

Fairfield Manufacturing

INTRODUCES
NEW GEAR DRIVE



The new 18000 Series ExcelDrive is the largest member of the Excel line of torque-hub planetary gear drives with a maximum torque capacity of 160,000 lb.-in.

Available in three frame sizes, the 18000 Series can cover most wheel, drum or track applications that require continuous output torque of 80,000 lb.-in., according to John Easton, manager of new product development at Fairfield.

Easton says, "This design uses shared components of the 7000 Series and the 11000 Series design. The approach was to maximize commonality throughout three manufacturing cells so as to utilize similar sources for component supply as well as the same manufacturing cells for minimal setup changes between size ranges."

The entire Excel family can be applied on a particular machine group as the machines increase in size and torque requirements, so users can put a small, medium or large drive into small, medium and large machines, Easton says. The family's similar design

components also allow for streamlined purchasing power based on the volume spread out amongst the three sizes.

The drive offers double and triple reduction ratios from 15:1 to 132:1 and can be specified with Fairfield's integral Torque-Lock brakes. Depending on its configuration, the 18000 unit is 11.16" long and weighs 230 lbs.

Fairfield is currently taking orders for prototypes and can deliver higher volume production quantities six months after receiving the order.

"The 7000 Series and the 11000 Series can be found on aerial work platforms, spray tractors, paving equipment, harvesting machines, conveyor drives and other applications. We've shipped these products throughout North America as well as South America, Europe and Asia," Easton says. ■

Visit Fairfield Manufacturing at Gear Expo Booth #364.

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LeCount

JOINS GRINDING MARKET



The new Type G mandrel with an optional PartLocator from LeCount represents the company's efforts to expand into the grinding market. Though it's offered mandrels for years, LeCount has always specialized in manufacturing mandrels for inspection applications.

Building on its existing capabilities to design mandrels, LeCount just enhanced its standard package to satisfy the requirements for use on a grinding machine. According to president Marshall Krumpe, the enhancements include ground grooves in the bottom of the arbor slot and the back of jaws in order for fluid build-up to dissipate.

"The whole concept behind the Type G is a locking taper, which locks a part onto the mandrel. This ensures that the lock will work in grinding applications," he says.

Krumpe adds that during the testing procedures, the Type G displayed a clamping force that ranged from five to eight times the average torque on a workpiece during a grinding operation, instilling confidence within the company that the taper would not slip or move.

In addition, the mandrels were designed to accommodate most between-center

grind operations, which allows operators to save time in setup procedures. During the beta testing, load and unload time was less than 30 seconds, Krumpe says. Offered now as an optional add-on to the Type G and other mandrels, the new PartLocator allows operators to quickly and easily locate their parts on a desired location.

According to Krumpe, the patent-pending PartLocator is a totally different enhancement that is designed for the operator with repeat operations. By setting the locator where they want, operators can then stop it at any point.

"We've had positive feedback from inspection and grinding people who think it's a good accessory. Anytime you can do something to save time during grinding, it's a good thing," says Krumpe. ■

Visit LeCount at Gear Expo, Booth #370.

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ASI Technologies

INTRODUCES NEW GEAR DRIVE SYSTEM



The MK400 Series transaxle from ASI Technologies combines the precision of a single piece casting, which can improve the accuracy of gear center distance, with the mounting width flexibility of a two-piece casting.

According to the company's press release, this results in improved gear alignment and quieter transaxle performance. Mounting width flexibility is achieved with a separate, fully enclosed axle extension.

Using standard parts, widths from 9.37-14" are available. With custom tooled parts, widths above 14" are possible. Motors with diameters ranging from 3-4" are compatible, and fully enclosed axle systems come standard. Ratios from 12.0:1 to 21.0:1 are available.

All systems include a motor, electromagnetic brake, harnessing connectors, gear reduction and differential in one easy-to-install package. ■

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First 7-Speed Gearbox has a Shift Plate of DuPont Zytel

A SHIFT PLATE MADE OF DUPONT ZYTEL NYLON CARRIES THE FULLY INTEGRATED GEAR CHANGE CONTROL SYSTEM OF DAIMLERCHRYSLER'S 7G TRONIC SEVEN-SPEED, AUTOMATIC GEARBOX.

According to DuPont's press release, the complex part, about 40 cm long and molded to close tolerances, maintains its vital functional properties while immersed in gear oil up to 140°C. A flexible printed circuit, based on the DuPont Pyralux system, connects the electronics with the magnetic valves and with various sensors and floats, which

are also mounted onto the shift plate. The entire module was developed and is supplied by Siemens VDO Automotive AG, Regensburg, Germany. Geiger Technik of Garmish-Partenkirchen, Germany, supplies the shift plate.

DuPont's Zytel LM70G35 heat-stabilized nylon 66 is reinforced with 35% glass fiber. According to DuPont's press release, components of the electronic control unit work reliably regardless of the operating temperatures. The resin's combination of high stiffness and elasticity allow snap-fits to be integrally molded into the part.

Gerhard Lepsien, key account manager at Geiger Technik, says, "We and DuPont were both involved in the module's development from the beginning. This means that, at an early design stage, we could influence decisions affecting processing methods and parameters and match the tool optimally with the part. DuPont helped us with mold-filling simulations and

warpage analyses when evaluating various gating systems. As a result, we can respect very close tolerances without any difficulty, even though the part is a very large one."

DaimlerChrysler's 7G-Tronic seven-speed, automatic gearbox has been standard on its eight-cylinder models since late 2003 and is now an option on certain models in the upper-medium range. ■

Visit DuPont at Gear Expo Booth #448.

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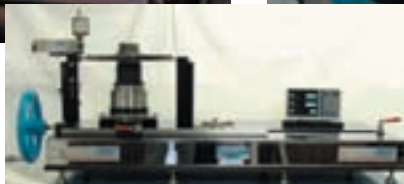
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DIGIT's Specialty

CUSTOM GAGES



DIGIT Gaging Solutions of Dayton, OH, will display its customized gaging solutions at Gear Expo.

Although the company manufactures gages predominantly for use in the gear industry, DIGIT has also produced gages for everything from card decks to bottles. Laser and inspection equipment is an aspect of DIGIT's business

that's growing at a rapid rate. To that end, the company is in the build stage of a laser measurement system that will be showcased in model concept form at its booth.

DIGIT regional sales manager Tyler Walther also hopes to show off the company's existing capabilities for custom gaging solutions.

"As long as we can hold the product consistently, we can measure for anyone. On the production floor, our measurements come down to a couple millionths of an inch," he says.

For custom gearing, DIGIT offers a turnkey service from design to delivery. Custom gages are designed for use in inspection labs and manufacturing

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Pitch diameter gages in operation range from 0.210" OD and 0.750" ID, 120 pitch, up to 30" OD, 70 pitch.

DIGIT Gaging Solutions manufactures gear gages. It entered the field of gear measurement when it designed a system for measuring the permanent bending or deforming of teeth causing gear failure. The engineering staff is equipped with the latest CAD and high-speed hardware as well as custom designed tooling for DIGIT gages. The company's emphasis lies in accuracy, repeatability and reproducibility during floor operation and in long-term wear. ■

Visit DIGIT Gaging Solutions at Gear Expo Booth #508.

For more information:

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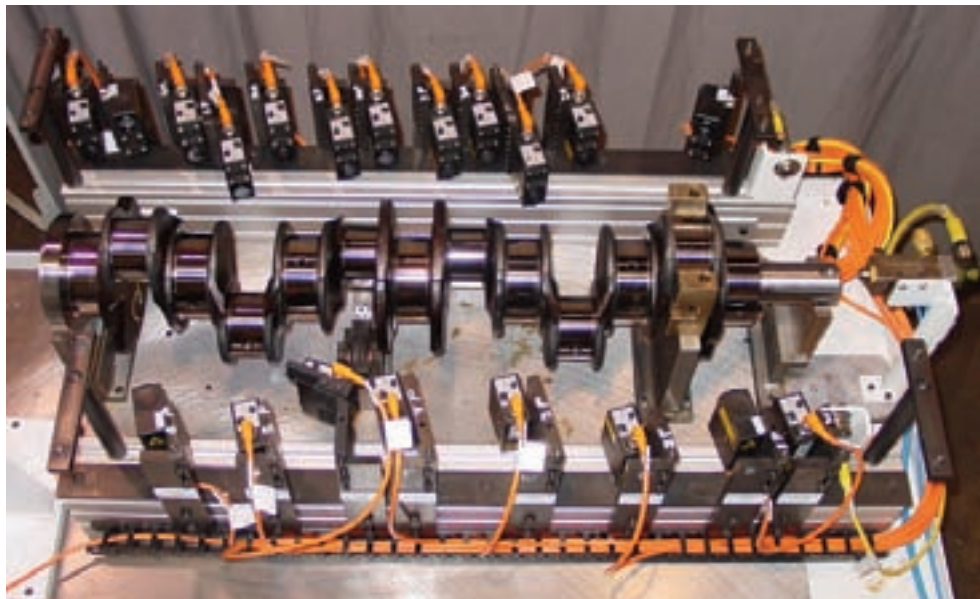


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IMPCO Machine Tools

INTRODUCES
NEW
LASER CHECKING
SYSTEM



The new OPTI-Scan Class II CE-certified laser heads from IMPCO Machine Tools are designed to perform

final inspection of precisely machined parts, such as crankshafts or transmission shafts, in seconds. The system can

be configured to check machined parts' surfaces and render a go/no-go signal. According to the company's press

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release, the process doesn't add time to production cycles and permits 100% checking.

"Because it is impossible to distinguish finely machined surfaces with the naked eye, we developed the OPTI-Scan laser checking system as a cost-effective method for 100% checking whether a precision surface has been properly machined," says an IMPCO spokesman.

The OPTI-Scan can be installed within a machine tool or as an offline check. Lasers are arranged around a part fixture, each aimed at a machined surface of a workpiece. The system is first shown a pre-finished master part and then a properly finished master part to illustrate the difference. Results are instantly displayed on a control panel, and the quality of the reflected light indicates whether a surface has been correctly finished.

In one of the first applications, the OPTI-Scan was installed as a station in a production microfinishing machine and used 21 laser heads to check all machined journal surfaces of a six-cylinder diesel engine in less than two seconds. According to IMPCO, the engine producer will use the system to assure that all surfaces are finished before the crankshaft proceeds to assembly.

Unlike with conventional contact gaging, surfaces do not need to be cleaned before checking with OPTI-Scan. Shop-hardened and reconfigurable for different parts, the system can operate in typical shop conditions.

"Precision journals, as on a crankshaft, are finished to submicron accuracy, and it's impossible to assure visually that they've all been processed, yet it is essential that properly finished components are released for assembly into an engine or the engine will prematurely fail," says the IMPCO spokesman.

Impco Machine Tools is a manufacturer of microfinishing machines. Additional products include a turn-to-finish machine, brake drums, tape finishers, taper control and tape machines, special purpose machinery and peen straightening machines. Its Generation Bearing Quality microfinishing technology and

tooling is patented to improve geometry, size tolerance and surface finish. ■

For more information:

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Bodine Electric

INTRODUCES
NEW U-SHAPED
GEARMOTORS

The new type HG gearhead from Bodine provides flexible mounting and high torque for applications including conveyor systems, food processing and factory automation.

According to the company's press release, the gearmotor design utilizes all



three stages of gearing, providing ratios from 6:1 to 110:1. The U-shaped gearmotor produces 1,000 lb.-in. of continuous torque and output from 3–23 rpm. For increased radial load capacity and long life, gearheads are unvented with needle bearings for the intermediate gear stages and large ball bearings on the output shaft.

Additional features include selectively hardened helical and spur gearing for quietness and high output-to-size ratios. A variety of built-to-order shaft options including single, double or hollow shaft configurations are available. Hollow shaft units can be connected directly to the driven load. In addition, the gearmotors can be face-mounted from either side for maximum flexibility in mounting configurations. ■

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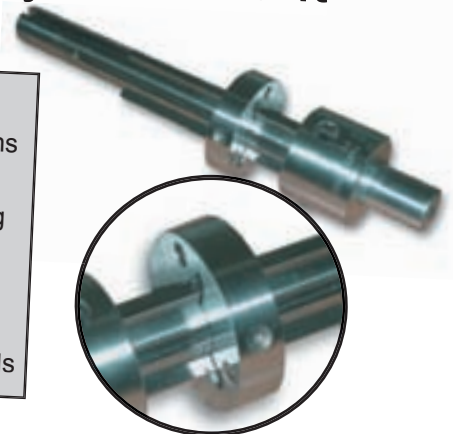
2 new products from LeCOUNT!!

LeCOUNT's new adjustable PartLocator lets you locate your part exactly where you need it

In response to customer need for a repeatable work piece locator, LeCOUNT introduces its new PartLocator (patent pending). Without sacrificing any of the mounting ease or size range of the LeCOUNT Mandrel, the PartLocator allows easy set up and consistent part location for inspection and grinding operations.

Features and Benefits:

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- Available with most LeCOUNT Mandrels

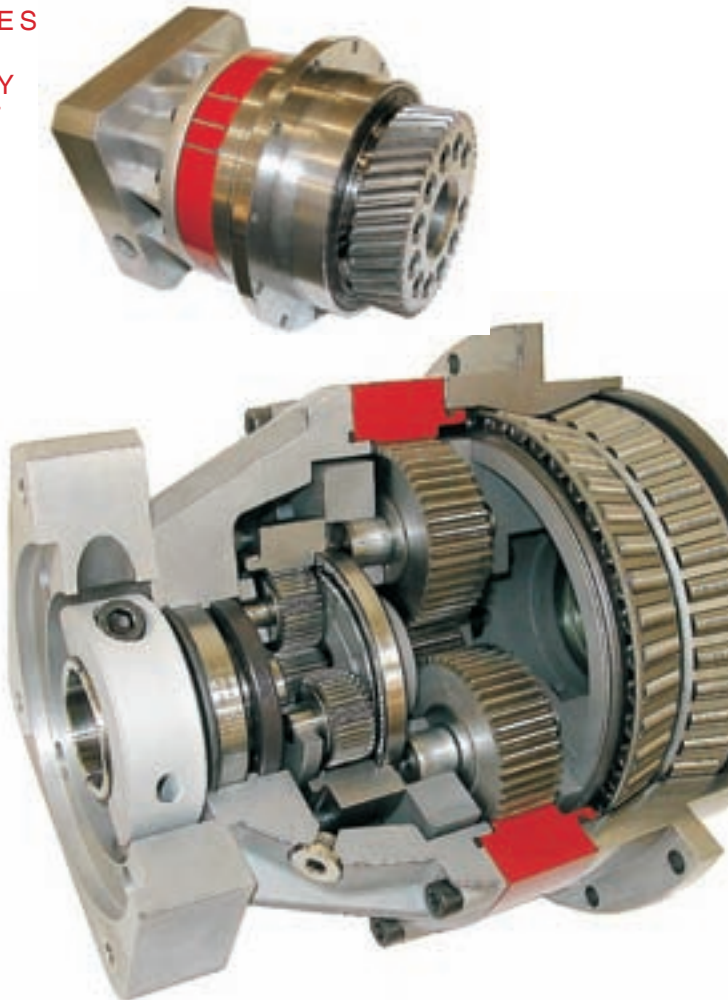


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Güdel

INTRODUCES
NEW
PLANETARY
GEAR UNIT



The new planetary gear unit from Güdel supplies solutions for power trains requiring high dynamics.

The power train and integrated pinion aim to save weight and space. Integrated high performance taper roller bearings are positioned close to the drive range and provide a service life two to three times longer than other planetary gears, according to the company's press release. Bearings also provide high tilting and radial stiffness.

The motor assembly is designed to work with a range of motors on the market, and a two-stage differential drive gear results in lower inertia and a compact design. Torque levels from 250–6,000

Nm offer the option of adding high performance bevel gear drives.

In addition, all four faces are precisely ground so multiple mounting options are available. Teeth are individually deburred as well. This planetary gear unit will be available in November 2005. ■

Visit Güdel at Gear Expo Booth #746.

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