



OIC Targets 30% growth for 2002

Production responds with improved manufacturing process

Somerset, NJ

Ogura Industrial Corporation is confident that 2002 will bring at least 30% growth in overall shipments. A majority of this business is current clutch and brake applications taken away from competitors, but there is also significant growth in new industrial applications.

Ogura has always taken pride in being one of the most cost effective, high volume clutch manufacturers in the world. But now more than ever Ogura's industrial manufacturing plants need to handle small volume production runs with the same efficiency they have applied to high-volume production.

To enhance the mid to low volume runs, Ogura production has made improvements for 2002. Some examples of these are:

1. Improved Machining Of Housings:

The aluminum housings that Ogura manufactures can sometimes take up to four hours of machining time per production lot. To help improve the productivity of these machines, additional tool spindle storage has been developed. This allows the machining centers to perform all of their required operations with no operator changeover. The goal of these new centers is to run 24 hours a day. To ensure quality, the tool storage areas are equipped with comparators that check tool wear and/or possible breakage. If a tool is determined to be worn down or is otherwise defective, it is rejected and a brand new one is automatically inserted in its place.



New auto tool machine



Housing Machining Line

This allows the machine to continue running with no down time.

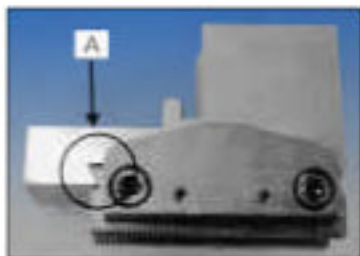
2. Decreased Chuck Changeover Time

Another improvement that was made was in regards to the low volume industrial clutch chuck changeover time. To change chucks in the lathes, the old process involved an Allen wrench and two bolts that would lock the chuck in place.

A new improved version allows the chuck to be slipped and then locked into place, thereby decreasing overall changeover time.



Old chuck clamp



New quick chuck part

The goal of this new process was to decrease changeover time to under 10 minutes.

The result was that the small machining centers that had two machines that previously required 58 minutes to changeover, were able to improve the changeover time to 17 minutes or 8.5 minutes per machine.

These productivity changes will allow Ogura manufacturing to be more flexible and machine more parts per day which will help decrease lead time and reduce labor set up costs.



Quick set up

OIC EMPLOYEE PROFILE

New Sales Representatives with Ogura Industrial

Mike recently joined Ogura to handle new industrial clutch and brake business in Illinois and Wisconsin.

Mike has lived in Schaumburg, IL since 1984 with his wife. He has two children, who are now 15 and 12. Mike likes traveling but when he is home he enjoys golf and home improvement projects.

A brief history from Mike about his work experience follows:

I started in the clutch/brake business with Warner Electric in 1977 selling in the Chicago area. My years at Warner included many different responsibilities in sales, marketing and management. I left Warner in 1984 to become a manufacturer's representative in motion control. During the next few years I gained a great deal of experience in a variety of industries, always selling a product, which required a technical expertise.

In 1991 I became the representative for Electroid. I was an exclusive rep. This arrangement changed in early 1998 when I was allowed to handle other lines. My association with Electroid ended in October of 1999.

Since that time, I have been fortunate to be able to associate with several (four) companies in the motion control and power transmission businesses. Most of these companies are the premier players in their businesses, like Ogura. This is essential for a small business like mine.

In summary, I have been in the clutch/brake business for almost 25 years. Most of my experience is in the Illinois and Wisconsin areas selling directly and through distributors. Currently, I am the only person in my firm.



Mike McNicholas

WEB SITE IMPROVEMENTS

CAD Drawings Added

CAD drawings have been added to the mobile, general purpose and PTO clutch/brake sections to the web site. All a user to the site has to do is click on the DXF icon and download the DXF file to their system. Currently, only 2D drawings are available on line; however, 3D drawings are available on CD. Please contact your sales rep or OIC directly to receive 3D drawings.



Ogura web site home page

Mr. Ichiro Ogura awarded 'Legion of Honor' Award

VALENCIENNES, FRANCE

Because Ogura's manufacturing operation in France has helped increase the business activity and employment in the area, Mr. Ichiro Ogura has been awarded the Legion of Honor award by the French Government.

Shortly after Ogura selected the Valenciennes location for their European manufacturing facility, Toyota also decided to build a manufacturing plant in the same industrial park. Because Ogura's pioneering spirit helped other companies also decide on Valenciennes, Ogura was given this honor.



Mr. & Mrs. Ogura and the French Ambassador to Japan and his wife



Mr. Ogura receiving award

APPLICATION STORY

Amusement rides install Ogura's mechanical clutch for trouble free rides

We all know Ogura as the leader in electro-mechanical clutches and brakes, but did you know that Ogura also makes mechanical clutch/brakes? Well, we do! No electrical power required!

Here is a fun application with unique challenges met by using Ogura's DS-354-TG mechanical clutch.

On an amusement ride, there are many "cups" with saucers (not unidentified flying) that act as seats (or cars) that spin on an axis. The riders gripping and pulling against a stationary steering wheel in the seats center control the speed and direction of the spin. All this, of course, while the base of the ride spins on its own axis. Sometimes teenagers can really get this ride spinning wildly. We all know someone who lost his or her lunch as a result!

Since the cups could still spin without power, the customer needed a way to stop the rotation and hold the spinning cups in

place when the cup door was opened. (Remember, it's free to spin on its own axis and bearings.) Although several methods, including electrical, were considered, the best solution was an Ogura mechanical clutch brake.

To leave the ride, the door to the cup opens inward. As soon as someone tries to open the door to leave, it activates the clutch yoke that compresses the friction disks that then absorb the rotating energy to stop and hold the load. Based on the torque required, Ogura's DS-354-TG and UG-35 coupling were selected to clutch (brake) the spinning cups to its stationary axis.

The reasons for the selection of this clutch were:

The sliding yoke



Teacup ride

allows for 360° rotation of the actuating lever. (Clutch can engage regardless of door position or cup speed.)

Unit works in any orientation. (Some devices do not operate

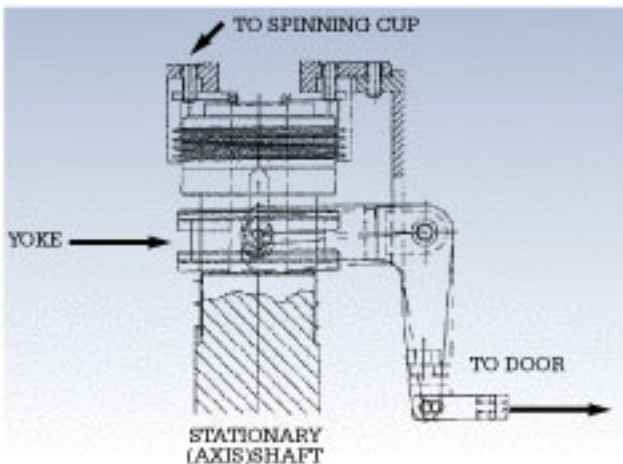
well in the vertical position.)

High Reliability. Unit is designed for tens of millions of cycles. That's a lot of trouble free rides!

Low cost for its torque and size, the DS-354 saved money over other engineering options.

So, there you have it. The next time you visit a major amusement

park, check out the rides. Maybe you can't see it, but you may be using Ogura's DS-354-TG clutch/brake! Please pass the barf bag!



Ogura multiple disk mechanical clutch with linkage



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Happy Spring from the staff of Ogura Industrial



NEW PRODUCT RELEASE

Monster Spring Applied Brake developed

Ogura has developed one of the largest multiple disk spring applied brakes in the industry, capable of producing torque in excess of 23,000 ft.lb. (approximately 31,000 Nm).

The purpose of this brake is for emergency braking on electric motors used in construction elevators. These construction elevators are typically needed in high-rise buildings to transport both people and construction material. If a power or motor failure occurs, or if the cable brakes, the brake immediately stops the elevator from falling.

In a normal holding



Construction elevator

brake application, the brake is usually mounted directly on the motor. This allows the smallest possible brake to be used.

However, in this instance, since safety is of the highest concern, the brake is mounted on the output side of the gearbox. This tremendous torque, coupled with a potential elevator load of up to 15 tons, necessitated this type of brake.

As buildings become taller and larger, the need for this type of safety brake will increase. Through the design of this process, Ogura has gained addi-



New brake mounted on test stand

tional knowledge on how to design and produce high torque holding brakes efficiently which reduces both lead time and cost. This knowledge will help Ogura apply this technology to other industries that require this type of braking.

OGURA IN THE NEWS

New Ad Released

The follow ad was released for various industry publications. It highlights Ogura's tooth clutches and some of the advantages that these clutches can offer for potential customers.



Electromagnetic tooth clutch ad

New Logo

Kiryu, Japan

Ogura has introduced a new logo of a running computer mouse. This logo will be used on

Ogura's internal correspondence as well as some advertising. It is designed to remind both Ogura workers and customers of Ogura's desire to decrease response time and production time for our customers. It's also going to be used as a reminder to our design engineers to speed up their implementation of new technology and to stay updated on the latest developments in materials and manufacturing.

