporated

JLS International, Inc.

Parker Hannifin Corporation Rogers Industrial Products Inc.

Spaltech International

Valv-Trol Co.

Zeppelin Systems USA, Inc.

Valves, control and regulating

Armstrong International

Barksdale, Inc.

Bell & Gossett

Crane Co.

Cyclonaire Corp.

Dixon Valve & Coupling Co.

Durbin Industrial Valve, Inc.

Dvnamic Air Inc.

Edwards Engineering Corp.

Erie Mill & Press Co. Inc.

Flowserve

Hunt Engineering

JLS International, Inc.

Jordan Valve Div., Richards Industries

Mesabi Control Engineering, Ltd.

Metso Automation

Norgren

Oilgear Co.

Parker Hannifin Corp., Brass Products

Parker Hannifin Corp., Stratoflex

Products

Parker Hannifin Corporation

Rogers Industrial Products Inc.

Teikoku

Tempest Inc.

H.O. Trerice Co.

United Feed Screws Ltd.

Valv-Trol Co.

Vulcanizers

Akron Steel Fabricators Co. Inc.

AKS Cutting Systems American Autoclave Co.

Anchor Autoclave Systems

Buflovak Products

Burton Press Co., Inc.

Cober, Inc.

Colmec USA, Inc.

Dabsco Equipment Inc. Danieli Corporation

Davey Industries Inc.

Erie Mill & Press Co. Inc.

ESI - Extrusion Services Inc.

Gerlach Machinery Corp. Gomaplast Machinery, Inc.

HF Rubber Machinery, Inc.

Hix Corporation

IBA Industrial, Inc. Industrial Rubber Machinery Inc.

Infratrol, LLC JM Machinery Inc.

KraussMaffei Berstorff

The Lanly Co. Machinery Products U.K. Ltd.

Macrodyne Technologies Inc.

McGill AirFlow LLC

McNeil & NRM, Inc. Mesnac Americas Co. Ltd. Mitsubishi Heavy Industries America MK Kubitza USA NFM Iddon Limited NFM Welding Engineers, Inc. Passaic Rubber Co. Patterson Industries (Canada) Limited Pebsco. LLC Reliable Rubber and Plastic Machinery Rogers Industrial Products Inc. Shaw Almex Industries **Shaw Almex Presses** Siempelkamp LP Silico Sp. z oo Sivon Manufacturing Co. Soberay & Sons Ltd. Taricco Corp. Troester Machinery Ltd. Tung Yu Hydraulic Machinery Co., Ltd. United Feed Screws Ltd. WSF Industries, Inc.

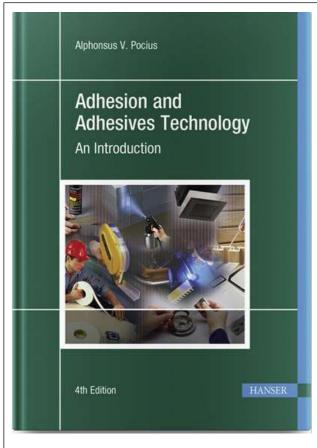
Weighing

A&D Weighing

Acrison, Inc.

Avery Weigh-Tronix Best Process Solutions. Inc. Budzar Industries, LLC C.M.P. Corp. Carrier Vibrating Equipment, Inc. Colmec USA, Inc. Cyclonaire Corp. Dynamic Air Inc. Electronic Development Labs, Inc. Emery Winslow Scale Co. Facts Inc. Fairbanks Scales Flexicon Corp. G3 United States of America Corp. Gomaplast Machinery, Inc. Hardy Process Solutions, Inc. Menzel LP Mesabi Control Engineering, Ltd. Mesnac Americas Co. Ltd. Midlands Millroom Supply. Inc. O.A. Newton Polymer Machinery Co., Inc. Soberay & Sons Ltd. Sterling Systems & Controls, Inc. Thayer Scale, Hyer Industries, Inc. Zeppelin Systems USA, Inc.

Winders Accraply-Stanford Akron Steel Fabricators Co. Inc. Amacoil Inc. Birch Bros. Southern, Inc. Buzuluk a.s. CalemardÆ by Spoolex Group Comerio Ercole S.p.A. Conceptromec Inc. Dabsco Equipment Inc. **Durant Tool Company** Entwistle Co. ESI - Extrusion Services Inc. G.F. Goodman & Son. Inc. Independent Machine Company JJB Engineering Co. Kokubun Ltd. KraussMaffei Berstorff Menzel LP MK Kubitza USA MK Maschinenbau Kubitza GmbH Parkinson Technologies, Inc. Soberay & Sons Ltd. The Steelastic Co. LLC Troester Machinery Ltd. Wire & Plastic Machinery Corp.



Adhesion and Adhesives Technology 4th Edition

\$215.00

This book describes, in clear understandable language, the three main disciplines of adhesion technology: mechanics of the adhesive bond, chemistry of adhesives, and surface science.

Some knowledge of physical and organic chemistry is assumed, but no familiarity with the science of adhesion is required. The emphasis is on understanding adhesion, how surfaces can be prepared and modified, and how adhesives can be formulated to perform a given task. Throughout the book, the author provides a broad view of the field, with a consistent style that leads the reader from one step to the next in gaining an understanding of the science.

www.rubberworld.com/book-store

The following directory gives the address and contact person for companies listed under the specific equipment categories in the section preceding this one. These companies supply process machinery to the rubber industry.

2BA North America

24 Joseph St.

Parry Sound, Ontario, Canada P2A2G2(705) 746-1162

Fax: (705) 773-0322

Email: gary.2BANA@baueradventures.

Gary Bauer, managing director

2KM North America Metering & **Mixing Systems**

Industriestr. 6a 51709 Marienheide - Rodt Germany

Website: www.2km.org d.ehrlich@2km.org

Daniel Ehrlich, key account manager

A&D Europe GmbH

Berliner Allee 65

Darmstadt, Germany D-64347

.....+49 (6155) 60 52 50

Fax: +49 (6155) 60 51 00

Website: www.aanddeurope.com Email: info@aanddeurope.com

Zoltan Barabas, sales manager

A&D Weighing

1756 Automation Pkwy.

San Jose, CA 95131 ... (800) 726-3364

Website: www.andweighing.com Email: info@andweighing.com

Terry Duesterhoeft, president and CEO

Aaron Equipment Company

735 E. Green St.

Bensenville, IL 60106 .. (630) 350-2200

Fax: (630) 350-9047

Website: www.aaronequipment.com Email: sales@aaronequipment.com

Paul O. Abbe, Inc.

201 Hansen Ct., Ste. 125

Wood Dale, IL 60191 ... (630) 350-3012 (800) 524-2188

Fax: (630) 238-7584

Website: www.pauloabbe.com

Email: sales@pauloabbe.com Jeffrey Hoffmann, vice president

Abrasive Supply Company, Inc.

25240 State Route 172

Minerva, OH 44657 (330) 894-2818

Fax: (330) 894-2626

Website: www.polyblast.com

Email: sales@polyblast.com

Rob Miller, president; Rob Rouse,

sales manager

Accrapiv

1139 S. Broadway Ave.

Salem, IL 62881 (618) 548-2600

Fax: (618) 548-6782

Website: www.accraply.com/stanford

Email: sales@accraply.com

Nancy Peterson, production manager

Accumold

1711 S.E. Ora Labor Rd.

Ankeny, IA 50021...... (515) 964-5741

Fax: (515) 964-5742

Website: www.accu-mold.com

Email: ajohnson@accu-mold.com Aaron Johnson, vice president, marketing and customer strategy

Ace Equipment Co.

4725 Manufacturing Rd.

Cleveland, OH 44135 .. (216) 267-6366

(800) 255-1241

Fax: (216) 267-4361

Website: www.armaturecoil.com Email: sheran@armaturecoil.com

Scott Heran, owner

ACE Laboratories

6800 N. Chestnut St., Ste. C

Ravenna, OH 44266.... (330) 577-4088 Website: www.ace-laboratories.com

Email: ace sales@ace-laboratories.

Erick Sharp, president and CEO (See our ads on pages 34, 98 and 99)

Acme-Hardesty Co.

450 Sentry Pkwy. W.

Blue Bell, PA 19422 (215) 591-3610

(800) 223-7054

Fax: (215) 591-3620

Website: www.acme-hardesty.com

Email: sales@acme-hardesty.com

Bryan Huston, national sales manager

Acrison, Inc.

20 Empire Blvd.

P.O. Box 380

Moonachie, NJ 07074.. (201) 440-8300

Fax: (201) 440-4939

Website: www.acrison.com

Email: informail@acrison.com John T. Shaw, vice president, market-

Acrolab Ltd.

7475 Tranby Ave.

Windsor, Ontario, Canada N8S 2B7

..... (800) 265-9542

Brian Forster, business development: Richard Sharpe, sales; Franklin Paul, engineering and John Hodgins, chief executive officer

Website: www.acrolab.com

Fmail: info@acrolab.com

Fax: (800) 465-9674

Admet Inc.

51 Morgan Dr.

Norwood, MA 02062 (781) 769-0850

(800) 667-3220

Fax: (781) 769-0884

Website: www.admet.com

Fmail: info@admet.com

John Gikas, account director: Scott Carroll, account director

Advanced Process Technology, Inc.

200 Egel Ave.

Middlesex, NJ 08846... (732) 356-4438

Fax: (732) 356-4005

Website: www.advancedprocess.com Email: info@advancedprocess.com

AEC. Inc.

2900 S. 160th St.

New Berlin, WI 53151.. (262) 641-8600

Fax: (262) 641-8653

Website: www.aecinternet.com Email: info@acscorporate.com

Gary Burgardt, industrial marketing

manager

AES Rubber Equipment, LLC

2134 Primo Rd., Ste. 101

Highlands Ranch, CO 80129

......(269) 598-3322 Website: www.usedrubberequip.com Email: aes_54@hotmail.com

Brad Scott, president

Air Products & Chemicals, Inc.

7201 Hamilton Blvd.

Allentown, PA 18195.....(610) 481-4911

Fax: (610) 481-5900

Website: www.airproducts.com

Email: info@airproducts.com Bridget Nyland, marketing and applica-

Ajax Ceco Erie Press

tions development manager

1253 West 12th St.

P.O. Box 4061

Erie, PA 16512.....(814) 455-3941

Fax: (814) 456-4819

Website: www.eriepress.com Email: bhirsh@eriepress.com

Akromold

510 Mooney St.

Bob Hirsh, sales

Goderich, Ontario, Canada N7A 3Y6

......(519) 524-8751
Website: www.akromold.com
Email: sales@akromold.com
Derek Langtry, president

Akron Special Machinery, Inc.

2740 Cory Ave.

Akron, OH 44314...... (330) 753-1077

Fax: (330) 753-7308

Website: www.polinggroup.com Email: sales@polinggroup.com

David L. Poling, president

Akron Steel Fabricators Co. Inc.

3291 Manchester Rd.

Akron, OH 44319...... (330) 644-0616

Fax: (330) 644-0105

Website: www.polinggroup.com Email: sales@polinggroup.com

Raymond Matthiesen, engineering director; Kevin R. Kline, production director; Leon Poole, applications and program specialist; Jeffery Nixdorf, executive vice president; Timothy Sullivan, senior engineer

Albany Engineered Composites, Inc. 216 Airport Dr.

Rochester, NH 03867

.....(888) 797-6735 (603) 330-5800

Fax: (603) 330-5801 Website: www.albint.com

Email: amer-aec-webaccountmanagers@albint.com

Gordon Varney, senior program manager

Alcon Tool Co.

565 Lafollette St.

Akron, OH 44311 (330) 773-9171

Fax: (330) 773-8042 Website: www.alcontool.com

Email: sales@alcontool.com

Charlie Conner, president

Alfa Laval Separation Inc.

5400 International Trade Dr. Richmond, VA 23231 .. (866) 253-2528 Website: www.alfalayal.com

Email: customerservice.usa@alfalaval.

Email: customerservice.usa@alfalaval.

Toni McCormick, marketing manager

All Well Ind. Co., Ltd.

No. 75, Liuchiao W. Rd. Chingkou Village, Puhsin Hsiang Changhua Hsien, Taiwan 51346

.....(886) 4-8346006 Fax: (886) 4-8350823

Website: www.all-well.com.tw Email: sales@all-well.com.tw

Bor Po Chen, president

Alpha Technologies

6279 Hudson Crossing Pkwy., #200 Hudson, OH 44236..... (330) 745-1641

Fax: (330) 848-7326

Website: www.alpha-technologies.com Email: alphasales@alpha-technolo-

gies.com

Jayson Humble, senior director of marketing and business development; Sri Kothy, director of engineering and operations; James Hill, global director of sales

Altman Manufacturing Co.

1990 Ohio St.

Lisle, IL 60532 (630) 963-0031

Fax: (630) 963-0089

Website: www.altmanmfg.com Email: brian@altmanmfg.com Paul Altman, president; Brian A. Alt-

man, vice president, sales

Amacoil Inc.

2100 Bridgewater Rd. P.O. Box 2228

Aston, PA 19014...... (610) 485-8300

Fax: (610) 485-2357 Website: www.amacoil.com

Email: amacoil@amacoil.com John Scavitto, product manager

American Autoclave Co.

7819 Riverside Rd. E. Sumner, WA 98390

..... (253) 863-5000 Fax: (253) 863-1770

Website: www.americanautoclave.com Email: rfstack@comcast.net

Robert Stack, president

American Kuhne, a brand of Graham Engineering

1203 Eden Rd.

York, PA 17402 (401) 326-6200

Fax: (401) 326-6201

Website: www.grahamengineering.com Email: sales@grahamengineering.com Jason DiChristofaro, strategic market manager, extrusion and extrusion systems; Gary Siy, regional sales manager, northeast; Corbett Driggett, regional sales manager, north central; Patrick Johnsen, regional sales manager, midwest; Charlie Gonzalez, regional sales manager, southwest; Mike Duff, vice president, sales and service

American Pulverizer Co.

1319 Macklind Ave.

St. Louis, MO 63110

.....(314) 781-6100 Fax: (314) 781-9209

Website: www.ampulverizer.com

Email: sales@ampulverizer.com Skip Anthony, vice president, sales and service

B.C. Ames Inc.

1644 Concord St. Framingham, MA 01701

.....(781) 893-0095

(800) 438-4249

Fax: (781) 647-3356 Website: www.bcames.com

Email: info@bcames.com

Francis Gardner, president

Ametek/Controls Div.

1100 Cassatt Rd.

Berwyn, PA 19312 (610) 647-2121 Website: www.ametek.com/products/ businessunits/instrumentationandspe-

cialtycontrols

Jack Rilea, director of advertising

Amsoil Synthetic Lubricants

6715 River Corners Rd.

Spencer, OH 44275.....(330) 648-1175

Fax: (330) 648-1176 Website: www.1syn.com

Email: jimallen@1syn.com

Jim Allen, STLE certified specialist; Al Amatuzio, president/CEO/vice president; Doug Strum, purchasing director; Ed Newman, sales and marketing manager; Dave Anderson, technical director

Anderson International Corp.

4545 Boyce Pkwy.

Stow, OH 44224(216) 641-1112

Fax: (330) 688-0117

Website: www.andersonintl.net Email: jtrocano@AndersonIntl.com Jacob Trocano, director of polymers

Arburg GmbH + Co KG

Arthur-Hehl-St.

72290 Lossburg

Lossburg, Germany 7229049 7446-33-0

Fax: 49 7446-33-3365

Website: www.arburg.com

Email: contact@arburg.com

Christoph Schumacher, marketing and corporate communications

Armstrong International

816 Maple St.

Three Rivers, MI 49093

......(269) 273-1415 Fax: (269) 278-6555

Website: www.armstronginternational.

con

Email: marketing@armstronginternational.com

Patrick Armstrong, CEO; Tom Henry, director of global sales; Rex Scare, vice president of sales, the Americas

Arntz, Inc.

320 International Cir. Summerville, SC 29483(843) 873-7850

Fax: (843) 873-7890 Website: www.arntz.us Email: sales@arntz-usa.com

Job Arntz, CEO; Jan Arntz, president; Steve Sparks, executive vice president/general manager

ARP Materials

200 Creekside Dr.

Amherst, NY 14228

.....(716) 691-2141 Fax: (716) 691-5664

Website: www.arpmaterials.com Email: nfasolino@arpmaterials.com Nick Fasolino, president

(See our ad on page 6)

ASB Industries/Hannecard Roller Coatings

1031 Lambert St. Barberton, OH 44203

......(330) 753-8458 Website: www.asbindustries.com

Email: Ohio@hannecard.com

Asbury Graphite Mills

156 Asbury-West Portal Rd.

P.O. Box 144

Asbury, NJ 08802 (908) 537-2157

Fax: (908) 537-2908 Website: www.asbury.com Email: asburyinfo@asbury.com

Nicholas Mares, vice president of marketing

Associated Environmental Systems

8 Post Office Rd. Acton, MA 01720

..... (978) 772-0022 Fax: (978) 772-0644

Website: www.associatedenvironmental.com

Email: sales@associatedenvironmen-

Beran Peter, CEO

Atlas Material Testing Technology LLC

1500 Bishop Ct.

Mount Prospect, IL 60056

......(773) 327-4520 Fax: (773) 327-5787 Website: www.atlas-mts.com

Website: www.atlas-mts.com Email: atlas.info@ametek.com

August Strecker GmbH & Co. KG

27 NE Industrial Rd. Branford, CT 06405

......(475) 414-6130 Website: https://www.strecker.de/en/ Email: RickB@wafios.us

Rick Bray, national sales manager and service technician

August Strecker GmbH & Co. KG Jahnstrasse 5

D-65549 Limburg, Germany

.....+49 6431 9610 0 Fax: +49 6431 9610 600 Website: www.strecker.de Email: sales@strecker.de

Leon Schmitt, sales manager

(See our ads on pages 106 and 107)

Aurora Rubber

10821 Shoemaker Ave. Santa Fe Springs, CA 90670

......(562) 777-1520
Website: www.aurorarubber.com
Email: auroracustomeraservice@
aurorarubber.com

Barbara Phillips, CFO; Robert White, president; Kenneth Duran, vice president

Automation Products, Inc. - Dynatrol Division

3030 Maxroy St.

Houston, TX 77008-6294

......(713) 869-0361 (800) 231-2062 USA/Canada Fax: (713) 869-7332

Website: www.dynatrolusa.com Email: sales@dynatrolusa.com

Thomas Graham, CEO

Avery Weigh-Tronix

1000 Armstrong Dr.

Fairmont, MN 56031.... (507) 238-4461

Fax: (507) 238-4195

Website: www.averyweigh-tronix.com Email: usinfo@awtxglobal.com Charles Banker, general manager

Axel Plastics Research Laboratories, Inc.

50 Cambridge Dr.

Monroe, CT 06468...... (203) 590-2000 Fax: (203) 590-2000

Website: www.axelplastics.com Email: info@axelplast.com Scott Waterman, director of sales

Axon Plastics Machinery AB

Hokaregatan 2

Nyvang, Sweden S-265 50

......46-42-57080 Fax: 46-42-54152 Website: axonmachinery.se Email: axon@axonmachinery.se Tore Akesson, president

Azco Corp.

26 Just Rd.

Fairfield, NJ 07004 (973) 439-1428 Website: www.azcocorp.com Email: cs@azcocorp.com

Andrew Zucaro, president

B&P Littleford, LLC

1000 Hess Ave.

Saginaw, MI 48601..... (989) 757-1300 Fax: (989) 757-1301

> Website: www.bplittleford.com Email: sales@bplittleford.com

Larry Slovin, president

B&W Environmental Solutions LLC

2200 Sacramento St., Ste. 1106 San Francisco, CA 94115

.....(415) 931-3381 Fax: (415) 929-8123

Website: www.lrbenterprises.com Email: sales@Irbenterprises.com Larry Barnblatt, president

B.A.G. Corp.

1155 Kas Dr., #170

Richardson, TX 75081. (214) 355-5829

Fax: (214) 355-5829 Website: www.bagcorp.com

Email: sherlene@bagcorp.com

Jodi Simons, president

Bardons & Oliver, Inc.

5800 Harper Rd.

Solon, OH 44139...... (440) 498-5800

Fax: (440) 498-2001 Website: www.bardonsoliver.com

Email: info@bardonsoliver.com Tom Van Horne, sales and business development manager

Barksdale, Inc.

3211 Fruitland Ave.

P.O. Box 58843

Los Angeles, CA 90058-0843

......(323) 589-6181 (800) 835-1060

Fax: (323) 589-3463

Website: www.barksdale.com/en
Email: sales@barksdale.com
Margie Mueller, marketing communica-

Bartell Machinery Systems Corp.

6321 Elmer Hill Rd.

tion manager

Rome, NY 13440...... (315) 336-7600

Fax: (315) 336-0947

Website: www.bartellmachinery.com Email: sales@bartellmachinery.com

Barwell Global Ltd., Corporate Headquarters	Website: www.bellgossett.com Email: FHS.webmaster@itt.com	Website: www.bestobellsteamtraps.
Unit 1, 9 Burrel Rd.	Mark Handzel, vice president	Email: steam@richardsind.com
St. Ives, Cambridge, U.K. PE27 3LE	Wark Hariazor, vice president	Kyndle McMurry, advertising manager
	Belleville Wire Cloth Co., Inc.	rtyridio Momarry, advortioning managor
Fax: 44-1480-832-851	18 Rutgers Ave.	Birch Bros. Southern, Inc.
Website: www.barwell.com	Cedar Grove, NJ 07009	9510 New Town Rd.
Email: sales@barwell.com	(973) 239-0074	P.O. Box 70
lan Turner, sales director	Fax: (973) 239-3985	Waxhaw, NC 28173(704) 843-2111
	Website: www.bwire.com	Fax: (704) 843-3936
Barwell Global USA - Spare Parts &	Email: contactus@bwire.com	Website: www.birchbrothers.com
Service	San Steele, marketing manager	Email: sales@birchbrothers.com
2868 Westway Dr., Unit E	-	Steven Birch, president
Brunswick, OH 44212-5661	Belmont Metals Inc.	Dive Meye Hitrogonies
(330) 225-9557	330 Belmont Ave.	Blue Wave Ultrasonics
Fax: (330) 225-9555	Brooklyn, NY 11207-4000	209 West 76th St.
Website: www.barwell.com/usa Email: tammy@barwellusa.com	(718) 342-4900 Fax: (718) 342-0175	Davenport, IA 52802 (800) 373-0144 Fax:(563) 322-7180
Tammy Kidd, operations manager	Website: www.belmontmetals.com	Website: www.bluewaveinc.com
rammy rada, operations manager	Email: mail@belmontmetals.com	Email: sales@bluewaveinc.com
Barwell Global USA - Machine Sales	Charles C. Gaver, Jr., sales manager;	Kalvin Frank, director of sales and
2868 Westway Dr., Unit E	Randall Andreola, account executive	service
Brunswick, OH 44212-5661		
(330) 225-9500	Bepex International LLC	The Bonnot Company
Fax: (330) 225-9555	333 Taft St. N.E.	1301 Home Ave.
Website: www.barwell.com/usa	Minneapolis, MN 55413	Akron, OH 44310 (330) 896-6544
Email: ian@barwellusa.com	(612) 331-4370	Fax: (330) 896-0822
lan Turner, vice president, sales and	Fax: (612) 627-1444	Website: www.thebonnotco.com
service	Website: www.bepex.com	Sutton Cook, president
(See our ad on page 34)	Email: info@bepex.com Jack Keeney, director of sales	Boston Matthews, Inc.
Basler, Inc.	Jack Reeney, director of Sales	12136 Wiles Rd.
855 Springdale Dr., Ste. 203	Berlyn Extruders	Coral Springs, FL 33076
Exton, PA 19341 (610) 280-0171	375 Airport Dr.	(954) 575-3627
Fax: (610) 280-7608	Worcester, MA 01602 (774) 701-1689	Fax: (954) 575-3630
Website: www.baslerweb.com	Website: www.berlyn.com	Website: www.bostonmatthews.com
Email: sales.usa@baslerweb.com	Email: berlyn@berlyn.com	Email: sales@bostonmatthews.com
Katie Martin, sales U.S., sealing	Jerry Berlyn	Simon Brookes, managing director
inspection		
	Berran Industrial Group, Inc.	Boy Machines Inc.
Batson Inc.	570 Wolf Ledges Pkwy.	199 Philips Rd.
1 Club Rd. P.O. Box 3978	Akron, OH 44311 (330) 253-5800	Exton, PA 19341 (610) 363-9121 Fax: (610) 363-0163
Greenville, SC 29608 (864) 242-5262	Fax: (330) 253-5805 Website: www.berranindustrialgroup.	Website: www.boymachines.com
Fax: (864) 271-4535	com	Email: spelna@boymachines.com
Website: www.lpbatson.com	Email: sales@berran.com	Sonya Pelna
Email: batson@lpbatson.com	Randy P. Adair, president; Paul Zuzik,	conju i cina
Glenn Batson, vice president; Steve	general manager	B&P Littleford
Ouimette, product manager		1000 Hess Ave.
,,	Best Process Solutions, Inc.	Saginaw, MI 48601
Battaggion S.p.A.	1071 Industrial Pkwy. N.	(989) 757-1300
Viale Pirovano 6/B	Brunswick, OH 44212 (330) 220-1440	Website: www.bplittleford.com
Bergamo, Italy 24125 035 236-236	Fax: (330) 220-1447	Email: sales@bplittleford.com
Fax: 035 225-693	Website: www.bpsvibes.com	William Barker, marketing manager
Website: www.battaggion.com	Email: sales@bpsvibes.com	

Bell & Gossett 8200 N. Austin

Morton Grove, IL 60053

Fabio Belotti, sales manager

.....(847) 966-3700 Fax: (847) 966-9052 3170 Wasson Rd. Cincinnati, OH 45209(513) 533-7345

Kyle Vidovic, sales manager

Bestobell Steam

(800) 543-7311 Fax: (513) 871-0105 Fax: (201) 343-0608

.....(201) 343-8425

C.W. Brabender Instruments, Inc.

South Hackensack, NJ 07606

50 E. Wesley St.

P.O. Box 2127

Website: www.cwbrabender.com Email: sales@cwbrabender.com

Email: info@battaggion.com

Guy Avellon, North American sales manager

Bramley Mixers USA

P.O. Box 842

Pottstown, PA 19464 ... (610) 326-2500

Fax: (610) 327-9649

Website: www.bramleymixersusa.com Herbert H. Houston, general manager

Brenntag Specialties, LLC

186 Wood Ave., South, Ste LL1 Iselin, NJ 08830.....(908) 561-6100 (800) 732-0562

Fax: (800) 833-8139 Website: www.brenntag.com

Email: specialties@brenntag.com Michael Strausser

Brown Machine Group

330 Ross St.

Beaverton, MI 48612 ... (800) 989-3726 (989) 435-7741

Fax: (989) 435-2821

Website: www.bmg-solutions.com Email: gwolf@brown-machine.com Gregory Wolf, president

BST North America

655 West Grand Ave., Ste. 220

Elmhurst, IL 60126 (630) 833-9900 Fax: (630) 833-9909

Website: www.bstna.com Email: sales@bstna.com

Mark Lambrecht, president; John Thome, vice president, marketing

Budzar Industries, LLC

38241 Willoughby Pkwy.

Willoughby, OH 44094. (440) 918-0505 Fax: (440) 918-0606

Website: www.budzar.com Email: sales@budzar.com

Anthony LaRiccia, sales; Steve Guttu, sales; Joel Maganza, president

(See our ad on page 34)

Buflovak Products

750 East Ferry St. Buffalo, NY 14211

......(716) 895-2100 Fax: (716) 895-8263

Fax: (716) 895-8263 Website: www.btcorp.com Email: sales@buflovak.com Robin Guadagno, sales coordinator

Buhler Aeroglide Corp.

100 Aeroglide Dr.

Cary, NC 27511 (919) 851-2000 Fax: (919) 851-6029

Website: www.aeroglide.com

Email: sales@aeroglide.com
Andy Sharpe, president and CEO

Burton Press Co., Inc.

2156 Avon Industrial Dr.

Rochester Hills, MI 48309-3610

......(248) 853-0212 Fax: (248) 853-2102

> Website: www.burtonpress.com Email: info@burtonpress.com

Edward LaPierre, president

Butler

41 Leona Dr.

Middleboro, MA 02346-1404

.....(508) 923-0544 Website: www.butlerautomatic.com

Email: philjohnson@butlerautomatic.

Phil Johnson, vice president, sales

Buzuluk a.s.

Buzulucka 108 Komarov 267 62

Komarov u Horovic, Czech Republic420 311 575 111

Fax: 420 316 572-234

Website: www.buzuluk.cz Email: info@buzuluk.cz

Ondrej Soukup, assistant marketing manager; Frantisek Devera, CEO; Pavel Charvat, marketing manager; Vaclav Jelinek, strategic business unit manager; Jaroslav Spot, sales manager; Frantisek Kubalek, customer service manager

Calemard by Spoolex Group

7 Rue De La Poudriere Zl Du Buisson

Roche La Moliere, France 42230334 77-9000-34

.........334 77-9000-34 Fax: 334 77-9036-83

Website: www.calemard.com Email: calemard@spoolex.com Cyrille Pontet, general manager; Chris-

tian Montuslat, sales manager

Canadian Feed Screws Mfg. Ltd.

80 Venture Dr.

Scarborough, Ontario, Canada M1B 3L6

..... (416) 284-8880 Fax: (416) 284-8169

Website: www.canadianFeedscrews.

Email: cfsafs@aol.com

John Vasilev, president; Brigitte Girardo, director of sales

Canterbury Engineering Company, Inc., a brand of Milacron

1057 Vijay Dr.

Chamblee, GA 30341 .. (770) 458-4882 Fax: (770) 454-9021

Website: www.milacron.com

Email: info@milacron.com Paul Cusolito, CEO; Tim Brown, vice president; Joseph Moses, technical director

Carrier Vibrating Equipment, Inc.

3400 Fern Valley Rd.

Louisville, KY 40213 (502) 969-3171

Fax: (502) 969-3172

Website: www.carriervibrating.com Email: cve@carriervibrating.com Charles Mitchell, sales manager

Carter Bros. (Rochdale) Ltd.

Unit 30A Stakehill Ind. Est., Finlan Rd. Middleton, Manchester, England

M24 2RW.....+44 (0)1706 638 301 Fax: +44 (0)1706 526 569

Website: www.cb-mixing.com Email: info@cb-mixing.com

Peter Fletcher, managing director

Carter Day Jacobson

500 73rd Ave. N.E.

Minneapolis, MN 55432

.....(763) 571-1000 Fax: (763) 571-3012

Website: www.carterday.com Email: bulldog@carterday.com

Andrew Hollister, project manager

Carver, Inc.

1569 Morris St. P.O. Box 298

Wabash, IN 46992-0298

..... (260) 563-7577 Fax: (206) 563-7625

Website: www.carverpress.com Email: carverpress@acscorporate.com Donovan Sparks, regional sales manager; David Singer, sales and marketing manager

(See our ads on pages 96 and 97)

CCS Instruments Inc.

1868 Akron Peninsula Rd.

Akron, OH 44313...... (330) 376-3600 (800) 742-8535

Fax: (330) 376-8500 Website: www.ccsi-inc.com

Email: info@ccsi-inc.com

David Warner, president; Michael Kent Warner, executive vice president

CEM Corp.

3100 Smith Farm Rd. Matthews, NC 28104

......(704) 821-7015 (800) 726-3331

Fax: (704) 821-8710 Website: www.cem.com Email: info@cem.com

Michael J. Collins, president and CEO

CF Extrusion Technologies

P.O. Box 272

Cuyahoga Falls, OH 44222

......(844) 439-8783 Website: www.cfextrusion.com Email: info@cfextrusion.com

Terrance Hendershot, president and owner; Shannon Davidson, vice president of sales and operations; Larry Schlabaugh, senior engineer; Chance Hendershot, sales engineer; Madison Hendershot-Dubay, business development

Chantland MHS Co.

502 7th St. North

Dakota City, IA 50529.. (515) 332-4045

Fax: (515) 332-1502

Website: www.chantland.com Email: chantland@chantland.com Steve Hartmann, project manager; Jamie Flot, president

Chemineer, Inc.

5870 Poe Ave.

Dayton, OH 45414...... (937) 454-3200 (800) 643-0641

(800) 643-0641 Fax: (937) 454-3379

Website: www.chemineer.com Email: chemineer@nov.com Patty Breig, managing director

Chromalox, Inc.

103 Gamma Dr.

Pittsburgh, PA 15238 ... (412) 967-3800

Fax: (412) 967-3938

Website: www.chromalox.com Email: is@chromalox.com

Barbara Lee, marketing communication specialist

Cimcorp North America

635 South Service Rd.

Grimsby, Ontario, Canada L3M 4E8(905) 643-9700

Fax: (905) 643-9666 Website: www.cincorp.com Email: sales_na@cimcorp.com

Rick Trigatti, CEO

Cincinnati Industrial Machinery Co.

Division of Armor Group

4600 N. Mason-Montgomery Rd. Mason, OH 45040 (513) 923-5601

Fax: (513) 923-5694

Website: www.cinind.com Email: sales@cinind.com

Joshua Donay, president

Circle Mold & Machine Inc.

83 S. Thomas Rd.

Tallmadge, OH 44278-0513

.....(330) 633-7017

Fax: (330) 633-7025 Website: www.circlemold.com Email: info@circlemold.com

Edward A. Siciliano, CEO; Edward T. Siciliano, president

Clauss Tools

55 Walls Dr., Ste. 201

Fairfield, CT 06824..... (800) 835-2263 Website: www.claussco.com

Email: claussco@acmeunited.com
William Miller, marketing manager

Clemco Industries Corp.

One Cablecar Dr.

Washington, MO 63090

..... (636) 239-0300 Fax: (800) 726-7559

Website: www.clemcoindustries.com Email: info@clemcoindustries.com Patti Roman, vice president, marketing

Cleveland Mixer

4 Heritage Park Rd.

Clinton, CT 06413.....(860) 669-1199

(800) 243-1188 Fax: (860) 669-7461

Website: www.clevelandmixer.com Email: info@clevelandmixer.com

Sean Donkin, president and CEO

Cleveland Motion Controls, a Lincoln Electric Company

4130 Carolina Commerce Pkwy.

Ladson, SC 29456...... (800) 321-8072 (843) 695-4000

Fax: (843) 795-8931

Website: www.cmccontrols.com Email: burnykaliburnservice@lincolnelectric.com

Geoffrey Allman, senior vice president

CM Tire Shredders/CM Industrial Shredders

1920 Whitfield Ave.

Sarasota, FL 34243 (941) 755-2621

Fax: (941) 753-2308

Website: www.cmshredders.com Email: mario.vazquez@cmshredders.

com

Mario Vazquez, director of sales and marketing

C.M.P. Corp.

4101 S.E. 85th St.

Oklahoma City, OK 73135

..... (844) 768-0424

Fax: (405) 672-4547

Website: www.cmpcorp.com Email: kelsey@cmpcorp.com

Brad Croy, president; Darren Croy, vice president; Kelsey Poe, director of marketing and sales

Cober, Inc.

30 Moffitt St.

Stratford, CT 06615

......(203) 855-8755 Fax: (203) 855-7511

Website: www.cober.com Email: mkrieger@cober.com Matthew Krieger, vice president, tech-

nology; Bernard Krieger, CEO

Coi Rubber Products. Inc.

19255 San Jose Ave. D-1 City of Industry, CA 91748

...... (626) 965-9966 Fax: (626) 581-2335

Website: www.coirubber.com Email: sales@coirubber.com

David Chao, president

Cold Jet - Dry Ice Cleaning and Production Systems

455 Wards Corner Rd.

Loveland, OH 45140.... (800) 337-9423

Fax: (513) 831-3211 Website: www.coldjet.com Email: swilson@coldjet.com

Steve Wilson, applications development director

Colmec USA, Inc.

35 Nutmeg Dr. #135

Trumbull, CT 06611 (203) 502-8822

Fax: (203) 502-8390 Website: www.colmecusa.com

Email: info@colmecusa.com Martin Yonnone, managing director

Comerio Ercole S.p.A.

Via Castellanza, 100 P.O. Box 342

Busto Arsizio, Varese, Italy 1-21052

......39-0331-488411 Fax: 39-0331-4884421

Website: www.comercole.it Email: info@comercole.it

Commission Brokers Inc.

P.O. Box 8456

Cranston, RI 02920-0456

..... (401) 943-3777 Fax: (401) 943-3670

Website: www.commissionbrokers.com Email: marty137@aol.com

Martin Kenner, president

Computer Age Engineering

867 E. 38th St.

Marion, IN 46953(765) 674-8551

Fax: (765) 674-3964 Website: www.caeweb.com Email: info@caeweb.com

Tim Anger, sales engineer

Conair	Cryogenic Systems & Parts	Dabsco Equipment Inc.
200 West Kensinger Dr.	3965 E. La Palma Ave.	3007 Trenton Rd.
Cranberry Township, PA 16066	Anaheim, CA 92807 (714) 241-7793	Clarksville, TN 37040 (931) 553-0242
(724) 584-5500	Fax: (844) 270-7639	Fax: (931) 647-1914 Website: www.dabsco.com
Fax: (724) 584-5299	Website: www.cryogenicsystemsusa.	Email: info@dabsco.com
Website: www.conairgroup.com Email: cweinrich@conairgroup.com	com Email: cryo@cryogenicsystemsusa.	Jerome Buie, vice president; David
Chris Weinrich, general manager,	com	Buie, president
extrusion sales	Jeff Walter, president	zaio, prociaent
	(See our ad on page 35)	Dake - a Laguna Company
Conceptromec Inc.		1809 Industrial Park Dr.
1782 Industrial Blvd.	Cumberland	Grand Haven, MI 49417
Magog, Quebec, Canada J1X 4V9	2900 S. 160th St.	(800) 937-3253
(819) 847-3627	New Berlin, WI 53151 (262) 641-8600	Fax: (800) 846-3253
Fax: (819) 847-3628 Website: www.conceptromec.com	Fax: (262) 641-8653 Website: www.cumberlandplastics.com	Website: www.dakecorp.com Email: customerservice@dakecorp.
Email: info@conceptromec.com	Email: info@acscorporate.com	com
Pierre-Etienne Alliaume, marketing	John Farney, national sales manager	Scott Van Dyke, sales manager
specialist	com ramey, national calco manager	cook van byko, calco managor
Specialist.	Curtin-Hebert Co., Inc.	Dalmec, Inc.
Conitex Sonoco	11 Forest St.	469 Fox Ct.
1302 Industrial Pike	Gloversville, NY 12078	Bloomingdale, IL 60108
Gastonia, NC 28052	(518) 725-7157	(630) 307-8426
(704) 833-1357	Fax: (518) 773-3805	Fax: (603) 307-8436
Website: www.conitexbulksak.com	Website: www.curtinhebert.com	Website: www. dalmec.com
Email: jwatkins@conitex.com Jamie Watkins	Email: bruce@curtinhebert.com Bruce T. Anderson, sales manager	Dalton Electric Heating Co., Inc.
damie watams	Didee 1. Anderson, sales manager	28 Hayward St.
Conn & Co., LLC	Curtiss-Wright/Exlar Automation	Ipswich, MA 01938 (508) 356-9844
11 S. Marion St.	18400 West 77th St.	Fax: (508) 356-9846
Warren, PA 16365 (814) 723-7980	Chanhassen, MN 55317	Website: www.daltonelectric.com
Fax: (814) 723-8502	(855) 620-6200	Email: dalton@daltonelectric.com
Website: www.connblade.com	Website: www.cw-actuation.com/	E.W. Whitney III, vice president
Email: info@connblade.com	Email: cha_info@curtisswright.com	Danieli Corneration
Richard C. Freeman, owner	Bonnie Gallea, advertising specialist	Danieli Corporation 800 Cranberry Woods Dr., Ste. 200
Coperion Corporation	Custom Engineering Co.	Cranberry Township, PA 16066
663 E. Crescent Ave.	2800 McClelland Ave.	(724) 778-5400
Ramsey, NJ 07446 (201) 327-6300	Erie, PA 16510(814) 898-2800	Fax: (724) 778-5401
Fax: (201) 825-6494	Fax: (814) 898-2825	Website: www.danieli-usa.com
Website: www.coperion.com	Website: www.platens.com	Email: sales@danieli-usa.com
Email: info.cus@coperion.com	Email: andyt@customeng.com	Losso Paolo, president
Ulrich Bartel, president; Walt Ploski,	Andy Tompkins, sales manager	D D
regional sales manager	Custom Scientific Instruments Inc	Davey Resource Group 295 S Water St., #300
Crane Co.	Custom Scientific Instruments, Inc. 1125 Conroy Place	Kent, OH 44240(800) 828-8312
100 1st Stamford Pl.	Forks Township (Easton), PA 18040	Website: www.davey.com
Stamford, CT 06902 (203) 363-7300	(610) 923-6500	Email: richard@davey.com
Website: www.craneco.com	Fax: (610) 923-6543	Richard Schaack, president
Email: development@craneco.com	Website: www.csi-instruments.com	
R.S. Evans, chairman of the board;	Email: info@csi-instruments.com	David Wolfe Design, Inc.
Eric Fast, president and CEO	0.1110	829 Moe Dr.
Crucaronia Dofloobina Customa In-	Cyclonaire Corp.	Akron, OH 44310 (330) 633-6124
Cryogenic Deflashing Systems Inc.	2922 North Division Ave. P.O. Box 366	Fax: (330) 633-9926
1701 E. Edinger Ave., Bldg. G-2 Santa Ana, CA 92705	York, NE 68467(402) 362-2000	Website: www.davidwolfedesign.com Email: info@davidwolfedesign.com
(714) 564-1020	(800) 445-0730	Doug Pryor, design manager
Fax: (714) 564-1026	Fax: (402) 362-2001	
Website: www.cryogenicdeflashingsys-	Website: www.cyclonaire.com	Davis-Standard, LLC
tems.com	Email: sales@cyclonaire.com	#1 Extrusion Dr.
Empile on compared off a chicago set a se-	Coott Colonsid muscidents Association	Device trials OT 00070

Scott Schmid, president; Aaron Huff,

Tyler Mullen, marketing manager

vice president of sales and marketing;

Email: cryogenicdeflashingsystem-

Ruben Mendez, president

sinc@msn.com

Pawcatuck, CT 06379

.....(860) 650-4886

Website: www.davis-standard.com

Email: info@davis-standard.com Joseph Wnuk, vice president, elastomer and profile systems

Deguma-Schütz

150 North Michigan Ave., 35th Floor Chicago, IL 60601

......(773) 493-4872 Website: www.deguma.com Email: deguma@deguma.com

Dek-Tron Scientific Instruments

244 East Third St.

Plainfield, NJ 07060..... (908) 226-1777

Fax: (908) 226-4973 Website: www.dektroncorp.com

Email: info@dektroncorp.com Miguel Vargas, sales and marketing manager

Delrovd Worm Gear

2221 Niagara Falls Blvd. Niagara Falls, NY 14304-5710

(716) 298-4100

Fax: (716) 298-4101 Website: www.delroyd.com

Email: info@delroyd.com Michael Suszek, product manager; Don Wierbinski, plant Manager

Delta Cooling Towers, Inc.

185 U.S. Highway 206 Rockaway, NJ 07836

..... (973) 586-2201 Fax: (973) 586-2243

Website: www.deltacooling.com Email: sales@deltacooling.com

Desenco, Inc.

1938 S. Arlington St.

Akron, OH 44306...... (330) 724-1200

Fax: (330) 724-1443

Website: www.desenco.com Email: info@desenco.com

Robert Bates, president

Desmasa

Condado De Trevino, 87 Burgos, 09001 Spain

.....+34 947 47 09 40

Website: www.desmasa.com Email: a.rica@desmasa.com

AndreaRica, business development and marketing

Desma USA. Inc.

2195 Arbor Tech Dr. Hebron, KY 41048-7509

......(859) 525-6610

Fax: (859) 525-8972 Website: www.desma-usa.com Email: sales.us@desma.biz

L. Scott Early, president and CEO

Despatch Industries

8860 207th St.

Minneapolis, MN 55044

......(952) 469-5424 Website: www.despatch.com Email: info@despatch.com

Robert Berding, sales

Dessau Diamond

15-01 Pollitt Dr., Unit 10 Fair Lawn, NJ 07410

.....(201) 791-2005 Fax: (201) 791-2115

Website: www.dessaudiamond.com Email: sales@dessaudiamond.com

Deublin Co.

2050 Norman Dr.

Waukegan, IL 60085.... (847) 689-8600 Fax: (847) 272-7746

Website: www.deublin.com Email: cs@deublin.com

Afzal Ali, P.E., director of marketing

DeWAL Industries, a division of Rogers Corporation

15 Ray Trainor Dr. (800) 366-8356 (401) 789-9736

Website: www.rogerscorp.com/ems Email: dewal@rogerscorp.com

Diamond America

96 E. Miller Rd.

Akron, OH 44301...... (330) 535-3330 Website: daextrusion.com

Dinamec Systems LLC

4285 McEver Industrial Dr. NW Acworth, GA 30101......(770) 421-1181

Fax: (770) 421-8611

Website: www.dinamecsystems.com Email: samantha.paulson@dinamecsystems.com

Luc Ceyssens, director; Drew Jones, general sales manager; Samantha Paulson, marketing

Dischem, Inc.

4252 Strausser N.W. North Canton, OH 44720

..... (330) 494-5210

Fax: (330) 494-1305

Website: www.dischem.com Email: sales@dischem.com Sam Lakhia, president

Dixon Valve & Coupling Co.

1 Dixon Square

Chestertown, MD 21620-1196

......(410) 778-2000 Website: www.dixonvalve.com Email: sales@dixonvalve.com

Karen Hurless, advertising

Doss Visual Solution Srl

Via Dell Industria, 57 Erbusco Brescia, Italy 25030

Daniel Salva, general manager; Fabio Cadenelli, head of service department; E. Colosio, quality department; Francesca Giusti, sales department

DRP Mold Corp.

70 James Baldwin Dr.

Martinsville, IN 46151-8080

..... (765) 349-3355 Fax: (765) 349-3366

Website: www.drpmold.com Email: pparker@drpmold.com

Paul Parker, president and CEO; Linda Parker, owner

Drying Technology, Inc.

500 East Ave. N.

P.O. Box 1635

Silsbee, TX 77656 (409) 385-6422

Fax: (409) 385-6537

Website: www.moisturecontrols.com Email: sales@moisturecontrols.com John Robinson, sales director

Durant Tool Company

200 Circuit Dr.

North Kingston, RI 02852

.....(401) 781-7800 Fax: (401) 738-2586

Website: www.durantco.com Email: sales@durantco.com

Diane Mulligan, vice president

Durbin Industrial Valve, Inc.

1062 Triplett Blvd.

Akron, OH 44306...... (330) 724-9968

Fax: (330) 724-9975

Website: www.durbinvalve.com Email: valve@durbinvalve.com Marc Paquette, vice president of sales

and marketing

Dynamic Air Inc.

1125 Willow Lake Blvd.

St. Paul, MN 55110..... (651) 484-2900

Fax: (651) 484-7015

Website: www.dynamicair.com Email: info@dynamicair.com

James Steele, president; Tom Acheson, national sales manager; Carol Steele, marketing manager

Dynisco Instruments

38 Forge Pkwy.

Franklin, MA 02038...... (508) 541-9400

Fax: (508) 541-9436

Website: www.dynisco.com Email: david.newell@dynisco.com David Newell, director of sales

E&D Engineering Systems LLC

895 Industrial Dr.

Gladwin, MI 48624...... (989) 246-0770

Fax: (989) 246-0774

Website: www.edengsys.com Email: ed@edengsys.com

John Shurlow, shop supervisor; Ed Wark, president

Eagle Polymer Equipment, Inc.

P.O. Box 1271

Akron, OH 44309...... (330) 706-0552

Fax: (330) 706-0546

Website: www.polymerequipment.com Email: info@polymerequipment.com

Eastman Machine Co.

779 Washington St. Buffalo, NY 14203-1396

..... (716) 856-2200

Fax: (716) 856-1140

Website: www.eastmancuts.com Email: sales@eastmancuts.com Elizabeth Hagen, marketing manager

Eaton

901 S. 12th St.

Watertown, WI 53094.. (920) 261-4070 Website: www.eaton.com

Email: info@eaton.com

Craig Arnold, chairman and chief executive officer

Eco Green Equipment

615 W. 900 N.

North Salt Lake, UT 84054

.....(801) 505-6841

Website: www.ecogreenequipment. com

Email: sales@ecogreenequipment. com

Brad Swenson, president; Andres Salazar, sales director

Edge-Sweets Co.

2887 Three Mile Rd., N.W. Grand Rapids, MI 49544

......(616) 453-5458

Fax: (616) 453-6227

Website: www.edge-sweets.com Email: esco@edge-sweets.com Dario Ramazzotti, vice president, sales

Edwards Engineering Corp.

101 Alexander Ave.

Pompton Plains, NJ 07444

..... (973) 835-2800 Fax: (973) 835-3222

Website: www.edwards-eng.com

Email: info@edwards-eng.com Vince Sardo, sales manager

Electro Chemical Engineering

750 Broad St.

Emmaus, PA 18049 (800) 235-1885

(610) 965-9061

Fax: (610) 965-2595

Website: www.electrochemical.net Email: inquiry@electrochemical.net Mike Bunner, president; Dale Heffner, vice president; Charles Williston, sales, marketing manager

Electronic Development Labs, Inc.

244 Oakland Dr.

Danville, VA 24540 (434) 799-0807

(800) 342-5335 Fax: (434) 799-0847

Website: www.edl-inc.com Email: sales@edl-inc.com

Danielle Smith, sales manager: Stephanie King, service manager: Gabbi White, marketing director

Elmet

712 Terminal Rd.

Lansing, MI 48906 (517) 402-7744 Website: www.elmet.com

Email: b.rafig@elmet.com

Emerson

41 Eagle Rd.

Danbury, CT 06813-1961

.....(203) 796-0400 Fax: (203) 796-9838

> Website: www.emerson.com/en-us Email: info@Emerson.com

Emerson Process Management

6005 Rogerdale Rd.

Houston, TX 77072..... (281) 879-2300 Website: www.emersonprocess.com Email: custserve.ras@emerson.com Tom Stovall, vice president, global sales

Emery Winslow Scale Co.

73 Cogwheel Lane

Seymour, CT 06483..... (203) 881-9333

Fax: (203) 881-9477

Website: www.emerywinslow.com Email: sales@emerywinslow.com David M. Young, sales manager

Empire Abrasive Equipment Co.

2101 W. Cabot Blvd.

Langhorne, PA 19047-1893

.....(215) 752-8800 Fax: (215) 752-9373

Website: www.empire-airblast.com Email: Airblast@empire-airblast.com Betty Rickards, marketing coordinator

Empire West/Urethane Service

12104-1/2 E. Park St.

Cerritos, CA 90703 (866) 397-8677

Fax: (562) 404-0687

Website: www.urethaneservice.com Email: steve.hille@empirewestcorp.

com

Mark S. Prichard, director/sales engineer, RIM Division

Encore Systems, Inc.

8501 Savage Rd.

Angora, MN 55703 (218) 666-5455 Website: www.tirebaler.com

Email: info@tirebaler.com

Keith Ojanen

Energy Sciences Inc.

42 Industrial Way

Wilmington, MA 01887

.....(508) 694-9000 Website: www.ebeam.com Email: sales@ebeam.com

P. Michael Fletcher, marketing manager

Engel

3740 Board Rd.

York, PA 17406 (717) 764-6818 Website: www.engelglobal.com Email: contact.us@engelglobal.com

Chad Zediker, account manager, elastomers/LSR

Entex, Rust & Mitschke GmbH

Heinrichstrasse 67a, Bochum North Rhine-Westphalia D-44805

Germany.....+49 234 891 22 0 Fax: +49 234 891 22 99

> Website: www.entex.de Email: rquack@triadsales.com

Ralf Quack, vice president, Triad Sales LLC

Entwistle Co.

6 Bigelow St.

Hudson, MA 01749 (508) 481-4000

Fax: (508) 481-4004

Website: www.entwistleco.com Email: jfield@entwistleco.com

George L. Kaplan, vice president sales

Equipto

225 Main St.

Tatamy, PA 18085 (610) 253-2775 Fax: (888) 859-2121

Website: www.equipto.com Email: rinder@equipto.com

Dick Garnett

Erhardt + Leimer Ltd.

5403 Harvester Rd., Unit #3 Burlington, Ontario, Canada L7L 5P2

.....(905) 632-8181

(450) 635-4311 (Montreal) Fax: (905) 632-9473 Website: www.erhardt-leimer.ca Email: info-can@erhardt-leimer.com Gary Milani, vice president

Erie Mill & Press Co. Inc.

P.O. Box 6349 953 East 12th St.

Erie, PA 16512.....(814) 454-1581

Fax: (814) 454-7913 Website: www.empco-inc.com

Email: jan@empco-inc.com John Nowak, president; Greg Maus,

vice president

Eriez Magnetics

2200 Asbury Rd. Erie, PA 16506.....(814) 835-6000 (800) 345-4946

Fax: (814) 838-4960 Website: www.eriez.com Email: eriez@eriez.com

Eric Confer, market manager

ESI - Extrusion Services Inc.

305 West North St.

Akron, OH 44303...... (330) 434-1861 Fax: (330) 434-1862

Website: www.esi-extrusion.com Email: sales@esi-extrusion.com

David B. Saunders, senior sales engineer; Declan J. Smith, CEO; Scott A. Gardner, business manager

Estee Mold & Die - First Tool Corporation

612 Linden Ave.

Dayton, OH 45404...... (937) 254-6197 Website: www.firsttoolcorp.com Email: sales@firsttoolcorp.com

Dan Rinehart, president

Eurotherm by Schneider Electric

44621 Guilford Dr., Ste. 100

Ashburn, VA 20147..... (703) 724-7300 Fax: (703) 724-7301

Website: www.eurotherm.com Email: info.eurotherm.us@schneider-

electric.com

Doug Chancellor, sales manager

Everhard Products, Inc.

1016 9th St. SW

Canton, OH 44707...... (330) 453-7786 (800) 298-2832

Fax: (330) 453-7449

Website: www.everhard.com Email: sales@everhard.com

Barbara Morgan, sales manager

Extreme Coatings

2895 46th Ave. N.

St. Petersburg, FL 33714

.....(727) 528-7998 (888) 367-2569

Website: www.extremecoatings.net Email: info@extremecoatings.net

F.A.S. Machinery LLC

9916 Broadway Áve.

Cleveland, OH 44125 .. (216) 472-3800

Fax: (216) 472-3803

Website: www.fassales.com Email: fassales@fassales.com

Robert Sadlowski, president

Facts Inc.

2737 Front St.

Cuyahoga Falls, OH 44221

.....(330) 928-2332 Fax: (330) 928-3018

Website: www.facts-inc.com

Email: sales@facts-inc.com Thomas W. Fisher III, president; Scott

Hall, general manager Fagus GreCon, Inc.

648 Griffith Rd., Ste. A

Charlotte, NC 28217.... (704) 912-0000

Website: www.grecon-us.com Email: sales@grecon.us

Richard Harrold, marketing manager

Fairbanks Scales

6800 W. 64th St.

Overland Park, MO 66202

.....(800) 451-4107 Fax: (816) 471-0241

> Website: www.fairbanks.com Email: info@fairbanks.com

Ingrid Adel, sales support manager

Fairway International

P.O. Box 782

716 N. Mantua St.

Kent, OH 44240 (330) 678-2540

Fax: (330) 673-0120

Website: www.hwfairway.com Email: lee@hwfairway.com

Lee Strange, sales manager

Farrel Corporation

25 Main St.

Ansonia, CT 06401...... (203) 736-5500

Fax: (203) 735-6267

Website: www.farrel.com Email: info@us.hf-group.com

William Flaherty, vice president sales; Guy Tiso, manager, repairs, rebuilds

Fecken-Kirfel America, Inc.

6 Leighton Place

Mahwah, NJ 07430..... (201) 891-5530

Fax: (201) 891-0129

Website: www.fecken-kirfel.de

Email: info@fk-am.com Francis Pinckers, vice president

Federal Equipment Company

8200 Bessemer Ave.

Cleveland, OH 44127 .. (216) 271-3500

Fax: (216) 271-5210

Website: www.fedequip.com Email: sales@fedequip.com

David Winger, executive vice president

Feedscrews.com

2511 N. Friday Rd.

Cocoa, FL 32926 (321) 631-2050

Fax: (321) 636-3508

Website: www.feedscrews.com Ron Anderson, CEO/president

Ferry Industries, Inc.

4445 Allen Rd.

Stow, OH 44224-1058

.....(330) 920-9200

Fax: (330) 920-4200

Website: www.ferryindustries.com Email: sales@ferryindustries.com

Ann Rowland, international sales

manager

Fisa North America Inc.

260 Stanley St.

Elk Grove Village, IL 60007

.....(847) 299-8400 Fax: (847) 299-8440

Website: www.fisa.com

Email: fisa-na@fisa.com

Phil Vaudeleau, president

The Fitzpatrick Co., an IDEX Corp.

90 Glacier Dr., Ste. 1000 Westwood, MA 02090

......(630) 530-3333

Fax: (519) 884-0253

Website: www.fitzmill.com

Email: info@fitzmill.com

Heath Mitts, vice president

FlackTek, Inc.

1708 Hwy. 11

Landrum, SC 29356 (864) 895-7441 Website: www.speedmixer.com

Email: speedmixer@flacktek.net

Flexfab, LLC

1699 W. M-43 Highway

Hastings, MI 49058...... (800) 331-0003

Fax: (269) 945-4802

Website: www.flexfab.com

Email: sales@flexfab.com Matthew DeCamp, president and chief

executive officer

Flex Machine Tools

705 Commerce Dr.

Wapakoneta, OH 45895
......(800) 837-2503
Website: www.flexmachinetools.com
Email: info@flexmachinetools.com
Flex sales team

Flexicon Corp. 2400 Emrick Blvd. Bethlehem, PA 18020

......(610) 814-2400 (888) flexicon Fax: (610) 814-0600 Website: www.flexicon.com Email: sales@flexicon.com

Greg Slack, sales manager, North and South America

Flow Polymers, Inc. 12819 Coit Rd.

Cleveland, OH 44108(216) 249-4900 Fax: (216) 249-8916

Website: www.flowpolymers.com Email: info@flowpolymers.com Rikki Lamba, managing director, additives and international business

Flowserve

5215 N. O'Connor Blvd. Irving, TX 75039 (972) 443-6500 Fax: (972) 443-6800

Website: www.flowserve.com Email: RLGsales@flowserve.com Mark A. Blinn, president and chief executive officer

Fluid Kinetics, Inc.

251 Thorn Ave. Orchard Park, NY 14127

......(716) 662-7900 Fax: (716) 662-7982 Website: www.fluidkinetics.net

Email: info@fluidkinetics.net Douglas J. Hayes; Robert Glace, Jr.

Foremost Machine Builders, Inc.

23 Spielman Rd. Fairfield, NJ 07004

..... (973) 227-0700 Fax: (973) 227-7307

Website: www.foremostmachine.com Email: sales@foremostmachine.com Marlene C. Heydenreich, president; Clifford J. Weinpel, vice president and general manager; Drew Schmid, assistant sales manager

Fort Wayne Mold and Engineering

4501 Earth Dr. Fort Wayne, IN 46809

......(260) 747-9168 Fax: (260) 747-3601

Website: www.fortwaynemold.com

Email: sales@fortwaynemold.com Rick Schmidt, president; Roger Marley, vice president of sales; Darrell Beverly, vice president of manufacturing; Brad Fiedler, vice president of engineering

Forte Technology, Inc.

58 Norfolk Ave., Ste. 4 South Easton, MA 02375

.....(508) 297-2363 Fax: (508) 297-2314

Website: www.forte-tec.com Email: info@forte-tec.com

Patricia White, president

Franklin Miller, Inc.

60 Okner Pkwy. Livingston, NJ 07039

......(973) 535-9200 Fax: (973) 535-6269

Website: www.franklinmiller.com Email: info@franklinmiller.com William Galanty, president; Dave Schuppe, vice president

Freeman Schwabe Machinery

4064 Clough Woods Dr. Cincinnati, OH 45103

..... (513) 947-2888 Fax: (513) 947-2887

Website: www.freemanschwabe.com Email: sales@freemanschwabe.com Greg DeFisher, CEO

French Oil Mill Machinery Co.

Polymer Machinery Group; Hydraulic Machinery Group 1035 W. Greene St. P.O. Box 920 Pigua, OH 45356-0920

......(937) 773-3420 Fax: (937) 773-3424 Website: www.frenchoil.com

Website: www.frenchoil.com Email: tflutz@frenchoil.com

Tayte French Lutz, chairman and CEO; Brian Greever, polymer sales; Jason Mc-Daniel, COO and president; Doug Smith, hydraulic sales, Dave Sledz, hydraulic sales; Jeff Rudy, aftermarket sales; Alex Lee, polymer sales; Troy Hanf, aftermarket sales; Tim Jacomet, aftermarket sales; Mary Quinlan, hydraulic sales (See our ads on pages 100 and 101)

Friction Coating Corp.

44833 Centre Ct.

Clinton Township, MI 48038

..... (866) 817-0205 Fax: (586) 731-0991

Website: www.frictioncoating.com Email: frictioncoating@yahoo.com Michael Jones, sales

Friess Equipment

2222 Akron-Peninsula Rd.

Akron, OH 44313...... (330) 945-9440

Fax: (330) 923-5833

Website: www.friessequipment.com Email: info@friessequipment.com Jim Friess, president

(See our ad on page 124)

Future Foundation North America

2400 Old Brick Rd., Ste. 329 Glen Allen, VA 23060....(585) 794 5612 Website: www.ffinstruments.com Email: abeersinghal@ffinstruments.

Abeer Singhal, president

G3 United States of America Corp.

Part of G3 Mixing Technologies 920 Killian Rd.

Akron, Ohio 44312

Website: www.g3machinery.com Email: sales@g3machinery.com Brian Howard, director of USA operation

G.F. Goodman & Son. Inc.

Two Ivybrook Blvd. P.O. Box 2909

Ivyland, PA 18974...... (215) 672-8810

(800) 458-8000 Fax: (215) 441-8949

Website: www.gfgoodman.com
Email: gfg@gfgoodman.com
Duke Davis, vice president, manufac-

turing

Galco Industrial Electronics

1451 E Lincoln Ave. Madison Heights, MI 48071

......(800) 827-8902 (248) 542-9090 Fax: (248) 542-8031

Fax: (248) 542-8031 Website: www.galco.com Email: sales@galco.com

Michael Conwell, president

Gates Corporation

1144 15th St., #1400

Denver, CO 80202......(303) 744-1911 Fax: (303) 744-4003

Website: www.gates.com
Email: info@gates.com

Ivo Jurek, chief executive officer

Gearhart Machine Co.

1145 Highbrook Ave. Akron, OH 44301

..... (330) 253-1880 Fax: (330) 253-1886

Email: jamie@erlbachergear.com Patrick Casto, president/owner

Gem Gravure

112 School St.

Hanover, MA 02339 (781) 878-0456 Website: www.gemgravure.com Email: info@gemgravure.com

Annaliese Sviokla

(See our ads on pages 18 and 134)

Genca

Milacron Family of Brands

9600 18th St. N.

St. Petersburg, FL 33716

..... (800) 237-5448 Fax: (888) 393-3622

Website: www.milacron.com Email: sales@milacron.com

Jim Rathert, general manager; Keith Daniels, production control manager; Ken Shields, production manager; Jasmin Sehovic, engineering manager; Brian Schemenaur, sales engineer; Bill Holmes, sales engineer; Maria Kimberling, sales engineer

George Koch Sons, LLC

10 S. Eleventh Ave.

Evansville, IN 47712.... (888) 873-5624

Website: www.kochllc.com Email: sales@kochllc.com

Sam Woehler, vice president, sales

Gerlach Machinery Corp.

444 Brickell Ave., Ste. 700

Miami, FL 33131 (800) 448-0699 Website: www.gerlach-machinery.com Email: na@gerlach-machinery.com Michael Braun, sales

(See our ad on page 34)

Gibitre Instruments srl

Via dell'Industria, 73, 24126 Bergamo, Italy.....39-035-460146 Fax: 39-035-460687

Website: www.gibitre.it Email: info@gibitre.it

Mauro Belloni, president

(See our ad on page 17)

Gislotica

Rua Sidónio Muralha, No. 12 4455-554 Perafita, Portugal

.....+351 229 951 782 Fax: +351 229 942 546 Website: www.gislotica.pt

Glacier Garlock Bearings, Inc.

700 Mid Atlantic Pkwy.

Thorofare, NJ 08086 ... (856) 848-3200

Fax: (856) 848-5115

Email: geral@gislotica.pt

Website: www.www.ggbearings.com Email: gbsales@www.ggbearings.com Les Conner, product manager

Glacier Machinery Sales Corp.

P.O. Box 130486

St. Paul, MN 55113..... (651) 786-9700 Website: www.glaciermachinery.com Email: sales@glaciermachinery.com Marvin Cleveland, president

Glenro, Inc.

39 McBride Ave.

Paterson, NJ 07501..... (973) 279-5900

(888) 453-6761 Fax: (973) 279-9103

Website: www.glenro.com Email: info@glenro.com

Gary Van Denend, president; Mike Papapietro, vice president, engineering

Glo-Mold Inc.

115 W. Bartges St.

Akron, OH 44311 (330) 434-4442 Fax: (330) 258-2016

Website: www.vallevrubber.com Email: eric@valleyrubber.com Eric Conroy, sales manager

Gluco, Inc.

0-794 Chicago Dr.

Jenison, MI 49428 (616) 457-1212 Fax: (616) 457-3620

Website: www.gluco.com Email: gluco@gluco.com

Doug Grotenrath, vice president of sales

Gneuss, Inc.

10820-G Independence Pointe Pkwy. Matthews, NC 28105... (704) 841-7251 Fax: (704) 841-7254

Website: www.gneuss.com

Email: gneuss.usa@gneuss.com Monika Gneuss, vice president sales and marketing; Daniel Gneuss, presi-

Gomaplast Machinery, Inc.

2424 Long Rd.

Wooster, OH 44691 (330) 263-7845 Website: www.gomaplast.com Email: sales@gomaplast.com Marcelo S. Hildebrandt, president

(See our ads on pages 20, 102 and 103)

Graco Inc.

P.O. Box 1441

Minneapolis, MI 55440

..... (877) 844-7226 Fax: (612) 623-6273 Website: www.graco.com

Email: info@graco.com Patrick McHale, CEO; Mark Sheahan, vice president; Mike Sebion, sales and marketing director; Gavin Petersen,

sales manager

Granutech-Saturn Systems Corp.

201 E. Shady Grove Rd. Grand Prairie, TX 75050

.....(972) 790-7800 Fax: (972) 790-8733 Website: www.granutech.com

Email: sales@granutech.com Matthew Morrison, president

Great Western Mfg. Co., Inc.

2017 S. 4th St. P.O. Box 149

Leavenworth, KS 66048

..... (913) 682-2291 Fax: (913) 682-1431

Website: www.gwmfg.com Email: sifter@gwmfg.com

Paul Van Camp, director of sales and marketing

Greene Rubber Company

20 Cross St.

Woburn, MA 01801 (781) 937-9909 Fax: (781) 937-9739

Website: www.greenerubber.com Email: marketing@greenerubber.com Stephanie Aguias, marketing manager

Greenerd Press & Machine Co.

41 Crown St.

P.O. Box 886

Nashua, NH 03061 (603) 889-4101 Website: www.greenerd.com

Email: sales@greenerd.com

Thomas M. Lavoie, applications man-(See our ads on pages 104 and 105)

Greerco Products, Chemineer, Inc.

125 Flagship Dr.

North Andover, MA 01845

.....(978) 687-0101 Fax: (978) 687-8500 Website: www.chemineer.com

Email: chemineer@nov.com Dave Youkstetter, sales manager

Grieve Corporation

500 Hart Rd.

Round Lake, IL 60073

.....(847) 546-8225 Fax: (847) 546-9210

Website: www.grievecorp.com Email: sales@grievecorp.com Frank Calabrese, vice president, sales

Grimco Presses Inc.

65 First Ave.

Paterson, NJ 07514..... (973) 345-0660

Fax: (973) 345-0686

Website: www.grimcopresses.com Email: sales@grimcopresses.com David Grimaldi, Jr., president; David

Grimaldi, sales and marketing manager; Robert Szydlowski, technical director

Grover Mfg. Corp.

620 S. Vail Ave. P.O. Box 986 Montebello, CA 90640

> Website: www.grovermfg.com Email: sales@grovermfg.com

Guang Zhou Scut Bestry Technology Co., Ltd.

No.3 Huali St., Yuyan Rd. Luogang District, Guangzhou, P.R.C8620-32310888

Website: www.bestry.com.cn Email: market@bestry.com.cn

Guill Tool & Engineering

10 Pike St.

West Warwick, RI 02893

......(401) 828-7600 Fax: (401) 823-5310 Website: www.guill.com Email: sales@quill.com

Bill Conley, sales manager

Guspro Inc.

1-715 Richmond St.

Chatham, Ontario, Canada N7M 5L5 (888) 648-7776

Fax: (519) 352-7676 Website: www.guspro.com Email: guspro@guspro.com

Al Moon, sales manager

Guyson Corp.

13 Grande Blvd.

Saratoga Springs, NY 12866-9090(800) 228-7894

Fax: (518) 587-7840 Website: www.guyson.com Email: info@guyson.com

Caitlin Lewis, business development manager; Steve Donohue, vice president, sales

Halliburton Systems Inc.

400 Morris Ave., Ste. 268

Denville, NJ 07834 (973) 625-9292 Fax: (973) 625-3166 Website: www.halliburton.com

Email: info@hsix.com

Stephen Halliburton, president

Hamilton Mold & Machine, Inc.

25016 Lakeland Blvd.

Cleveland, OH 44132.. (216) 732-8200 Website: www.hamiltonmold.com Email: jfleming@hamiltonmold.com John Fleming, vice president; Dale Fleming, president

Hana RFID

29000 Aurora Rd.

Solon, OH, 44139....... (330) 405-4600 Website: https://hana-rfid.comEmail: info@hanarfid.com

Mike Hetrick, SVP sales; Randall Grein, business development director; Val Peters, vice president of marketing

Hanovia Specialty Lighting LLC

6 Evans St.

Fairfield, NJ 07004 (973) 651-5510 Fax: (976) 651-5550

Website: www.hanovia-uv.com Email: sales@hanovia-uv.com Jeff Andrews, vice president, sales

Hardy Process Solutions, Inc.

10075 Mesa Rim Rd.

San Diego, CA 92121.. (858) 292-2710 Fax: (858) 278-6700

Website: www.hardysolutions.com Email: hardyinfo@hardysolutions.com Rodger Jeffery, vice president of sales and technical services

Haumiller Engineering Co.

370 Joseph Dr.

South Elgin, IL 60177 ... (847) 695-9111 Website: www.haumiller.com Email: sales@haumiller.com

Russ Holmer, president

Hayden Corp.

333 River St.

West Springfield, MA 01089-3603

..... (413) 734-4981 Fax: (413) 785-5052

Website: www.haydencorp.com Email: daniel.hayden@haydencorp. com

John O. Hayden, chairman; Daniel Hayden, president

Haysite Reinforced Plastics

5599 New Perry Hwy.

Erie, PA 16509.....(814) 868-3691

Fax: (814) 864-7803

Website: www.haysite.com Email: info@haysite.com

Mark Anderson, president; Anthony Lignetta, director of sales

Heat Seal, LLC

4922 East 49th St., Ste.100

Cleveland, OH 44125 .. (216) 341-2022

Fax: (216) 341-2163

Website: www.heatsealco.com Email: custserv@heatsealco.com Mike Slivers, west and midwest equipment sales manager; Bryan Rakovec, eastern equipment sales manager

Heinemann Saw Co.

2017 Navarre Rd. S.W.

P.O. Box 6240

Canton, OH 44706...... (330) 456-4721

Fax: (330) 456-0318

Website: www.heinemannsaw.com Email: efetko@heinemannsaw.com Art Poorman, vice president; Amanda Streamo, sales

Helro Corp.

326 Albertson

Rochester, MI 48307 ... (248) 650-8500 Fax: (248) 650-2399

Website: www.helro.com

Jeff Russell, general manager

Herbert Machine Works Inc.

850 Moe Dr.

Akron, OH 44310....... (330) 929-4297 Website: www.herbert.eu/herbertmaschinenbau

Email: matthias.walter@herbert.eu

HF Rubber Machinery, Inc.

1701 Northwest Topeka Blvd. Topeka, KS 66608-0250

.....(785) 235 2336 Fax: (785) 235-1331

Email: james.carlton@hf-group.com Website: www.hf-mixinggroup.com/en

Hix Corporation

1201 E. 27th Terrace

Pittsburg, KS 66762..... (800) 835-0606

Fax: (620) 231-1598

Website: www.ovens-dryers.com Email: Info@ovens-dryers.com Kara Charbonneau, customer service

Holyoke Machine Co.

514 Main St.

manager

P.O. Box 988

Holyoke, MA 01041 (413) 534-5612 Fax: (413) 532-9244

Fax: (413) 532-9244 Website: www.holyokemachine.com

Email: tclark@holyokemachine.com Thomas Clark, sales manager

Hoowaki, LLC

400 Birnie St., Ste. C

Greenville, SC 29611 .. (864) 353-6808 Fax: (864) 646-2178

Website: www.hoowaki.com Email: alex@hoowaki.com

The Horsburgh & Scott Co.

5114 Hamilton Ave.

Cleveland, OH 44114 .. (216) 431-3900

Fax: (216) 432-5850

Website: www.horsburgh-scott.com Email: nas@horsburgh-scott.com Pradeep Saha, president and CEO

Horton, Inc.

2565 Walnut St. Minneapolis, MN 55113

.....(651) 361-6400 (800) 621-1320

> Fax: (651) 361-6801 Website: www.hortonww.com Email: info@hortonww.com

Mitch Bieber, regonal manager

Hosokawa Polymer Systems

10 Chatham Rd.

Summit, NJ 07901 (860) 828-0541 Fax: (860) 829-1313

Website: www.polysys.com Email: sales@hps.hosokawa.com

Doug Ort, sales

HotSet America

713 Kite Rd., Hwy. 57 W. Swainsboro, GA 30401

.....(912) 289-1844 Fax: (866) 496-4123

Website: www.hotset-worldwide.com Email: usa@hotset-worldwide.com David Cieslica, president and managing director, Americas; Jorge Herrera, sales application engineer, Americas; Nicole Beyer, production planner/sales coordinator, Americas; Kenneth Willoughby, purchasing/logistics coordinator, Americas; Jodi Conner, human

resources

Hull Industries, Inc.

59 Industrial Dr. New Britain, PA 18901

......(215) 230-4260 Fax: (215) 230-4261

Website: www.hullindustries.com Email: info@hullindustries.com Patrick Shire, vice president of sales

Hunt Engineering

1913 E. State St.

Salem, OH 44460 (330) 337-9535 Fax: (330) 337-3754

Website: www.huntvalve.com Email: sales@huntvalve.com

Tim Pulcini, application engineer

Hunter Hydraulics, Inc.

2512 Columbus Rd. N.E.

P.O. Box 7117

Canton, OH 44705...... (330) 455-3983

Fax: (330) 455-6534

Larry R. Hunter, president

Husky Injection Molding Systems, Inc.

8845 West 192nd St.

Mokena, IL 60448...... (708) 479-9049

Fax: (708) 479-9054 Website: www.husky.co

John Galt, president and CEO

Hvde Industrial Blade Solutions

54 Eastford Rd.

Southbridge, MA 01550

.....(508) 764-4344 Fax: (508) 764-8172

Website: www.hydeblades.com Email: epfeiffer@hydetools.com Eric Pfeiffer, director of marketing and

business development; Mike Castner, vice president, sales

Hydratecs Injection Equipment Co.

430 Morgan Ave.

Akron, OH 44311 (330) 773-0491 Fax: (330) 773-3800

Website: www.hydratecsinjectionequip.

Email: hiekarl@ameritech.net

Karl Barkey, president

IBA Industrial, Inc.

470 Spring Park Place, Ste. 700 Herndon, VA 20170 (571) 449-4992 Fax (703) 860-0401

Website: www.iba-worldwide.com Email: info-worldwide@iba-group.com

Icon Industries, Inc.

1522 Madison Ave., S.E. Grand Rapids, MI 49507

......(616) 241-1877

Fax: (616) 241-5578
Website: www.iconindustries.com
Email: sales@iconindustries.com
Thomas D. Jacques, president; Robert
Zieger, vice president; Pete Spiering,

sales manager

IKA Works, Inc.

2635 Northchase Pkwy. SE Wilmington, NC 28405

(910) 452-7059

(800) 733-3037 Fax: (910) 452-7693

Website: www.ikausa.com Email: process@ika.net

Julia Schittko, marketing manager

IMS Co.

10373 Stafford Rd.

Chagrin Falls, OH 44023-5296

.....(440) 543-1615 (800) 537-5375

Fax: (440) 543-1069

Website: www.imscompany.com

Email: sales@imscompany.com Dianna Barnes, sales manager

Indco. Inc.

4040 Earnings Way New Albany, IN 47150

......(812) 945-4383 (800) 942-4383 Fax: (800) 042-0742

Fax: (800) 942-9742 Website: www.indco.com Email: info@indco.com

Tricia Thien, sales manager

Independent Machine Company

20 Industrial Rd.

Fairfield, NJ 07004 (973) 882-0060

Fax: (973) 808-9505

Website: www.independentusa.com Email: andrewl@independentusa.com Bruce L. Butler, sales manager; Robin Ulanski, marketing manager; Jack Santa Lucia, engineering manager

Indusco

120B Spence Ln.

Nashville, TN 37210 (615) 833-0666

Fax: (615) 834-8722

Website: www.induscousa.com Email: sales@indusco.com

Tony Hoffman, president

Industrial Hard Chromium Co.

7 Rome St.

Newark, NJ 07105...... (973) 344-2265 Fax: (973) 344-2812

Website: www.ihcco.com Email: info@ihcco.com

Eugene L. Foote, president

Industrial Rubber Machinery Inc.

3784 Brant Dr.

Akron, OH 44319...... (330) 645-0020

Fax: (330) 645-0070

Larry Weber, president

Infratrol, LLC

483 Gardner St.

South Beloit, IL 61080 (779) 475-3098 Fax: (779) 475-2016

Website: www.infratrol.com

Email: sales@intratrol.com

Hank Hemphill, vice president, sales; Steve Onsager, president

Instron Corporation

825 University Ave.

Norwood, MA 02062.... (800) 564-8378 Website: www.instron.com

Email: web@instron.com

Andrew DeWolfe, marketing

Intereuropean

Via Mariano Tentorio 2b

22100 Como (CO), Italy(+39) 031 565403 Fax: (+39) 031 5472170 Website: www.intereuropean.it Email: ceo@intereuropean.it Vladislav Tsoupikov, chief executive

officer

International Baler Corporation 5400 Rio Grande Ave.

P.O. Box 61025 Jacksonville, FL 32254 ... (904) 358-3812 (800) 231-9286 Fax: (904) 358-7013 Website: www.intl-baler.com Email: sales@intl-baler.com Roger Griffin, president and CEO

International Knife & Saw

1435 North Cashua Dr. Florence, SC 29501..... (843) 662-6345 Fax: (843) 664-1103 Website: www.iksinc.com Email: iks@iksinc.com George Revollo, vice president

International Mold Steel

1155 Victory Place Hebron, KY 41048 (859) 342-6000 Fax: (859) 342-6006 Website: www.imsteel.com Email: salesdesk@imsteel.com Paul Britton, national sales manager

Intralox, L.L.C. USA

301 Plantation Rd. New Orleans, LA 70123(504) 733-0463

Fax: (504) 734-0063 Website: www.intralox.com Email: msantana@intralox.com Dan Waters, national sales manager

IR Engraving, LLC

5901 Lewis Rd. Sandston, VA 23150 (804) 222-2821 Website: www.irengraving.com Email: sales@irengraving.com Francesca Wyatt, sales manager

Iten Industries

4602 Benefit Ave. P.O. Box 2150

Ashtabula, OH 44004 .. (440) 997-6134 (800) 227-4836 Fax: (440) 992-4966

Website: www.itenindustries.com Email: info@itenindustries.com Timothy Salo, technical sales

ITW Performance Polymers

130 Commerce Dr. Montgomeryville, PA 18936 (215) 855-4156 Fax: (215) 855-4688

Website: www.itwperformancepolymers.com

Email: info.na@itwep.com Alan Kaniss, technical manager

Jackson-Wheeler Metals Service, Inc.

270 Georgia Ave. Brooklyn, NY 11207 (718) 342-5000 Fax: (718) 342-0175

Website: www.jacksonwheeler.com Email: mail.jacksonwheeler.com Robert Lockwood, sales manager

Jaco Products

15060 Madison Rd. Middlefield, OH 44062-9407 (440) 632-5800 Fax: (440) 632-0012

Website: www.iacoproducts.com Email: sales@jacoproducts.com Bill Carter, general manager

Jarvis Industries, Inc.

3639 Waterloo Rd. P.O. Box 496

Randolph, OH 44265... (330) 325-9507

Fax: (330) 325-9524 Website: www.jarvisindustries.com

Email: eric@jarvisindustries.com Jim Jarvis, president; Eric Jarvis, vice president; Gail Jarvis, secretary and treasurer

Jaygo Incorporated

7 Emery Ave.

Randolph, NJ 07869.... (908) 688-3600 Fax: (908) 688-6060

> Website: www.jaygoinc.com Email: sales@jaygoinc.com

Jason Hayday, owner and president

Jemco Corp.

59 Old Turnpike Rd. Beacon Falls, CT 06403 (203) 881-0488 Fax: (203) 881-0178

Website: www.jemcocorp.com Email: joe@Jemco.comcastbiz.net Joseph Norton; George Norton; Priscilla Weiss

Jing Day Machinery Industrial Co., Ltd.

No. 57, Houjue, Danei Dist., Tainan 74255, Taiwan (886) 6-576-1168 (576) 3289, 576-3648

Fax: (886) 6-576-3369 Website: www.jingday.com

Robert K.M. Yang, general manager

JJB Engineering Co.

2695 North Haven Blvd., Ste. 10 Cuyahoga Falls, OH 44223

.....(330) 807-0671 Fax: (330) 926-1134

Email: sales@jjbengineering.com Edward Sheehan, president

JLS International, Inc.

P.O. Box 240948

Charlotte, NC 28224.... (704) 679-9575 Fax: (704) 679-9574 Website: www.jlsintl.com

Email: info@ilsintl.com John Litschert, president

JM Machinery Inc.

P.O. Box 378 Wadsworth, OH 44282

......(330) 825-2400 Fax: (330) 825-0569

Website: www.jmmachinery.com Email: enquiry@immachinery.com Michael Dyer, president and CEO; Jacqueline McCaman, vice president; Jason Breth, sales manager; Harish Nene, India office director

JM/KTM Machinery, Inc.

P.O. Box 378 Wadsworth, OH 44282

.....(330) 825-2400 Fax: (330) 825-0569 Website: www.jmktm.com Email: michaeldyer@jmktm.com

Michael Dyer, president; Jacqueline McCaman, vice president of operations; Jason Breth, sales manager

Jordan Reduction Solutions

355 Clow Lane Birmingham, AL 35217

..... (888) 733-8248 (205) 849-0178

Fax: (205) 849-5075

Website: www.jordanreductionsolutions.com

Email: sales@jordanreductionsolutions.com

Howard Boyd, general manager

Jordan Valve Div., Richards Industries, Inc.

3170 Wasson Rd.

Cincinnati, OH 45209 ... (800) 543-7311 Fax: (513) 871-0105

Website: www.jordanvalve.com Email: info@richardsind.com Kyndle McMurry, marketing manager

JP Conveyors S.A. de C.V.

Km. 16 Carr. Alvaro Obregón Casa 038 Cd. Cuauhtémoc, Chihuahua,

Mexico(625) 586-7649 Website: www.jpconveyors.com.mx Email: sales@jpconveyors.com.mx	Website: www.kentmold.com Email: pj@kentmold.com Paul J. Ferder, president; Paul M. Ferder, general manager	Knitting Machinery Corp. of America 15625 Saranac Ave. Cleveland, OH 44110 (216) 851-9900 Fax: (216) 851-9909
Kaeser Compressors, Inc.	r craci, general manager	Website: www.knittingmachinerycorp.
511 Sigma Dr. Fredericksburg, VA 22408 (540) 898-5500	Kiffer Industries Inc. 4905 Rocky River Dr. Cleveland, OH 44135	com Email: info@knittingmachinerycorp. com
Fax: (540) 898-5520 Website: www.us.kaeser.com	(800) 317-2363 (216) 267-1818	Michael L. Brokos, vice president
Email: info.usa@kaeser.com	Fax: (216) 267-1850	Kobelco Stewart Bolling Inc.
Karg Corp.	Website: www.kiffer.com Email: info@kiffer.com	1600 Terex Rd. Hudson, OH 44236(330) 655-3111
241 Southwest Ave.	Greg Phillip, president; Mike Burns,	Fax: (330) 655-2982
P.O. Box 197 Tallmadge, OH 44278-0197	director, sales and marketing	Website: www.ksbiusa.com Email: information@ksbi.com
(330) 633-4916	Kimbell-Bishard, a Division of Kim-	Hisashi Mitamura, president; Brian P.
Fax: (330) 633-0235	bell Gin Machinery Co.	Howard, assistant general manager of
Website: www.kargcorp.com Email: sales@kargcorp.com	226 Loop 289 N.E. P.O. Box 1356	sales and marketing
Michael J. Karg, president	Lubbock, TX 79408	Koch Separation Solutions
menaerer rang, preesaem	(806) 763-6645	850 Main St.
Kay Zee, Inc.	Website: www.kgmfans.com	Wilmington, MA 01887 (978) 694-7000
P.O. Box 95	Email: kgm@kgmfans.com	Website: www.kochmembrane.com
New Philadelphia, OH 44663(330) 339-1268	Wiley Kimbell, president	James Pothier, advertising manager
Fax: (330) 339-4324	Kipe Molds, Inc.	Kokubun Ltd.
Website: www.kayzeeinc.net	340 E. Crowther Ave.	100-1 Nezumino
Email: kayzee10@aol.com	Placentia, CA 92870	Hamamatsu, Shizuoka-Pre., Japan
Kayton Industry Co., Ltd.	(714) 572-9576 Fax: (714) 572-9579	430-0838 81-53-427-2722 Fax: 81-53-427-2733
47 Liuchiao East Rd., Puhsin	Website: www.kipemolds.com	Website: www.kokubun.jp
Chang Hua, Taiwan	Email: office@kipemolds.com	Email: sales@kokubun.jp
(886) 4-832-2471	Becky Kipe, sales	S. Kokubun, managing director
Fax: (886) 4-834-2822 Website: www.tire-machine.com	Klein Cutlery	Kornylak Corp.
Email: kayton@ms22.hinet.net	7971 Refinery Rd.	400 Heaton St.
Shio-Shen Ho, general manager	Bolivar, NY 14715 (585) 928-2500	Hamilton, OH 45011
Kempler Industries Inc.	Fax: (585) 928-1101 Website: www.kleincutlery.com	(513) 863-1277 Fax: (513) 863-7644
2461 Greenleaf Ave.	Email: customerservice@kleincutlery.	Website: www.kornylak.com
Elk Grove Village, IL 60007	com	Email: kornylak@kornylak.com
(847) 737-7432 Fax: (847) 640-0431	Chris Olix, project engineer; Wayne West, president; Rick Gould, vice	Richard Kornylak, president
Website: www.kempler.com	president	KraussMaffei Berstorff
Email: sales@kempler.com Douglas Kempler, sales and marketing	KMT Wateriet Systems	7095 Industrial Rd. Florence, KY 40122 (859) 283-0200
manager	KMT Waterjet Systems 635 W. 12th St.	Fax: (859) 283-1860
manage.	Baxter Springs, KS 66713	Website: www.kraussmaffei.com
Kendy Mold Industrial Ltd.	(620) 856-2151	Email: info@kraussmaffei.com
Building 5, Juhui Mold Industrial Park,	Website: www.kmtwaterjet.com	Marion Sommerwerck, corporate com-
Tianliao Com, Yutang St. Guangming District	Email: sales@kmtwaterjet.com Duane Johnson, president	munication and marketing
ShenZhen City, China 518105	Buario dofficori, producini	LaBour Pumps
+86-755-2328 4987	Kneader Machinery USA Ltd.	901 Rawnwood Dr.
Website: www.kendymold.com	3883 Brecksville Rd.	Selma, AL 36701 (334) 875-4100 Website: www.labourtaber.com
Email: info@kendymold.com Judy Zhu, sales manager	Richfield, OH 44286(330) 923-2727	Jerry Kroemer, plant manager
tas, and manager	Fax: (330) 923-6070	coy racomon, plant managor
Kent Mold & Mfg. Co.	Website: www.kneaderusa.com	LabsCubed Inc.
1190 W. Main St.	Email: sales@kneadermachinery.com	14 Hoffman St.
Kent, OH 44240(330) 673-3469 Fax: (330) 673-9699	Jacques Mortimer, president (See our ads on pages 42 and 134)	Kitchener, Ontario, Canada N2M 3M4(519) 749-5234

Website: www.labscubed.com Email: khaled@labscubed.com Jeffrey Patracca, Paul Bhogal, Khaled Bogaileh and Ammar Jafar

Lakecraft Corp.

1010 W. Lakeshore Dr. Port Clinton, OH 43452

..... (419) 734-2828 Website: www.lakecraft.com

Sam Conte, owner

Lamac Systems Inc.

412 Honeysuckle Dr.

Dayton, OH 45429...... (937) 439-4131 (800) 439-4131

Fax: (937) 439-5408 Website: www.lamac.com

Email: sales@lamac.com James K. Hoffman, president; Bob Al-

len, vice president

The Lanly Co.

26201 Tungsten Rd. Cleveland, OH 44132

.....(216) 731-1115 Fax: (216) 731-7900

Website: www.lanlv.com Email: sales@lanly.com

Ed Chapman, application engineering

Laselec Inc.

2605 N. Forum Dr. Grand Prairie, TX 75052

.....(817) 460 7830

Website: www.laselec.com

Frederick Viaut, sales manager

Lawer SpA

Via Giovanni Amendola, 12/14 13836 Cossato (Biella), Italy

.....+39 015 9899511 Fx: +39 015 9842211

Website: www.lawer.com Email: hsandberg@hfssolutions.com

Hugo F. Sandberg, president

(See our ads on pages 34 and 125)

Lawson Hemphill, Inc.

1658 G.A.R. Highway, Ste. 6

Swansea, MA 02777.... (508) 679-5364

Fax: (508) 679-5396

Website: www.lawsonhemphill.com Email: information@lawsonhemphill.

Norman Barker, sales

LCI Corp.

4433 Chesapeake Dr. P.O. Box 16348

Charlotte, NC 28297.... (704) 398-7728 Fax: (704) 392-8507

Website: www.lcicorp.com

Email: info@lcicorp.com Lynda L. Smith, marketing communication supervisor

Lechler Inc.

445 Kautz Rd.

St. Charles, IL 60174 .. (800) 777-2926

Fax: (630) 377-6657

Website: www.lechlerUSA.com Email: info@lechlerUSA.com

Marty Gangler, inside sales

Legg Co., Inc.

325 E. 10th St.

P.O. Box 112

Halstead, KS 67056..... (316) 835-2256 (800) 835-1003

Fax: (316) 835-3218

Website: www.leggbelting.com Email: jessica.rutschman@legg.conti-

tech.us Jessica Rutschman, sales and market-

Leibinger

2702 Buell Dr., #2

East Troy, WI 53120 ... (262) 642-4030

Fax: (262) 642-4033

Website: www.leibinger-group.com Email: info@leibinger-group.com (See our ad on page 129)

Leistritz Extrusion, a business unit of Leistritz Advanced Technologies Corporation

175 Meister Ave.

Branchburg, NJ 08876

.....(908) 685-2333 Fax: (908) 685-0247

Website: www.leistritz-extrusion.com Email: sales@alec-usa.com

Charlie Martin, president; Stuart Kapp, sales manager

Leonard Enterprises

6665 View Park Ct. Riverside, CA 92503

.....(951) 785-5566 Fax: (951) 785-5870

Website: www.leonardenterprises.com Email: jeffrey.kobus@leonardenterprises.com

Jeff Kobus, president and CEO

Lever Manufacturing Corp.

420 Route 17 South

Mahwah, NJ 07430..... (201) 684-4430 (800) 526-5265

Fax: (201) 529-0188

Website: www.levercorp.com Email: bcorbett@levercorp.com

William M. Corbett, vice president and general manager

132 Hopping Brook Rd.

Holliston, MA 01746..... (508) 429-7403

Fax: (508) 429-8615

Website: www.lewa-inc.com Email: sales@lewa-inc.com

Naota Shikano, CEO; Stefan Glasmeye, CMO; Martin Fiedler, COO

Liahtnin

An SPX Process Equipment Operation 135 Mt. Read Blvd.

Rochester, NY 14611

..... (585) 436-5550 Fax: (585) 527-1742

Website: www.spx.com/en/lightnin Carmen P. Clar, manager, market communications

Linde North America Inc.

575 Mountain Ave.

New Providence, NJ 07974

.....(800) 232-4726 Website: www.linde.com Email: info@linde.com

Wolfgang Büchele, chief executive

officer

Liquid Controls

105 Albrecht Dr.

Lake Bluff, IL 60044..... (847) 295-1050

Fax: (847) 295-1057 Website: www.lcmeter.com

Email: lc-info.lcmeter@idexcorp.com Doug Chapman, industrial marketing manager

List USA

2231 Gateway Blvd.

Charlotte, NC 28208

.....(704) 319-7011 Website: www.list.us

Email: mike.wilson@list.ch

Mike Wilson

C.A. Litzler Co., Inc.

4800 W. 160 St. Cleveland, OH 44135

.....(216) 267-8020 Fax: (216) 267-9856

> Website: www.calitzler.com Email: sales@calitzler.com

Susan Beohmerle, marketing manager

LMI Technologies Inc.

9200 Glenlyon Pkwy.

Burnaby, British Columbia, Canada V5J 5J8.....(604) 636-1011

Fax: (604) 516-8368 Website: www.lmi3d.com

Email: contact@lmi3d.com Terry Arden, CEO; Len Chamberlain,

vice president, sales

Long Chang Mechanical Co. Ltd.

No. 9 Lane 220 Chung Chen South Rd. Young Kang City, Taiwan

......(886) 6-2531251-2 Fax: (886) 6-2535271

Website: www.longchang.com.tw Email: taiwan-lcmi@umail.hinet.net Chin-Huo Huang, CEO/president; Ping-Shun Huang, vice president/ purchase director; Chin-Yin Chang, technical director

Lord Corporation

111 Lord Dr.

Cary, NC 27511(877) ask-lord

Fax: (919) 469-5811 Website: www.lord.com

Paul Stancil, marketing communication specialist

Lotréc AB

Södra Kungsvägen 321 Lidingö, Stockholm, Sweden 18166+46 (8) 544 80 900 Website: www.lubkorelease.com Email: release@lotrec.se

Louisiana Chemical Equipment Co., L.L.C. (LCEC)

P.O. Box 1490 11100 Hwy. 225

LaPorte, TX 77572 (281) 471-4900

Fax: (281) 470-2968 Website: www.lcec.com

Stephen Rotenberg, president and CEO; Steve Nelson, general manager

Lufkin Industries, LLC

811 Willow Oak Dr, Missouri City, TX 77489

.....(281) 495-1100 Website: www.lufkin.com Email: contact@lufkin.com

Andy Cordova president

LWB Machinery N.A. LP

8865 Norwin Ave., Ste. 27, #362 North Huntingdon, PA 15642

......(724) 733-1942 Fax: (724) 733-1962 Website: www.lwb.us.com

Tim Crites, president; John Fleming, national sales manager; Seth Sheets, service liaison manager

Maag Automatik Inc.

1500 Continental Blvd.

Charlotte, NC 28273.... (704) 716-9026

Fax: (704) 716-9096 Website: www.maag.com

Email: info@lwb-steinl.us

Email: maag.erg.information@maag.com

Machinery + Planning, Inc.

1655 North Lancaster Rd.

South Elgin, IL 60177 .. (630) 924-0100

Fax: (630) 924-1675 Website: www.maplan.at

Email: sales@maplan-usa.com John Mohl II, vice president, sales; John Mohl III, technical sales director; Benjamin Puffer, technical sales director; Russ Burgert, service manager; Jessica Louzensky, operations manager; Deven Lokagariwar, president

Machinery Exchange Corp.

34501 Aurora Rd., #106

Solon, OH 44139 (330) 896-0585 Fax: (330) 896-0147

Website: www.mecakron.com Email: bthompson@mecakron.com Bob Thompson

Machinery Products U.K. Ltd.

55 Eastfield Rd.

Louth, Lincolnshire, U.K. LN 11 7AL44 (0) 1507 610 108 Fax: 44 (0) 1507 610 044

Website: www.machineryproducts.

Email: johnny.walker@btconnect.com Johnny Walker, managing director

Macrodyne Technologies Inc.

311 Connie Cres.

Concord, Ontario, Canada L4K 5R2(905) 669-2253

Fax: (905) 669-0936 Website: www.macrodynepress.com

Email: sales@macrodynepress.com Dennis Colyer, sales manager; Andrew Kirk, vice president

Madison Tooling

147 Elevator Ave., Unit 2 Painesville, Ohio 44077

.....(440) 367-8877 Fax: (440) 354-2666

Website: www.mtoolscorp.com Email: sales@mtoolscorp.com Ron Danko, operations manager; Daniel Hobson, design engineer

Magnaflux, a Division of ITW, Inc.

155 Harlem Ave.

Glenview, IL 60025 (847) 657-5300 Fax: (847) 657-5388

Website: www.magnaflux.com

Magnatech International, Inc.

17 East Meadow Ave. Robesonia, PA 19551

......(610) 693-8866 Fax: (610) 693-8816

Website: www.magnatech-int.com

Email: info@magnatech-int.com David Thun, chairman/CEO

Magnolia Metal Corp.

10675 Bedford Ave., Ste. 200

Omaha, NE 68134..... (800) 228-4043

Fax: (402) 455-8762

Website: www.magnoliabronze.com Email: bronzesales@magnoliabronze.

com

Pierce A. Koslosky, Jr., vice president, sales

Mahr Inc.

1144 Eddy St.

Providence, RI 02905

.....(401) 784-3100 (800) 343-2050

Website: www.mahr.com Email: marketing.pvd@mahr.com

Bryan Orr, vice president, sales, Americas; John Robinson, CFO

Maimin Technology Group, Inc.

227 Ambrogio Dr., Unit B

Gurnee, IL 60031 (800) 243-4645 (847) 236-8200

Fax: (847) 263-8299 Website: www.maimin.com Email: derek@maimin.com

Derek Khubchandani, vice president

Robert A. Main & Sons, Inc.

20-21 Wagaraw Rd.

Fair Lawn, NJ 07410 ... (201) 447-3700

Fax: (201) 447-0302

Website: www.ramsco-inc.com Email: info@ramsco-inc.com

Robert Main, Jr., president

Malvern Panalytical Ltd.

Enigma Business Park Grovewood Rd.

Malvern, U.K. WR14 1XZ

.....+44 (0) 1684 892456 Fax: +44 (0) 1684 892789

Website: www.malvern.com Email: salesinfo@malvern.com

Brian Dutko, president

Marangoni Tread North America Inc.

708 Myatt Dr.

Madison, TN 37115 (888) 266-2551 Website: www.marangoni.com Email: marangoni@marangoni.

Marathon Equipment

P.O. Box 1798

Vernon, AL 35592...... (800) 633-8974 (205) 695-9105

Fax: (205) 695-8813

Website: www.marathonequipment.

Email: marketing@marathonequipment.com Gary Brooks, director of sales Maren Engineering Corp. 111 W. Taft Dr. South Holland, IL 60473 (708) 333-6250 Fax: (708) 333-7507 Website: www.marenengineering.com Email: sales@marenengineering.com Terry Stengel, sales; Mike Blais, sales; Michel Hartung, sales Maris S.p.A. Corso Moncenisio 22 Rosta, (TO) Italy 10090+ 39 011 9567925 Fax: +39 011 9567987 Website: www.mariscorp.com Email: info@mariscorp.com Luciano Gallino, sales manager **Mass Finishing** 1060 Commerce Blvd. Howard Lake, MN 55349(320) 543-3222 (888) 260-6277

Matthews Marking Systems

Cory Carr, project manager

3159 Unionville Rd., Ste. 500 Cranberry Township, PA 16066

.....(800) 775-7775 (412) 665-2500 Fax: (412) 665-2594

Fax: (320) 543-3355

Website: www.massfin.com Email: sales@massfin.com

Website: www.matthewsmarking.com Email: info@matw.com

Max Machinery Inc.

33A Healdsburg Ave. Healdsburg, CA 95448

.....(707) 433-2662 Fax: (707) 433-1818

Website: www.maxmachinery.com Email: kirk@maxmachinery.com Jeff Kolacek, project manager

Maxcess

222 West Memorial Rd. Oklahoma City, OK 73114

.....(405) 755-1600 Fax: (405) 755-8425

Website: www.maxcessintl.com Email: msullivan@maxcessintl.com Mike Sullivan, sales manager

Maxi-Blast Inc.

3650 North Olive Rd.

South Bend, IN 46628..(574) 233-1161 (800) 535-3874

Fax: (574) 234-0792

Website: www.maxiblast.com Email: info@maxiblast.com

Tim Whisman, sales manager

Mavnards

Website: www.maynardseurope.com Email: inquiry@maynardseurope,com (See our ad on page 88)

McCoy Machinery Corporation

P.O. Box 967 1101 Curtis St.

Monroe, NC 28111...... (704) 289-5413

Fax: (704) 283-0480

Website: www.mccoy-usa.com Email: info@mccoy-usa.com

Dan McCoy, president

McGill AirFlow LLC

2400 Fairwood Ave. Columbus, OH 43207

..... (614) 829-1200 Fax: (614) 829-1488

Website: www.mcgillairflow.com Email: marketing@mcgillairflow.com Robert Hassler, technical services

McNeil & NRM. Inc.

96 E. Crosier St.

Akron, OH 44311 (330) 253-2525

Fax: (330) 253-5714 Website: www.mcneilnrm.com

Email: sales@mcneilnrm.com Donald R. Spear, P.E., executive vice

president, sales

Melrose Mold & Machining Co.

10085 Pacific Ave.

Franklin Park, IL 60131-1830

..... (847) 233-9970 Fax: (847) 233-9975

Website: www.melrosemold.com Email: melrosemold@sbcglobal.net Mark Kawczynski, president

Menzel LP

P.O. Drawer 3308

Spartanburg, SC 29304

......(864) 576-5690 Fax: (864) 574-4570

Website: www.menzelus.com Email: info@menzelus.com

Kent Bolick, general manager

Mesabi Control Engineering

7800 3rd St. North, Ste. #900

Oakdale, MN 55128

..... (651) 771-1890 Website: www.mesabicontrol.com Email: mesabi@mesabicontrol.com Mesnac Americas Co. Ltd.

2620 Ridgewood Rd. Akron, OH 44313.....(865) 591 3655 (865) 856 2317

Website: www.mesnac.com Email: americas@mesnac.com David Jones, president; Jerry Gu, CEO; Gilberto Gonzalez, sales manager; Bill Kulmacz, technical service manager

Metso Automation

44 Bowditch Dr. Shrewsbury, MA 01545

.....(508) 852-0200 Fax: (508) 852-8172

Website: www.metso.com

Eric Fillion, marketing

Mewo

Represented by Machinery + Plannina Inc.

.....(630) 924 0100 Website: www.mewo-machines.com Email: office@maplan-usa.com

Micro-Poise Measurement Systems

555 Mondial Pkwv.

Streetsboro, OH 44241

..... (330) 541-9100 Fax: (330) 541-9111

Website: www.micropoise.com Email: micropoise.techsupport@ ametek.com

Shaun M. Immel, DVP product management

Mid-American Machine & Equipment, Inc.

815 E. 6th St.

LeRoy, KS 66857...... (620) 964-2156 Fax: (620) 964-2157

Website: www.mid-americanmachine. com

Email: ssutherland@mid-americanmachine.com

Shane Sutherland, president

Midlands Millroom Supply, Inc.

1911 36th St. NE

Canton, OH 44705...... (330) 453-9100 Fax: (330) 453-6644

Fred Clark, president and CÉO; Phil Rastok, applications manager; Rod Cunningham, vice president

Mid-States Tool & Machine, Inc.

2220 Patterson St.

Decatur, IN 46733...... (260) 728-9797

Fax: (206) 728-9795

Website: www.midstatestool.com Email: sales@midstatestool.com Jason Scheumann, president

Midwest Busics	Mahaita, www.mhr ina aam	Empile info@montgomon industries
Midwest Brake	Website: www.mhr-inc.com Email: info@mhr-inc.com	Email: info@montgomeryindustries.
26255 Groesbeck Hwy.		COM Pahart Mantgamary, prosident CEO
Warren, MI 48089	Jeffrey Hunter, global sales manager;	Robert Montgomery, president, CEO
(586) 775-3000	James Gohlke, vice president, sales	and treasurer; Jonathan Montgomery,
Fax: (586) 775-3040 Website: www.midwestbrake.com	MV Maashinanhay Vyhitea CmhU	executive vice president and secretary
	MK Maschinenbau Kubitza GmbH	Mauria Baan 9 Ca
Email: sales@midwestbrake.com	Hauptstrasse 19-21	Morris Bean & Co.
Kurt Liebold, sales and marketing	Michelstadt, Germany 64720	777 E. Hyde Rd.
manager	49 6061 5832 Fax: 49 6061 5862	P.O. Box 108
MikroPul	Website: www.mk-kubitza.de	Yellow Springs, OH 45387
		(937) 767-7301
4433 Chesapeake Dr.	Email: info.germany@mk-kubitza.de	Fax: (937) 767-7306 Website: www.morrisbean.com
Charlotte, NC 28216(704) 318-2770	Eduard Falk, marketing	Email: sales@morrisbean.com
` ,	Madara Suprancian Systems	G. Michael McWilliams, general man-
Fax: (704) 998-2601 Website: www.mikropul.com	Modern Suspension Systems	
	16000 E. Michigan Ave.	ager, tire molds
Email: info@mikropul.com	Albion, MI 49224 (800) 704-1562	Marca Mfg. Co. Inc.
Lynda Smith, marketing communica-	Fax: (800) 800-0036	Morse Mfg. Co., Inc. 727 West Manlius St.
tion supervisor	Website: www.modernsuspensionsys-	P.O. Box 518-RRB
Milton Doy Co. Flow Control Div	tems.com	
Milton Roy Co., Flow Control Div. 201 Ivyland Rd.	James Hager	East Syracuse, NY 13057-0518
	Mokon	(315) 437-8475
Warminster, PA 18974 (215) 441-0800 Fax: (215) 441-8620	2150 Elmwood Ave.	Fax: (315) 437-1029 Website: www.morsedrum.com
Website: www.miltonroy.com	Buffalo, NY 14207 (716) 876-9951	Email: inquiry@morsedrum.com
Email: info@miltonroy.com		Ralph Phillips, marketing manager
•	Fax: (716) 874-8048 Website: www.mokon.com	naipii Fillilips, marketing manager
Chris Krieps, president	Email: sales@mokon.com	Motion Industries, Inc.
Mitchell, Inc.	Roseann Leberer, marketing assistant;	1605 Alton Rd.
P.O. Box 413	Rob Kennery, vice president, sales and	Birmingham, AL 35210
1321 Leininger Ave.	marketing/general manager; Mark Pas-	(205) 956-1122
Elkhart, IN 46515 (574) 295-3509	tor, customer service manager; Alan	Website: www.motionindustries.com
Fax: (574) 295-3798	D'Ettorre, engineering manager	Website: www.motioninidustries.com
Website: www.mitchell-inc.com	D Ettorre, engineering manager	Mount Hope Machinery Co.
Email: sales.mitchellinc@gmail.com	Moldex 3D North America Inc.	912 Haase St.
Jeffrey M. Bailey, president	27725 Stansbury Blvd., Ste. 190	Neenah, WI 54956 (920) 729-7000
comey w. Baney, prediatin	Farmington Hills, MI 48334	Fax: (920) 729-7010
Mitsubishi Heavy Industries Ameri-	(248) 946-4570	Website: www.xerium.com
ca, Inc.	Fax: (248) 928-2270	Mark Parmentier, plant manager
Tire Machinery Division	Website: www.moldex3d.com	main r aimeiniei, piani managei
600 Cherry Fork Ave.	Email: sales.us@moldex3d.com	M.R. Mold and Engineering Corp.
Leetonia, OH 44431 (330) 427-8900	Wendy Tsai, marketing specialist	1150 Beacon St.
Fax: (330) 427-8909	3 4 4 4 4	Brea, CA 92821(714) 996-5511
Website: www.mitsubishitoday.com	MonTech USA	Fax: (714) 996-6029
Email: chuck_coristin@mhiahq.com	1280 S. Williams Dr.	Website: www.mrmold.com
Katsuhide Aikawa, general manager;	Columbia City, IN 46725-0169	Email: info@mrmold.com
Robert Focht, plant manager; Chuck	(800) 552-5115	Rick Finnie, president; Brian Giesel,
Coristin, business manager	(260) 244-5115	operations manager
,	Fax: (206) 244-4158	
Mitutoyo America Corp.	Website: www.montechusa.com	MTS Systems Corporation
965 Corporate Blvd.	Email: info@montechusa.com	14000 Technology Dr.
Aurora, İL 60502 (630) 820-9666	Spencer. Bagan, national sales and	Eden Prairie, MN 55344
(888) 648-8869	marketing manager	(952) 937-4000
Fax: (630) 978-5394		Fax: (952) 937-4515
Website: www.mitutoyo.com	Montgomery Industries International	Website: www.mts.com
Email: info@mitutoyo.com	Inc.	Email: info@mts.com
Mark Izumi, advertising and sales	2017 Thelma St.	
manager	P.O. Box 3687	Multiplas Enginery Co., Ltd.
	Jacksonville, FL 32206	65 Technology 7th Rd.
Mix Head Repair & Sales	(904) 355-5671	Hwa-Ya Technology Park
78 Veterans Dr.	Fax: (904) 355-0401	Gueishan, Taoyuan, Taiwan

Website: www.montgomeryindustries.

.....+886-3-318-0090

Fax: +886-3-3975-359/397-5498

Fax: (616) 394-9711

Holland, MI 49423 (616) 394-0191

Website: www.multiplas-tw.com Email: multiplas@multiplas.com.tw

Myers Mixers

8376 Salt Lake Ave.

Cudahy, CA 90201...... (323) 560-4723

Fax: (323) 771-7789

Website: www.myersmixers.com Email: sales@myersmixers.com Cathy Strahan, marketing manager

NDC Infrared Engineering

5314 N. Irwindale Ave.

Irwindale, CA 91706 (626) 960-3300

Fax: (626) 939-3870 Website: www.ndc.com Email: info@ndc.com

Jay Luis, global marketing manager

Nerpco USA, LLC

43 Russell Rd.

Bethany, CT 06524..... (203) 393-9050 Fax: (203) 393-9051

Website: www.nerpcousa.com/ Email: nerpcousa@att.net

Steven R. Barnes, vice president; Richard B. Barnes, president

Nexus Elastomer Systems GmbH

Solarstrasse 10

4653 Eberstalzell, Austria

......+43 (0) 50 / 1215-200 Website: www.nexus-elastomer.com Email: office@nexus-elast.com Bernhard Schaufler, senior sales manager international

NFM Iddon Limited

Quin St.

Leyland, Lancashire, U.K. PR5 1TB1772-421258

Fax: 1772-431114

Website: www.nfmiddon.co.uk Email: sales@nfmiddon.co.uk Michael I. Iddon, sales director; Peter

Rowe, sales manager

NFM Welding Engineers, Inc.

577 Oberlin Rd., S.W.

Massillon, OH 44647 ... (330) 837-3868 Fax: (330) 837-2230

Website: www.nfm.net

Email: sales@nfm.net

Paul R. Roberson, president

Nihon Spindle Manufacturing Co., Ltd.

4-2-30 Shioe, Amagasaki-city, Hyogo Japan 661-8510

.....+81-6-6499-5551 Fax: +81-6-6499-7627 Website: www.spindle.co.jp

Hiroshi Arito, president

Nilfisk, Inc.

740 Hemlock Rd., Ste. 100

Morgantown, PA 19543(800) nilfisk

Fax: (610) 286-7350 Website: www.nilfiskcfm.com

Email: sales@nilfiskadvance.com Tracy Walton, advertising assistant

Nol-Tec Systems, Inc.

425 Apollo Dr.

Lino Lakes, MN 55014

......(651) 780-8600 Website: www.nol-tec.com Email: sales@nol-tec.com

Jerry VanderWerff, director of business development

Nordson Corporation

28601 Clemens Rd.

Westlake, OH 44145 ... (440) 892-1580 Website: www.nordson.com/en-us Michael Hilton. CEO

Norgren

5400 S. Delaware St.

Littleton, CO 80120......(303) 794-2611 Fax: (303) 795-9487

Website: www.norgren.com

Email: sales.usa@imi-precision.com Mark Stevens, marketing director

Nova International Tools

C-82/1, 2nd 'A' Main Rd., Peenya Industrial Estate, Peenya 2nd Stage, Bangalore, 560058 India

.....+91 94488 97640 Email: nittools24@gmail.com

Betta Gowda, director

Nuttall Gear

2221 Niagara Falls Blvd.

Niagara Falls, NY 14304-5710

..... (716) 298-4100 Fax: (716) 298-4101

Website: www.nuttallgear.com

Email: info@nuttallgear.com

John Proven, national sales manager; Michael Suszek, product manager

O.A. Newton

16356 Sussex Hwy.

P.O. Box 397

Bridgeville, DE 19933...(302) 337-8211

Fax: (302) 337-3780

Website: www.oanewton.com Email: solutions@oanewton.com Rob Rider, president

E.T. Oakes Corp.

686 Old Willets Path

Hauppauge, NY 11788... (631) 232-0002 Fax: (631) 232-0170

Website: www.oakes.com

Email: info@oakes.com

Karen Oakes

OEM Press Systems

311 S. Highland Ave.

Fullerton, CA 92832..... (714) 449-7500

Fax: (714) 449-7510

Website: www.oempresssystems.com Email: sales@oempresssystems.com

Email: sales@oempresssystems.com Sean Field, CEO; Mary Quinlan, sales manager; Bill Puscas, service manager

Ohio Blow Pipe Co.

446 East 131st St.

Cleveland, OH 44108.... (216) 681-7379

Fax: (216) 681-7713

Website: www.obpairsystems.com Email: sales@obpairsystems.com

Roy Gumprecht, marketing

Oil States Industries, Inc.

7701 S. Cooper P.O. Box 670

Arlington, TX 76004-067

.....(817) 548-4200

Fax: (817) 548-4250

Website: www.oilstates.com Email: houstonsales@oilstates.com

Howard Hughes, president

Oilgear Co.

1424 International Dr.

Traverse City, MI 49686

David Paulson, vice presidend sales and marketing

Oliver Carbide Products

7445 Mayer Rd.

Cottrellville, MI 48039 .. (810) 765-1000

Fax: (810) 765-7000

Website: www.olivercorp.com Email: info@olivercorp.com

Rex Oliver, president

Open Mind Technologies USA, Inc.

1492 Highland Ave., Unit 3

Needham, MA..... (888) 516-1232

Fax: (270) 912-5822

Website: www.openmind-tech.com Email: info.americas@openmind-tech. com

Alan Levine, managing director; John Welch, account manager

Orhie

1055 Corporate Center Dr.

Oconomowoc, WI 53066(800) 890-7292

Website: www.orbiscorporation.com Email: info@orbiscorporation.com

Cynthia Steudorf, manager market communications

Osborn

1100 Resource Dr., Ste. 1 Brooklyn Heights, OH 44131-1854

..... (800) 720-3358 (216) 361-1900 Fax: (216) 361-1913

Website: www.osborn.com Email: brushes@osborn.com

Mark Johnson, vice president, sales and marketing

Oxco. Inc.

547-H Kinas Ridae Dr.

Fort Mill, SC 29708..... (704) 333-7514

Fax: (704) 333-7517 Website: www.oxco.com Email: emeier@oxco.com

Erich Meier, president

Pacific Press Technologies, L.P.

714 Walnut St.

Mt. Carmel, IL 62863 ... (618) 262-8666

Fax: (618) 262-7000 Website: www.pacific-press.com

Email: sales@pacific-press.com Gordan Baker, vice president, director of sales and product development

Palmer Wahl Instruments, Inc.

234 Old Weaverville Rd. Asheville, NC 28804

..... (828) 658-3131 Fax: (828) 658-0728

Website: www.palmerwahl.com Email: palmerwahl@instrumentationgroup.com

Stephen Santangelo, president

Pangborn Group

4630 Coates Dr.

Fairburn, GA 30213 (404) 665-5700 Fax: (404) 665-5701

Website: www.pangborn.com Email: info@pangborn.com

Brian Hastings, director of sales

Pannier Corporation

207 Sandusky St.

Pittsburgh, PA 15212... (412) 323-4900

Fax: (412) 323-4962 Website: www.pannier.com

Email: sales@pannier.com Mike Leard, director of sales

Paratherm Corporation

2009 Renaissance Blvd. King of Prussia, PA 19406

.....(610) 941-4900 Fax: (610) 941-9191

Website: www.paratherm.com

Email: info@paratherm.com John C. Fuhr, president

Park Thermal International

62 Todd Rd.

Georgetown, Ontario, Canada L7G 4R7 (905) 877-5254 (877) 834-4328

Fax: (905) 877-6205

Website: www.parkthermal.com Email: jmistry@parkthermal.com Jay Mistry, CEO

Parker Hannifin Corporation

6035 Parkland Blvd.

Cleveland, OH 44124

..... (216) 896-3000 (800) 272-7537

> Fax: (216) 896-4410 Website: www.parker.com

Email: c.parker@parker.com

Parker Hannifin Corp., Brass Products

300 Parker Dr.

P.O. Box 215

Otsego, MI 49078-1472

.....(616) 694-9411 Fax: (616) 694-4614

Website: www.parker.com

Kathleen Sloe, marketing research analyst

Parker Hannifin Corp., Stratoflex **Products**

220 Roberts Cut-Off Rd. Fort Worth, TX 76114

..... (817) 738-6543 Fax: (817) 738-9920

Website: www.parker.com Email: csimms@parker.com

Cheryl Simms, administration assistant

Parker Hannifin Corp., Hydraulic Pump/Motor

Shapps Ferry Rd. P.O. Box 1790

Greeneville, TN 37744-1790

.....(423) 639-8151 Fax: (423) 639-8213 Website: www.parker.com

Kathleen Sloe, marketing research analyst

Parker Hannifin Corp., Hose Prod-

30240 Lakeland Blvd. Wickliffe, OH 44092-1797

..... (440) 833-2120

Fax: (440) 833-2230 Website: www.parker.com

Amy Strahl, marketing research ana-

Parker Hannifin Corp., Cylinder

500 S. Wolf Rd.

Des Plaines. IL 60016-3198

..... (847) 298-2400 Fax: (847) 294-2655

Website: www.parker.com Amy Strahl, marketing research ana-

Parkinson Technologies, Inc.

100 Goldstein Dr.

Woonsocket, RI 02895

.....(401) 762-2100 Fax: (401) 762-2295

Website: www.parkinsontechnologies.

Email: sales@parkinsontechnologies. com

Peter Termyn, president and CEO

Passaic Rubber Co.

45 Demarest Dr.

Wayne, NJ 07470 (973) 696-9500

Fax: (973) 696-0686 Website: www.passaic.com

Email: answers@passaic.com

Jeff Leach, chairman/COO; J.D. Mathey, president: James Leach, vice president, operations

Patterson Industries (Canada) Limited

49 Passmore Ave.

Scarborough, Ontario, Canada M1V 4T1 (416) 694-3381

(888) 368-8884 Fax: (416) 691-2768

Website: www.pattersonindustries.com Email: process@pattersonindustries.

Mike Lindsey, sales manager; Heinz W. Haischt, president; Mike Lindsey, sales and marketing

Patterson-Kelley

155 Burson St.

East Stroudsburg, PA 18301

..... (877) 728-5351 Website: www.pattersonkelly.com

Email: pkboilerssales@spx.com Mark Lasewicz, general manager; Ron Pearson, plant manager; Thomas Chirkot, laboratory manager

Patterson Process Equipment Corporation

P.O. Box 386

Hatboro, PA 19040

..... (880) 724-0158

Fax: (330) 386-5880

Website: www.pattersonprocess.com Email: sales@pattersonprocess.com

Bernard S. Breitman, president

Pebsco	PHI	(215) 443-7930
Akron, OH (330) 631-7823	14955 E. Salt Lake Ave.	Fax: (215) 443-7934
Website: www.rubberandplasticequip-	City of Industry, CA 91746-3133	Website: www.ppc-mfg.com
		Email: jsheehy@precisionproductsmfg.
ment.com	(626) 968-9680	
Email: pebscosales@rubberandplas-	Fax: (626) 333-3610	com
ticsequipment.com	Website: www.phihydraulics.com	James Sheehy, president
Omar Esmile	Email: phisales@phihydraulics.com	
	Russ Hanson, sales manager	Precision Quincy
Pelmar Engineering Group		483 Gardner St.
3, Bustenai Str.	Polyad Company Inc.	South Beloit, IL 61080
P.O. Box 2418	P.O. Box 59583	(302) 602-8738
Ramat Hasharon, Israel 4730203	Schaumburg, IL 60159-0583	(815) 222-9461
+972-3-540-9277	(847) 571-0062	Fax: (302) 366-8602
Fax: +972-3-549-3520	Fax: (847) 304-0074	Website: www.pqovens.com
Website: www.pelmar.com	Website: www.polyadusa.com	Email: sales@pqovens.com
Email: mail@pelmar.com	Email: info@polyadusa.com	John Hober, vice president of sales
Eldad Eilam, CEO	D.J. Pollock, technical director	Builtin Bull Office Lord
-		Precision Roll Grinders, Inc.
Pelmar USA, LLC	Polymer Industrial Products Co.	6356 Chapmans Rd.
P.O. Box 1175	Subsidiary of Polymer Enterprises, Inc.	Allentown, PA 18106 (610) 395-6966
Cuyahoga Falls, OH 44223	688 Industrial Park Rd.	Fax: (610) 481-9130
(704) 966-6555	P.O. Box 310	Website: www.precisionrollgrinders.
Website: www.pelmar.com	Piney Flats, TN 37686	com
Email: mail@pelmar.com	(423) 538-5105	Email: sales@precisionrollgrinders.
Tony Gowan, director of business	Fax: (423) 538-3262	com
development	Website: www.pipcousa.com	Bob Rourke, national sales/marketing
development	Email: sales@pipcousa.com	manager; Jim Manley, president
Pornetual Machine Company	Taneem Aziz, vice president, manufac-	manager, our maniey, president
Perpetual Machine Company		Dressure Block Mfg. Co. Inc.
1810 Lessco Dr.	turing	Pressure Blast Mfg. Co., Inc.
P.O. Box 2086	D. I M I	279 Nutmeg Rd.
Dalton, GA 30722 (706) 226-1534	Polymer Machinery Co., Inc.	South Windsor, CT 06074
(706) 278-0272	154B Potomac Ave.	(800) 722-5278
Fax: (706) 226-2448	Tallmadge, OH 44278-2715	Website: www.pressureblast.com
Website: www.perpetualmachine.com	(330) 633-5734	Lowell McMullen, president
Website: www.perpetualmachine.com Email: sales@perpetualmachine.com		
Email: sales@perpetualmachine.com	(330) 633-5734 Fax: (330) 633-6367	
	(330) 633-5734	Lowell McMullen, president
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool,		Lowell McMullen, president Princo Instruments, Inc. 1020 Industrial Blvd.
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales		Lowell McMullen, president Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC		Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095(215) 355-1500
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd.		Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036		Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036		Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	(330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111)	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036(609) 267-1600 Fax: (609) 267-4499 Website: www.perryvidex.com	(330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc.	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	(330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd.	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036(609) 267-1600 Fax: (609) 267-4499 Website: www.perryvidex.com	(330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	(330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300 Fax: (262) 268-9400	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300 Fax: (262) 268-9400 Website: www.popeinc.com	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300 Fax: (262) 268-9400 Website: www.popeinc.com Email: info@popeinc.com	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300 Fax: (262) 268-9400 Website: www.popeinc.com Email: info@popeinc.com Mark Talkington, vice president	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300 Fax: (262) 268-9400 Website: www.popeinc.com Email: info@popeinc.com Mark Talkington, vice president Porth Products Co.	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300 Fax: (262) 268-9400 Website: www.popeinc.com Email: info@popeinc.com Mark Talkington, vice president Porth Products Co. 56285 Fairway Dr.	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300 Fax: (262) 268-9400 Website: www.popeinc.com Email: info@popeinc.com Mark Talkington, vice president Porth Products Co. 56285 Fairway Dr. Paw Paw, MI 49079 (269) 343-4684	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095
Email: sales@perpetualmachine.com Danny Morgan, president; Stan Pool, sales Perry Videx LLC 25 Mt. Laurel Rd. Hainesport, NJ 08036	Fax: (330) 633-5734 Fax: (330) 633-6367 Website: www.polymermachineryco. com Email: sales@polymermachineryco. com Jim Chiofolo, sales; Mathew Turlik, sales (See our ads on pages 110 and 111) Pope Scientific, Inc. 351 N. Dekora Woods Blvd. P.O. Box 80018 Saukville, WI 53080 (262) 268-9300 Fax: (262) 268-9400 Website: www.popeinc.com Email: info@popeinc.com Mark Talkington, vice president Porth Products Co. 56285 Fairway Dr.	Princo Instruments, Inc. 1020 Industrial Blvd. Southampton, PA 18966-4095

Email: porth@aol.com

Karl Porth, president

Warminster, PA 18974

68 Ash Circle

Precision Products Co., Inc.

1008 Whitehead Rd. Extension

Harley McNair, president

Ewing, NJ 08638 (609) 883-4610

Fax: (609) 883-1629 Website: www.pflaumer.com

Email: info@ pflaumer.com

Prodicon International SRL

Bill Barker, sales manager

Via Statuto, 18 20121 Milano, Italy+39 02 6552271

Email: sales@processall.com

Fax: +39 02 29002931 Website: www.prodicon.it Email: info@prodicon.it

Andreas Engel, general manager

PTC Instruments

2301 Federal Ave. Los Angeles, CA 90064

.....(310) 478-1134 Fax: (310) 312-0826 Website: www.ptc1.com Email: sales@ptc1.com

Linda Wolfe, general manager

Puritan Magnetics, Inc.

533 S. Lapeer Rd., Suite 100

Oxford, MI 48371....... (800) 787-3624 (248) 628-3808 Fax: (248) 628-3844

Website: www.puritanmagnetics.com Email: magnet@puritanmagnetics.com Andrea Webster, inside sales

Pyrometer Instrument Co., Inc.

70 Weber Ave.

Ewing Township, NJ 08638

.....(609) 443-5522 Fax: (609) 443-5590

> Website: www.pyrometer.com Email: sales@pyrometer.com

David Crozier, CEO; Judd Parrish, president; Mickey Otto, sales manager

Qingdao Doublestar Rubber & Plastic

Machinery Co., Ltd.

No. 768 Taishan Rd.

Jiaonan, Qingdao City, China 266400+86-53285176121 Fax: +86-532-86164767

Website: www.doublestar.globalchem-

made.com

Email: double starmachinery @126.com

Radio Frequency Co.

150 Dover P.O. Box 158 Millis, MA 02054

.....(508) 376-9555 Fax: (508) 376-9944

Website: www.radiofrequency.com Email: rfc@radiofrequency.com

Frank Kosky

Rahco Rubber Inc.

1633 Birchwood Ave. Des Plaines, IL 60018

......(847) 298-4200 Fax: (847) 298-4201

Website: www.rahco-rubber.com
Email: jackanton@rahco-rubber.com
Jack Anton, vice president of sales and
marketing

RAK Machine, Inc.

5814 Walworth Ave. Cleveland. OH 44102

......(216) 631-7750 Fax: (216) 631-7790

> Website: www.rakmachine.com Email: info@rakmachine.com

Timothy Bragg, president and CEO

Ralphs-Pugh Co., Inc.

3931 Oregon St.

Benicia, CA 94510 (707) 745-6363

(800) 486-0021 Fax: (800) 995-3942

Website: www.ralphs-pugh.com Email: sales@ralphs-pugh.com

Jay Bauer

Rampart Finishing Equipment Co.

632 E. 152nd St.

Cleveland, OH 44110 .. (216) 541-0100 Fax: (216) 541-1124

Ron Watson, president

Raydar Rubber

1734 Wall Rd., Ste. B

Wadsworth, OH 44281...(330) 334-6111

Fax: (330) 334-7232

Website: www.raydarrubber.com Email: asavakis@raydarrubber.com Angelo Savakis, co-owner

Readco Kurimoto, LLC

460 Grim Ln.

York, PA 17406 (717) 848-2801 Fax: (717) 848-2811

Website: www.readco.com Email: readco@readco.com

Stan Myers, sales group leader

Red Seal Electric Co.

3835 West 150th St.

Cleveland, OH 44111... (216) 941-3900

Fax: (216) 941-5305

Website: www.redseal.com Email: contact@redseal.com

Jeff Chrow, sales manager

Regioplas Corporation

1088 Miners Rd.

St. Joseph, MI 49085....(269) 428-1100 Fax: (269) 428-1155

Website: www.regloplasusa.com Email: info@regloplasusa.com Henry J. Van Gemert, president

Reimers Electra Steam, Inc.

4407 Martinsburg Pike

Clearbrook, VA 22624 ... (540) 662-3811

Fax: (540) 665-8101

Website: www.reimersinc.com Email: sales@reimersinc.com

Tony Delligatti, vice president

Reliable Rubber and Plastic Machinery Co.

2008-14 Union Tpke. North Bergen, NJ 07047

.....(201) 865-1073 Fax: (201) 865-6878

Website: www.reliable-machinery.com Email: info@reliable-machinery.com Thomas Liccardo, vice president/sales manager; Helga Liccardo, president; Joseph Liccardo III, vice president, engineering; Doug James, purchasing

director; Zsolt Racz, engineering
(See our ads on pages 108 and 109)

Remco

13903 Norby Rd. Grandview, MO 64030

..... (816) 966-8717

Fax: (816) 761-3463

Website: www.rollerequipment.com Email: info@rollerequipment.com

Dean Armstrong, president

Renold Ajax

100 Bourne St.

Westfield, NY 14787.....(716) 326 3121

Fax: (716) 326-8229 Website: www.renold.com

Email: keith.sowers@renold.com Keith Sowers, sales director

Rep Corp.

310 Katom Dr.

Kodak, TN 37764...... (847) 697-7210

Fax: (847) 697-6829

Website: www.repinjection.com Email: jwirtz@repcorp.com; dwil-

liams@repcorp.com

James Wirtz II, president; Derek Williams, vice president of sales

Reuther Mold & Mfg. Co.

1225 Munroe Falls Ave.

Cuyahoga Falls, OH 44221

..... (330) 923-5266 Fax: (330) 923-9930

Website: www.reuthermold.com Email: karlii@reuthermold.com

Karl Reuther II, president

Rexnord Industries LLC

111 W. Michigan St.

Milwaukee, WI 53203.... (866) 739-6673

Fax: (614) 675-1898

Website: www.rexnord.com Email: international1@rexnord.com

Todd Adams, president

Rexroth Bosch Group

14001 South Lakes Dr. Charlotte, NC 28273.... (800) 739-7684

Website: www.boschrexroth.com

Email: info@boschrexroth-us.com Larry Foy, business development

RICO Elastomere Projecting GmbH

A-4600 Thalheim/Wels

Am Thalbach 8 +43 (0) 7242-76460

Website: www.rico.at Email: office@rico.at

RIF Molds Inc.

9901 Colbert, Ville d'Anjou

Montreal, Quebec, Canada H1J 1Z9 (514) 352-6021

Fax: (514) 352-7528 Website: www.rifmolds.com

Website: www.ritmolds.com Email: info@rifmolds.com

Rene Mellerin, president

Rimrock Corp.

1700 Jetway Blvd.

Columbus, OH 43219 (614) 471-5926

Fax: (614) 471-7388
Website: www.rimrockcorp.com
Email: sales@rimrockcorp.com

Diane Myers, marketing

RJS Corporation

3400 Massillon Rd.

Akron, OH 44312...... (330) 896-2387

Website: www.rjscorp.com Email: sales@rjscorp.com

Jake Esola, director of sales and marketing

RMS Equipment LLC

1 Vision Lane

Cuyahoga Falls, OH 44223

......(330) 633-0505
Website: www.steelastic.com
Email: sales@steelastic.com

Rodolfo Comerio S.r.l.

Via IV Novembre, 165 21058 Solbiate Olona (VA)

Italy, VA, Italia 21058....+390331641680

Fax: +390331641666 Website: www.comerio.it Email: comm@comerio.it

Enrico Comerio and Carlo Comerio, owners

Roemheld North America

927 Horan Dr.

Fenton, MO 63026...... (800) 827-2526 Fax: (636) 386-8034

Website: www.roemheld-usa.com Email: info@clrh.com

Hilma engineer

Rogers Industrial Products Inc.

532 S. Main St.

Akron, OH 44311 (330) 535-3331

Fax: (330) 535-4408

Website: www.rogersusa.com Email: sales@rogersusa.com

Rob Cole, general manager; John R. Cole, president and CEO; Brady Stalmaker, manager, engineering

Roll Concept

7 Rue De La Poudriere 71 Du Buisson

Roche La Moliere, France 42230

......33 477-293-681 Fax: 33 477-293-680

> Website: www.rollconcept.com Email: rollconcept@spoolex.com

Catherine Pic, marketing assistant; Olivier Bru, general manager; Patrick Mercier, sales engineer

Ronci, P. Machine Co.

19 Appian Way

Smithfield, RI 02917 (401) 231-8676

Fax: (401) 231-8679 Website: www.ronci.com

Email: info@ronci.com

Philip Cerrone, president

Root, G.M. Inc.

160 Ridge Rd.

Buffalo, NY 14218 (716) 825-4342

Fax: (716) 821-0565

Website: www.gmroot.com Email: gmroot@gmroot.com

Rory Root, president; Richard Root, CEO/owner; Glenn Root, managing director

Charles Ross & Son Co., Inc.

710 Old Willets Path P.O. Box 12308

Hauppauge, NY 11788-0615

.....(631) 234-0500 (800) 243-7677

Fax: (631) 234-0691

Website: www.mixers.com Email: sales@mixers.com

Joseph Martorana, executive vice president

Rosta USA Corp.

797 Ferguson Dr.

Benton Harbor, MI 49022

Website: www.rosta.us Email: info@rosta.com

Arnie Redsicker, vice president, busines development manager; Monty Proffitt, sales manager

Rotex, Inc.

1230 Knowlton St.

Cincinnati, OH 45223 .. (513) 541-1236

Fax: (513) 346-5454 Website: www.rotex.com Email: info@rotex.com

Steve Paxton, product manager

RRR Development Company, Inc. (RRR-USA)

8817 Pleasantwood Ave. NW North Canton, OH 44720

Ronald T. Dillard, CEO; Thomas P. Dillard, president; Robert D. Irwin, executive vice president; Gene Emerick, vice president, business development

Rubber City Machinery Corp.

1000 Sweitzer Ave. P.O. Box 2043

Akron, OH 44309...... (330) 434-3500

Fax: (330) 434-2244 Website: www.rcmc.com

Email: info@rcmc.com, dabraham@rcmc.com

Robert Westfall, executive vice president; Daniel Abraham, general manager, sales, certified appraiser

Rubberhog

7445 Mayer Rd. Cottrellville, MI 48039

......(810) 765-1000 Fax: (810) 765-7000

Website: www.olivercarbide.com Email: rubberhog@olivercorp.com Wyatt Neal, technical sales; Mike Oliver, sales and marketing

RubberTrade Machinery S.r.l.

Via S. Severo, 31, 21040 Oggiona VA, Italy.....+39 0331 739141 Website: www.rubbertrademachinery.it Email: andrea.bracaletti@rubbertrade.

Andrea Bracaletti

Safe-Run Machinery Co. Ltd.

No. 328 Changan Rd. Wujiang City, Jiangsu Province, Suzhou, Jiangsu, China

......86-512-81550088 Fax: 86-512-8155009

Website: safe-run.en.made-in-china.

Sage Automation Inc.

4925 Fannett Rd. Beaumont, TX 77705

.....(409) 842-8040 (800) 731-9111

Fax: (409) 842-9141

Website: www.sagerobot.com Email: sales@sagerobot.com James Glenn, vice president, sales and marketing

Saginaw Machine Systems, Inc.

800 N. Hamilton St.

Saginaw, MI 48602..... (989) 753-8465

Fax: (989) 758-5575

Website: www.saginawmachine.com Email: sales@saginawmachine.com Blaine Tigner, sales engineer

Samson Machinery Inc.

No.13-5. Sinhe Rd. Sinfong Township, Hsinchu County 304, Taiwan+886-3-5680606 Fax: +886-3-5687722

Website: www.samson.com.tw Email: webmaster@samson.com.tw Marian Hung, sales director

Sandvik Process Systems, LLC

21 Campus Rd.

Totowa, NJ 07512...... (973) 790-1600 Fax: (973) 790-9247

Website: www.processsystems.sand-

Email: spsusa.info@sandvik.com Brian Spalding, president; Craig Bartsch, general manager

Sanyu USA, Inc.

1718 Indian Wood Cir., Ste E Maumee, OH 43537 (419) 897-9595

Fax: (419) 897-9262 Website: www.sanyu-sti.com Email: info@sanyusa.com

Mark Beaver, vice president

(See our ads on pages 114 and 115)

Scarponi Textiles, Inc.

150 N. Miller Rd., Ste. 300B

Fairlawn, OH 44333 ... (330) 864-0360 Fax: (330) 864-0214

Website: www.scartex.com

Email: scarponi@scartex.com David L. Scarponi, president; David L. Murphy, vice president; Tracie L. Goetz, operation manager

Schaefer Machine Co., Inc.

32 New Rd.

Madison, CT 06443 (860) 526-4000 Fax: (860) 526-4654 Website: www.schaeferco.com Email: schaefer@schaeferco.com

Virginia Gammons, advertising manager

Schaefer Systems International, Inc.

10301 Westlake Dr.

Charlotte, NC 28273... (888) SSI-TOTE

Website: www.ssitote.com Email: linda.balwinski@ssi-schaefer. com

Schlatter Inc.

4640 Colt Rd.

Rockford, IL 61109 (815) 874-9471

Fax: (815) 874-8585

Website: www.schlattergroup.com Email: north-america@schlattergroup.

Ronnie Meiers, general manager

Schneider Electric

10900 Equity Dr.

Houston, TX 77041 (713) 329-1600 Website: www.schneider-electric.com Michel Crochon, executive vice president

Schoeller Allibert Inc.

4320 S. Cotton Ln., Ste. 200 Goodyear, AZ 85338 .. (813) 634-8242 Fax: (813) 634-8242

Website: www.schoellerallibert.com Email: info.usa@schoellerallibert.com

Schold Machine Co., Midwest Facility

7201 W. 64th Pl.

cipal engineer

Chicago, IL 60638-4692

.....(708) 458-3788 Website: www.schold.com Email: schold@schold.com Christopher Spatz, president; John Duong, vice president; Mike Barr, prin-

Schutte & Koerting

2510 Metropolitan Dr.

Trevose, PA 19053 (215) 639-0900 Fax: (215) 639-1597

Website: www.s-k.com Email: sales@s-k.com

Seika Machinery, Inc.

C/O Ueshima Seisakusho Co., Ltd. 1580 Boggs Rd., Ste. 900 Duluth, GA 30096

.....(770) 446-3116 x11 Website: www.seikausa.com/rubbert-

Email: tim@seikausa.com Tim Cappoen, sales manager

Selco Products Company

8780 Technology Way

Reno, NV 89521-5908. (775) 674-5100 (800) 257-3526

Fax: (775) 674-5111

Website: www.selcoproducts.com Email: sales@selcoproducts.com Michelle Blakeslee, marketing man-

Shaw Almex Industries

P.O. Box 430

Parry Sound, Ontario, Canada P2A 2X4(800) 461-4351

> Fax: (705) 746-5884 Website: www.almex.com Email: sail@almex.com

(705) 746-5884

James Shaw, president; Susan Moir, production manager; Terry Ideson, sales manager

Shaw Almex Presses

5051 Snapfinger Woods Dr.

Decatur, GA 30031 (404) 294-0574

Fax: (404) 294-4407

Website: www.almex-online.com Email: bob shaw@almex.com Bob Shaw, vice president, operations

Sherdil Precision Inc.

447 Silver Creek Industrial Dr. Tecumseh, Ontario, Canada N8N 4W2

..... (519) 727-4010 Fax: (519) 727-4011 Website: www.sherdil.com Email: sales@sherdil.com

Joe Baute, sales and processing manager

Shibaura Machine Company, America

755 Greenleaf Ave.

Elk Grove, IL 60007..... (888) 593-1616 Website: www.shibaura-machine.com Email: sma-info@shibaura-machine. com

Hiroshi Azuma, president

Shred-Tech

295 Pinebush Rd.

Cambridge, Ontario, Canada N1T 1B2 (800) 465-3214

Fax: (519) 621-4288

Website: www.shred-tech.com Email: shred@shred-tech.com

Rob Glass, sales and marketing manager

Sichuan Yaxi Rubber & Plastic Machine Co., Ltd.

No. 128 Shengli St., Niuhua Town Wutongqiao District Sichuan, China 614800

.....(86) 0833-13508145166 Website: www.yaximachine.gmc.globalmarket.com

Siempelkamp LP

200 Cobb Pkwy. N., Ste. 302

Marietta, GA 30062..... (770) 424-4141 Fax: (770) 424-4998

Website: www.siempelkamp-usa.com

Email: info@siempelkamp-usa.com Juergen Maibohm, sales engineer

Signature Control Systems

738 E. Main St.

Ravenna, OH 44266.....(720) 641-1131

Fax: (810) 494-5022

Website: www.signaturecontrol.com Email: info@signaturecontrol.com

Tom Trexler, sales

Sikora

150 Huddleston Rd., Ste. 1300 Peachtree City, GA 30269

..... (770) 486-1233 Website: www.sikora.net

Email: sales@sikora-usa.com John Dognazzi, managing director

Silico Sp. o.o.

Zgody 16B, 05-074 Józefin, Poland

.....+48 (0) 22 773-89-25 +48 (0) 22 760-44-07

Fax: +48 (0) 22 760-44-07 Website: www.silico.pl

Email: biuro@silico.pl

Wojciech Szymski, president

Simmons Knife & Saw

400 Regency Dr.

Glendale Heights, IL 60139

.....(630) 912-2880 Fax: (630) 912-2890

Website: www.simcut.com Email: sales@simcut.com

Bruce G. Gillilan, president

Simplex Cutting Machinery Company, Inc.

950 Ridge Rd. #C16

Claymont, DE 19703 ... (302) 792-9122

Fax: (302) 792-9123

Website: www.simplexcmci.com Email: customerservice@simplexcmci.

COI

Mike Krysiak, president and general manager

Sino Rubber Machinery

Jinsha Park

Sanming New and High-Tech Industry Development Zone

Fujian Province, China 365500

......0598-5066366 Fax: 0598-5066399

Website: www.smhj.chemchina.com Email: smhj@cnce.chemchina.com

Sinoarp Tires Equipment Technology

No. 18 Pingsheng Rd. Suzhou Industrial Park

Suzhou, China +86-0512-62812532

Fax: +86-0512-62812552 Website: www.sinoarp.com Email: sinoarp@sinoarp.com

Chen Qiang, president

Sivon Manufacturing Co.

3131 Perry Pk. Rd.

Perry, OH 44081 (440) 259-5505

Fax: (440) 259-4602

Website: www.sivonmfg.com Email: smaco38@hotmail.com

Charlotte E. Kieffer, president; Bonnie Judd, treasurer; Kathleen Ritts,

secretary

SKF USA Inc.

890 Forty Foot Rd.

Lansdale, PA 19443-0332

..... (216) 436-6000 Fax: (267) 436-6001

Website: www.skfusa.com Email: skfinfo@skf.com

Soberay & Sons Ltd.

5500 Walworth Ave.

Cleveland, OH 44102.... (216) 334-2003

Fax: (216) 334-2005

Website: www.soberaysons.com Email: sales@soberaysons.com

Ron Soberay, president and CEO; Ryan Soberay, vice president

SP Industries

815 Route 208

Gardiner, NY 12525..... (800) 523-2327

Fax: (845) 255-5338

Website: www.spscientific.com Email: sales@spscientific.com

Bill Downs, executive vice president

Spadone Bearings

445 Bunting Ave.

Trenton, NJ 08611 (800) 959-2529

Fax: (800) 967-2182

Website: www.spadone-bearings.com Email: sales@spadone-bearings.com

Spadone Machine Inc.

601 Davisville Rd.

Willow Grove, PA 19090

..... (215) 396-8005 Fax: (215) 322-2264

Website: www.spadonemachine.com Email: sales@spadonemachine.com Art Laney, general manager

Spaltech International

27 Byron St.

Halton Hills, Ontario, Canada L7G 3W6 (289) 891-6690

Website: www.spaltech.com Email: info@spaltech.com

Peter Sproule, technical sales

Speco, Inc.

3946 Willow Rd.

Schiller Park, IL 60176(800) 541-5415

(847) 678-4240 Fax: (847) 678-8037 Website: www.speco.com Email: sales@speco.com

Michael Aulson, president

Spectro Analytical Instruments Inc.

91 McKee Dr.

Mahwah, NJ 07430 (800) 548-5809 (201) 642-3000

Fax: (201) 642-3091

Website: www.spectro.com Email: spectro.info@ametek.com

Emily Leuba Jones, sales and marketing support manager

Spirax Sarco Inc.

Northpoint Business Park 1150 Northpoint Blvd.

Blythewood, SC 29016....(800) 883-4411 Fax: (803) 714-2222

Website: www.spiraxsarco.com

Email: orders@spirax.com Marcus Steel, chairman; Mark Vernon, president; D.B. Harrison, vice president, finance; Sharon Sherbourne, vice president, human resources; Peter Moreton, vice president, manufacturing; Pat Tillisch, vice president, sales; John Pink, international manager; Malcolm Gordge, chief engineer; Dawn

Sprimag Inc.

9965 Cincinnati-Dayton Rd. West Chester, OH 45069

Cartwright, communications

..... (513) 779-5730 Fax: (513) 779-5739

Website: www. sprimag.com Email: info@sprimag.com

Joseph Vanden-Eynden, managing director; Susie Harris, purchasing director; Felix Ampon, sales and marketing manager; Aaron Steifel, technical director

Sprinter Marking Inc.

1805 Chandlersville Rd. Zanesville, OH 43701

.....(740) 453-1000

Fax: (740) 453-6759 Website: www.sprintermarking.com

Email: sales@sprintermarking.com John Bishop, president

(See our ads on pages 22, 131 and 135)

SPX Thermal Product Solutions

P.O. Box 150

3827 Riverside Rd.

White Deer, PA 17887-0150 Email: sci@sterlingcontrols.com (800) 334-7254 (800) 586-2473 Don Goshert, vice president and gen-Fax: (937) 322-1963 (570) 538-7200 eral manager Website: www.sweetmfg.com Email: sales@sweetmfg.com Fax: (570) 538-7380 Sterling, Inc., ACS Group Website: www.thermalproductsolu-Julio Contreras, vice president, sales tions.com 2900 S. 160th St. M. Swift & Sons, Inc. Email: tps.info@spx.com New Berlin, WI 53151 ... (262) 641-8610 Bruce Williamson, president Fax: (262) 641-8653 10 Love Ln. Website: www.acscorporate.com P.O. Box 150 SSI Shredding Systems, Inc. Email: mhedberg@acscorporate.com Hartford, CT 06141-0150 9760 S.W. Freeman Dr.(860) 522-1181 Tommy Saffold, industrial market manager/OEM sales Wilsonville, OR 97070-9286 (800) 628-0380 Fax: (860) 249-5934 (503) 682-3633 Fax: (503) 682-1704 Herman H. Sticht Co., Inc. Website: www.mswiftandsons.com Website: www.ssiworld.com 1 Maxwell St., Ste. D Email: contact@mswiftandsons.com Email: info@ssiworld.com Easy Rockaway, NY 11518 Kari L. Button, advertising director (718) 852-7602 Thomas J. Garnier, president; Joby Easton, director, sales and marketing Website: www.stichtco.com **TA Instruments** Email: stichtco@aol.com 159 Lukens Dr. The L.S. Starrett Co. Paul H. Plotkin, president New Castle, DE 19720... (302) 427-4000 Fax: (302) 427-4001 121 Crescent St. Athol. MA 01331 Storch Magnetics Website: www.tainstruments.com (978) 249-3551 11827 Globe Rd. Email: info@tainstruments.com Website: www.starrettmetrology.com Livonia, MI 48150 (800) 959-0047 David Bohnsack, product manager, rubber/rheology; Alina Latshaw, prod-(734) 591-2200 Email: general@starrett.com Fax: (734) 591-2582 Andrew S. Morin, manager, force and uct specialist, rubber special gage divisions Website: www.storchmagnetics.com Email: sales@storchmagnetics.com Taricco Corp. Jared Sparr, national account manager 1520 W. 16th St. **Starrett-Bytewise Measurement** Long Beach, CA 90813 **Systems Straton Industries** 1245 Broadway(562) 437-5433 Columbus, GA 31901 ... (706) 323-5142 180 Surf Ave. (800) 4-CLAVES Website: www.starrett.com/bytewise Stratford, CT 06615 (203) 375-4488 Fax: (562) 901-3932 Email: sales.bytewise@starrett.com Fax: (203) 381-9542 Website: www.taricco.com Matt Orvis, global sales director Email: carolyn@taricco.org Website: www.straton.com Email: quotes@straton.com Todd Taricco, president The Steelastic Co. LLC 1557 Industrial Pkwy. Sumitomo (SHI) Demag Plastics **Taylor-Winfield Technologies** Machinery North America, Inc. 3200 Innovation Place Akron, OH 44310(330) 633-0505 11792 Alameda Dr. P.O. Box 779 Fax: (330) 633-0527 Strongsville, OH 44149 Youngstown, OH 44509(440) 876-8960(330) 259-8500 website: www. steelelastic.com Email: sales@steelelastic.com Fax: (440) 876-4383 (800) 523-4899 Fax: (330) 259-8538 Armand Massary, president Website: www.sumitomo-shi-demag.us Email: sdna.machinesales@shi-q.com Website: www.taylor-winfield.com Steelman Industries, Inc. John F. Martich, vice president and Email: sales@taylor-winfield.com 2800 Hwy. 135 North COO Donnie Wells, president Kilgore, TX 75662...... (903) 984-3061 Fax: (903) 984-1384 Superior Mold & Die Co. Technico Inc. Website: www.steelman.com 449 N. Main St. 766 N. River Rd. NW Email: sales@steelman.com Munroe Falls, OH 44262 Warren, OH 44483 (330) 847-7000 Fax: (330) 847-0528 Steve Moore, sales manager, burn off (330) 688-8251 ovens; Art Conrad, sales manager, Fax: (330) 688-8253 Website: www.technico.com bake ovens; Carlton Mann, engineer-Email: slussier@technico.com Website: www.s-m-d.us ing manager; Danny Bell, president Email: jeff@s-m-d.us Steven Lussier, president Richard Yamokoski, president; David Sterling Systems & Controls, Inc. Yamokoski, operations manager Tekcast Industries, Inc. 24711 Emerson Rd. 124 Maple St. P.O. Box 418 Sweet Manufacturing Co. Warwick, RI 02888 (800) 445-7900 2000 E. Leffel Lane (401) 785-9504 Sterling, IL 61081 (815) 625-0852 (800) 257-7214 P.O. Box 1086 Website: www.tekcast.com Fax: (815) 625-3103 Springfield, OH 45501 Email: info@tekcast.com

.....(937) 325-1511

Tom Francis, president

Website: www.sterlingcontrols.com

		<u> </u>
Teikoku	Textile Rubber & Chemical Co.	Tire Recycling Consultants (TRC,
959 Mearns Rd.	1400 Tiarco Dr. S.W.	LLC)
Warminster, PA 18974	Dalton, GA 30720	P.O. Box 290034
(215) 343-6000	(706) 277-1300	Ft. Lauderdale, FL 33329
Website: www.teikokupumps.com	Fax: (706) 277-1111	(888) 791-4995
Email: info@teikokupumps.com	Website: www.trcc.com	(954) 295-5423
	Chip Howalt, president	Website: www.recyclingtires.com
Tema Systems, Inc.	TOM Kania Turbinan Curbil	Email: Recyclingtires@aol.com
7806 Redsky Dr.	TGM Kanis Turbinen GmbH Am flachmoor 6 Gewerbepark	Rob Czukor, president/CEO
Cincinnati, OH 45249(513) 489-7811 Fax: (513) 489-4817	Feuch, Nürnberg, Germany PLZ 90475	TKM United States Inc.
Website: www.tema.net	+49 911 239568-900	1845 Airport Exchange Blvd., #150
Email: sales@tema.net	Website: www.grupotgm.com.br	Erlanger, KY 41018 (866) 856-8721
Tammy Runyan, advertising manager	Email: info@tgmkanis.com	Website: www.tkmus.com
, , ,	Daniel Lindner	Email: sales@tkmus.com
Tempest Inc.		
12750 Berea Rd	Thayer Scale, Hyer Industries, Inc.	TMP, A Division of French
Cleveland, OH 44111 (216) 883-6500	91 Schoosett St.	1035 W. Greene St.
Fax: (216) 883-6766	P.O. Box 669	P.O. Box 920
Website: www.tempest-eng.com	Pembroke, MA 02359	Piqua, OH 45356 (937) 773-3420
Chas Ruebensaal, president; Dave	(617) 826-8101 Fax: (617) 826-7944	Fax: (937) 773-3424
DiBiasio, general manager; Edward George, sales manager; Robert T.	Fax: (617) 826-7944 Website: www.thayerscale.com	Website: www.frenchoil.com/tmp- products
Hansford, sales; Jim George, engi-	Email: sales@thayerscale.com	Email: sales@frenchoil.com
neering manager; Stan Kulesa, service	David Hyer, president	Tayte French Lutz, chairman and CEO;
manager; John Revenaugh, plant	Bavia Hyor, problabili	Brian Greever, polymer sales; Jason Mc-
manager	Thermal Care, Inc.	Daniel, COO and president; Doug Smith
5	5680 W. Jarvis Ave.	hydraulic sales, Dave Sledz, hydraulic
Tensitron	Niles, IL 60714	sales; Jeff Rudy, aftermarket sales; Alex
2011 Ken Pratt Blvd., #210	(847) 966-2260	Lee, polymer sales; Troy Hanf, after-
ongmont, CO 80501 (303) 702-1980	Fax: (847) 966-9358	market sales; Tim Jacomet, aftermarket
Fax: (303) 702-1982	Website: www.thermalcare.com	sales; Mary Quinlan, hydraulic sales
Website: www.tensitron.com	Email: info@thermalcare.com	(See our ads on pages 100 and 101)
Email: sales@tensitron.com Nancy Myers, sales manager	Lee Sobocinski, president	Trent, Inc.
valicy Myers, sales manager	Thwing-Albert Instrument Co.	201 Leverington Ave.
TerraSource Global	14 W. Collings Ave.	Philadelphia, PA 19127 (215) 482-5000
200 N. Broadway, Ste. 1735	West Berlin, NJ 08091	Fax: (215) 482-9389
Saint Louis, MO 63102	(856) 767-1000	Website: www.trentheat.com
(855) 483-7721	Fax: (856) 767-2615	Email: info@trentheat.com
Fax: (314) 241-5606	Website: www.thwingalbert.com	L.J. Silverthorn, CEO; J. Barrett, secre-
Website: terrasource.com	Email: info@thwingalbert.com	tary; Charles L. Hierdahl, sales
Email: info@terrasource.com	Susan K. McKeown, marketing man-	11.0. To 12.0.
Jack Vivrett, marketing director	ager	H.O. Trerice Co.
Testek Solutions	Tianiin Saiviana Toohnology Co	12950 W. Eight Mile Rd. Oak Park, MI 48237 (248) 399-8000
7900 E. Pleasant Valley Rd.	Tianjin Saixiang Technology Co., Ltd.	Fax: (248) 399-7246
Independence, OH 44131	No. 9, Hitech Developing 4th Rd.	Website: www.trerice.com
(216) 750-5152	Huayuan New Tech Industrial Zone	Email: sales@trerice.com
Fax: (216) 750-5107	Tianjun, TNJ, China 300384	Rich McCullough
Website: www.avtronaero.com	022-23788188	3
Email: sales@avtronaero.com	Fax: 022-23788199	Trinks
Bruce DeWitt, chief executive officer	Website: www.chinarpm.com	2140 Little Rapids Rd.
	Email: info@tst-group.com	De Pere, WI 54115
Testing Machines Inc.	Ti L	(920) 347-1983
40 McCullough Dr.	Timesavers, Inc.	Fax: (920) 347-9183
New Castle, DE 19720	11123 89th Ave. North	Website: www.trinksinc.com Email: sales@trinksinc.com
(302) 613-5600 (800) 678-3221	Maple Grove, MN 55429 (763) 488-6600	Adrian Drewitz, director of sales
(000) 070-0221		, idilali biovite, anotto oi dalos

Fax: (763) 488-6601

Website: www.timesaversinc.com

Brent Fischmann, vice president

Email: info@timesaversinc.com

Fax: (302) 613-5619

Website: www.testingmachines.com

Sean Kohl, director of global sales

Email: info@testingmachines.com

Am Brabrinke 1-4

Troester GmbH & Co. KG

30519 Hannover, Germany

+49-511-87040 Fax: +49-511-864028 Website: www.troester.de Email: info@troester.de Karsten Jung, sales
Troester Machinery Ltd. 300 Loomis Ave. Cuyahoga Falls, OH 44221(330) 928-7790 Fax: (330) 928-7239 Website: www.troester.de Email: info@troester-usa.com Zach Boaz, president and CEO (See our ad on page 34)
Tryco International 3614 Harryland Rd. Route 6, Box 105A Decatur, IL 62525
Tunco Mfg., Inc. 4300 Thurmond Tanner Pkwy. Flowery Branch, GA 30542(770) 967-2600 Fax: (770) 967-3472 Website: www.tuncomfg.com Email: alan@tuncomfg.com Alan Aiken, sales manager
Tung Yu Hydraulic Machinery Co., Ltd.
No 12, Yongsing Rd., Nan Kung Industrial Zone, Nantou City Taiwan 540
+886-49-2253588 Fax: +886-49-2252998 Website: www.tungyu.com Email: tungyu@tungyu.com Hua-Ling, Lin, general manager; Steven Yen, vice general manager; Frank Cheng, sales and marketing manager; Chen-Pin Yang, president and CEO
Ueshima Seisakusho Co., Ltd. 6-5-22 Yaho Kunitachi-shi Tokyo, Japan 186-0011(042) 572-1397 Website: www.ueshima-seisakusho. co.jp/top_en.htmlHiroshi Yoshioka
Uncountable Inc. 460 Brannan St. #77625 San Francisco, CA, 94107

.....(650) 208-5949 Website: www.uncountable.com Email: info@uncountable.com Will Tashman, chief revenue officer 86 **RUBBERWORLD.COM • JULY 2025**

Union Process, Inc. 1925 Akron-Peninsula Rd.

Akron, OH 44313...... (330) 929-3333

Fax: (330) 929-3034

Website: www.unionprocess.com Email: unionprocess@unionprocess.

Brian Li, regional business director; Emery Li, national sales manager; Jackie Tasker, international sales; Anita Goins, rubber ink sales; Sara Codrea, grinding media/grinding balls sales; Craig McCaulley, spare parts and production

(See our ad on page 135)

United Feed Screws Ltd.

487 Wellington Ave. P.O. Box 9433

Akron, OH 44305...... (330) 798-5532 Fax: (330) 798-5548

Website: www.unitedfeedscrews.com Email: jpaulnorton@unitedfeedscrews.

J.P. Norton, president; Jim Norton, vice president operations; Joseph P. Norton Sr., technical director; Becky Jackson, office manager

United Rolls Inc., A Subsidiary of Whemco. Inc.

1400 Grace Ave. N.E. Canton, OH 44705

..... (330) 456-2761 Fax: (330) 456-2085 Website: www.whemco.com Email: sales@unitedrolls.com

United Testing Systems, Inc.

1375 S. Acacia Ave., Ste. A Fullerton, CA 92831

.....(800) 765-9997 Website: www.unitedtesting.com Email: sales@unitedtesting.com

U.S. Molding Machinery, Co.

38294 Pelton Rd. Willoughby, OH 44094

..... (440) 918-1701 Fax: (440) 918-1720 Website: www.usmolding.com

Email: usmolding@usmolding.com Zachariha Cohen, president

UTH GmbH

Eisenhowerstr. 7-9 Fulda, DE 36041, Germany+49 661 9741-0 Fax: +49 661 9741-30 Website: uth-gmbh.com Email: sales@uth-gmbh.com

M. Bessler, general manager, sales and project management

UTPVision

155 Webster Street, Unit A Hanover, MA 02339 (781) 499-6781 Website: www.utpvision.com Email: sales.us@utpvision.com Luca Palleschi, CEO (See our ads on pages 25, 34 and 130)

Uzer Makina Ve Kalip Sanayi A.S.

Kocaeli Arslanbey OSB, 5 Sok. No: 5/A 41285 Kartepe, Kocaeli, Turkey+90 (262) 351 31 84

Fax: +90 (262) 351 31 93 Website: www.uzermakina.com

Email: uzer@uzermakina.com Sevfullah Bozkurt, managing director; Ahmet Kilic, marketing and sales director

Valv-Trol Co.

1340 Commerce Dr. P.O. Box 2259

Stow, OH 44224-1737 . (330) 686-2800 (800) 497-2136

Website: www.valv-trol.com Email: sales@valv-trol.com

Charles Garrett, co-owner

Vanguard Pai Lung

601 McArthur Cir.

Monroe, NC 28110 (704) 283-8171

Fax: (704) 283-9257 Website: www.vanguardpailung.com

Email: sales@vanguardpailung.com Bill Moody, president

Vapor Power International

551 South County Line Rd.

Franklin Park, IL 60131 (630) 694-5500 Fax: (630) 694-2230

Website: www.vaporpower.com Email: info@vaporpower.com William Chambers, president

Venango Machine Co., Inc.

14118 Rte. 8-89, P.O. Box 239

Wattsburg, PA 16442....(814) 739-2211 Fax: (814) 739-2024

Website: www.venangomachine.com Email: nvogel@venangomachine.com Nyla J. Vogel, sales manager

(See our ads on pages 123 and 134)

Ventilex USA Inc.

10168 International Blvd.

Cincinnati, OH 45246 .. (513) 217-5830 Fax: (513) 217-5831

> Website: www.ventilex.com Email: sales@ventilex.com

Jeff McGrady, sales manager

Vibco, Inc.

75 Stilson Rd.

Wyoming, RI 02898 (800) 633-0032 Wallen, Inc. Email: sales@wcacc.com (401) 539-2392 P.O. Box 2187 George Schofhauser, president; Bruce Lexington, SC 29071-2187 Fax: (401) 539-2584 Reichenfeld, vice president(803) 951-1944 Website: www.vibco.com Fax: (803) 951-1701 I.J. White Systems Email: sales@vibco.com Website: www.walleninc.com 20 Executive Blvd. Frank A. Tanner, director of sales Email: service@walleninc.com Farmingdale, NY 11735 Videx Equipment Corp. William A. Braun, president; Kurt(516) 293-2211 Fax: (516) 293-3788 1105 NE Circle Blvd. Braun, vice president; David C. Smith, Corvallis, OR 97330 (541) 758-0521 business manager Website: www.ijwhite.com Fax: (541) 752-5285 Email: service@ijwhite.com Website: www.videx.com Walther Trowal GmbH & Co. KG Jim Souza, vice president sales 6147 Valduga Dr. SW, Ste. A Email: sales@videx.com Raymond Hovey, sales manager Byron Center, MI 49315 Williams, White & Co.(616) 455-8940 600 River Dr. VMI Americas, A Div. of VMI Group Fax: (616) 871-0037 Moline, IL 61265 (877) 797-7650 Fax: (309) 797-7655 4670 Allen Rd. Website: www.walther-trowal.com Website: www.williamswhite.com Stow, OH 44224 Email: b.iacopelli@walther-trowal.com(330) 929-6800 Josh VanDuinen, regional sales man-Email: sales@williamswhite.com Fax: (330) 929-7254 ager; Kenneth Raby, national sales **David Nesbitt** Website: www.vmi-group.com manager Email: sales@vmi-usa.com Williamson Corp. Wardjet, Inc. Ashok R. Bisoen, general manager 70 Domino Dr. (See our ads on pages 5, 94, 95 and 131) Concord, MA 01742-1270 180 South Ave. Tallmadge, OH 44278 ... (330) 677-9100(978) 369-9607 Volcanic Heater Inc. Fax: (330) 677-9121 Fax: (978) 369-5485 12260 N. Rockhill Ave. Website: www.wardjet.com Website: www.williamsonir.com Alliance, OH 44601 Email: sales@wardiet.com Email: sales@williamsonir.com(330) 823-0770 Richard Ward, president; Jeff Day, Bill Barron, president Fax: (330) 823-0772 sales manager Website: www.volcanic-heater.com Willrich Precision Instrument Co., Email: info@volcanic-heater.com Wardwell Braiding Co. Inc. 1211 High St. 80 Broadway Steve Darmon, manager Central Falls, RI 02863 Cresskill, NJ 07626......(201) 567-1411 Waage Electric, Inc.(401) 724-8800 Fax: (201) 567-7470 720 Colfax Ave. Fax: (401) 723-2690 Website: www.willrich.com P.O. Box 337 Website: www.wardwell.com Email: info@willrich.com Kenilworth, NJ 07033 Email: sales@wardwell.com R.G. Chitos, president(908) 245-9363 Cynthia Chen, sales and marketing Fax: (908) 245-8477 coordinator Wire Cloth Mfgs., Inc. Website: www.waage.com 110 Iron Mountain Rd. Email: info@waage.com Webber Manufacturing Co. Mine Hill, NJ 07803 (973) 328-1000 8498 Brookville Rd. Fax: (973) 328-0919 Curtis Waage P.O. Box 19449 Website: www.wireclothman.com Wabash MPI Indianapolis, IN 46219.... (317) 357-8681 Email: newjerseysales@wireclothman.com Fax: (317) 357-8685 LeeAnn Standridge, secretary 1569 Morris St. Wabash, IN 46992-0298 Website: www.webbermfg.com Email: info@webbermfg.com Wire & Plastic Machinery Corp.(260) 563-1184 Website: www.wabashmpi.com David E. Lovett, president 100 Franklin St. Email: wabashmpi@acscorporate.com Bristol, CT 06010...... (860) 583-4646 David Singer, marketing manager Wendt Corp. Fax: (860) 589-5707 (See our ads on pages 96 and 97) 2555 Walden Ave. Website: www.wireandplastic.com Buffalo, NY 14225 (716) 391-1200 Email: info@wireandplastic.com

West Coast Rubber Machinery, Inc.

Website: www.wendtcorp.com

Email: sales@wendtcorp.com

Fax: (562) 806-4628

Scott Edwards, MTB sales specialist

..... (562) 927-2546

Website: www.wcrubbermach.com

7180 Scout Ave.

Bell Gardens, CA 90201

CPM Wolverine Proctor LLC

251 Gibraltar Rd.

Horsham, PA 19044..... (215) 443-7265 Fax: (215) 443-5206

Website: www.wolverineproctor.com Matthew Clark, sales manager

Rahul Sachdev, executive vice presi-

(See our ad on page 135)

dent; Erik Macs, director of sales

H.W. Wallace & Co. Limited

Curtis Road Industrial Estate Curtis Rd., Dorking, RH4 1EJ, U.K.

.....+44 1306 885816 Website: www.wallaceinstruments.com Email: info@wallaceinstruments.com, chris.mundy@wallaceinstruments.com Chris Mundy, sales and service manager

(See our ad on page 126)

New machinery suppliers

WSF Industries, Inc.

7 Hackett Dr. Tonawanda, NY 14150

.....(800) 874-8265 (716) 692-4930

(716) 692-4930 Fax: (716) 692-4135

Website: www.wsf-industries.com Email: info@wsf-inc.com

John L. Hettrick, Jr.

Wyko Tire Technology

6435 Hwy. 411 S. P.O. Box 130 Greenback, TN 37742

......(865) 856-2317 Fax: (865) 856-2092

Website: www.wyko.com Email: sales@wyko.com

Kenny McCleery president; Rob Marcus, technical sales manager

Wyssmont Co., Inc.

1470 Bergen Blvd. P.O. Box 1397

Fort Lee, NJ 07024..... (201) 947-4600

Fax: (201) 947-0324

Website: www.wyssmont.com Email: sales@wyssmont.com

Joseph Bevacqua, president

Xaloy Incorporated

375 Victoria Rd. Austintown, OH 44515

..... (330) 726-4000 Fax: (330) 726-9437

Website: www.nordsonpolymerprocessing.com

Email: info@nordsonpolymerprocessing.com

Yiyang Rubber & Plastics Machinery Group Co., Ltd.

Yiyang, Hunan Province

China 413000 86-737-620-5808 (for foreign trade) 86-737-620-5878/5839/5825 (domestic sales)

Fax: 0737-429-8888/620-3088 Website: www.chinamixing.com

Yizumi Rubber Machinery Co., Ltd.

Yizumi molding plant, No.9-3 Shunchang Rd., Wusha Industrial Zone Daliang, Shunde, Foshan City, Guangdong Province, China PC528300

.....+86-757-2926 8680 86-757-2926 5156

> Website: www.yizumi.com Email: rim@yizumi.com

Nancy Liu, international sales manager

Young & Bertke Co.

3111 Spring Grove Ave. Cincinnati, OH 45225

..... (513) 241-5566 Fax: (513) 421-1860

Website: www.youngbertke.com Email: info@youngbertke.com Lorri Dean Munafo, marketing man-

Yxlon/Comet Technologies USA,

A member of the Comet Group

5675 Hudson Industrial Pkwy. Hudson, OH 44236

......(234) 284-7849 Fax: (234) 284-7886

Website: www.yxlon.com Email: yxlon@yxlon.com

Connie Hanzlik, North America marketing specialist

Zenith Pumps

1710 Airport Rd.

Monroe, NC 28110(704) 289-6511

Fax: (704) 289-9273

Website: www.zenithpumps.com Email: cc@circor.com

Keith Schafer, business manager

Zeppelin Systems USA, Inc.

11050 West Little York, Bldg. D Houston, TX 77041..... (610) 282-5848 Fax: (610) 282-5849

Website: www.zeppelin-usa.com Email: ctittensor@zeppelin-usa.com Christian Tittensor, sales and marketing manager, tire and rubber; Bob McNabb, national sales manager

Zumbach Electronic AG

CH-2552 Orpund

Switzerland+41 32 356 04 00 Fax: +41 32 356 04 30 Website: www.zumbach.ch Email: sales@zumbach.ch

Silvio Piller, sales director

Zumbach Electronics Corp.

140 Kisco Ave. Mount Kisco, NY 10549-1407

......(914) 241-7080 Fax: (914) 241-7096

Website: www.zumbach.com Email: sales@zumbach.com Keith F. Donahue, vice president, sales

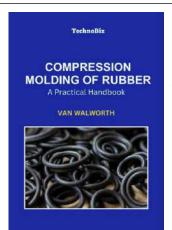
Zwick USA

2125 Barrett Park Dr., Ste. 107 Kennesaw, GA 30152

..... (770) 420-6555 Fax: (770) 420-6333

Website: www.zwickroell.com/en-us Email: info@zwickroell.com

Bob Donohue, sales manager



Compression Molding of Rubber - A Practical Handbook \$185.00

"Compression Molding of Rubber – A Practical Handbook" is the second book by Van T. Walworth, building upon rubber industry technology and know-how. This book focuses specifically on the technical aspects Van considers to be fundamental principles of compression molding of rubber products. Some of the information presented in this book will be obvious and well known to many rubber molding practitioners, while at the same time, much of the content discussed in this book will not necessarily be considered basic, or even obvious, to those skilled in compression molding technology. From Van's point of view, compression molding has not been replaced by transfer molding or injection molding, but rather, the process of molding rubber products has been expanded from compression molding to include transfer and injection molding. Compression molding remains the most widely used process in the world of rubber molding. Advancements in transfer molding and the installation of thousands of injection presses are somewhat offset by the ever-increasing market demand for rubber products. As a result, compression molding remains a vibrant, valuable, and necessary molding process in the rubber industry, and yet may also be the most widely underutilized rubber molding process. www.rubberworld.com/book-store

The following directory lists the suppliers of used and rebuilt processing machinery to the rubber industry, with address, contact information and type(s) of machinery offered.

Aaron Equipment Company

735 E. Green St.

Bensenville, IL 60106 .. (630) 350-2200

Fax: (630) 350-9047

Website: www.aaronequipment.com Email: sales@aaronequipment.com

AES Rubber Equipment, LLC

2134 Primo Rd., Ste. 101 Highlands Ranch, CO 80129

......(269) 598-3322 Website: www.usedrubberequip.com Email: aes_54@hotmail.com

Brad Scott, president

Ajax Ceco Erie Press

1253 West 12th St. P.O. Box 4061

Erie, PA 16512.....(814) 455-3941

Fax: (814) 456-4819

Website: www.eriepress.com Email: bhirsh@eriepress.com

Bob Hirsh, sales

Azco Corp.

26 Just Rd.

Fairfield, NJ 07004 (973) 439-1428 Fax: (973) 439-9411

Website: www.azcocorp.com

Email: cs@azcocorp.com

Andrew Zucaro, president

Barwell Global Ltd., Corporate Headquarters

Unit 1, 9 Burrel Rd. Stirling Way

St. Ives, Cambridge, U.K. PE27 3LE

......44-1480-832-852 Fax: 44-1480-832-851

Website: www.barwell.com Email: sales@barwell.com

lan Turner, sales director

Barwell Global USA - Spare Parts & Service

2868 Westway Dr., Unit E Brunswick, OH 44212-5661

..... (330) 225-9557

Fax: (330) 225-9555 Website: www.barwell.com/usa

Email: tammy@barwellusa.com Tammy Kidd, operations manager

Barwell Global USA - Machine Sales

2868 Westway Dr., Unit E Brunswick, OH 44212-5661

..... (330) 225-9500 Cell: (330) 441-8630 Fax: (330) 225-9555 Website: www.barwell.com/usa

Email: ian@barwellusa.com lan Turner, business development and

service director

(See our ad on page 34)

Batson Inc.

1 Club Rd.

P.O. Box 3978

Greenville, SC 29608.... (864) 242-5262

Fax: (864) 271-4535

Website: www.lpbatson.com Email: batson@lpbatson.com

Glenn Batson, vice president; Steve Ouimette, product manager; Ben Rushing, Jr., area sales manager; Chuck Hays, area sales manager

Berlyn Extruders

375 Airport Dr.

Worcester, MA 01602.... (774) 701-1689

Fax: (508) 856-9256 Website: www.berlyn.com

Email: berlyn@berlyn.com

Jerry Berlyn

Brown Machine Group

330 Ross St.

Beaverton, MI 48612... (800) 989-3726 Fax: (989) 435-2821

Website: www.bmg-solutions.com Email: gwolf@brown-machine.com Gregory Wolf, president

CCS Instruments Inc.

1868 Akron Peninsula Rd.

Akron, OH 44313...... (330) 376-3600

Fax: (330) 376-8500

Website: www.ccsi-inc.com

Email: info@ccsi-inc.com

David Warner, president; Michael Kent Warner, executive vice president

Commission Brokers Inc.

P.O. Box 8456

Cranston, RI 02920 (401) 943-3777

Fax: (401) 943-3670

Website: www.commissionbrokers.com Email: marty137@aol.com

Martin Kenner, president

Cumberland

2900 S. 160th St.

New Berlin, WI 53151 ... (262) 641-8600

Fax: (262) 641-8653

Website: www.cumberlandplastics.com

Email: info@acscorporate.com John Farney, national sales manager

Custom Engineering Co.

2800 McClelland Ave.

Erie, PA 16510.....(814) 898-2800

Fax: (814) 898-2825

Website: www.platens.com Email: andyt@customeng.com

Andy Tompkins, sales manager

Dabsco Equipment Inc.

3007 Trenton Rd.

Clarksville, TN 37040(931) 553-0242

Fax: (931) 647-1914

Website: www.dabsco.com

Email: info@dabsco.com

Jerome Buie, vice president; David Buie, president

Davey Resource Group

295 S. Water St., #300

Kent, OH 44240......(800) 828-8312 Website: www.davev.com

Website: www.davey.com Email: richard@davey.com

Richard Schaack, president

Davis-Standard, LLC

#1 Extrusion Dr.

Pawcatuck, CT 06379... (860) 650-3224
Website: www.davis-standard.com
Email: info@davis-standard.com
Joseph Wnuk, vice president, elasto-

mer and profile systems

Deguma-Schütz

150 North Michigan Ave., 35th Floor

Chicago, IL 60601

......(773) 493-4872 Website: www.deguma.com Email: deguma@deguma.com

Delroyd Worm Gear

2221 Niagara Falls Blvd.

Niagara Falls, NY 14304-5710

..... (716) 298-4100 Fax: (716) 298-4101

Website: www.delroyd.com Email: info@delroyd.com

Michael Suszek, product manager; Don Wierbinski, plant manager

Desma USA, Inc.

2195 Arbor Tech Dr. Hebron, KY 41048-7509

......(859) 525-6610

Fax: (859) 525-8972 Website: www.desma-usa.com

Email: sales.us@desma.biz
L. Scott Early, president and CEO

Durbin Industrial Valve, Inc.

1062 Triplett Blvd.

Akron, OH 44306...... (330) 724-9968

Fax: (330) 724-9975

Website: www.durbinvalve.com Email: valve@durbinvalve.com Marc Paquette, vice president of sales and marketing

Erie Mill & Press Co. Inc.

P.O. Box 6349 953 East 12th St.

Erie, PA 16512.....(814) 454-1581 Fax: (814) 454-7913

Website: www.empco-inc.com

Email: jan@empco-inc.com John Nowak, president; Greg Maus,

F.A.S. Machinery LLC

9916 Broadway Ave.

vice president

Cleveland, OH 44125.... (216) 472-3800

Fax: (216) 472-3803 Website: www.fassales.com

Email: fassales@fassales.com Robert Sadlowski, president

Farrel Corporation

25 Main St.

Ansonia, CT 06401

.....(203) 736-5500

Fax: (203) 735-6267 Website: www.farrel.com Email: info@us.hf-group.com

William Flaherty, vice president sales; Guy Tiso, manager, repairs, rebuilds

Federal Equipment Company

8200 Bessemer Ave.

Cleveland, OH 44127

..... (216) 271-3500 Fax: (216) 271-5210

> Website: www.fedequip.com Email: sales@fedequip.com

Ted Davis, vice president

Feedscrews.com

2511 N. Friday Rd. Cocoa, FL 32926

.....(321) 631-2050 Fax: (321) 636-3508

Website: www.feedscrews.com Ron Anderson, CEO/president

Freeman Schwabe Machinery

4064 Clough Woods Dr.

Cincinnati, OH 45103(513) 947-2888

Fax: (513) 947-2887

Website: www.freemanschwabe.com Email: sales@freemanschwabe.com Greg DeFisher, CEO

French Oil Mill Machinery Co.

Polymer Machinery Group; Hydraulic Machinery Group 1035 W. Greene St.

P.O. Box 920

Piqua, OH 45356-0920

.....(937) 773-3420 Fax: (937) 773-3424

> Website: www.frenchoil.com Email: tflutz@frenchoil.com

Tayte French Lutz, chairman and CEO; Brian Greever, polymer sales; Jason Mc-Daniel, COO and president; Doug Smith, hydraulic sales, Dave Sledz, hydraulic sales; Jeff Rudy, aftermarket sales; Alex Lee, polymer sales; Troy Hanf, aftermarket sales; Tim Jacomet, aftermarket sales; Mary Quinlan, hydraulic sales (See our ads on pages 100 and 101)

Glacier Machinery Sales Corporation

P.O. Box 130486

St. Paul, MN 55113..... (651) 786-9700 Website: www.glaciermachinery.com Email: sales@glaciermachinery.com Marvin Cleveland, president

Gluco, Inc.

0-794 Chicago Dr.

Jenison, MI 49428 (616) 457-1212

Fax: (616) 457-3620 Website: www.aluco.com

Email: gluco@gluco.com

Doug Grotenrath, vice president of sales

Gomaplast Machinery, Inc.

2424 Long Rd.

Wooster, OH 44691 (330) 263-7845 Website: www.gomaplast.com

Email: sales@gomaplast.com

Marcelo S. Hildebrandt, president (See our ads on pages 20, 102 and 103)

Halliburton Systems Inc.

400 Morris Ave., Ste. 268

Denville, NJ 07834 (973) 625-9292

Fax: (973) 625-3166

Website: www.halliburton.com

Email: info@hsix.com

Stephen Halliburton, president

Hull Industries, Inc.

59 Industrial Dr.

New Britain, PA 18901 .. (215) 230-4260

Fax: (215) 230-4261

Website: www.hullindustries.com Email: info@hullindustries.com Patrick Shire, vice president of sales

Icon Industries, Inc.

1522 Madison Ave., S.E. Grand Rapids, MI 49507

..... (616) 241-1877

Fax: (616) 241-5578

Website: www.iconindustries.com Email: sales@iconindustries.com

Thomas D. Jacques, president; Robert Zieger, vice president; Pete Spiering, sales manager

Industrial Rubber Machinery Inc.

3784 Brant Dr.

Akron, OH 44319...... (330) 645-0020

Fax: (330) 645-0070

Larry Weber, president

JJB Engineering Co.

2695 North Haven Blvd., Ste. 10 Cuyahoga Falls, OH 44223

.....(330) 807-0671

Fax: (330) 926-1134 Email: sales@jjbengineering.com

Edward Sheehan, president

JM Machinery Inc.

P.O. Box 378

Wadsworth, OH 44282.. (330) 825-2400 Fax: (330) 825-0569

Website: www.jmmachinery.com Email: enquiry@jmmachinery.com Michael Dyer, president and CEO; Jacqueline McCaman, vice president; Jason Breth, sales manager; Harish Nene. India office director

Kobelco Stewart Bolling Inc.

1600 Terex Rd.

Hudson, OH 44236......(330) 655-3111

Fax: (330) 655-2982

Website: www.ksbiusa.com Email: information@ksbi.com

Hisashi Mitamura, president; Brian P. Howard, assistant general manager of sales and marketing

Lamac Systems Inc.

412 Honeysuckle Dr.

Dayton, OH 45429...... (937) 439-4131

(800) 439-4131

Fax: (937) 439-5408

Website: www.lamac.com

Email: sales@lamac.com

James K. Hoffman, president; Bob Allen, vice president

Louisiana Chemical Equipment Co., L.L.C. (LCEC)

P.O. Box 1490 11100 Hwy. 225

LaPorte, TX 77572 (281) 471-4900

Fax: (281) 470-2968 Website: www.lcec.com

Stephen Rotenberg, president and CEO; Steve Nelson, general manager

Machinery Exchange Corp.

34501 Aurora Rd., #106

Solon, OH 44139 (330) 896-0585

Fax: (330) 896-0147

Website: www.mecakron.com Email: bthompson@mecakron.com **Bob Thompson**

Machinery Products U.K. Ltd.

55 Eastfield Rd.

Louth, Lincolnshire, U.K. LN 11 7AL44 (0) 1507 610 108 Fax: 44 (0) 1507 610 044

Website: www.machineryproducts.

Email: johnny.walker@btconnect.com Johnny Walker, managing director

Marathon Equipment

P.O. Box 1798

Vernon, AL 35592 (800) 633-8974

(205) 695-9105 Fax: (205) 695-8813

Website: www.marathonequipment.

Email: marketing@marathonequipment.com

Gary Brooks, director of sales

Micro-Poise Measurement Systems

555 Mondial Pkwy. Streetsboro, OH 44241

.....(330) 541-9100

Fax: (330) 541-9242

Website: www.micropoise.com Email: micropoise.techsupport@

ametek.com

Linda O'Shea, marketing manager

Mid-American Machine & Equipment, Inc.

815 E. 6th St.

LeRoy, KS 66857...... (620) 964-2156

Fax: (620) 964-2157

Website: www.mid-americanmachine.

com

Email: ssutherland@mid-americanmachine.com

Shane Sutherland, CEO

Mix Head Repair & Sales

78 Veterans Dr.

Holland, MI 49423 (616) 394-0191

Fax: (616) 394-9711

Website: www.mhr-inc.com

Email: info@mhr-inc.com

Jeffrey Hunter, global sales manager; James Gohlke, vice president sales

Nerpco USA, LLC

43 Russell Rd.

Bethany, CT 06524..... (203) 393-9050

Fax: (203) 393-9051

Website: www.nerpcousa.com

Email: nerpcousa@att.net

Steven R. Barnes, vice president:

Richard B. Barnes, president

NFM Iddon Limited

Quin St

Leyland, Lancashire, U.K. PR5 1TB

.....1772-421258

Fax: 1772-431114 Website: www.nfmiddon.co.uk

Email: sales@nfmiddon.co.uk

Michael I. Iddon, sales director; Peter

Rowe, sales manager

NFM Welding Engineers, Inc.

577 Oberlin Rd., S.W.

Massillon, OH 44647 ... (330) 837-3868

Fax: (330) 837-2230

Website: www.nfm.net

Email: sales@nfm.net

Paul R. Roberson, president

Nuttall Gear

2221 Niagara Falls Blvd.

Niagara Falls, NY 14304-5710

.....(716) 298-4100

Fax: (716) 298-4101 Website: www.nuttallgear.com

Email: info@nuttallgear.com

John Proven, national sales manager

OEM Press Systems

311 S. Highland Ave.

Fullerton, CA 92832..... (714) 449-7500

Fax: (714) 449-7510

Website: www.oempresssystems.com Email: sales@oempresssystems.com Sean Field, CEO; Mary Quinlan, sales manager; Bill Puscas, service manager

Parkinson Technologies, Inc.

100 Goldstein Dr.

Woonsocket, RI 02895... (401) 762-2100

Fax: (401) 762-2295

Website: www.parkinsontechnologies.

com

Email: sales@parkinsontechnologies.

com

Peter Termyn, president and CEO

Patterson Industries (Canada)

Limited 49 Passmore Ave.

Scarborough, Ontario, Canada M1V 4T1(416) 694-3381

Website: www.pattersonindustries.com Email: process@pattersonindustries.

Mike Lindsey, sales manager; Heinz

W. Haischt, president; Mike Lindsey, sales and marketing

Perry Videx LLC

25 Mt. Laurel Rd.

Hainesport, NJ 08036 ... (609) 267-1600

Fax: (609) 267-4499

Website: www.perryvidex.com

Email: gfisher@perryvidex.com Gregg Epstein, president and CEO

Polymer Machinery Co., Inc.

154B Potomac Ave.

Tallmadge, OH 44278-2715

.....(330) 633-5734 Fax: (330) 633-6367

Website: www.polymermachineryco.

Email: sales@polymermachineryco.

Jim Chiofolo, sales; Mathew Turlik,

sales

(See our ads on pages 110 and 111)

Reliable Rubber and Plastic Machinery Co.

2008-14 Union Tpke.

North Bergen, NJ 07047

.....(201) 865-1073

Fax: (201) 865-6878 Website: www.reliable-machinery.com

Email: info@reliable-machinery.com Thomas Liccardo, vice president/sales manager; Helga Liccardo, president;

Joseph Liccardo III, vice president, engineering; Doug James, purchasing

director; Zsolt Racz, engineering (See our ads on pages 108 and 109)

Rodolfo Comerio S.r.l.

Via IV Novembre, 165

21058 Solbiate Olona (VA) VA, Italy 21058+390331641680

Fax: +390331641666 Website: www.comerio.it

Email: comm@comerio.it Enrico Comerio and Carlo Comerio.

Rogers Industrial Products Inc.

532 S. Main St.

owners

Akron, OH 44311 (330) 535-3331

Fax: (330) 535-4408

Website: www.rogersusa.com Email: sales@rogersusa.com

Rob Cole, general manager; John R. Cole, president and CEO; Brady Stalmaker, manager, engineering

Ronci, P. Machine Co.

19 Appian Way

Smithfield, RI 02917 (401) 231-8676

Fax: (401) 231-8679 Website: www.ronci.com

Email: info@ronci.com

Philip Cerrone, president

RRR Development Company, Inc. (RRR-USA)

8817 Pleasantwood Ave. NW North Canton, OH 44720

......(330) 966-8855 Fax: (330) 966-8008 Website: www.rrrdev.com Email: info@rrrdev.com

Ronald T. Dillard, CEO; Thomas P. Dillard, president; Robert D. Irwin, executive vice president; Gene Emerick, vice president, business development

Rubber City Machinery Corp.

1000 Sweitzer Ave. P.O. Box 2043

Akron, OH 44309...... (330) 434-3500 Fax: (330) 434-2244

Website: www.rcmc.com Email: info@rcmc.com, dabraham@ rcmc.com

Robert Westfall, executive vice president; Daniel Abraham, general manager, sales, certified appraiser

Soberay & Sons Ltd.

5500 Walworth Ave. Cleveland, OH 44102

..... (216) 334-2003 Fax: (216) 334-2005

Website: www.soberayandsons.com Email: sales@soberayandsons.com Ron Soberay, president and CEO; Ryan Soberay, vice president

Spaltech International

27 Byron St.

Halton Hills, Ontario, Canada L7G 3W6(289) 891-6690

Website: www.spaltech.com Email: info@spaltech.com

Peter Sproule, technical sales representative

TMP, A Division of French

1035 W. Greene St. P.O. Box 920

Piqua, OH 45356...... (937) 773-3420

Fax: (937) 773-3424 Website: www.frenchoil.com/tmp-

products Email: sales@frenchoil.com Tayte French Lutz, chairman and CEO; Brian Greever, polymer sales; Jason McDaniel, COO and president; Doug Smith, hydraulic sales, Dave Sledz, hydraulic sales; Jeff Rudy, aftermarket sales; Alex Lee, polymer sales; Troy Hanf, aftermarket sales; Tim Jacomet, aftermarket sales; Mary Quinlan, hydraulic sales (See our ads on pages 100 and 101)

Trinks

2140 Little Rapids Rd.

De Pere, WI 54115 (920) 347-1983 Fax: (920) 347-9183

Website: www.trinksinc.com Email: sales@trinksinc.com

Adrian Drewitz, director of sales

United Feed Screws Ltd.

487 Wellington Ave., P.O. Box 9433

Akron, OH 44305...... (330) 798-5532 Fax: (330) 798-5548

Website: www.unitedfeedscrews.com Email: jpaulnorton@unitedfeedscrews.

J.P. Norton, president; Jim Norton, vice president operations; Joseph P. Norton Sr., technical director; Becky Jackson, office manager

U.S. Molding Machinery, Co.

38294 Pelton Rd.

Willoughby, OH 44094

.....(440) 918-1701 Fax: (440) 918-1720

Website: www.usmolding.com Email: usmolding@usmolding.com Zachariha Cohen, president

Wardjet, Inc.

180 South Ave.

Tallmadge, OH 44278.. (330) 677-9100

Fax: (330) 677-9121 Website: www.wardjet.com

Email: sales@wardjet.com

Richard Ward, president; Jeff Day, sales manager

West Coast Rubber Machinery, Inc.

7180 Scout Ave.

Bell Gardens, CA 90201

.....(562) 927-2546 Fax: (562) 806-4628

Website: www.wcrubbermach.com

Email: sales@wcacc.com

George Schofhauser, president; Bruce Reichenfeld, vice president

Williams, White & Co.

600 River Dr.

Moline, IL 61265 (877) 797-7650

Fax: (309) 797-7655

Website: www.williamswhite.com Email: sales@williamswhite.com

David Nesbitt

Wire & Plastic Machinery Corp.

100 Franklin St.

Bristol, CT 06010....... (860) 583-4646 Fax: (860) 589-5707

Website: www.wireandplastic.com Email: info@wireandplastic.com Rahul Sachdev, executive vice presi-

dent; Erik Macs, director of sales
(See our ad on page 135)

Xaloy Incorporated

1399 Countyline Rd. New Castle, PA 16101

.....(724) 656-5600

Fax: (724) 656-5620 Website: www.xaloy.com Email: info@nordsonxaloy.com

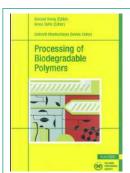
Danny Porter, sales manager

Zeppelin Systems USA, Inc.

11050 West Little York, Bldg. D Houston, TX 77041..... (610) 282-5848

Fax: (610) 282-5849

Website: www.zeppelin-usa.com Email: ctittensor@zeppelin-usa.com Christian Tittensor, sales and marketing manager, tire and rubber; Bob McNabb, national sales manager



Processing of Biodegradable Polymers - \$225.00

Biodegradable polymers (BDPs) based on renewable sources have been drawing scientific as well as industrial attention due to their potential to replace fossil derived polymers (FDPs) for a large number of applications. Furthermore, BDPs introduce the viability of bio-degradation at the end of their life cycle, thus reducing the environmental impact of most FDPs. This book covers the basic properties of BDPs according to their classifications, the rheology of BDPs and their blends, and their numerous applications, with an emphasis on processing: As BDPs possess attractive attributes compared to FDPs (which is discussed in the book), their processing has been investigated using conventional processing technologies. However, BDPs are sensitive to the processing conditions due to their composition, which is tuned to bio-degradation.

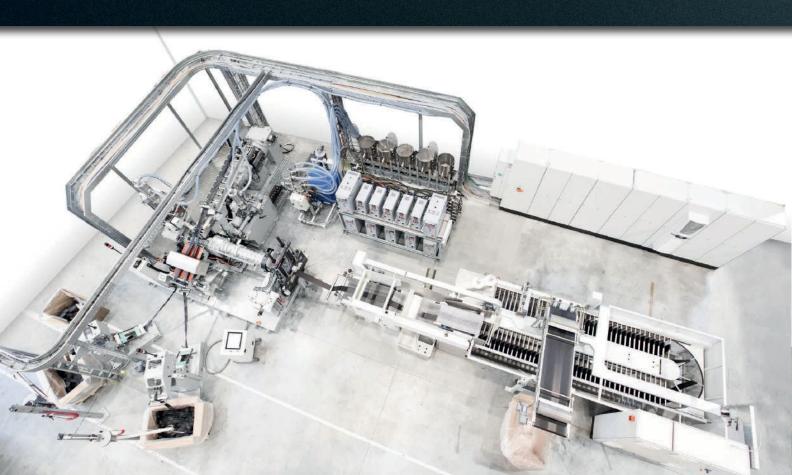
www.rubberworld.com/book-store



VMI'S ICOM FINAL MIXING PROCESS

VMI'S ICOM TECHNOLOGY BUILT ON EXTRUDER GEAR PUMP SYSTEMS OFFERS JUST-IN-TIME MIXING OF MASTERBATCH WITH VULCANIZATION CHEMICALS.

- Increase Mixing plant capacity with low investment
- Short time from planning to production
- Mixing at lower compound temperature
- Blending of masterbatches for optimal compound quality
- Single process step optional with straining / preforming
- Complete line including VMI's Batch-Off system



VMI'S CANTILEVER BATCH-OFF



THE VMI CANTILEVER BATCH-OFF IS OUR COMPACT SOLUTION FOR ENDLESS STRIP PRODUCTION AND CAN BE CUSTOMIZED TO MEET CUSTOMER SPECIFIC NEEDS.

- Easy overview and accessible
- Operator and maintenance friendly design
- Removable holding tank for easy cleaning of dip liquid
- Throughput up to 3000 kg/h
- Optimized handling of strips and slabs up to 400 [mm] wide
- Combination with multiple types of stackers possible







HYDRAULIC PRESSES



Genesis Series Hydraulic Presses

15 to 150 ton models for compression molding, super plastic molding, bonding and laminating. Genesis presses provide versatility and performance with economy.



Vantage Series Hydraulic Presses

200 to 1000 ton capacity for a wide variety of manufacturing functions including compression molding, bonding and laminating.



C-Frame Open Clamp Presses

15 to 150 ton capacity models permit long workpieces to extend on both sides of the clamp. They are used for molding and encapsulating cables, connectors and other components.



Plastic ASTM Test Sample Molding Presses

Genesis model G30H-ASTM is designed to produce polyethylene test samples in accordance with ASTM D4703, Procedure C.



Custom Molding Presses

For thermoset curing, or trim presses for flash removal or die cutting of sheet materials, 15 to 2,500 ton clamp capacity.



Transfer Molding Presses

For molding and encapsulating rubber or plastic parts, 30 to 450 ton capacity.

RELY ON WABASH PRESSES FOR EVERY NEED...

Over the years, Wabash has accepted, and accomplished, the challenge of designing standard and special presses for industry worldwide. Wabash MPI manufactures presses to meet nearly every production requirement. Parts and service are readily available on all Wabash presses. All are manufactured in the U.S.A. Ask your Wabash MPI representative to show you installations of Wabash presses performing productively in your area.

Our customers are accustomed to the reliable performance and low maintenance requirements of their Wabash presses. That's one of the many reasons they return to Wabash when their business warrants additional machines. We've been building them that way for over 75 years. For more information on any of our presses, see your Wabash MPI representative, visit our website, call, or e-mail us.

WABASH HYDRAULIC PRESSES

for Compression and Transfer Molding, Bonding, Trimming, and Laminating



Vacuum Molding & Laminating Presses

30 to 400 ton capacity, presses for evacuation of air and volatiles during processing. Larger custom sizes are available.



Rubber ASTM Test Sample Molding Presses

Genesis model G50H-19 is designed to vulcanize rubber sheets for material property testing in accordance with ASTM D3182.



Carver Auto Series Presses

Automatic electrically powered benchtop presses for the laboratory or R & D facility, 15 to 30 ton capacity.



PNP Compression Molding Presses

Pneumatic presses available in a clamping force of up to 20 tons. Suited for both production and lab environments. Ideal for low pressure applications and greater precision/reliability over hydraulic presses.



Carver Laboratory Presses

12 to 100 ton capacity, for every application, with an extensive line of accessories.



Custom Engineered Hydraulic & Pneumatic Presses

Available to meet your specific requirements.

ISO 9001:2015 Certified





WABASH MPI

1569 Morris Street Wabash, Indiana 46992-0298 U.S.A. Phone 260-563-1184 wabashmpi@acscorporate.com wabashmpi.com

ACCURATE COLLABORATIVE EFFICIENT



RUBBER, SILICONE & POLYMER EXPERTS

ACE LABORATORIES is a trusted partner to manufacturers around the world.

With all our resources under one roof at our ISO/IEC 17025 accredited facility, we deliver fast, dependable testing, development, and consulting services across every industry sector.

Whether you're validating materials, solving a problem, or developing something new, our team is here to support your next elastomer challenge.

Analytical & physical testing

Formulation development

Environmental testing

Reverse engineering

Dynamic testing

Failure analysis

QC release testing

Specification testing

6PPD alternatives analysis

Compliance & regulatory testing



Deadlines don't wait – neither do we. Lightning-fast turnaround times and expert support, delivered globally.







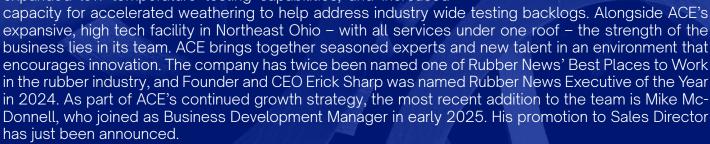


TRUSTED AND TESTED WORLDWIDE

Founded in 2015, ACE Laboratories quickly became the fastest growing independent testing and development lab in the rubber industry, fueled by service diversification, continuous investment in equipment, strategic hires, and strong partnerships. Today, ACE is recognized as one of the leading rubber, silicone, and polymer testing and development laboratories in the world.

ACE provides testing, materials development, and consulting services to manufacturers across the automotive, tire, construction, industrial, aerospace, energy, consumer goods, and cable and wire sectors, as well as to raw material suppliers. The company is known for its reliability and for having some of the fastest lead times in the industry.

From the beginning, ACE has prioritized reinvestment. Recent developments include a dedicated Dynamic Testing Laboratory, expanded low temperature testing capabilities, and increased



The original goal has not changed. From day one, ACE has focused on delivering exceptional service. That commitment remains central to everything the company does. Systems for traceability, tracking, and automated data management are not just tools – they are part of a broader strategy to ensure accuracy, responsiveness, and transparency at every stage. As the business has grown, these

systems have allowed ACE to scale without compromising on the reliability and speed that clients expect. Service continues to be the foundation for ACE's reputation and long-term success.

Today, ACE supports clients around the world who rely on their expertise to validate performance, meet global standards,

and bring better products to market. From start ups to industry giants, more companies are turning to ACE Laboratories for the insight and support they need to solve their elastomer challenges.















Hydraulic Presses

for customers molding critical rubber and composite components in the automotive, defense, medical, sporting goods industries, and more.



The French Oil Mill Machinery Company | Piqua, Ohio

We make machines to make people's lives better.™

W W W . F R E N C H O I L . C O M





TMP Asian

A durable and economical line of standard hydraulic presses for compression, injection and vacuum molding of rubber and silicone components.

Our wide variety of press styles and mold openings ensure we can deliver the right solution for your manufacturing process. Models from 100 to 600 tons available.

Visit www.tmpasian.com for a quote or to learn more.

Gomaplast Machinery, Inc. Wooster, Ohio • 330-263-7845 • sales@gomaplast.com • www.gomaplast.com

GLOBAL POLYMER SUMMIT

September 8-11, 2025 Cleveland, OH

Visit us in Booth # 1603









15"x15", 30 Ton, 4-post, electric platens, double acting ram, fully guided, Allen Bradley PLC, color HMI. 1157 STOCK!





18"x18", 75 Ton, 4-post, electric platens. double acting ram, fully guided, Allen Bradley PLC, color HMI. 650A



18"x18", 75 Ton, 4-Post electric platens, double acting ram, fully guided, Allen Bradley PLC, front light curtain, rear & side guarding.











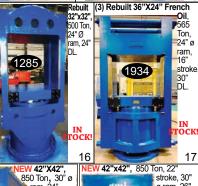
















12

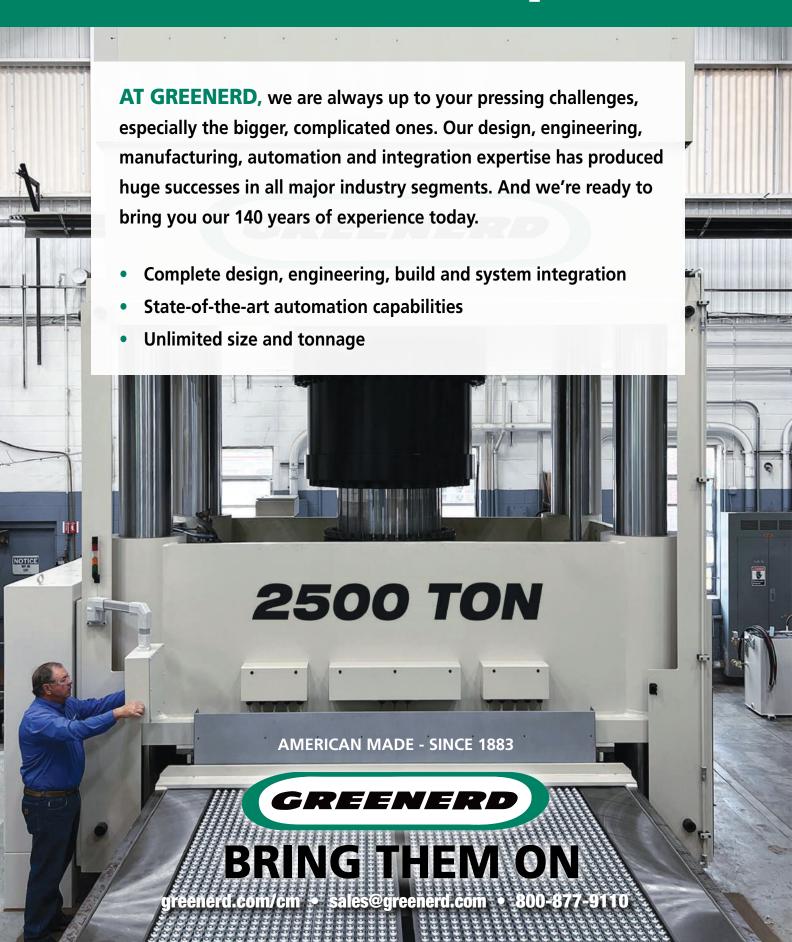








LARGER Compression



Molding Presses?



2500 Ton Hydraulic Compression Molding Press

- 10-foot square heated platens maintaining 500°F surfaces to +/- 5°
- Innovative Mold Transfer System Improves Ergonomics and Safety





400 Ton Hydraulic Compression Molding Press

- Force adjustable from a minimum of 2,500 lbs (1,134 kg) to a maximum of 800,000 lbs (362,873 kg)
- Platen size is 84 in. (2,134 mm) front-to-back and left-to-right, and stroke is adjustable to 14 in. (356 mm)

400 Ton Hydraulic Compression Molding Press

- In-depth application analysis and builder / vendor collaboration resulted in an ideal compression molding machine design
- Maintain full tonnage throughout the entire length of the stroke

Send us your rubber application challenges! We will design, build and back the best hydraulic compression molding press solution for your needs.

greenerd.com/cm • sales@greenerd.com • 800-877-9110



WIRE BUTTWELDING MACHINES | MADE IN GERMANY

BUTTWELDING MACHINES FOR STEELCORD

Type 00F-SC

Type 0-SC

Type S6-SC

Type BTZ

Type S10-SC

Type TZ

Type TZ4









BUTTWELDING MACHINES FOR STEELCORD



Machine description

robust machine design with precise mechanics, with programmable micro-processor control for the parting and welding process, the steel cord is firmly clamped without being deformed.



Application area

e.g. in the manufacture of tires or rubber conveyor belts. Welded joints may reach up to 40% strength of the starting material, mostly burr-free welds (depending on the structure).



Scope of supply

welding machine on mobile base, with programmable control, depending on the version with magnifying lamp, special grinder and electric magnetic hammer.

Clamping jaws with round profiled grooves.

PARTING GUNS FOR STEELCORD



Machine description

robust design, simple operation. Power supply via mains cable or mains-independent as rechargeable battery guns for up to approx. 10,000 cycles per charge.



Application area

e.g. at the end of a steel cord spool or when cutting steel cords to length in fabrication, electrical parting provides fused individual wires and prevents the steel cord from splitting.



Scope of supply

battery parting gun with rechargeable batteries and charger, or electric parting gun on mobile base, parting jaws.

TECHNICAL DATA

Туре	00F-SC	0-SC	S6-SC	S10-SC
kVA (nominal)	0.3	0.5	6	10
Steelcord outer Ø (mm)	0.3 - 0.6	0.4 - 1.6	1.6 - 4.5	2.0 - 6.0
Weight (kg)	100	124	265	278

TECHNICAL DATA

Туре	BTZ	TZ	TZ4
Battery voltage (V)	2.4	-	-
kVA (nominal)	-	2	4
Steelcord outer 0 (mm)	0.3 - 2.0	0.3 - 2.0	2.0 - 4.5
Weight (kg) gun incl. trolley	1.1 -	1.1 55	3.8 74

MORE INFORMATION

You can find more information about our products on our website. Just scan and learn more.

Brochure information based on experience, only the offer is decisive.



RELIABLE MACHINERY SOLUTIONS

We design, custom engineer, manufacture, remanufacture and rebuild machinery that endures. From the laboratory to the production floor, RELIABLE the experience and equipment to target your specific requirements. Servicing the Rubber and Plastic Processing Industries goes beyond just a list of equipment in "inventory." We deliver machinery that surpasses the everyday challenges of today's technology. With the most comprehensive facilities in the industry, RELIABLE performs more work in-house than any of our competitors.

Our 250,000+ square foot facility gives us plenty of space for an extensive on-site inventory, machine shop operation, in-house engineering, overhead crane operation (up to 40 tons), erecting and manufacturing. Contact **RELIABLE** today to navigate the industry and find your machinery solutions at www.reliable-machinery.com



NEW RELIABLE 68" Calender - roller bearings, drilled rolls & variable friction



REBUILT Cracker Mill



PRODUCTION EQUIPMENT

- Two Rolls Mills Rubber & Plastic
- Hydraulic Presses (Compression & Transfer)
- Calenders: 2, 3, & 4 Roll
- Extruders/Strainers
- Intensive Mixers (Banbury® & Kneader Type)
- Bale Cutters (New)



NEW RELIABLE Lab Internal Mixer





REBUILT Cold Feed Extruder

REBUILT 1200 ton

Slab Side Press

LABORATORY EQUIPMENT

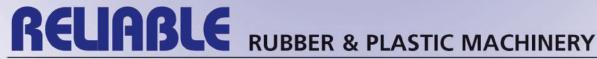
- Two Rolls Mills Rubber & Plastic
- Two Roll Mills Plastic (Electrically Heated)
- Intensive Mixers (Banbury® & Kneader Type)
- Hydraulic Presses (Compression & Transfer)
- Calenders: 2, 3, & 4 Roll
- Extruders/Strainers
- Bale Cutters (New)



NEW RELIABLE Self-Contained Hydraulic Press



RELIABLE 84" Mill - dual drives/variable friction



NAVIGATORS... FOR MORE THAN 88 YEARS.



NEW RELIABLE 36" Calender - roller bearings & variable speed



NEW RELIABLE 24" Lab Mill - dual drives/ variable friction



NEW RELIABLE Transfer Press



NEW RELIABLE
Guillotine Bale Cutter



NEW RELIABLE 36" Cushion Calender



NEW RELIABLE 84" Calender - roller bearings & drilled rolls



REBUILT 60" Mill - roller bearings & variable roll speeds



REBUILT Internal Mixer



REBUILT Twin Screw Sheeter with hydraulic drive motors



REBUILT 15" Extruder/Strainer

Polymer Machinery Company

THE NORTH AMERICAN LEADER IN;

CILITITE TO CONTROL OF THE CONTROL O

PRICE

- Compression presses from 20 tons to over 10,000 tons
- Injection presses from 15 tons to over 1,500 tons
- Advanced state of the art controls







Polymer Machinery Compa

Polymer Machinery Company, Inc. (PMC) is a long-standing professional supplier of top-quality machinery to the rubber molding industry. Previously associated with Barwell International of England, and Barwell Inc. of North America, we have been selling and servicing new and used machinery to the rubber industry since the early 1960's.

Our product range encompasses preformers and extruders, granulators, presses, both injection and compression, cleaning, deflashing and trimming equipment along many other specialty machines. Our superbly trained and outstanding sales, service, parts, and customer service teams are standing by for your inquiry.



Since 2004 PMC has been the single authorized distributor for Pan Stone Hydraulic of Taiwan for the North American market. Pan Stone has brought many years of technical expertise, and innovation to the rubber molding machinery industry. Pan Stone is a focused and excellent manufacturer of high-quality designed machines, from a standard range to custom designs. No job is to small or large. From 10 tons to 10,000 tons, we have done it all. Their dedicated and forward-thinking engineering staff has produced a wide range of machines to solve problems for many complicated and time-consuming products. Pan Stone has made the investment to become one of the largest manufacturers of rubber machinery in the world. They have reached this pinnacle by excelling in innovative design, outstanding quality, competitive pricing, and first-class customer service. Their 17+ patents, granted and applied for, show the world that they lead the way in technical advancements, safety, and production efficiency. Pan Stone can meet OSHA, CE, CSA and UL standards.

Talk with your PMC sales rep today to find out how we can engineer a solution to your molding problems that will make your company more competitive, technically advanced, and profitable than your competitors.





Ask us about our pre-owned machinery.

Call Us Today for More Information! 330-633-5734



Pan Stone – a technology leader in rubber machinery. Full capability and the largest complete line of rubber molding machinery in the industry.

Polymer Machinery Company 154-B Potomac Ave., Tallmadge, OH 44278 www.polymermachineryco.com





ADVANCING POLYMERS. DRIVING INNOVATION.



At ARDL, we are passionate problem solvers committed to advancing the innovation, production excellence, and qualification of polymer. With over six decades of experience and ISO certification and A2LA accreditation, our trusted expertise has helped shape the rubber industry.

From routine testing to complex problem-solving, we provide tailored services to meet the unique needs of each customer.







COMPOUND DEVELOPMENT

ARDL's **compound development** capabilities can help you reduce costs, develop new products, improve quality and reliability, resolve technical challenges, meet specifications, and maintain quality control.

Whether you're pursuing highly technical innovation or adapting one of the 20,000+ compounds in our extensive recipe library, our experienced team delivers effective, cost-efficient formulations tailored to your specific goals.



- Calendaring
- Evaluative
- Extrusion
- Mixing
- Process-ability
- Prototyping
- Transfer Molding

- Compression Molding
- Injection Mold Shrinkage
- Cost reduction Measures
- Formulation Reconstruction
- Formula Optimization
- Raw Ingredient Qualification
- Competitor Analysis
- Plastics & Rubber Injection Molding





CONTACT OUR EXPERTS TODAY!

866-778-ARDL



answers@ARDL.com



ARDL provides advanced testing for rubber, plastic, and latex materials across industries such as automotive, aerospace, medical, textiles, and more.

PHYSICAL / MECHANICAL



The **Physical Testing Laboratory** offers

physical/mechanical testing and certification for materials and components. We provide specimen preparation and testing for suppliers, molders, and end users, following ASTM, automotive, and government standards.

- Unaged & Aged Properties
- Abrasion & Tear Resistance
- Ozone, Weather & Fog Testing
- Compression Stress Relaxation (CSR & CCSR)
- Carbon Arc Exposure
- Fluid Immersion
- Wiper Blade Testing
- Q.C. Fingerprinting
- Custom Engineered Testing
- FEA Support Testing
- Dielectric Testing
- Viscoelastic Properties: DMA
- Conductivity & Resistivity Testing
- Low Temperature Properties
- Friction, Fatigue & Flex Testing

CONSULTING SERVICES



- Expert Witness & Litigation
- Technical Consulting
- Process Improvement
- Compound Enhancement & Development
- Sustainability Initiatives
- Prototyping & Small Batch Manufacturing
- Maneuvering Supply Challenges
- Life Cycle Predictions

ANALYTICAL / CHEMICAL



ARDL's Chemical Services Laboratory provides comprehensive analytical/chemical analysis—from single compound identification to full formula reconstruction. Our experts offer ASTM-standard testing for rubber, plastic, and latex materials, helping you understand chemical properties and performance. We serve a wide range of industries and offer expert material reviews.

- Formulation Fingerprinting
- Failure Analysis
- Reverse Engineering
- Dispersion Analysis
- Thermal Analysis: DSC, TMA. TGA, DMA
- Medical & Pharmaceutical
- Chemo & Chemical Permeation
- DEA Clearance: 100+ Hazardous Drugs
- PPE Penetration
- Microscopy
- Regulatory/Leachate Evaluation
- Medical Compliance Testing
- Sustainable / Biodegradable Material Testing



- Webinars
- Custom Tailored Classes
- Private Organization-Only Classes
- Lunch & Learns
- Technical Training
- Community Polymer **Training**
- K-12 Education Events



Whatever your challenges or goals, we can help you get there.

New applications, process improvements, difficult materials... our expert technicians are ready to demonstrate how the latest rubber and silicone processing machinery from Moriyama can help your business.

Moriyama Test Machine List in Maumee, OH

- WDS7-40 Moriyama Mixer
- 2TR-75 Moriyama Twin Taper Extruder
- SPM-20 Moriyama Sheet Preforming Machine
- DS1-5 Moriyama Lab Mixer



MORIYAMA

SEE THE NEW MORIYAMA

2TR-75

AT THE GLOBAL POLYMER SUMMIT!

BOOTH# 1812

419-897-9595 www.sanyu-sti.com

COMPANY PROFILE SANYU USA, INC.



Founded in 1989 and headquartered in Maumee, Ohio, Sanyu USA, Inc., is the North American sales and service arm for three leading rubber machinery lines: Sanyu, Moriyama and Rubicon.

We bring over 35 years of experience supplying high-performance rubber and silicone processing equipment to manufacturers in the automotive, medical, industrial, construction, and aerospace sectors.

Core Offerings

- **SANYU** Rubber injection molding machines from 25 2,500 ton clamp force, with advanced options for precision injection molding such as Al-based injection control, servo-drives, vent extruders and automation for insert loading, part removal, and inspection.
- MORIYAMA mixers and preforming extruders including lab mixers, tilt mixers with G2 & G3 Rotors, twin-taper extruders, and sheet preforming machines.
- RUBICON extruders and vulcanization lines, offering complete systems for producing rubber hoses, profiles, cables, and silicone parts. Vulcanization options include hot air tunnels, salt bath tanks, microwave preheaters, and infrared ovens.

We also operate a fully equipped Test Center in Maumee, Ohio and offer complete installation, training, maintenance, and technical support to help customers maximize machinery up time and productivity.

SANYU USA, INC.

1718 Indian Wood Circle / Suite E Maumee, OH 43537

SANYU

MORIYAMA

rubicon

Indispensable



Rubber Molding Principles

Author: Van Walworth 2nd Edition

Rubber Molding Principles 2nd Edition is the first in a series of technical books written to highlight the fundamentals of various aspects of rubber molding technology and how they relate to each other. The more one understands the interactions and relationships of these fundamental principles, the better one is able to exploit the fundamentals to their fullest advantage. Rubber Molding Principles is not intended to be an exhaustive attempt to cover every aspect of rubber molding technology. The fundamental elements of rubber molding technology which I consider to be essential to a better understanding of rubber molding technology.



Adhesion and Adhesives Technology

Author: Pocius, A. 4th Edition

This book describes, in clear understandable language, the three main disciplines of adhesion technology: mechanics of the adhesive bond, chemistry of adhesives, and surface science.

Some knowledge of physical and organic chemistry is assumed, but no familiarity with the science of adhesion is required. The emphasis is on understanding adhesion, how surfaces can be prepared and modified, and how adhesives can be formulated to perform a given task. Throughout the book, the author provides a broad view of the field, with a consistent style that leads the reader from one step to the next in gaining an understanding of the science.

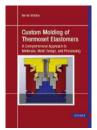


Extrusion of Polymers Theory and Practices

3rd Edition

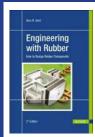
The author presents single-screw extrusion technology together with the relevant polymer fundamentals, with an emphasis on screw design. The presentation begins on a physical level, providing an in-depth conceptual understanding, followed by an analytical level with mathematical models. Practical applications of the mathematical models are illustrated by numerous examples. A brief description of twinscrew extrusion technology is also presented.

This revised third edition now also covers a novel patented barrier screw design that eliminates short-comings of all previous barrier screw designs, more descriptive specific screw design guidelines.



Custom Molding of Thermoset Elastomers

This comprehensive reference book incorporates the latest developments in the synthesis, production, characterization, and application of various types of polymeric nanocomposites. It outlines the various preparation techniques using different types of nanoparticles and polymer matrices with emphasis on clay nanoparticles. All fundamental issues such as thermodynamics, kinetics, and rheology are discussed. Also, the structure and the characterization of polymeric nanocomposites, including their molecular characteristics, thermal properties, morphology, and mechanical properties, are covered in detail.

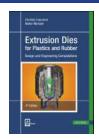


Engineering with Rubber

3rd Edition

This book provides the principles of rubber science and technology: what rubber is, how it behaves, and how to design engineering components with rubber. It introduces the principles on which successful use of rubber depends and offers solutions to the questions engineers in rubber processing face every day.

How is an elastomer chosen and a formulation developed? Why is rubber highly elastic and relatively strong? How is the stiffness and strength of a product estimated? How is high quality and durability guaranteed? The authors describe current practices in rubber engineering.



Extrusion Dies for Plastics and Rubber

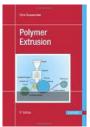
4th Edition

This definitive book provides a comprehensive account of the full range of dies used for extrusion of plastics and elastomers. The distinctive features of the various types of dies are described in detail. Expert advice on the configuration of dies is given, and the possibilities of computer-aided design, as well as its limitations, are demonstrated.

Fundamentals and computational procedures are clearly explained so that no special prior knowledge of the subject is required. The mechanical configuration, handling, and maintenance of extrusion dies are described.

www.RubberWorld.com

Reference Tools



Polymer Extrusion

By Chris Rauwendaal 5th Edition

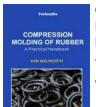
Bridging the gap between theory and practice, the fifth edition of Polymer Extrusion continues to serve the practicing polymer engineer and chemist, providing the theoretical and practical tools for successful extrusion operations. In its revised and expanded form, this book incorporates many new developments in extrusion theory and machinery.



Thermoplastic Elastomers

Author: Holden, G., Kricheldorf, H., Quirk, R. 3rd Edition

Thermoplastic elastomers are one of the fastest growing material groups. They can be processed like thermoplastics but their properties are close to those of vulcanized elastomers. New products, new processing techniques, new properties, and new applications have developed since the publication of the second edition. All these developments are reflected in the new edition of this well-established standard work. A unique and comprehensive, up-to-date guide to all scientific and technical aspects of thermoplastic elastomers



Compression Molding of Rubber

- A Practical Handbook

Van Walworth

the second book by Van T. Walworth, building upon rubber industry technology and know-how. This book focuses specifically on the technical aspects Van considers to be fundamental principles of compression molding of rubber products. Some of the information presented in this book will be obvious and well known to many rubber molding practitioners, while at the same time, much of the content discussed in this book will not necessarily be considered basic, or even obvious, to those skilled in compression molding technology.



Injection Molding Simulation for Beginners

This book offers an up-to-date, platform-independent introduction to injection molding simulation, which plays a very important role in the design of molds and molded parts as well as process development and optimization. The content is structured and conveyed within an engineering framework. Complicated mathematical derivations are avoided as far as possible.



Fatigue, Stress, and Strain of Rubber Components

This book covers the fatigue testing of specimens, curve fitting of equations to the test data, and the use of such equations in life prediction. Earlier chapters are background in the nature of rubber, history of its usage, brief mention of types of rubber and manufacturing methods. Stressstrain testing and behavior is covered to the extent relevant to fatigue analysis. Also, the text covers the application of finite element analysis to components to determine high stress points that are vulnerable to fatigue failure.

Online Bookstore: www.rubberworld.com/

book-store

Ph: 330-864-2122

Fx: 330-864-5298

RubberWorld

GLOBAL POLYMER SUMMIT

PRESENTED BY IEC & ITEC

September 8-11, 2025 Huntington Convention Center Cleveland, OH USA



Combining the strengths of the International Elastomer Conference (IEC) and the International Tire Exposition and Conference (ITEC), the Global Polymer Summit bridges the tire and rubber industries through comprehensive technical programming, engaging discussions and a dynamic all-in-one event.

COMPONENTS INCLUDE:

Expo · Technical Meeting · Educational Symposium · Women's Event · Student Programs • Young Professionals Events • Expo Theater Presentations • Receptions • 5K Walk/Run • Kevnote Addresses • Awards Ceremonies

Interested in exhibiting or attending? Scan the QR code for details.





Meetings

R.D. Abbott examines silicone fabrication

For the fourth year in a row, R.D. Abbott will host Manufacturing with Silicone Rubber, a comprehensive workshop with a fabricator's point of view. The event will be held August 26-28 in Barberton, OH. There is also an optional training opportunity on Friday, August 29, for one-on-one discussions with instructors and deeper dives into process development.

Attendees of this four-day event will deepen their knowledge of silicone rubber manufacturing, testing and troubleshooting. The curriculum includes classroom instruction and interactive sessions led by industry experts. This workshop is designed for anyone seeking a complete overview of manufacturing with high consistency silicone rubber (HCR) and liquid silicone rubber (LSR) materials.

Classroom instruction will take place on Tuesday and Wednesday, August 26-27, in the training room at Akron Rubber Development Laboratory, where participants will explore silicone sources, processing characteristics, fabrication methods, additive dispersion technologies and mold design considerations. Topics will also include physical, rheological and analytical testing of HCR and LSR compounds; LSR characterization techniques using virtual modeling; and process development and troubleshooting. Special sessions will cover modern dosing equipment, mold designs for turnkey applications, and failure analysis case studies involving rubber and plastics.

Interactive sessions will follow at R.D. Abbott's Barberton Service Center, a 127,000 sq. ft. facility that serves as the company's northeast hub, and is also home to NovationSi, its manufacturing subsidiary. During these hands-on trainings, attendees will gain direct experience with state-of-the-art materials, testing instruments and production equipment. Featured resources will include Dow performance silicones, DuPont Liveo silicones and NovationSi's custom modifiers, additives and colors, as well as Sigmasoft virtual molding software and equipment

from Alpha Technologies, Elmet, Sodick (Plustech), Kipe Molds and Engel.

A special breakout session on August 26 will offer extended instruction on extrusion systems and HCR manufacturing processes for attendees seeking deeper expertise in these areas.

The instructors for this workshop will include R.D. Abbott's Rick Ziebell, vice president of technology and technical fellow; and Craig Lustek, LSR application/business development engineer. NovationSi's Rob Bohland, research

and development manager; and Neil Lanterman, quality coordinator, will also share their many decades of industry knowledge.

The full lineup of instructors includes Bilal Rafiq and Bob Pelletier of Elmet North America; Bob Hershberger, Nicki Hershberger and Jason Poulton of ARDL; Bryce Maczko and Len Hampton of Sodick IMM by Plustech; and Jake Michaelson of Sigma Plastic Services. Registration details are available at rdabbott.com/2025workshop.

Rubber Group News

The **Detroit Rubber Group** will hold a golf outing August 19 at the Northville Hills

Golf Club in Northville, MI. Details are available at www. rubber.org/ detroit-rubber-

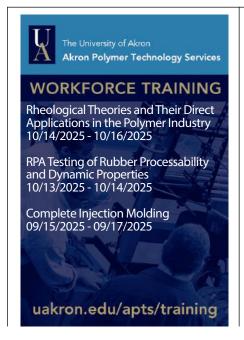


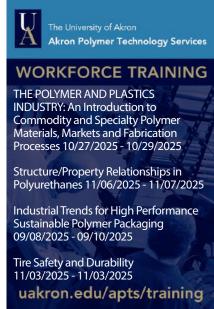
group-inc. The DRG held its annual fishing outing at the Toledo Beach Marina in La Salle, MI, on July 10. Several walleye fishermen are pictured above.

The **Los Angeles Rubber Group** will hold a golf tournament September 15 at the Western Hills Country Club in Chino Hills, CA. Further information is available at www.tlargi.org.

The Mexico Rubber Group will hold the course, Chemicals for Rubber Protection, instructed by Jose Gazano, on July 24 at the Rubber Chamber facilities in Mexico City, Mexico. Details are available at www.rubber.org/mexico-rubber-group.

The **Ohio Rubber Group** will hold a golf outing August 25 at the Silver Lake Country Club in Stow, OH. Further information is available at www.ohiorubbergroup.org.







American Chemical Society rubber.org

NEVER STOP LEARNING!

CONVENIENCE: Most all our learning opportunities are virtual only with some in-person courses at our partner's locations.

CEUs: We partner with The University of Akron to offer CEUs for many of the courses we offer, as well as for our Basic, Intermediate and Advanced Rubber Technology Self-paced Learning opportunities.

TRAINING PASS: You can purchase a training pass to attend all our virtual courses and webinars for ONE YEAR for ONE PRICE. Individual passes, as well as company level passes with tiers of up to 50 trainees are available.

Visit rubber.org/training for details about these courses, including full descriptions and pricing.



UPCOMING LEARNING OPPORTUNITIES

• July 17, 2025

Course: Static, Dynamic & Fatigue Characterization Testing

• July 21, 2025

Webinar: Maintaining High Performance in Challenging Testing Laboratories

July 23, 2025

Webinar: Electroelastomers – Applications, Principles & Opportunities

• July 24, 2025

Webinar: The Fatigue Limit of Rubber

• July 30, 2025

Course: Building the Rubber Compound – The Essentials

• July 31, 2025

Course: Intermediate Rubber Compounding

August 5, 2025

Course: Rubber Extrusion Technology

September 8-10, 2025
 GPS Educational Symposium Courses:

- Rolling Resistance & Sustainability in Tires
- Laboratory Qualifications for Real World Applications
- Compounding Fluoroelastomers
- Essentials of Silicone Rubber
- Introduction to Elastomer Durability
- An Introduction to Continuous Vulcanization
- Antidegradant Chemistry, Testing & Aging
- Setting Up a Rubber Molding Process
- Essentials of Rubber Technology
- Maximizing Productivity with Microsoft Teams
- Rubber Vulcanization & Curing Chemistry
- How to Bargain & Negotiate with Vendors & Suppliers
- Mixing & Testing for Compound Consistency
- Recovered Carbon Black Technology, Market & Sales
- Fridays September 12-December 19, 2025 Webinar Series: Formulating Fridays

All webinars are FREE for Rubber Division, ACS Members and all Rubber Division, ACS courses are FREE for undergraduate Student Members (discount for masters & graduate Student Members)!

Calendar



Future Meetings/ Expos

Cleveland September 8-11 2026 Warrensville Hts. April 14-16 Louisville Sept. 28 - Oct. 1

www.rubber.org

Rubber Division, ACS, Fluoroelastomers: Applications, Principles and Opportunities webinar, www.rubber.org - July 23.

University of Akron, Akron Polymer Training Services, RPA Testing of Rubber Processability and Dynamic Properties online course, www.uakron.edu/apts/-July 23-24.

Mexico Rubber Group, Course: Chemicals for Rubber Protection (Antioxidants and Antiozonants), Rubber Chamber Facilities, Mexico City, Mexico, www.rubber.org/mexico-rubber-group July 24.

Rubber Division, ACS, The Fatigue Limit of Rubber webinar, www.rubber. org - July 24.

University of Akron, Akron Polymer Training Services, Rubber Extrusion Technology online course, www.uakron. edu/apts/ - July 25.

Rubber Division, ACS, Building the Rubber Compound: The Essentials online course, www.rubber.org - July 30.

Rubber Division, ACS, Intermediate Rubber Compounding online course, www.rubber.org - July 31.

August

University of Akron, Akron Polymer Training Services, The Polymer and Plastics Industry: An Introduction to Commodity and Specialty Polymer Materials, Markets and Fabrication Processes online course, www.uakron. edu/apts/ - August 4-6.

Rubber Division, ACS, Rubber Extrusion Technology online course, www.rubber. org - August 5.

University of Akron, Akron Polymer Training Services, Essentials of Rubber Science and Technology online course, www.uakron.edu/apts/ - August 6-27.

University of Akron, Akron Polymer Training Services, Structure/Property Relationships in Polyurethanes online course, www.uakron.edu/apts/-August 7-8. University of Akron, Akron Polymer Training Services, Rubber Extrusion Technology online course, www.uakron. edu/apts/-August 11.

University of Akron, Akron Polymer Training Services, Industrial Trends for High Performance Sustainable Polymer Packaging online course, www.uakron. edu/apts/ - August 11-13.

University of Akron, Akron Polymer Training Services, Tire Safety and Durability online course, www.uakron. edu/apts/ - August 13.

University of Akron, Akron Polymer Training Services, Polymer Science for Engineers online course, www.uakron. edu/apts/ - August 13-15.

Detroit Rubber Group, golf outing, Northville Hills Golf Club, Northville, MI, www.rubber.org/detroit-rubber-group-inc - August 19.

University of Akron, Akron Polymer Training Services, Polymer Chemistry Characterization course, National Polymer Innovation Center, Akron, OH, www.uakron.edu/apts/ - August 21-22.

University of Akron, Akron Polymer Training Services, Rheological Properties of Polymers online course, www.uakron. edu/apts/ - August 22.

Ohio Rubber Group, golf outing, Silver Lake Country Club, Stow, OH, www. ohiorubbergroup.org - August 25.

R.D. Abbott, Mnaufacturing With Silicone Rubber workshop, Barberton, OH, www.rdabbott.com - August 26-29.

September

Reliable International Exhibition Services, China International Tire Expo 2025, Shanghai World Expo Exhibition and Convention Center, Shanghai, China, www.reliable.org.cn - September 3-5.

University of Akron, Akron Polymer Training Services, Sponge Rubber 101 online course, www.uakron.edu/apts/ -September 5.

University of Akron, Akron Polymer Training Services, Dynamic Viscoelastic Behavior of Rubber and its Products online course, www.uakron.edu/apts/ - September 8-9.

University of Akron, Akron Polymer Training Services, Industrial Trends for High Performance Sustainable Polymer Packaging online course, www.uakron. edu/apts/ - September 8-10.

Rubber Division, ACS, Global Polymer Summit, Huntington Convention Center, Cleveland, OH, www.rubber.org - September 8-11.

Swedish Institution of Rubber Technology (SGF), IRC RubberCon 2025, SÖdra Teatern, Stockholm, Sweden, www. rubbercon2025.com - September 9-11.

Rubber Division, ACS, Formulating Fridays webinar, www.rubber.org - September 12.

Los Angeles Rubber Group, golf tournament, Western Hills Country Club, Chino Hills, CA, www.tlargi.org - September 15. University of Akron, Akron Polymer Training Services, Elastomer Molding Technoloogy online course, www.uakron. edu/apts/ - September 17-19.

University of Akron, Akron Polymer Training Services, ASTM Rubber Testing: Selecting, Performing and Interpreting ASTM Rubber Test Methods course, National Polymer Innovation Center, Akron, OH, www.uakron.edu/apts/ - September 18-19.

Nova-Institute GmbH, Renewable Materials Conference 2025, Siegburg/ Cologne, Germany, https://renewable-materials.eu/ - September 22-24.

Ohio Rubber Group, golf outing, Silver Lake Country Club, Stow, OH, www. ohiorubbergroup.org - September 23.

The Tire Society, 44th Annual Conference, University of Akron, Ohio, www.tiresociety.org - September 23-25.

University of Akron, Akron Polymer Training Services, Exploring Color Measurements and Tolerance course, National Polymer Innovation Center, Akron, OH, www.uakron.edu/apts/ - September 24-25.

TechnoBiz, Latex Week 2025, Chennai, India, https://conference.technobiz.org - September 24-26.

University of Akron, Akron Polymer Training Services, Understanding Dynamic Properties of Rubber and Rubber Products online course, www.uakron.edu/apts/ - September 25-26.

October

Rubber Division, ACS, Processing and Testing of Rubber online course, www. rubber.org - October 2.

Rubber Division, ACS, Mastering Elastomer Molding: Reduce Costs and Improve Production Efficiency with Simulation course, Akron Rubber Development Laboratory, Barberton, OH, www.rubber.org - October 8.

Rubber Division, ACS, Rubber Manufacturing Econonmics: How to Rationalize Raw Materials, Minimize Costs and Optimize Final Properties online course, www.rubber.org - October 9.

Rubber Division, ACS, Sustainability in the Rubber Industry course, ACE Laboratories, Ravenna, OH, www.rubber. org - October 16.

Rubber Division, ACS, Essential Rubber Testing: What the Date Tell You online course, www.rubber.org - October 22.

Rubber Division, ACS, Advanced Rubber Compounding course, ARDL, Barberton, OH, www.rubber.org - October 29.

Servoelectric cold runner molds for LSR

The patent-pending SMARTshot I cold runner measurement and control concept incorporating servoelectrically actuated nozzle needles is an intelligent variant of the SMARTshot E

system. Once deployed in a practical setting, entirely automatic startup will be possible, as will controlled family molds with cavities of differing volumes that do not require additional sensor systems. This will enable cascaded injection processes with time-delayed opening and closing movements, as well as injection processes with partially open needles for simultaneously filling cavities with different volumetric flow rates per nozzle, according to the company.

The "I" technology is based on online rheometry for continuously optimizing the process and determining the actual material viscosity in the shear rate range of relevance to injection molding. This technology uses a mathematical relation-

ship between the volumetric flow rate of the injection molding machine, the geometric constraints of the cold runner, and the shear force at the needle to identify and quantify batch-to-

batch fluctuations. This turns the cold runner into a rheological measuring instrument.

In learning mode, the system automatically detects the volume of material required to fill a cavity, thus facilitating setup and optimization, especially with family molds with a number of cavities of differing sizes. Regarding integrating artificial intelligence (AI), the system is set to be able to support self-controlled injection molding machines if SMARTshot I control is integrated into the machine at a later date.

One of the general advantages of the servoelectric drive is said to be real time control of needle position, including permanent position monitoring. (*Elmet*)

www.elmet.com



Planetary roller extruder

In continuous processing using the planetary roller extruder (PRE), all formulation components are processed in a single step. The individual substances, with the exception of the vulcanizing agents, are dosed directly into the PRE and mixed and masticated at the required temperature. Once the main components have been mixed, homogenized and dispersed, the mass is cooled down during the ongoing process to the temperature at which the vulcanizing agents can be mixed in without the mass vulcanizing during this processing step. During the same process, the compound can also be degassed to remove air, water vapor and other volatile substances introduced into the process by the raw materials. All recipe components can be processed in a continuous extrusion stage. Since the materials are only heated once, the masses have a shorter temperature history compared to discontinuous processes, and therefore higher quality, according to the company. No intermediate storage or additional material cooling are required. Thanks to the excellent temperature control in the PRE, the mass can be cooled to the required processing temperature for the addition of vulcanizing agents, according to the firm. (*Entex*)

www.entex.de

Mold cleaning systems

A complete line of manual, automatic, CO_2 and robotic mold cleaning systems for rubber and tire applications is supplied by the company. Since 1963, the firm has been providing state-of-the-art mold cleaning equipment and technology to the rubber industry worldwide. Systems are available to process tire, compression, injection, platen and bladder molds. (*Friess Equipment*)

www.friessequipment.com

Custom extruders

Specialist engineers to the rubber and polymers industry are said to offer heavy duty internal mixers with tangential and intermeshing rotor designs for the optimum level of dispersion, performance and durability. Internal mixers range from a 1.5 liter laboratory size up to a 620 liter model. Bespoke chamber size increases up to 620 liters. An intermeshing type 7 rotor gives up to a 30% batch size increase. Service exchange and internal mixers are available featuring crack-free hard facing. Silica ready models are available with optimum dust seal options. Twin screw extruders and two-roll mills are provided. Emergency repair service is offered by the company, along with spares, onsite servicing and inspections. (Carter Bros. International Ltd.)

www.cb-mixing.com

Bulk material handling

This manufacturer of bulk material handling equipment for the tire and rubber industry provides a variety of systems and solutions. To be successful in the rubber and tire industries, companies need to have sound operating procedures that guarantee consistent, high quality, accurate feeding and precise weighing, according to the company. Products and services provided by the company include pneumatic conveying systems, silo systems, weighing and batching systems for solids and liquids, mixer feed systems and small chemical preparation systems. The company is said to be reinventing end-of-life tire recycling. As experts in this field, the firm is said to give used tires a second life and treat recyclates as a vital component of a sustainable circular economy. The company is said to be a partner for the economical, sustainable and high quality production of both tires and recyclates. (*Zeppelin Systems U.S.A.*)

www.zeppelin-systems.com

Magnetically coupled pump

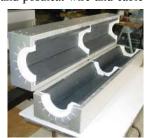
The Nemo R. MY magnetically coupled pump is designed to meet the most demanding requirements of industries requiring leak-free pumping solutions, according to the manufacturer. It is said to be ideal for use in chemical and other applications to convey highly viscous product. While mechanical seals are widely used and are a proven method of preventing leakage in pump systems, the failure of a mechanical seal system leads to a seal leak. The NEMO R. MY magnetically coupled pump features a hermetically sealed design, eliminating the risk of leakage, according to the company. The pump utilizes a magnetic coupling to transmit torque, which is said to ensure a completely sealed and robust system. This design is said to enhance safety and reliability, making it ideal for handling aggressive, toxic or abrasive product. Engineered for versatility, the NEMO R. MY magnetically coupled pump can handle a wide range of viscosities, from low viscosity fluids to highly viscous, shear sensitive substances, according to the company. The pump provides continuous, pressure-stable and low pulsation conveyance, which is said to ensure consistent and reliable performance. (Netzsch Pumps & Systems)

www.pumps-systems.netzsch.com

Clamshell tunnel ovens

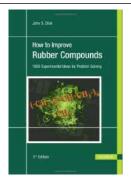
Enhanced multi-zone electric infrared and infrared with air clamshell tunnel heating, drying and curing systems are designed for customers to preheat and postheat wire and cable

products prior to and following silicone and rubber extrusion and coating application, and dry and cure solvent and water based inks and liquid coatings and powder coatings on wire and cable products (including bare wire and wire/cable insulation jackets). The system is said to feature superior, relatively slow response electric



infrared heater elements with composite cloth quartz face covering on heater faces. The energy efficient insulated enclosures are built in a clamshell style for ease of threading new product. The systems can be built with multiple zones in series or in parallel for improved travel direction and a side-to-side or top-to-bottom temperature profile on individual or tandem products where practical. (*David Weisman, LLC*)

www.daveweisman.com



How to Improve Rubber Compounds

This book is dedicated to providing the reader with various experimental ideas. For developing better compounds and solving technical problems. In a combined effort, 20 renowned industrial experts provide a large number of diverse experimental suggestions for enhancing a specific compound property. By reviewing the suggestions in this book, the compounder will develop a better "feel" for how to best achieve a compromise or trade-off with compound properties when developing new or improving tested rubber recipes.

www.rubberworld.com/book-store



Compression molding

The company's 2,500 ton compression molding press features 10' square heated platens maintaining 500°F surfaces to +/-5°. This 2,500 ton press is part of a seven-press order which is currently being built in the company's main facility. The press also is said to feature an innovative mold transfer system which significantly improves the ergonomic and safety dynamics for operators, and reduces the press idle time between cycles. The firm is said to offer unique hydraulic press application solutions for a range of industries, including compression and composites molding. To meet the demands of today's challenging applications, the company is said to be providing manufacturers with press solutions that are flexible, productive and reliable, as well as often being quite large and complex. For even greater manufacturing efficiency, the firm is able to provide its hydraulic press customers with turnkey, state-of-the-art robotic and other product handling solutions. This company is said to have a long tradition of designing, engineering and manufacturing customized hydraulic presses with product handling solutions. Hydraulic presses are available in a variety of styles with unlimited size and tonnage capabilities. (Geenerd Press & Machine)

www.greenerd.com



Friess Equipment supplies a complete line of manual, automatic, CO2 and robotic mold cleaning systems. Systems are available to clean molds up to 120" in diameter and weighing up to 30,000lbs. Since 1963, Friess Equipment has been providing state-of-the-art mold cleaning equipment and technology to the rubber industry worldwide. Systems are available to process; tire, compression, injection, platen and bladder molds.

Friess Equipment, Inc. Akron, Ohio, USA 330/945-9440 info@FriessEquipment,com

Smart vulcanization

The OCTOtherm BK 400 heating chamber for manufacturing rubber profiles is said to deliver hot air temperatures up to 340°C for efficient continuous vulcanization. For special applications, the temperature can be even higher. Inside the heating chambers, temperatures climb to over 900°C, ensuring rapid heat-up of the vulcanization channel and precise profile curing with minimal energy loss thanks to smart insulation, according to the company. Integrated exhaust air treatment cleans the process air as it is generated, which is said to contribute to a healthier work environment and help meet strict environmental regulations. Therefore, additional filter systems with complex piping for cleaning the vulcanization vapors are not required, according to the company. The system's design is said to mean that less energy is needed to achieve perfect vulcanization results. Exhaust air is captured and cleaned directly within theheating chamber, which is said to reduce emissions and operating costs. (Gerlach Maschinenbau GmbH)

www.gerlach-machinery.com

Injection automation

The company's integrated systems are said to offer streamlined coordination of injection molding machines, robots, peripheral equipment and tailored tooling, significantly reducing

project timelines and simplifying production. Handling robots automate part removal, and conveyor systems manage efficient downstream processing. The MAP. commander CC6 control system is said to provide intuitive, cen-



tralized oversight, enhancing usability and reducing training requirements. Intelligent controls optimize real-time parameters like temperature and pressure, critical in elastomer processing due to viscosity and complex vulcanization requirements. An extensive portfolio includes advanced elastomer injection machines (ERGO+, ERGOMAX+ and RAPID+ series) and versatile robotics solutions from the MAP.mate range, covering fast SCARA robots to robust 6-axis systems, according to the firm. Complementing these technologies is the company's inhouse mold-making division, supplying precision tools and cold runners. This 360° approach is said to ensure flexibility, shorter lead times, integrated components and cost-effectiveness, consolidating all production needs under one provider. (*Maplan*)

www.maplan.at

Used rubber equipment

This used machinery dealer offers more than 30,000 pieces of machinery within its five warehouse locations across the U.S. Equipment for the rubber industry includes extruders, mixers and rolling mills, along with complete extrusion lines and all styles of individual pieces of equipment, including payoffs and takeups, capstans and dancer/accumulators. (*Wire and Plastic Machinery*)

www.wireandplastic.com



Automatic weighing systems



ACCURACY



REPEATABILITY



TRACEABILITY

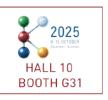


MONETARY SAVINGS









Lawer S.p.A. - Cossato (Biella) Italy sales@lawer.com | www.lawer.com



Roll covering by extrusion

Roll covering by extrusion is said to be a versatile and precise process that provides a uniform and resistant covering on rolls. This technology is said to offer numerous advantages, includ-



ing high precision, adaptability and efficiency, and is used in many industries to improve the service life and performance of rolls. The company's roll covering lines can be equipped with cold-feed pin barrel extruders. These extruders feature a newly

designed die, a special screw configuration and optimized extrusion tools that ensure uniform material output and consistent web geometry, according to the company. Even highly viscous mixtures are said to be processed smoothly, enhancing the coating quality. Vent extruders are said to eliminate air bubbles and volatiles matters from the rubber compound, resulting in a more uniform and higher quality rubber coating. This improves the bond between the rubber and the roll core, and ensures consistent coating quality, according to the firm. (*Rubicon*)

www.rubicon-halle.de

Precision dosing system

The TOP 5100 dosing system is said to provide flexibility and precision. It is said to be the all-rounder among dosing systems with its versatility and adaptability. Whether for standard applications or special requirements, the TOP 5100 can be optimally configured to individual needs, according to the company. With maximum process stability and a precise mixing ratio, the dosing system not only guarantees excellent part quality, but also exceptional cost-effectiveness, according to the manufacturer. Features are said to include a delivery rate of more than 5 liters/ minute/1.32 gallons/minute, and maximum pump pressure of 230 bar/3,336 psi. A stable pressure curve is provided during dosing thanks to a material pressure limiter. High precision volume counters are said to guarantee exact mixing ratios and maximum process stability of 3.9 µl/Imp (256.000 Imp/L). Economic efficiency is said to be provided through material utilization per container of up to 99.6 %; high quality components equaling service life of 20+ years; and low maintenance costs. Energy efficieniency is said to be provided through electrical energy consumption of approximately 50 watt-hour; and minimal idling losses equaling no pressure loss. (Elmet)

www.elmet.com

Innovating for Tomorrow. Trusted Since the 1950s

From material development to final product validation, labs across the rubber industry rely on Wallace Instruments to help manage the cost of quality.

Built on decades of experience and trusted worldwide, our instruments, software solutions, and specimen preparation equipment are reliable and easy to use.

We help keep testing straightforward, downtime low and lab productivity high, so you can focus on what matters.

- **Ø PRODUCTIVITY**
- **Ø RELIABILITY**
- **⊘** REPEATABILITY
- *O* TRACEABILITY
- info@wallaceinstruments.com
- mallaceinstruments.com



COMPRESSION • PLASTICITY • HARDNESS
VISCOSITY • DENSITY • FLEX

Slitters, rewinders, spooling

This company is said to have been working for many years on different applications to help customers achieve significant advancements in productivity, quality, operator safety and ergonomics. Fully automated cells are offered around the company's reliable slitter-rewinders and spooling lines, with automated systems and robotics to reduce downtime and accelerate production cycles. By integrating robots to load/handle/ unload, the firm is said to reduce hard/repetitive jobs and participate in safeguarding workers from injuries. The company's dual motorized shuttle or rotating unwinders are said to allow optimal tension control and loading of a second mother roll in parallel to production. It is also equipped with individual guiding systems to pre-position the web to save time. A floating razor blades block allows strips cutting along the cords for higher quality, and offers the advantage of quick cutting tools changeover, according to the company. The firm offers a turretwinder to produce pancakes or digital in-line spooling, both solutions ensuring a continuous process with consistent, optimal and individual winding tension control, as well as optimum use of handling robots, according to the company. (Calemard)

www.calemard.com

Low temperature testing

A one-liter laboratory double arm sigma blade mixer is designed to meet the growing needs of process industry laboratories requiring efficient, high quality mixing solutions,

according to the company. The Sigma blade mixer is said to be ideal for applications involving viscous, thick pastes and complex materials commonly encountered in the chemicals and other industries. With its heavy duty blade design, the mixer is said to provide uniform, high shear mixing and dispersion, ensuring thorough and



consistent results at laboratory scale, according to the firm. The mixer is said to help development processes improve product quality and reduce time to market for formulations and testing. Key features are said to include high efficiency dual sigma blade action for optimal mixing of viscous materials; precision control for reproducible results; stainless steel construction for durability and ease of cleaning; and scalability for full-scale production, according to the company. (*Jaygo*)

www.jaygoinc.com



Univeral testing machines

Autograph AGS-V Series tabletop precision universal testing machines feature a wide selection of load cell capacities, versatile control options and compatible accessories, delivering



dependable testing of diverse material types, according to the company. Available in seven different models, the AGS-V Series supports load capacities from 1 newton to 10 kilonewtons, said to make it ideal for delicate samples and high force

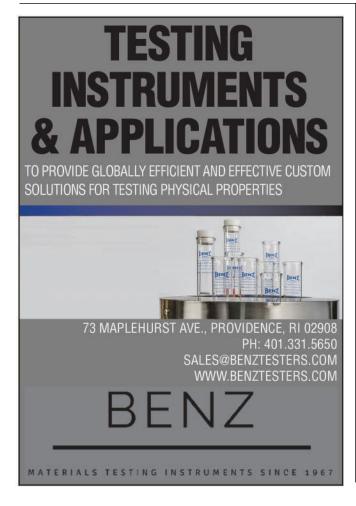
testing applications. It also accommodates a wide test speed range of 0.0005 to 1,500 mm/minute, providing greater adaptability for various test conditions. An improved crosshead return speed of 1,650 mm/minute is said to help reduce test cycle times and boost laboratory productivity. Expandable frame options are available to handle materials that undergo deformation, such as rubber and plastics. Users can increase both the testing stroke and main unit height with +250 mm and +500 mm extensions, said to enable reliable tests to failure on highly elastic or stretchable materials. (*Shimadzu Scientific Instruments*)

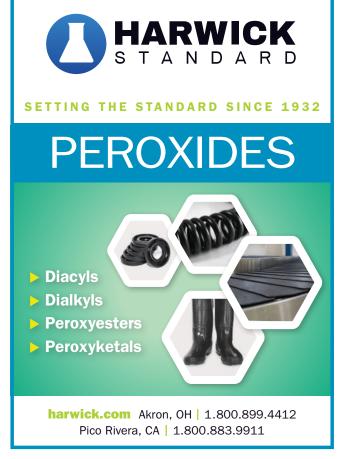
www.ssi.shimadzu.com

Flammability testing

Complying with UL 94, the reference standard for the flammability classification of elastomeric materials, is now said to be easier thanks to the company's Flammability Check, the professional tool designed to optimize development processes and guarantee full regulatory compliance. The stainless steel structure with tempered glass window and internal light allows users to safely monitor every stage of the test. The heart of the system is the ASTM D 5025 compliant Bunsen burner, mounted on a swiveling stand to adjust the flame angle $(0^{\circ}, 20^{\circ}, 45^{\circ})$, with a precision flowmeter for gas regulation. The various specimen holders available, for VB, MVB, HB and HBF tests are compliant with the standard and adaptable to the specimen characteristics, while the pneumatic slide allows precise positioning of the flame. The digital thermometer is said to ensure temperature control, and the timer, with 0.1 second resolution, is said to ensure accurate combustion time detection. Complemented by an efficient fume extractor, the company's Flammability Check is said to be the ideal solution for laboratories and manufacturers who want to optimize their materials and check the UL 94 compliance of their products. (Gibitre Instruments)

www.gibitre.it





Materials

Processing aid solutions

Both natural and synthetic elastomers are said to usually require the use of processing aids to assist mechanical breakdown. Beneficial effects of processing aids carry through the mixing cycle, permitting incorporation of fillers and other ingredients rapidly with lower power consumption. These materials also reduce internal friction in calendering and extrusion, and improve mold flow, according to the company. There are a number of types/classes of process aids for rubber which include internal lubricants, flow improvers and homogenizers. Each category is said to have specific technical benefits for the rubber compound. Vanfre processing aids are available from the company. (*Vanderbilt Chemicals*)

www.vanderbiltchemicals.com

EMI gasket materials

Rising demand for EMI shielding elastomers that meet MIL-DTL-83528 requirements is said to be met by the company. Known also as MIL-G-83528, this U.S. military detail specification defines general requirements for EMI gaskets and is organized into lettered sections. This company makes MIL-DTL-83528 Type A, B, C, D and K elastomers, all of which are part of the M83528 Qualified Product List (QPL) from the U.S. Defense Logistics Agency (DLA). The firm supplies MIL-DTL-83528 materials as sheets, rolls, extrusions and ready-to-mold compounds. These EMI shielding silicones and fluorosilicones are also available with 3M XYZ-Axis electrically conductive tape. Sheet materials that are laminated with this electrically conductive PSA can be converted into flat gaskets with the double-sided adhesive already applied. PSA shelf life is dependent upon storage conditions, product and application. MIL-DTL-83528 Type A materials use silicone as the base elastomer and are filled with silver-plated copper particles. They are capable of 110 dB of plane wave shielding effectiveness at 10 GHz and have a continuous use temperature range of -55°C to +125°C, according to the company. SSP2569-65 meets MIL-DTL-83528 Type A requirements, and this 65 durometer material provides an offset to CHO-SEAL 1215. SSP2569-65 is tan in color and has a third party test report for outgassing. MIL-DTL-83528 Type B materials use silicone as the base elastomer and are filled with silver-plated aluminum particles. They are capable of 100 dB of plane wave shielding effectiveness at 10 GHz and have a continuous use temperature range of -55°C to +160°C. SSP2368-65 meets MIL-DTL-83528 Type B requirements, and this 65 durometer material is an offset to CHO-SEAL 1285. SSP2368-65 has third party test reports for shielding and outgassing. MIL-DTL-83528 Type C materials use fluorosilicone as the base elastomer and are filled with silver-plated copper particles. They are capable of 100 dB of plane wave shielding effectiveness at 10 GHz and have a continuous use temperature range of -55°C to +160°C. SSP2573-75 meets MIL-DTL-83528 Type C requirements, and this 75 durometer material provides an offset to CHO-SEAL 1217. (Specialty Silicone Products)

www.sspinc.com



66

LEIBINGER printers are exceptionally reliable and need very little maintenance.



Why choose LEIBINGER?

Unmatched reliability & productivity

Our printers guarantee high productivity and reliable performance in any environment, meeting IP65 and IP66 standards.

Seamless printing

Unique automatic nozzle sealing prevents clogs and eliminates the need for cleaning, ensuring uninterrupted printing.

durable markings on all surfaces and at any speed.

High quality results for any application

We offer a variety of inks and solvents for clear,

Join industry leaders in choosing LEIBINGER!





Rubber World Industry Links



UTPVision (https://usa.utpvision.com) is a leading provider of turnkey vision inspection systems for rubber and plastic parts. With long experience in a variety of industries, UTPVision can develop solutions for virtually any application, precisely tailored to customer needs.

UTPVision's automated vision inspection and sorting systems are designed for real-time quality monitoring and statistical process control. They are able to identify critical surface defects (such as cuts, cracks, flashes, burrs, pitting, voids, blisters, stains, discoloration, foreign materials, etc.) and to perform extremely accurate dimensional measure-

ments (lengths, heights, diameters, radii, cross-sections, concentricity, ovality, etc.) on different types of products.

UTPVision's systems feature best-in-class optical, electronic and mechanical components; but what makes them unique is the innovative artificial intelligence software, which twists the traditional image processing methods based on manually set thresholds. With AI (artificial intelligence) technology, the operator needs to collect a series of significant defective samples and the machine will identify "objects" (with defined shapes) and surface defects (with undefined shapes) just by looking at sample images.

UTPVision's systems can improve production quality by detecting manufacturing defects and eliminating inspection errors, leading to increased productivity and reduced costs from day one.

Send in samples for a free feasibility study. UTPVision specialists will be able to recommend the best machine configuration based on a customer's specific quality needs, production rates and budget.

CHEMICALS AND MATERIALS

R.D. Abbott AGC Chemicals Americas AirBoss Rubber Solutions Akrochem Corporation **APV Engineered Coatings** Arduro

ARP Materials Brenntag Specialities Cabot Corporation Cancarb Limited R.E. Carroll

Chardon Custom Polymers

Chemours

Chem Technologies, Ltd.

Çınar Kauçuk Cri-Sil Silicones Davis-Standard **DRP Industries Eagle Elastomers**

ECO USA Emsodur

Harwick Standard Kayton Industry Co., Ltd.

Kenrich Pertochemicals

LWB-Steinl

Polymer Solutions Group Polymer Valley Chemicals, Inc.

Prism Worldwide Pyropel, Inc. Renkert Oil

Struktol Company of America Tokai Carbon Cancarb Limited

Vanderbilt Chemicals Wacker

Wvnca USA Zochem LLC

MACHINERY AND EQUIPMENT

The Bonnot Company Desma USA Diamond America **Doss Visual Solution** Emsodur

Gomaplast Machinery Guill Tool and Engineering Co. Jing Day Machinery Industrial Co.

Kayton Industry Co., Ltd.

Maplan USA

Reliable Rubber & Plastic

Machinery Samson Machinery Seika Machinery Sprinter Marking

Troester Machinery Ltd. Tung Yu Hydraulic Machinery Co.

United Feed Screws

UTPVision VMI Americas Inc. Wabash MPI/Carver

CUSTOM CALENDERING

Hoosier Racing Tire

MOLD RELEASES

ITW Franklynn McLube Release Coatings of New York

TESTING EQUIPMENT/ LABORATORIES

Akron Rubber Development Laboratory, Inc.

Facts, Inc.

Future Foundation

Gibitre Instruments

Hoto Instruments

Rex Gauge

Seika

The L.S. Starrett Co. SDS Systemtechnik

Starrett Bytewise

TA Instruments

Ueshima Seisakusho

Uncountable

Wallace Instruments

CUSTOM MIXING & COMPOUNDING

Eagle Elastomer **Polymerics**

RUBBER SHOWS

Global Polymer Summit Rubber Tech India

@ rubberworld.com





Sprinter Marking (www.sprintermarking.com) prides itself for inventing and manufacturing the most simplistic designed innovative, versatile, low cost contact ink code marking machines on the market. In 1990, Sprinter designed and manufactured this innovative contact ink marker. Sprinter has been selling and servicing its equipment for over 28 years through agents and directly all over the world.

Sprinter Marking manufactures a range of machine models that automatically ink code mark messages or dots up to 2 square inches. These messages or dots can be produced on a wide range of surfaces, including flat or circular, as well as porous or non-porous. These machines are very small in physical size, yet are built for rugged, reliable industrial operation, and are capable of intermittent coding and marking, as well as high speed imprinting on a continuous basis. The markers can be mounted in any orientation on existing in-line production/assembly lines or test

stations to get a labor-free ink mark.

Sprinter's industrial contact ink marking coder machines are also available for off-line operations as a complete system. In addition, Sprinter Marking offers two standard standalone options: a benchmount and a benchtop system for low volume date/product marking production runs. Sprinter can also custom design a standalone system for specific customer product needs.

Sprinter ink code marking machines operate with a reciprocating action. The reciprocating action is where the marking head moves from the ink supply position to the marking position by doing a 180 degree change of motion. All Sprinter models operate in the reciprocating action by having an air cylinder drive the marking head forward from the retracted position to the extended position. Once the code mark is made, the marking head retracts when the cylinder reverses action. Thus, Sprinter models are often referred to as reciprocating coders.

Sprinter Marking has been involved with ink code marking machines since the early 1970s, and has a long list of Fortune 500 companies that are repeat buyers.



VMI (www.vmi-group.com) is the world's leading supplier of machinery and services to the manufacturers of radial passenger tires, light truck tires, all steel radial truck tires, bus tires and off-the-road tires. Main product groups include the technical rubber industry, the tire industry and tire retreaders.

VMI supplies millroom equipment and a complete line of tire manufacturing, tire curing and testing systems for bias and radial tires for cars, trucks, utility and off-the-road vehicles. VMI's services range from financing through engineering and contracting projects. The firm also offers

maintenance contracts and upgrades of existing rubber and tire equipment.

VMI is known as the leader in millroom equipment and single stage machines for radial car and truck tires. VMI's network of agents is contantly monitoring developments in local markets on all continents. The firm's research and development department collaborates with the leading international rubber research institutes and with key suppliers of commercial components.

Service departments are on call 24 hours a day to provide rapid on-site service. VMI's global organization includes spare parts supply and servicing from plants in The Netherlands, the U.S. and China.

VMI's product portfolio for the tire industry includes millroom equipment, tire component systems, bead making and apexing machines, tire assembly systems for passenger and light truck tires, truck and OTR tire assembly systems, flexible tire building cells, tire building drums, tire testing machines, compound testing systems, tire curing presses and extruders.

For the technical rubber industry, VMI provides millroom equipment, molded products and rubber-to-metal processing systems, extrusion heads, preformers, straining equipment and airspring building systems.

VMI also provides retread tire curing systems.

If you would like your web site featured here contact your sales rep Mike Dies, mike@rubberworld.com or Pete McNeil, pete@rubberworld.com

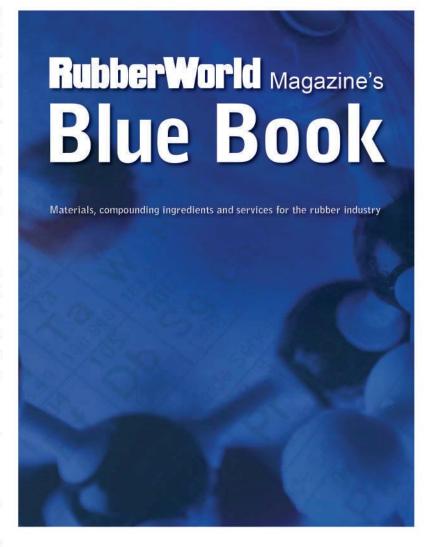
RubberWorld

PRINT EDITION AND ONLINE
Long regarded as the industry's
single most important reference for
technical information, the Blue Book
contains detailed information on
every raw material used by the rubber
industry-including chemical additives,
extenders, elastomers and latexes,
fillers and reinforcing materials,
carbon black and coloring materials,
to name a few.

The latest, most current information on more than 10,000 materials and ingredients is listed. And, to help you locate the best materials at the lowest possible cost, more ingredients are listed by chemical name as well as trade name.

Additionally, services for the rubber industry included in the Blue Book:

- Custom Mixing and Services directory
- Independent Testing Laboratories
- Instrumentation and Testing Equipment Suppliers
- Material and Ingredient Suppliers



We will again be producing a limited number of the 121st print edition, so to guarantee your copy, please visit our website or call 330.864.2122

ORDER NOW

For the Fastest and Easiest Ordering use our secure website: www.rubberworld.com/bookstore Or call 330-864-2122

People in the News

Wacker Polymers names Dave Bloom VP

Dave Bloom was appointed vice president of Wacker Polymers, North and Central America. Bloom brings more than 30 years of experience, including 17 at Wacker. He succeeds Mathias Wiedemann. Ato Taylor was appointed vice president of human resources for Wacker Chemical, reporting directly to President and CEO Christoph Kowitz. Stephen Patton was named facility director, leading operations at Wacker's Adrian, MI, production facility. Eli Ariav was appointed chief financial officer.

MANAGEMENT

Ryan Conway was appointed president of Best Process Solutions.

SALES

Mike McDonnell was promoted to sales director for ACE Laboratories, an independent ISO/IEC 17025 accredited laboratory for rubber, silicone and polymer testing and development.

Luigi Buttafuoco joined Farrel Pomini as a field sales engineer, responsible for sales of Farrel Pomini continuous mixing equipment and ancillary services across the east coast, as well as Kentucky, Tennessee and Alabama.

Ryan Gocher was appointed head of distribution for Continental's group sector ContiTech for its Industrial Solutions business in the Americas. He succeeds **Guy Enta** who is retiring.

Associations

The Tire Recycling Foundation (TRF) appointed **Stephanie Mull** as its executive director. Mull will lead the organization's efforts to drive innovation and invest in the circular tire economy, grow end-of-life tire markets and support research to address gaps in the tire recycling supply chain and sustainability.

On the occasion of the Euromap General Assembly in Stuttgart, Germany,



Dave Bloom
Wacker Polymers



Mike McDonnell

ACE Laboratories

European plastics and rubber machinery manufacturers elected their new leadership. **Tobias Baur**, chief sales officer of the German injection molding specialist Arburg GmbH & Co KG, is the new president of the European umbrella association. **Alessandro Grassi**, shareholder and chief executive officer of Frigosystem S.R.L., the Italian temperature control equipment manufacturer, was elected vice president.

The Greater Akron Chamber and Polymer Industry Cluster announced that







Ryan Gocher
Continental

Hans Dorfi was named executive director and chief innovation officer of The Polymer Industry Cluster (PIC). Dorfi brings more than two decades of innovation and technology experience in leadership roles in the U.S. and Europe, driving large scale transformation in the polymer, rubber and mobility sectors. As senior vice president at Bridgestone Americas, Dorfi led the transformation of the product and technology portfolio, pioneering digital innovation, sustainability and advanced materials for next generation products.

Dennis Kennelly retires from Rubber World after 35 years

Rubber World magazine announces the retirement of **Dennis Kennelly** after 35 years of dedication and service. Kennelly joined Rubber World in May 1988 as a sales manager, ultimately serving as senior vice president and associate publisher. His deep industry knowledge has left a lasting mark not only on the company, but on the rubber industry as a whole.

Kennelly earned the respect and admiration of colleagues, clients and industry peers alike. His talent as a salesman, combined with his genuine rapport with customers, made him a trusted and valued partner to many.

As Dennis embarks on this new chapter, *Rubber World* thanks him for his many contributions to the company, and wishes him all the best in a



well-earned retirement. Please join us at *Rubber World* magazine in celebrating Dennis, and in wishing him all the best for the future.

Classifieds





AFLAS Fluoroelastomers

FEPM: 100 and 150 Series high strength, general purpose use; **NEW Grades** 600X and 400E with rapid cure and multi-layering capability. **FFKM Series:** PM-1100, PM-3000 standard grades; PM-3500, PM-5000, PM-5500 for semiconductor; NEW Grade PM-1200 low viscosity, low Tq.

Contact us to learn about our FDA compliant AFLAS Fluoroelastomer grades!

www.agcchem.com



KNEADER MACHINERY HAS BEEN OPERATING FOR OVER 31 YEARS AND IS RECOGNIZED AS THE FOREMOST SUPPLIER OF CUTTING-EDGE TECHNOLOGY IN THE RUBBER AND PLASTICS INDUSTRIES.

www.kneadermachinery.com













New *Scrap *Recycle

- **★Granulating & Pulverizing**
- **★Cryogenic Grinding**
- *Sifting *Blending *Repackaging
- **★R&D** small batch grinding





Classifieds

Custom Textile Treaters/Finishers



RFL Treatments for Nitrile, Neoprene or Vinyl Pyridine on Cotton, Polyester or Nylon Fabric Release Treatments for Liners and Leaders

Contact Maxine Terlop Tel: 216-883-7585 or email: jjwhite@jjwhite.com • www.jjwhite.com





- Optional ISO 17025 Certificate
- Manual & Motorized Durometer Stands Available

800-327-9989 imada.com



- Union Process has been a trusted name for high quality inks for over 40 years.
- Our inks are ideal for screen printing, stamping and marking natural latex-based rubber products.
- Great Pricing!Corinne Seelie (330) 929-3333



Your Industry. Your Voice.

The global source for rubber industry news and innovations — since 1889.

Stay ahead with in-depth features, technical papers, and market insights tailored for rubber chemists and professionals worldwide.

Join thousands who rely on Rubber World Magazine monthly, in print and online.





Index To Advertisers

R.D. Abbott (www.rdabbott.com) 34 Laur Silicone (www.laursilicone.com) LEIBINGER (www.leibinger-group.com) Lianda (www.liandacorp.com) Maynards (www.maynardseurope.com) McLube (www.maynardseurope.com) McLube (www.mclube.com) McLube (www.mclube.com) Polymerics (www.polymerics.com) Polymerics (www.polymerics.com)	129 27 26
AGC Chemicals Americas (www.agcchem.com)	27 26 34
AirBoss Rubber Compounding (www.airbossofamerica.com)	26
Akrochem Corporation (www.akrochem.com)4th cover McLube (www.mclube.com)	34
Akron Rubber Development Laboratory, Inc. (www.ardl.com)	
	34, 135
Allgrind Plastics (www.allgrind.com)	110, 111
American Rheinmetall (www.americanrheinmetall.com)	34, 134
APV Engineered Coatings (www.apvcoatings.com)	
ARP Materials (www.arpmaterials.com)6 Renkert Oil (www.renkert.com)	
August Strecker (www.strecker.de) 106, 107 H.M. Royal (www.hmroyal.com)	
Barwell (www.barwell.com)	
Benz (www.benztesters.com)	
Budzar Industries, LLC (www.budzar.com)	
R.E. Carroll, Inc. (www.recarroll.com)	
Cri-Sil Silicone Technologies (www.crisil-silicones.com)	
Cryogenic Systems & Parts (www.cryogenicsystemsusa.com)	
Endurica LLC (www.endurica.com) 127	
Friess Equipment, Inc. (www.messequipment.com)	
French Oil Mill Machinery (www.frenchoil.com)	
Geni Gravure (www.genigravure.com)	
Gerlach Maschinenbau (www.gerlach-machinery.com)	
Gibitre Instruments (www.gibitre.it)17 UTPVision (www.usa.utpvision.com)25,	
Gomaplast Machinery, Inc. (www.gomaplast.com)	
Greenerd (www.greenerd.com/cm)	
Harwick Standard Distribution (www.harwick.com)	
HB Chemical (www.hbchemical.com)	
Hoto Instruments (www.hoto-instruments.com)	
Industry Links Directory (www.rubberworld.com)	
Kenrich (www.4kenrich.com)134 J.J. White Products, Inc. (www.jjwhite.com)	
Kneader Machinery (www.kneadermachinery.com)	
Lawer (www.lawer.com) 34, 125 Zochem (www.zochem.com)	19

Rubber World SALES STAFF

MIKE DIES

Marketing Representative 1741 Akron-Peninsula Rd. Akron, OH 44313-5157 Ph: 330-864-2122/Fx: 330-864-5298 Email: mike@rubberworld.com

PETE MCNEIL

Sales Consultant 1741 Akron-Peninsula Rd. Akron, OH 44313-5157 Ph: 330-864-2122/Fx: 330-864-5298 Email: pete@rubberworld.com RINGIER TRADE PUBLISHING

Mainland China
MAGGIE LIU
Ph: +86-2885-5152
Email: maggieliu@ringiertrade.com

Hong Kong
OCTAVIA

Ph: +852-9648-2561 Email: octavia@ringier.com.hk Taiwan **SYDNEY LAI** Ph: 886 4 2329 7318 Email: sydneylai@ringier.com.hk

TechnoBiz

REGISTER NOW



10-12 March 2027 Bangkok, Thailand

Middle East RUBBER & TYRE EXPO

23-25 November 2027 Sharjah, UAE

RUBBER WEEK

1-4 September 2025Bogor, Indonesia

28-31 October 2025 Colombo, Sri Lanka



24-26 September 2025 Chennai, India



Stressed by supply-chain headaches?

Supply-chain issues have disrupted seemingly every industry leaving companies with unfulfilled orders and unhappy customers.

Akrochem carries the most complete inventory of compounding materials in the rubber industry. And they're in stock to fulfill your immediate or future needs with multiple warehouses available to expedite your delivery. All materials feature the same high quality that has made Akrochem a leader in the market for the past 90 years.

Call us at 1.800.321.2260 today.







Providing the most complete line of compounding materials in the industry.

AKROCHEM.COM

800.321.2260