

Samputensili's Master Gears

PERSONALIZED
TO CUSTOMER/DIN
SPECIFICATIONS

Samputensili has introduced a range of master gears used to determine work gear accuracy and setting masters to adjust checking equipment.

According to the company's press release, the Samputensili software and manufacturing methods deliver products to customer specifications or DIN standards. Master gears allow checking of internal or external spur and helical gears with or without profile corrections.

When checking parts, the master gear flank rotates in contact with the work gear teeth and primarily checks meshing, center distance and runout, detecting any nicks. Setting masters, conversely, are usually static. Two master gears for different applications and consequently of different design can check the same workpiece correctly. The company's production range includes master gears from module 1 to module 6 with outside diameters from 40–300 mm, tooth face widths from 4–100 mm and helix angles from 0–45°.

All master gears are produced in high speed steel or bearing steel without surface coating, depending on customer specifications. The company says it mainly uses powder metals, high speed steels ASP23 and ASP30. ■

For more information:

Samputensili S.p.A.
c/o Star SU LLC
5200 Prairie Stone Pkwy., Ste. 100
Hoffman Estates, IL 60192
Phone: (847) 649-1450
E-mail: sales@star-su.com
Internet: www.star-su.com

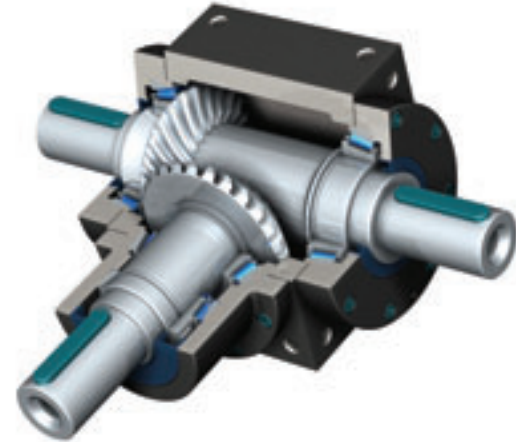
Neeter Drive Gearboxes

TRANSMIT POWER UP
TO 6,600 N-M

The PowerGear range of bevel gearboxes from Neeter Drives is available in sizes 360 and 450 with an extended transmission range of 3,750 N-m for the 360 and 6,600 N-m for the 450.

Neeter Drive says these sizes extend the PowerGear range's torque capacity by a further 3,400 N-m. This is complemented by uniform load distribution on the gear teeth that is set by optimizing the contact pattern during assembly. Both gearboxes are available with six gear ratios up to 5:1 as standard, and each design has solid and hollow shaft variants up to four-way shaft configuration.

According to the company, other advantages include a 98% industrial efficiency rating, a compact and rigid design, fretting-free torque transfer



using a friction locked fit between shaft and bevel gear, and a lifetime lubrication guarantee.

Typical applications are angular torque transfer and torque distribution in single- or multiple-shaft configurations as well as in non-stationary applications where weight is a consideration. ■

For more information:

Neeter Drive
Power Jacks Group
Maconochie Rd., Fraserburgh
Scotland, U.K.
Phone: +(44) 1346-513-131
E-mail: sales@powerjacks.com
Internet: www.powerjacks.com

UTS

ENHANCES
INTEGRATED GEAR
SOFTWARE PACKAGE

Universal Technical Systems released a new upgrade for its Integrated Gear Software product line for greater ease of use.

According to the company's press release, a new built-in DXF converter allows users to bring coordinates from IGS into a CAD system for 2-D or 3-D use. Other new features include the addition of the Ticona M15HP high performance engineering plastic

material and further animation of gear rotation through the length of the active profile.

UTS says a new range analysis capability offers improved "what-if" analysis in less time. The new software quickly generates a table of results to help users arrive at the optimum design solution more quickly. The new range analysis facility is available in 80+ programs in IGS. ■

For more information:

Universal Technical Systems
202 W. State St., Ste. 700
Rockford, IL 61101
Phone: (800) 435-7887
E-mail: sales@uts.com
Internet: www.uts.com

Alpha Gear's Newest Software

SIMPLIFIES SELECTING GEAR REDUCERS

The Cymex calculation software from alpha gear drives Inc. uses a database of company products and 6,000 motors from various manufacturers.

According to the company's press release, users simply enter their application data, and the software will immediately calculate the most appropriate drive train. Users can experiment with different load cases, varying the parameters and testing the preferred drive systems in detail. The software then compiles comprehensive technical documentation.

Beyond the basic Cymex 3.0 Design Edition package, the Cymex 3.0 Motion Edition allows users to lay out a complete drive system with a mouse click. In the Motion edition, belt, volume, spindle, turntable and rack-and-pinion drives are pre-defined as standard applications.

Additionally, arbitrary general load cases can be computed. Along the drive system, it is possible to output data at every one of the six dial gages (torque, number of revolutions, mass-moment of inertia, translations, etc.) to optimize the drive. ■

For more information:

alpha gear drives Inc.
1249 Humbracht Circle
Bartlett, IL 60103
Phone: (630) 540-5341
Internet: www.alphagear.com

Zero-Max's Linear Actuators

CONVERT ROTARY MOTION INTO PRECISE LINEAR MOTION



The Roh'lix linear actuators from Zero-Max convert rotary motion to linear travel and carry loads at speeds up to 70" per second, depending on size. They are designed for positioning operations in different types of machinery and are an alternative to ball screws.

The actuators are built to handle thrust rated between 5–200 lbs., and loads can be attached to the Roh'lix carrier block using two cap screws. The product's thrust capacity is adjustable, so the system will disengage if the present thrust is exceeded, providing overload protection if an obstruction is encountered.

The linear actuators consist of three replaceable precision ball bearings at each end of a two-piece aluminum carrier block. Mounted at an angle to the drive axis, the six bearings convert drive shaft rotation into proportional linear travel. With a minimum of 90% efficiency, the actuators can normally provide up to 100 million inches of linear travel. The movable Roh'lix carrier block travels on a smooth, threadless, hardened RC 58 shaft that requires no lubrication, Zero-Max says in its press release. ■

For more information:

Zero-Max
13200 6th Ave. N.
Plymouth, MN 55441
Phone: (763) 546-4300
E-mail: zero-max@zero-max.com
Internet: www.zero-max.com

PCB Piezotronics'

NEW ROTARY TORQUE SENSOR SYSTEM ASSESSES AUTOMOTIVE DRIVELINES

The rotary torque sensor system from the Force/Torque Division of PCB Piezotronics is designed for automotive driveline and power train dynamometers and other torque measurement applications requiring a robust torque transducer.

The Torkdisk features a telemetry system consisting of an on-board electronic module that converts torque signals into a high-speed 16-bit digital output. According to the company's press release, styles are available that use a non-contact, maintenance-free design that eliminates the need for replacing worn brushes, as is the case with conventional slip-ring type rotating torque sensors.



Applications include dynamometer testing of gasoline and diesel engines, transmissions, transfer cases, differentials and drive shafts. Additional applications include torque studies on pumps, fans and electric motors. Rotary torque sensors are offered in capacities from 0.35 N-m to 25.4 kN-m full scale and maximum speeds to 15,000 rpm. ■

For more information:

PCB Piezotronics Inc.
Force/Torque Division
3425 Walden Ave.
Depew, NY 14043
Phone: (888) 684-0004
E-mail: force@pcb.com
Internet: www.pcb.com

Bison Gear

INTRODUCES LINE OF AC MOTORS



Bison Gear & Engineering introduced a new line of custom AC motors manufactured in its St. Charles, IL, facility.

Motors will be available in the 34 and 49 frame. The 34 frame (3.3" OD) will have a power range of 1/80 hp (10 W) to 1/10 hp (75 W) with a 1/2" standard shaft diameter. The 49 frame (4.9" OD) will have a power range of 1/10 hp (75

W) to ¼ hp (185 W) and will have a 1/2" standard shaft diameter. The motors will be available as PSC, split phase, three-phase and three-phase inverter style. Winding configurations are available as well. The company says its U.S. manufacturing location allows it to offer short lead times. ■

For more information:

Bison Gear & Engineering
3850 Ohio Ave.
St. Charles, IL 60174
Phone: (630) 377-6777
Internet: www.bisongear.com

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Haas Automation's

MACHINING CENTER UTILIZES IN-LINE, DIRECT DRIVE SYSTEM

The VF-6SS from Haas Automation is a high performance vertical machining center designed for high volume production and work necessitating high speed and short cycle times.

The machining center comes standard with a 12,000 rpm inline direct-drive spindle, ultra-fast tool changer and high-speed rapids. It also is equipped with a 40-taper spindle that uses an inline, direct-drive system to couple the motor directly to the spindle. According to the company's press release, this yields less vibration, heat and noise than other drive systems, providing improved surface



finishes, extreme thermal stability and quieter operation. The spindle's 30-hp vector dual-drive system provides low-end torque and the required speed for high-speed machining operations.

Additional features include a high speed, 24 pocket side-mount tool changer that swaps tools in 1.6 seconds. To further reduce cycle and non-machining time, high pitch ball screws and high torque servo motors for rapids of 1,200 ipm on the Y and Z axes and 900 ipm on

the X axis are provided. More standard features include an automatic chip auger system, programmable coolant nozzle, floppy disk drive, 1 MB of program memory, Visual Quick Code programming and a remote jog handle. ■

For more information:
Haas Automation
2800 Sturgis Rd.
Oxnard, CA 93030
Phone: (805) 278-1800
Internet: www.HaasCNC.com

Mitutoyo's CMM

INCORPORATES RECENT TECHNOLOGIES

The Legex 574 CNC coordinate measuring machine from Mitutoyo America combines state-of-the-art design, electronics, computing, sensors



and materials to offer improved performance.

According to the company's press release, accuracy of $MPE_E = (0.35 + L/1000) \mu\text{m}$, a measuring range of X: 510 mm, Y: 710 mm and Z: 455 mm and a worktable loading capacity of 200 kgf make the machine suitable for a diverse range of applications.

The Legex is driven by MCOSMOS (Mitutoyo Controlled Open System for Modular Operation Support) software with modules supporting numerous CAD formats while providing in-line measurement, data feedback and process management

In addition, the machine uses spheroidal graphite ductile cast iron for the chassis and air-damped spring isolators in order to attenuate vibration. A FEM (Finite

Element Modeling) analysis optimizes its configuration to ensure geometric accuracy by minimizing the deformations caused by normal machine operation. Thermally stable components and real-time temperature compensation maintain accuracy when operating under temperatures from 64.4°–71° F. Available probes include contacting scanning as well as laser and vision. ■

For more information:
Mitutoyo America Corp.
965 Corporate Blvd.
Aurora, IL 60504
Phone: (630) 978-5385
E-mail: info@mitutoyo.com
Internet: www.mitutoyo.com

Mori Seiki's

HIGH EFFICIENCY SHAFT MACHINE ONE-THIRD THE SIZE OF PREVIOUS MODELS

Mori Seiki released the NZ-S1500 2-turret shaft lathe for shaft machining.

Workpieces that can be machined are restricted to those with a maximum machining diameter of $\phi 120$ mm and a standard machining diameter of $\phi 60 \sim 20$ mm. According to the company's press release, the size of this shaft machine was reduced to one-third of that of the previous model. A symmetrical construction in which two turrets are aligned with the spindle, which is mounted on the vertical bed, is used. The machine's 1,500 mm height allows for easier chip discharging as well as great visibility.

Other features include a vertical protector that prohibits chip accumulation, three-point support construction, and a high speed loader with rotary hand function. ■

For more information:

Mori Seiki Co. Ltd.
2-35-16 Meieki, Nakamura-ku
Nagoya City 450-0002
Japan
Internet: www.moriseiki.com



Baldor's Motors

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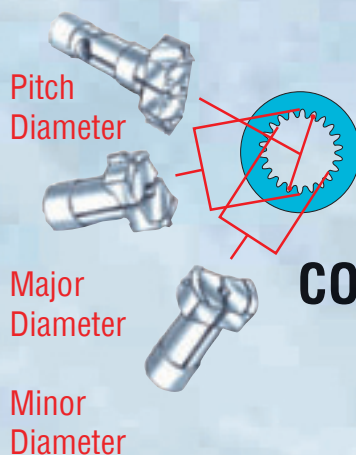
Baldor Electric Co. offers low inertia, high efficiency, high cycle brake motors

with cast aluminum footless frames for increased thermal dissipation.

According to the company's press release, a DC brake with integral rectifier provides faster action than traditional spring-set brakes, and the motors feature a low inertia design best suited

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for continuous start/stop applications. A die cast aluminum frame aids in heat dissipation. The brake coil is powered by an integral rectifier connected in the motor conduit box so it may be separately connected if the motor is used with an inverter.

Baldor brakes are available in 1/2-2 horsepower for applications including baggage conveyors and any other applications requiring frequent stopping.

For more information:

Baldor Electric Co.
5711 R.S. Boreham, Jr. St.
P.O. Box 2400
Fort Smith, AR 72901
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Fax: (479) 648-5792
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Parker Bayside

COMBINES SERVO MOTOR
AND HELICAL PLANETARY
GEARHEAD

Each gearmotor in the Stealth line from Parker Bayside is a brushless servo motor and a helical planetary gearhead integrated into a single product.

According to the company's press release, the motor magnets are attached directly to the input gear shaft, eliminating the extra couplings, shafts and bearings normally required. The servo gearmotor simplifies installation by eliminating potential configuration and assembly problems associated with conventional separate motor/gear packages. Available as both in-line and right-angle units with operations for metric/NEMA configurations and special output shafts, flanges and/or windings, the gearmotor can save space. Units are available with 160 VDC or 300 VDC windings and ratios from 5:1



to 100:1 for a variety of speed and torque ranges. Encoders, resolvers and brakes are offered as standard options without increasing the overall unit size. ■

For more information:

Parker Bayside
5500 Business Park Dr.
Rohnert Park, CA 94928
Phone: (707) 584-7558
Internet: www.parkermotion.com

For more information:

alpha gear drives Inc.
1249 Humbracht Circle
Bartlett, IL 60103
Phone: (630) 540-5341
E-mail: mbilstein@alphagear.com
Internet: www.alphagear.com

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**Robin Wright,
Assistant Editor
Gear Technology
1425 Lunt Ave.
Elk Grove Village, IL 60007
robin@geartechnology.com**

Alpha Gear

INTRODUCES ECONOMY LINE OF GEARHEADS



The LP+/LPB+ value line of gearheads from alpha gear drives Inc. offer efficiency with low torsional backlash for less demanding applications.

According to the company's press release, the gearheads are maintenance-free for their entire service life due to a unique lubrication concept.

The LPB+ offers the option of adding an integrated geared pulley drive system. The belt pulley eliminates the need for a right-angle gearbox, couplings and/or additional bearings.

The company says the gear reducers achieve a 95% efficiency at full load. The two-stage reducer restricts torsional backlash to 10 arc-minutes while the single-stage version operates at less than eight arc-minutes. ■

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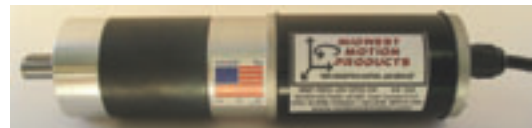
The Model MMP-TM55-12V GP52-308 gearmotor from Midwest Motion accepts any 12-volt DC source including battery power and measures 2.14" in diameter by 7.75" long and has a keyed output shaft of 12 mm diameter by 25 mm long.

According to the company's press release, easier mounting is possible with four face mount M5 threaded holes, equally spaced on a 40 mm diameter bolt circle. The gearmotor's output is rated for 35 N-m continuous torque at 15 rpm and 70 N-m peak. The motor's design requires 7.2 amperes at 12 volts DC to generate its full load output torque. Optional 24- and 36-volt windings are available. The design is rated at IP-54 protection level for operation in harsh environments.

Typical options available include servo motors with integral optical encoders, failsafe brakes, analog tachometers and planetary gearheads with ratios from 3:1 to 450:1 and standard or low backlash precision gearing. ■

For more information:

Midwest Motion Products
10761 Ahern Ave. SE
Watertown, MN 55388
Phone: (952) 955-2626
E-mail: randy@midwestmotion.com
Internet: www.midwestmotion.com



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United Grinding's

NEWEST MACHINE TURNS AND GRINDS SHAFTS AND CHUCKED WORKPIECES

The Studer S242 from United Grinding is designed for the hard turning and grinding of high-precision applications for both shaft and chucked workpieces such as gear shafts, camshafts, turbocharger shafts and tool holders.

According to the company's press release, a part can be fully machined with a single clamping, reducing machining time, idle time and logistics costs (fixturing and refixturing from one machine to another). Modular design for quick setup and changeover, state-of-the-art digital control and drive systems and step-by-step programming are designed for flexibility. Swing diameter is 185 mm and between-centers grinding length is 400 mm, with an 800 mm version coming late in 2006. Depending on the application, parts up to 1,000 mm can be machined, and the maximum workpiece weight is 25 kg.

A rigid longitudinal slide with two independently-controlled cross slides for the tool holders ensure short travels for combined machining and the flexible use of numerous tools. The left cross slide holds the wheel head while the rotating tool turret with eight tool positions—with an optional four driven tools for milling and drilling—is fitted to the right-hand cross slide. Highly dynamic axis drives with pre-tensioned linear guideways and linear measuring systems for in-process length positioning, length and diameter guarantee higher precision.

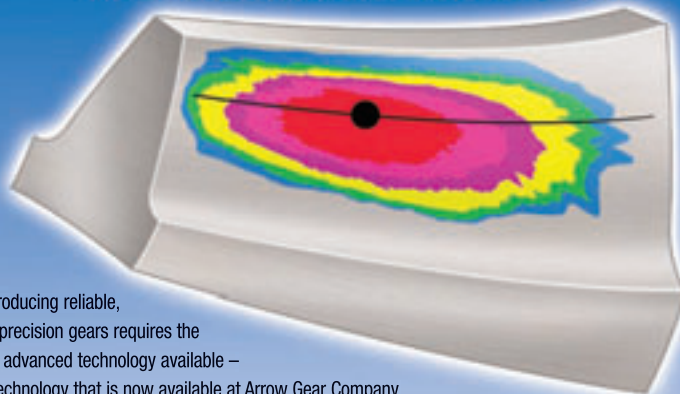
The Grantitan® S103 mineral inclined-bed machine base meets machine accessibility requirements, optimum chip discharge into the chip conveyor, effective vibration dampening and high thermal stability. ■

For more information:

United Grinding
510 Earl Blvd.
Miamisburg, OH 45342
Phone: (937) 859-1975
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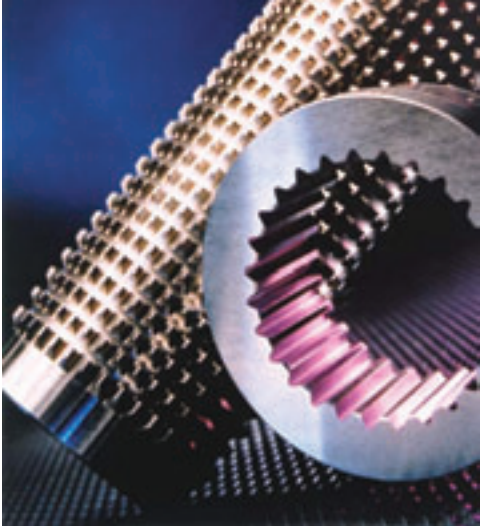
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