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We're going to start this month's issue the same way we started it in November of 2021; And that is that we've entered the holiday season which starts with, well, November, and with November comes Thanksgiving. The season of giving thanks. And with that, we're here to extend a huge helping of gratitude right on all your plates. We appreciate all the great companies that continue to grace the pages of the Gateway Magazine. We know it's somewhat cliché, but, hey, it's true—we wouldn't be here if it weren't for all of you. So, thank you so much.

This month we've got another spotlight piece submitted by BELT Technologies. This month their CEO, Denis Gagnon shares a case study speaking to an issue they solved for customer that involved creating a customized printing process with increased precision and adhesion. The customer reached out to BELT to find out how they could improve their current printing process and eliminate the need for embossing. In response, BELT created an entirely new custom steel belt design that was the perfect fit to solve the issues with bonding and print clarity. Keep flipping the pages to read the full story.

Our second feature is penned by Del Williams who is no stranger to the pages of the Gateway. This month he riffs on containing clutter and potential messes that stem from grinding operations with the utilization of advanced precision rotary units that are designed to minimize surface grinding mess and completely contain any debris. Check it out (and thank you, Del)!

It's worth mentioning that we're happy to receive any story that you've got percolating up there in the think tank, and if you're looking for someone to help you piece it together, we're happy to do that for you. Shoot us your ideas!

Happy Thanksgiving from our family to yours! Don't be shy when it comes to adding that gravy to everything on the plate in front of you.

With thanks,



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DCMTech
Rotary Surface Grinders

CONTAIN THE MESS FOR CLEANER, MORE PRECISE GRINDING OPERATIONS

Advanced precision rotary units are designed to minimize surface grinding mess and completely contain any debris

This month's industry spotlight is brought to us by the one and only Del Williams, a technical writer based in Torrance, California who has been contributing to the pages of the Gateway Magazine quite regularly (and we thank him for it)! He submitted this the following piece on his forte, surface grinding, and creating cleaner job functions to better the finished product. If you've got an interesting story that you'd like to share, be like Del and submit it for potential placement in the pages of the Gateway Magazine!

"You can't stop him, you can only hope to contain him," is a favorite catchphrase of sportscaster Dan Patrick, used to describe the challenge of playing against elite athletes. With surface grinding, it can similarly be said that you can't stop the cloudy haze of dust, swarf, and debris generated during the grinding process – you can only hope to contain it.

That is just what today's advanced surface grinders aim to do, by minimizing the amount of material that must be removed to achieve very precise tolerances, and incorporating shrouds, air misting, and cooling filtration systems that contain the mess almost entirely.

"Many people know they are in a shop with a conventional surface grinder as soon as they walk in the door because there is a unique smell due to the breakdown of the abrasive, combined with burning of the material. It is also not uncommon to see a cloud of dust over the grinding area," says Erik Lawson, Engineering Manager at Winona, MN-based DCM Tech, a designer and builder of industrial rotary surface grinders.

In precision metalworking shops, grinding the surface of parts is often required to achieve certain specifications for size, tolerance, flatness, or surface condition. Regardless of the reason, traditional surface grinders are notoriously messy – producing dust, debris, and swarf, which is a combination of the material removed and the consumed abrasive.

However, in precision machine shops today there is increasingly less tolerance for excessive grinding mess. Machine shops prefer tidy operations and so are increasingly searching for more modern, automated surface grinders that are easier to operate, provide much more precise grinding, and do so while containing the debris.

Times Have Changed

A decade or two ago, a messy, dusty shop floor may have been acceptable, but not today. Precision machine shops have evolved and now both customers and operators have much higher expectations for tidiness, according to Lawson.

“For customers, a messy shop floor can indicate a lack of attention to detail and raise questions about the ability

to be precise. Shop operators do not want to work in a cloud of dust and swarf all day, go home dirty, and have their family smell it on their clothes,” says Lawson. He notes that in the past, machine shops may have swept their floors once a week or, at best, once a day.

Today, many machine shops take pride in presenting an extremely clean work environment. Since the grinding process is inherently messy, however, the first key to achieving a clean shop while meeting all quality criteria is grinding to spec without overgrinding.

“Automated, precision grinders minimize mess because the machine only removes the minimal amount of material and so prevents overgrinding, which generates excess dust and debris for no real purpose,” says Lawson. “On top of that, some material is quite valuable, so overgrinding can be costly.”

Machine shops primarily utilize surface grinders with a reciprocating table and a horizontal spindle that turns the grinding wheel. Reciprocating table grinders are precise but have a slow material removal rate and require multiple passes. Traditional rotary surface grinders are a faster option but can be problematic in the hands of less experienced operators. With limited control of spindle speeds as well as manual controls, the equipment requires sophisticated operators that can factor in complex calculations, and considerable expertise and experience are required.

Although both types of conventional surface grinders can be found in many shops, they typically have an open configuration, which allows dust and debris to escape the machine and become airborne.

In contrast, modern vertical spindle, rotary table surface grinders have a table that rotates with the workpiece held firmly in place underneath a vertical spindle. The grinding is not performed by the peripheral edge of the wheel, but by the entire diameter of the abrasive surface, which facilitates grinding performance and consistency.



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“The less material that is removed while meeting all specs, the less debris that goes into the air or gets into the coolant,” says Lawson.

Today, surface grinders like DCM Tech’s IG 282 SD are also designed with much more advanced sensors and controls that automatically maintain very tight tolerances, removing material down to within one ten-thousandth of an inch of the final thickness. This can prevent overgrinding and enable operators to be much more intentional about how much material they would like to remove from each part.

When it is essential to contain debris to avoid a mess, selecting such an advanced rotary unit with an integrated shroud is also important. “The shroud, which is a sliding door with a built-in window for viewing the process, encloses the grinding area,” says Lawson. He adds that a fully enclosed shroud also reduces the noise produced by the machine.

In addition to a shroud, grinders like the IG series provide an integral air mist collection system that draws particulate from the air and moves it away from the operator to enhance the cleanliness and safety of the work environment.

Because of the importance of clean coolant when grinding, IG grinders provide through-spindle and external coolant flow, as well as a self-contained recirculating filtration system with a 3 micron roll style paper pre-filter and 5 micron in-line canister filter.



The most advanced units even offer programmed features that allow the machine to automatically rinse parts when grinding is complete, which is what a good operator would do.

“The rinse clears the debris from the tooling mating surfaces, so there is no problem loading the next part. This is very advantageous, particularly in automated settings where there is no operator on the machine,” says Lawson.

Although “messy” and “grinders” have been synonymous for decades, modern design improvements provide machine shops with much cleaner, high-performance options. Today, modern rotary surface grinders can be configured with sophisticated, automated features that make the messiest grinding operations a thing of the past.

For more information: call (800) 533-5339 // email info@dcm-tech.com // www.dcm-tech.com.

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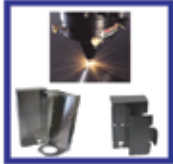
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METAL BELTS PROVIDE A COST-EFFECTIVE AND IMPROVED HEALTH CARE PRINTING PROCESS



With ongoing hiring issues, manufacturers are turning to robots for help. And metal belts are integral to the functioning of these robots.

Written by Denis Gagnon, BA, MBA
CEO of Belt Technologies, Inc., in Agawam, Massachusetts

When compared to belts made of other materials, metal conveyor belts offer multiple distinct advantages—including superior precision control, hygienic properties and customization options, among others. A producer of health and personal care products recently experienced these advantages firsthand in their printing process. They were disappointed with the inaccurate and inconsistent results from their traditional embossing and silicone printing processes and sought a steadier, more reliable and cost-effective solution. This led them to Belt Technologies.

Our team solved the customer's problem by creating a customized printing process with increased precision and adhesion. Not only did this allow the client to open production in new markets, but we created a partnership that is set to last for years to come.

The Process and the Problem

The customer's process consisted of pushing silicone through a grown nickel screen to create printed patterns such as chevrons and waves. The old method also included a traditional embossing process that utilized a complex, loom-woven belt made from polyethylene terephthalate (PET) fibers.

Unfortunately, the screens had thin walls with sharp burrs around the perforation pattern, which both affected the silicone print medium and negatively impacted the final product's print quality and adhesion. The screens typically lasted less than two months, resulting in costly turnover, and their embossing process resulted in a weakened end product. The customer wanted a new solution that used a thicker, more robust material and offered cost-saving benefits.

The Improvement

The customer reached out to Belt to find out how we could improve their current printing process and eliminate the need for embossing. In response, we created an entirely new custom steel belt design that was the perfect fit to solve the issues with bonding and print clarity.

"We have a wide range of stock products, but creating custom solutions is really what we are passionate about," said Brian Harbison, managing director of Belt Technologies. "For this project, we knew our PureSteel® material would make the process more precise and the pattern clearer. We were able to double the cylinder thickness and create more height, which allowed for the intricate patterns to be created by thousands of perforated holes."

In addition to the increased thickness and more accurate patterns, we were able to add a Teflon coating to both sides of the cylinder to help ensure the silicone does not stick to the cylinder. The process presented some challenges, but our team was determined to create a custom solution that worked.

"Turning a flat piece of metal into a perfect disk is a difficult task," continued Harbison. "We tried numerous weld configurations before we developed the flattest weld with the help of specialist tooling, and it works extremely well."

The Results

With double the thickness, an anti-stick coating and a more accurate hole pattern, our silicone solution eliminated the customer's need to emboss products, improving their process while making it more cost effective. This has allowed them to open up production in new markets. And that was just the beginning—we continue to work with this customer to develop solutions for other production challenges. Our goal is to help them radically change the way their process operates so they can achieve larger production matches, shorter printing times and reduced costs.

A Closer Look at the Benefits of Stainless Steel

Manufacturing and material-handling equipment designed for the medical and pharmaceutical industries must be heavily regulated to ensure safety. This means any automated conveyor system used in these operations must be completely sanitary, easy to clean and resistant to corrosion. PureSteel® conveyors from Belt Technologies met these hygienic requirements, while offering the necessary precision and customization for their application.

Hygiene

Although widely used, polymer, plastic and metal mesh conveyors may actually increase the risk of product contamination during production. This is because stainless steel has a smooth impermeable surface that offers no opportunity for the invasion of microbes or bacteria. The complete lack of gaps, recesses and crevices also makes it much easier to clean than traditional materials. Stainless steel is also resistant to corrosion, meaning it can be sanitized by high-pressure steam, high-pressure wash or chemical cleaning.

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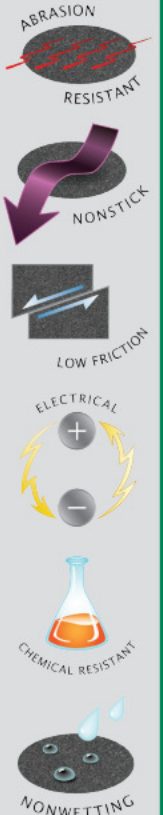


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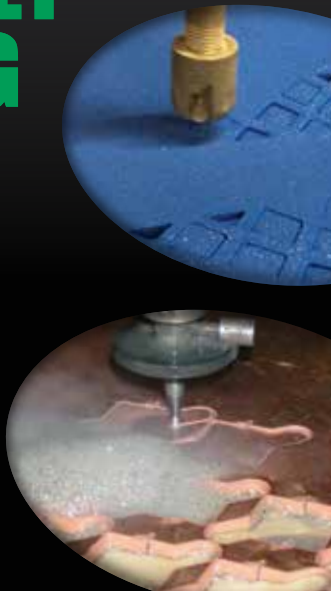
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Precision

Metal belts from Belt Technologies offer unlimited travel lengths and are available in a variety of alloys. When compared with other power transmission or motion control components (linear actuators, lead screws, chains), metal belts provide improved strength-to-weight ratio, durability and precise positioning. Additionally, metal belts can be constructed in a multilayer configuration, consisting of several bands ranging in thickness from 0.003 to 0.005 inches (0.076 to 0.127 mm). This provides the combined strength of all layers while retaining the reduced bending stress of each individual layer, increasing the modulus of elasticity and helping to resist backlash. As a result, the belt is stronger without sacrificing precision or flexibility.

Customization

The perforations in our belt's pitch profiles are created by mechanical and laser cutting, die-and-cut presses and rotary-pinned perforation rollers. While custom pitch profiles vary by manufacturer, our team can create perforations in stainless steel belts as thin as 0.002 inches (0.05 mm), as narrow as 0.040

inches (1 mm) and as wide as 35 inches (900 mm). Other customization options include a large array of metal alloys, belt width and thickness combinations, perforation patterns, coatings and attachments.

About Denis Gagnon

Denis Gagnon has been the CEO of Belt Technologies since 2019. A graduate of Babson College with a BA in accounting and Columbia Business School with an MBA in finance, Gagnon is a seasoned professional with more than 25 years of financial and executive management experience with multinational firms.

About Belt Technologies, Inc.

For more than 50 years, Belt Technologies, Inc., has produced PureSteel® metal conveyor belts, timing belts and pulleys ideally designed for automation applications. Committed to providing customized solutions to meet exact specifications and treating every project with an individualized approach, Belt helps customers achieve optimal performance while maintaining standards for the most stringent levels of safety. If you're ready for your facility to take advantage of all the benefits of automation, you can learn more at belttechnologies.com.

Contact Information:

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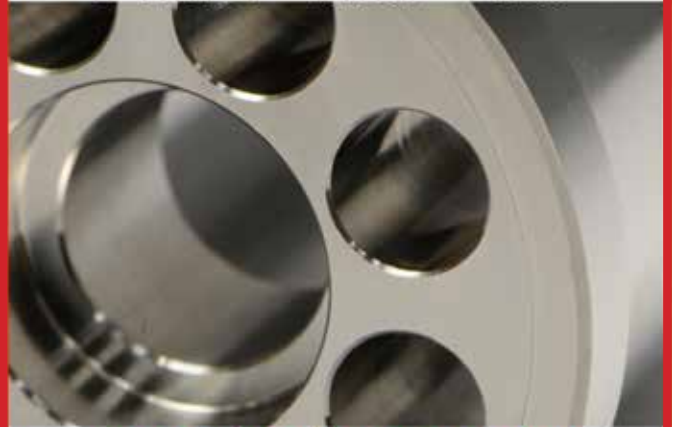
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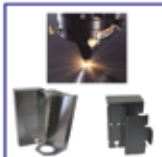
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EXCEL DRYER WELCOMES SCOTT KERMAN AS BUSINESS DEVELOPMENT MANAGER-SPECIFICATIONS

Excel Dryer, Inc., manufacturer of the XLERATOR® Hand Dryer, announced that Scott Kerman has been hired as their business development manager-specifications. In this new role, Kerman, a resident of Phoenix, Arizona, will work with the Excel Dryer sales and marketing teams to grow profits; nurture, retain and support partner relationships; conduct demonstrations and sales presentations and much more.

“Scott comes with a unique set of skills that will make him a valuable asset for Excel Dryer and our distribution partners,” said William Gagnon, vice president of sales and marketing at Excel Dryer. “He has worked extensively over his career with hand dryers and other restroom accessories, providing him an in-depth knowledge of our industry. We are excited to welcome him to the team.”

Kerman, a graduate of Arizona State University, has more than 30 years of experience in sales and business development. He has extensive product knowledge with numerous construction market segments and will tap into this experience at Excel Dryer to help grow and support the construction team’s annual profit by leveraging data in construction platforms.

“I have always been impressed with Excel Dryer’s products and am excited to now be working to grow their presence,” said Kerman. “I am ready to use my vast knowledge of the industry to guide the sales team in an even more profitable direction.”

About Excel Dryer

Excel Dryer has been manufacturing and developing hygienic hand drying solutions that are cost effective and sustainable for more than 50 years. The family-owned and -operated company revolutionized the industry with the invention of the XLERATOR® Hand Dryer that set a new standard for performance, reliability and customer satisfaction. Excel Dryer prides itself on offering the best customer service and making touchless, economical and renewable products people can depend on. Available for distribution worldwide, Excel Dryer products can be purchased through an established network of sales representatives who work with distributors globally. Learn more about Excel Dryer at exceldryer.com.

BELT TECHNOLOGIES, INC., INTRODUCES NEW LASER WELDING MACHINE

The new machine significantly enhances the company’s capacity and product quality.

Belt Technologies, Inc., a manufacturer of custom metal belt conveyor solutions for more than 50 years, is announcing a major investment in new technology with the addition of a laser welding machine. This is the fourth such machine within the western Massachusetts facility, and it will allow Belt to greatly expand their ability to complete welding orders.

“Not only does this new technology enhance our laser welding capacity by more than thirty percent, but it also improves our product quality with state-of-the-art optical systems,” explained Belt Technologies president, Alan Wosky. “The new work cell allows us to weld parts up to thirty-six inches wide, even for the thinnest of materials, and it creates a weld so precise that it’s almost impossible to see on the finished product.”

Ideal for stainless steel welding, the laser is contained within a partially automated work cell designed by Belt, including proprietary welding fixtures. The laser cell primarily operates by seamlessly welding the two ends of a metal strip together to form an endless belt, as well as to attach end tabs and other features. The new laser cell can handle a greater variety of belt types and sizes, helping to alleviate capacity constraints at any of the other three stations.

“This technological investment will be critical for us to maintain and exceed our customers’ expectations despite ongoing supply chain issues,” said Wosky.

Belt’s PureSteel® products—including belts, conveyor systems and pulleys—drive productivity with custom automation solutions, complete with engineering support from concept to completion.

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About Belt Technologies

Belt Technologies, Inc., has been producing custom metal belt conveyor solutions for new and existing conveyor systems for more than five decades. Sophisticated engineering, advanced manufacturing processes, and an unlimited variety of configurations and coatings are available to custom-design belts to suit any application. Metal belts, timing belts, and metal drive tapes are superior, high-quality options for automated production and robotic facilities. A subsidiary, Belt Technologies Europe (BTE), located in Tyne and Wear in the U.K., serves as the sales office for Europe and Asia. To learn more about Belt Technologies and metal conveyor belts, visit belttechnologies.com.

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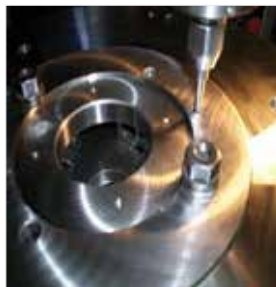


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