

Navigating the New Normal

Leadership Discusses COVID-19 Threat in PT Industry

Editorial Team, PTE Magazine

To say the last month has been unusual would be the understatement of the year. Here we are, working from home offices, making conference calls by video chat, and trying to establish some sense of normalcy during a time that is anything *but* normal.

The editors of *PTE* have compiled the latest information from power transmission component suppliers regarding the COVID-19 pandemic. Some stories are about working on the frontlines to fight the disease, others are simply how organizations are building essential components under new, challenging work environments. Each story is unique, preparing all of us for the many obstacles and difficulties to come in the months ahead.

A Change in Routine

Carl Rapp, president, Philadelphia Gear, vice president, power systems group, The Timken Company, discussed the many new challenges manufacturers are facing in 2020.

"Shifting to the new norm of social distancing and working from home for those who can. Fortunately, our business networks are reliable, and our people are adapting quickly, so other than occasional bandwidth issue, our teams have done a good job making the change and we haven't had any substantive disruptions to office workflows," Rapp said.

Rapp also discussed the importance of providing real-time solutions during global disruptions like COVID-19.

"Our business systems and machine tools are well-built and well-maintained, but I think right now for all of us, it's really about making sure the basics are being delivered. No one is really doing any successful pro-active selling right now anywhere. No customers are listening to those messages in this new norm. Instead we're trying to prioritize resources and meet the most urgent demand for our most important end-users, in a timely fashion," he said.

Philadelphia Gear has recently provided emergency repairs on gearboxes, motors and generators to help other critical infrastructure companies function.

"Last week we sent a field service engineer to troubleshoot a job when others wouldn't or couldn't go. We are also deeply involved in the defense industry and have clear directives relative to the need to maintain our schedules to serve the warfighter. We are open to helping in any way we can to manufacture parts or provide repair services for the electro-mechanical systems that power the world, and which allow millions of citizens to remain safely at home," Rapp said.

As a provider of 'essential services' as defined by Homeland Security and DoD, Philadelphia Gear's manufacturing and service centers are open to serve the critical infrastructure of the nation's power plants, refineries, water/waste management, defense and other sectors.

"A huge number of our team members are home, continuing their daily routines via WebEx, conference calls and



While increasing safety measures at its plants and warehouses, NSK continues to meet a steady demand for shipments to its authorized distributor network (see sidebar on page 27).



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social media platforms to serve customers. We are adapting and in doing so providing some level of economic continuity,” Rapp said.

For Maxon Motors, the supply chain remains a critical obstacle.

“The biggest challenge for the company is the supply of materials. The gaps in the supply chain are increasing and the situation is expected to deteriorate further,” said Eugen Elmiger, CEO Maxon Group. “Through a short time working program at our headquarters in Switzerland and a global cost savings program, we will ensure operational reliability over the coming months. Until further notice we will continue production five days a week.”

The Altra Industrial Motion Supply Chain Team is proactively working with its suppliers to keep current and manage the evolving needs of their customers. In many cases, they have multiple suppliers for critical components and materials, redundant manufacturing capacity in many of their businesses and strong relationships with suppliers that they will leverage where possible.

Currently, these proactive steps are working. However, as the situation evolves, the Altra Supply Chain Team recognizes there may be additional steps needed and they will continue to proactively communicate with customers. The senior leadership team remains vigilant and is monitoring the situation in real time and responding rapidly as conditions evolve. (*Editor’s Note: Read about Boston Gear and Bauer Gearmotors direct response to fighting COVID-19 in the next sub-section*).

Though Gear Motions does not provide end products to the market, it is a vital link in the supply chain supporting those companies essential to meet the needs in this crisis.

H2W Technologies manufactures voice coil actuators for medical applications.



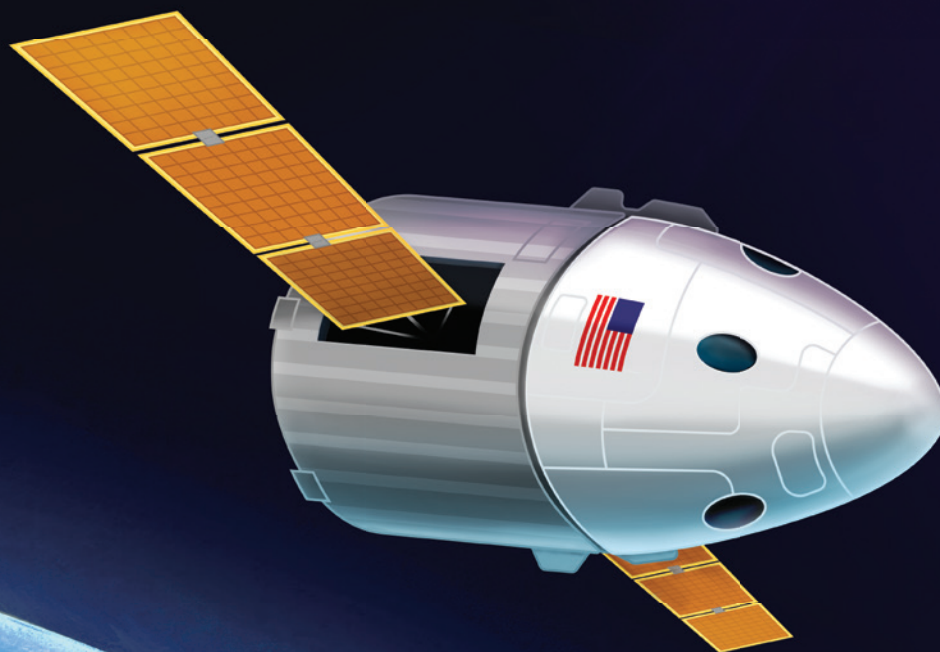
Gear Motions supplies product used in medical equipment, food processing, power generation, transportation, aerospace/defense, and construction. Without the products produced by Gear Motions, these essential businesses cannot meet their needs during this crisis.

“We take the health and safety of our employees as our highest priority and have instituted new measures to assure their protection while within the facility. We have taken steps to prohibit visitors, implemented social distancing, and increased attention to cleaning and disinfecting at the facilities. We have shifted all non-essential office personnel to remote work and are adjusting staffing to balance shift sizes. We continue to monitor directives from the CDC, and we will continue to comply with the guidance and directives for maintaining a clean and safe work environment issued



WEG recently announced an agreement with LEISTUNG to produce artificial ventilators that will be used by patients tested positive for COVID-19.

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by the Department of Health,” said Dean Burrows, president and CEO at Gear Motions.

Facing the serious global COVID-19 situation, NSK Americas continues to place the highest priority on the health and safety of its employees, customers and suppliers while working intensely to ensure business and supply continuity for its customers.

Brian Parsons, CEO, NSK Americas and vice president of NSK Ltd. states: “As a critical infrastructure supplier to many key industries, NSK is focused on keeping its employees safe and healthy, and maintaining full support to its customers.”

Fighting on the Frontlines

The following companies are providing resources, components and materials directly in the global fight against COVID-19:

Mechanical Power Transmission Components

“Our teams across the globe are also helping our customers and partners maximize our existing digital services to keep critical services running safely, and we are finding new virtual ways of connecting with each other and our stakeholders,” said Bjorn Rosengren, CEO of ABB. “To further support our customers, we have decided to make some of our software services available free to ensure uninterrupted power supplies to critical healthcare applications and to support commercial and industrial facilities in better managing their facilities.”

ABB has donated masks and delivered protective equipment to hospitals and frontline workers in some of the most badly affected countries, such as China and Italy. The company is currently working with governments to assess where ABB could use its technology and expertise to support the production of critical equipment, such as ventilators and masks.

WEG recently announced the signature of a technology transfer agreement with LEISTUNG Equipamentos Ltda., a manufacturer of medical equipment, to produce artificial ventilators that will be used by patients tested positive for COVID-19.

The contract, signed between the companies, grants WEG the license to produce the ventilator based on the mechanical ventilation device “Luft-3” from LEISTUNG.

WEG will use the current structure of its factories in Jaraguá do Sul, in the state of Santa Catarina, to produce ventilators and works with the possibility of adjusting the project to speed up production.

The plan is to immediately purchase all required components in order to produce 500 ventilators. Once the production line is installed by WEG, they will have an estimated capacity to produce 50 ventilators per day and deliver in the second half of May.

“We now depend on obtaining electronic and pneumatic components, many of which are imported and are currently in short supply in the market,” says Manfred Peter Johann, managing director of WEG Automation.

The implementation of the production line will follow all health hygiene protocols and other protective measures



Bearings manufacturing has continued throughout the crisis at Napoleon Engineering Services.

recommended by health authorities for industries.

Boston Gear and Bauer Gearmotor are providing mechanical overload clutches and worm gears for sanitary products, COVID-19 test kits and respirators. The greatest challenges the company is currently facing includes getting material from vendors and managing staffing during the shutdown.

“We’re enforcing new social distancing policies at our facility,” said Michael Stegmann, product manager at Altra Industrial Motion. “We have self-manufactured masks to supplement what we could purchase from mask suppliers.”

He added that one of the keys to maintaining business during a time like this is simply, “Communication, Communication, Communication!”

Andantex management has taken precautions to ensure the safety of all employees. They have gone to split shifts in all departments and on the days that are not in the office, they are able to work from home. They have a maximum of 10 people inside the entire facility at any one time. However, they are still making every effort to support customers by shipping open orders, maintaining availability of application assistance and providing emergency repairs as required.

Andantex USA services many customers in the critical industries of defense, aerospace, distribution supply chain, machine tools, and automation. “We have been able to ensure customers in these industries that we will be there for them and help to keep their machinery operational,” says David Regiec, VP Engineering.

Located in Ocean Township, NJ, Andantex is also



supporting their local medical community. “We have provided food for lunches at Jersey Shore Medical Center in support of doctors, nurses and all health workers on the front lines trying to keep us all safe,” Regiec says.

Finally, Andantex is investigating the possibility of manufacturing small steel or aluminum components that can help with shortages of medical equipment.

Marcelo A. Marcos, president of KTR Corporation, says that KTR is also open for business and ready to supply couplings for whatever industry is in need. “We manufacture a wide range of small precision couplings that can be used in some medical devices...for pump drives and for motion control,” Marcos says.

Marcos adds that the KTR factory is still open two shifts. “Minor changes were made to reduce human interaction. Sales employees are working from home whenever possible,” he says.”

But even outside manufacturing, KTR, located in Michigan City, IN, is trying to do their part to help. “We have obtained face masks and have offered them to employees and families, as well as to local senior citizen homes and smaller clinics in the area.”

Motion Control Contributions

H2W Technologies have been manufacturing voice coils that have been custom designed for the medical industry. Voice Coil Actuators in quantities of 100 to 200 are available in 4 weeks and OEM (Original Equipment Manufacturers) quan-

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ties can be available in 6 to 8 weeks from receipt of order. Voice coils have been desirable for applications such as ventilators because of their compact design and high-speed capabilities coupled with their sliding contact bearing system, which allows for high lifetime, high cycle, and a desirable MTBF in the system.

In dealing with the COVID-19 pandemic many companies have volunteered or been requested to produce urgently needed medical products such as: Masks, gowns, and ventilators. "Tooling Up" quickly to produce medical grade products for some companies can bring challenges. In addition to needing FDA compliant materials that will be used in the actual masks, gowns, and ventilators, the tooling used to manufacture these products may also need to meet FDA compliance standards. Depending on the product being manufactured, the tooling may need to be: Washed down using caustic chemicals, cleaned with high pressure steam, or sterilized with high Intensity ultra-violet light or radiation.

LM76 manufactures several types of FDA compliant linear bearings and pillow blocks that are drop-in-replacements for existing bearings. FDA compliant bearings and pillow blocks from LM76 will not trap contaminating debris and can be thoroughly sanitized following Sanitation Standard Operating Procedures (SSOPs). SSOPs are detailed schedules and procedures specifying what to clean, how to clean, how often to clean, and the record keeping used for monitoring.

Bosch Rexroth said in a public statement that it is available to help companies right now that must rapidly move from prototype to full production or ramp up existing assembly operations to meet extremely urgent needs.

Bosch Rexroth offers linear motion, automation and assembly technology that can be used to build new, in-demand machines or systems, as well as modular, easy-to-assemble workstations and powered conveyor systems that are ready to integrate into production operations. Applications include: aluminum structural framing to help with medical equipment assembly and ventilator hoods; workstations, carts and flow

racks for manual assembly production lines; modular conveyor systems to link work cells; linear motion technology such as stainless steel miniature ball rails and ball screws for lab and diagnostic machines; and complete Cartesian motion systems for automated fluid handling systems.

A Critical Period in Time

The major consensus from everyone we've spoken with this week is that the decisions and strategies put in place today will play a huge role in how manufacturing will look in the future. Many individuals are looking more into emerging technologies such as robotics, automation, IIoT and additive manufacturing to better prepare for crisis management in the coming years.

Everyone is being proactive and putting their employees and families first.

"With many critical services and industries at risk of being overwhelmed or shut down, we all need to work together – governments, business and civil society – to keep our health-care systems, power networks and other essential services operational. The health and wellbeing of all of us – workers, families, society and future generations – depend on it," added ABB's Rosengren.

And we'll end with some of the best advice we heard during our interviews and discussions of this crisis:

"Tell the truth. Listen. Don't panic. Manage cash. Be there for your people, to the best of your ability," said Rapp at Philadelphia Gear. "There is a lot stress in the world right now. But as we come together and deal with this crisis, I am optimistic that we will get through this." **PTE**

For more information:

ABB

www.abb.com

Altra Industrial Motion

www.altramotion.com

Andantex

Andantex.com

Bosch Rexroth

www.boschrexroth-us.com

Gear Motions

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