

OGURA

"What you need in a clutch"®

ON THE MOVE

Volume 77 • Fourth Quarter • 2018

GIE EXPO 2018

Louisville, KY

The show this year was very upbeat. Both exhibitors and attendees were very positive about the future of outdoor power equipment. Show management anticipated about a 15% increase in attendees over last year and based upon the crowds, that seemed to be accurate.

Ogura showed the traditional GT series, the mobile series and the newer 1.5 and 2.75 clutches.

Ogura animations and installation videos were on display on the booth monitors. The show is an excellent opportunity for Ogura to explain to the landscapers how clutches work and what they need to do to avoid problems.

Ogura also had an outside booth where Ogura sponsored lawnmower racers, Chuck Miller and Bobby Cleveland, showed off their racing lawnmower and supercharged puller. Any time Chuck started up his supercharged mini-puller, it instantly grabbed the attention of anyone within earshot.

Besides Ogura sales managers, to assist booth visitors, there were also sales reps from different parts of the country, support from Ogura Japan, Ogura inside customer support and engineering personnel to handle questions from show visitors. ●



OIC staff and sales reps at the booth



Booth visitors learning about Ogura clutch advantages

55TH KIRYU YAGIBUSHI FESTIVAL

Kiryu, Japan

Last quarter, Ogura took part in the 55th Kiryu Yagibushi Festival.

This year, there was also an air show performed by the aerobatic demonstration team, Blue Impulse of Japan Air Self-Defense Force. It was the first air show in the county and it attracted visitors from all over the world.

As in the previous year, a high wooden stage was set up, but this year it was decorated with banners saying, "Thank you for trusting us for 80 years." Ogura also commissioned ice sculptures commemorating the 80th anniversary of the company.



Member of the motorcycle team participating in singing contest



Geishas performing traditional dance

This year, the musician Toshiyuki Suwa and accompanist, Kiryu born singer Rumi Maikawa hosted the popular Amateur Singing Contest.

Geishas from Kyoto also demonstrated a traditional dance captivating the crowd. The motorcycle team "Ogura Clutch with Ride In" participated in the event as well.

Everyone, including guests from outside of Japan, enjoyed the festival, especially the aircraft demonstration and the geishas. ●

Ogura Sales Rep Profile

PAUL ROZGONYI KELLER INDUSTRIAL, INC.

Paul Rozgonyi has been a part of Keller Industrial's sales team for 2-1/2 years. Paul and Melissa his wife of 20 years live in the Baltimore area. Together they have two children, Zachary (10th grade) and Madison (9th grade). Paul enjoys attending his children's Lacrosse games and mountain biking during his spare time.

He was born and raised in the Pittsburgh area and graduated from West Virginia University. Paul was brought on board to replace a retired long term team member. His responsibilities are to grow sales in Maryland and expand Keller's reach into the Northern & Western Virginia markets along with maintaining their strong presence in Central Pennsylvania.

Paul brings over 20 years of industrial sales experience mostly stemming in the material handling industry. His knowledge of selling to the government is an added benefit opening new opportunities for Keller Industrial Products.

Ogura is pleased to welcome Paul Rozgonyi to the Ogura sales force. ●



Paul Rozgonyi

ATLANTIC CITY SALES REP TRAINING HELD

Atlantic City, NJ

Last quarter, OIC held a series of training classes over three days for 38 key sales reps. The training consisted of general group classes attended by all reps, and 12 different breakout training sessions where detailed technical information and hands-on product training took place.

All reps came away with a better understanding on Ogura's newest products and how they should be applied. This detailed product knowledge will allow the reps to respond faster to questions from both existing and potential customers. ●



Ogura sales reps attend training sessions



OIC staff and sales reps at the Ogura National Sales Meeting

MECHA MECA FAIR 2018

Kiryu, Japan

Last quarter, Ogura participated in a fair organized by the Japan Machine Association in Gunma. The fair encourages elementary, junior and senior high school students to experience machines in action to stimulate more interest in science and engineering.

Students had fun using the "grasping grasper" which is a demonstration machine showing how torque sensors work. They also saw how brakes work by controlling a roulette wheel that was used to award prizes to the children. Ogura believes that participation in these types of events will help children to expand their interest in science and technology. ●



Children learning about motion control



Ogura personnel and their interactive machines for children

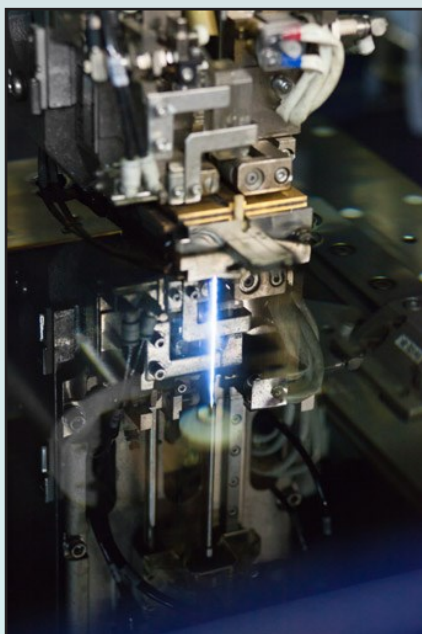
Wire Cutting EDM: *It May Not Be What You Think*

When most people think of a wire cut part, the normal assumption is that the wire is somehow working like bandsaw to cut through the metal part. However, an electrical discharge machining or EDM uses heat instead of physical cutting tools to machine mechanical parts.

More specifically, it uses a brass wire of approximately 0.2 mm in diameter as an electrode to generate heat sufficiently high enough to melt a metal surface.

Wire is fed from an unwind spool to a take up spool with the workpiece set in between. Controlling tension on the wire is critical because the wire must maintain the proper spacing between itself and the workpiece.

As the positively charged wire and the negatively charged workpiece come in close proximity to each other, an electric spark (discharge) is created.



Wire cutting head

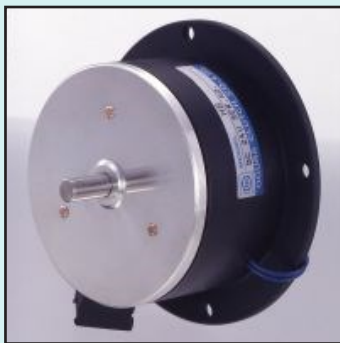
This electric spark is extremely concentrated, and is called the arc column. The arc column is so hot, it can melt metal. At the same time, the water that comes in contact with this extremely hot wire, explosively vaporizes. That creates pressure that helps remove the small metal chips.

When current in the wire stops, the water refills the space to wash away the small pieces of cutting debris. The distance between the electrode wire and the metal surface is reestablished, restoring the insulation. This process is repeated as many as 100,000 times per second in order to cut metal.

As long as the material is conductive, EDM can cut any material regardless of its hardness. This makes EDM irreplaceable technology when it comes to fine machining. To control wire tension, both a hysteresis brake (HB) and a magnetic particle clutch (OPC) can be used.

The wire pulled from the wire bobbin passes through the pulley, tension roller, and wire guide, and is then collected into a wire hopper while performing the electric discharge process. An OPC clutch is used between the wire bobbin and motor. Since it is a magnetic particle clutch, torque is proportional to voltage, and tension of the wire can be controlled extremely quickly. Some machines also need to control the rewind, which can also use the OPC clutch.

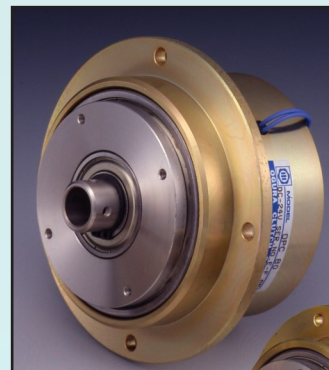
For high precision tension applications, in some machines for controlling tension on only the unwind, a hysteresis brake (HB) is used. Since torque is controlled purely by a magnetic field and there are no frictional components to generate the torque, the HB brakes are extremely precise.●



Ogura HB Series



Wire cutting machine



Ogura OPC Series



Happy Holidays from the Staff of Ogura

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Ogura in the News

LAWNMOWER RACING FINALS CANCELLED

Jonesboro, AR

Coming into the finals on September 22nd, Chuck Miller was in 2nd place in the BP class. He was going up against a young driver, Colten Miller (no relation) and was excited for this year's finals.

Unfortunately, mother nature didn't cooperate and heavy rain caused cancellations of all races on both days. All racers ended up in the position that they were in going into the finals.



Flooded race track

Chuck finished in 2nd place for the year and Bobby Cleveland in 9th.



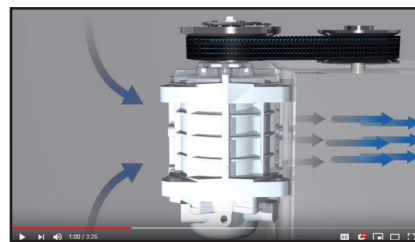
Bobby and Chuck with their trophies

For 2019, Chuck is planning to do a full program of races in the BP class. Bobby will be competing in a few select races throughout the year. Look for a schedule of their upcoming races in the Spring issue of "Ogura On the Move."●

SUPERCHARGER/ BLOWER ANIMATION CREATED BY OGURA

Somerset, NJ

Ogura Industrial has created a new animation showing how a supercharger/air blower works. Many people are familiar with the term supercharger from the automotive world but are unaware of the many other uses of these high-performance units. Have you ever wondered how it works? This new three minute animation provides a quick understanding of how a supercharger operates for engine applications, but also for use in a variety of applications like air blow off and drying systems, agricultural sprayers and fuel cells, because of the high efficiency needed. Ogura superchargers come in eight different standard models and



New supercharger animation

can provide a discharge volume from 100 to 2,800 cc per revolution with many units comfortably operating at 12,000 rpm.●

22nd MECHANICAL COMPONENTS TECHNOLOGY EXPO

Tokyo, Japan

Last quarter, Ogura exhibited in the expo at the Tokyo Big Site. This year, 2,522 companies exhibited attracting a record breaking 88,679 visitors. This is Ogura's 15th time participating in the expo. This time, the focus was on power off brakes. The desktop robot demonstration machine equipped with a grasping tension sensor and thin power off brake attracted much attention. The grip tension sensor on display measures and identifies the grip force when grasping an object. Even if the object is a different shape or hardness, the sensor instantly determines the necessary force without breaking or crushing the object.●



The Ogura Clutch booth at the Mechanical Expo