

Dynamic Performance

PTE Examines Gearmotor and Gear Drive Technology

Matthew Jaster, Senior Editor

The following is a compilation of product highlights for gear drives and gear motors. Some are new, some are old, but they all offer significant performance advantages in areas like construction, packaging, food and beverage, robotics, automation and more.

Regal Beloit

OFFERS HUB CITY HERA GEAR DRIVES

Hub City stainless steel (SS) HERA gear drives are rated IP69K, built for sanitary operation, and have easy cleanability and polished stainless-steel housings. SS HERA gear drives are 90% efficient—up to 40% more efficient than standard worm gearing—and each size is dimensionally interchangeable, for up to four sizes of worm drives for inventory consolidation and reduction. Now, with the addition of two larger stainless-steel models, the SSSHERA55 and SSSHERA75 (with torque capacity up to 8,500 in-lb), the four models in this product suite can replace up to 12 sizes of worm speed reducers. In addition to the dual lip seals specifically configured for severe high-pressure, high-temperature and chemical washdown requirements, HERA gear drives are HACCP compatible, BISSC certified and USDA accepted.

Because these gear drives use helical and hypoid gear technologies, not only do they provide up to twice the output torque capacity of standard comparable worm speed reducers, they are also a viable and economical replacement for other types of right-angle gear technologies in the marketplace, such as helical-worm or helical-bevel gear drives. Helical-hypoid gearing lasts longer than worm gearing due to cooler operating temperatures and rolling action (instead of sliding friction) can provide longer gearbox life and reduced downtime in time-critical industry applications.

The Hub City SS HERA gear drive product suite also features a new split stainless-steel output cover for the HUBLOC keyless bushing system. This bolt-on cover design features a smooth profile and provides knockouts for shaft extensions. The HUBLOC keyless bushing system provides a positive fret-free connection to driven equipment that is easy to install



Hub City SS HERA gear drives provide twice the output torque capacity of standard worm speed reducers.

and remove.

The Hub City SS HERA gear drive is part of a suite of IP69K-rated products from Regal.

For more information:

Regal Beloit Corporation
Phone: (630) 364-8800
regalbeloit.com/IP69K

Atlanta Drive Systems

OFFERS RACK AND PINION, LINEAR ACTUATOR AND SMART TECHNOLOGIES

Rack & Pinion Drive Systems

Atlanta Drive Systems offers a complete range of standard rack and pinion drive systems, which are available in five levels of precision, including ultra-high precision zero backlash axis drives. They are perfect for a wide range of applications, including axis drives requiring precise positioning and repeatability, traveling gantries and columns, pick and place robots, CNC routers and material handling systems. Heavy loads and duty cycles can also be easily handled with these drives. Industries served include material handling, automation, aerospace, woodworking, machine tool and robotics.

This range of drive systems utilizes Atlanta's wide range of rack and pinions, consisting of both helical and straight (spur) tooth versions, in an assortment of sizes, materials and quality levels. Rack quality levels include soft, induction-hardened, quenched and tempered and hardened and ground (DIN 3 to DIN 10, AGMA 8 to 12+).

Typical delivery time for these systems is only 2 to 3 weeks—ideal for OEM's requiring just-in-time delivery schedules. Special and/or modified designs are always possible.

Industry 4.0 Developments

Atlanta is integrating Industry 4.0 into its rack and pinion and servo reducer products. All racks are measured for pitch deviation, individually marked and logged in the cloud. Using an app, customers can scan a rack and look up the production and product information. It would be possible to order an exact replacement of the rack with the same tolerances.

Customers can use this information to optimally mount racks to achieve an overall pitch deviation near zero. The customer can scan a series of racks and then the app would tell them in what order to mount them to achieve zero pitch error.

For gearboxes, the motor flanges are fitted with sensors to measure temperature, vibration, speed and displacement. This helps monitor the gearbox and motor to insure they are working properly.

For more information:

Atlanta Drive Systems
 Phone: (800) 505-1715
www.atlantadrives.com

Bonfiglioli

IMPROVES PERFORMANCE AND EFFICIENCY IN EXCAVATOR AND AGV APPLICATIONS

Bonfiglioli offers a complete drive solution for 2-3 ton mini-excavators. This fully electric alternative to the conventional axial piston hydraulic unit reduces noise levels and CO₂ emissions.

The complete electric powertrain dramatically improves the efficiency of the machine and extends the maintenance interval providing a significant reduction of the total cost of ownership. While the gear units benefit from over 65 years of experience by Bonfiglioli in the field of conventional hydraulic applications, the electric motors have been specifically designed and developed to match the demanding requirements of the market in terms of energy efficiency, compact dimensions and high power density.

In the area of Automated Guided Vehicles (AGVs), Bonfiglioli gearboxes meet the necessary requirements.

AGV applications are designed to transport, stack, store and retrieve heavy loads on a continuous basis, requiring high levels of resistance and reliability. Bonfiglioli Planetary Gearboxes provides an optimal solution for AGV applications in terms of high load capacity (the reinforced bearing option for extremely high radial load ensures the support of the weight of the vehicle and of the payload), high energy efficiency (the minimized energy dispersion ensured by the PPGs optimizes the use of the AGV battery for longer operation), compactness, compatible with various motor types and customizable. **PTE**

For more information:

Bonfiglioli
 Phone: (859) 334-3333
www.bonfiglioli.com



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