

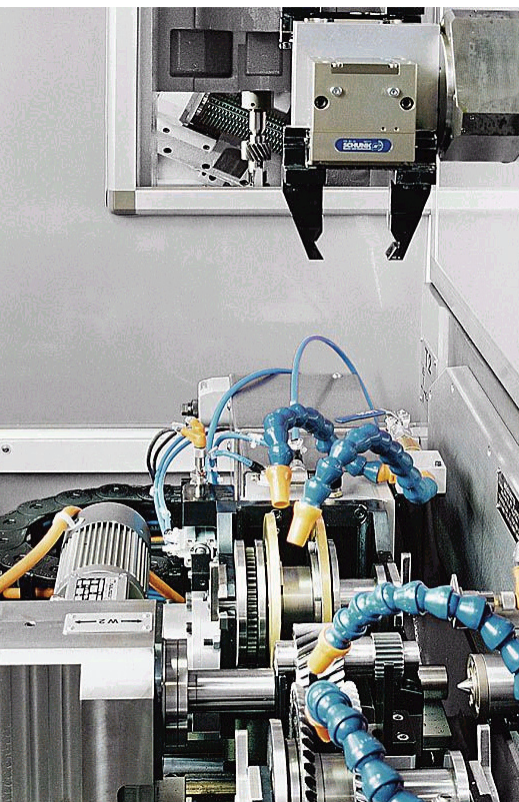
Samputensili

LAUNCHES COMBINED MACHINE TOOL LINE

Samputensili introduced the S 150-400 CDM Series, a new range of combined machine tools that integrate hobbing, chamfering and deburring technology into a single machine tool solution.

According to the company's press release, the series was designed to minimize space requirements and perform all roughing operations on gears and shafts. Hobbing, chamfering and deburring can be performed dry or wet with guaranteed process reliability and flexibility.

The series integrates multiple processes on a single machine and meets the needs of automotive customers. New software solutions enable each operation to be managed autonomously. Each process can be actuated independently.



The series consists of four machine models (S 150 CDM, S 200 CDM, S 300 CDM and S 400 CDM), which hob workpieces with maximum diameters from 150–400 mm and chamfer and deburr workpieces up to a maximum diameter of 250 mm.

High-speed rotation and linear acceleration enable the machine to realize faster cycle times. It may be placed on the existing production line and upgraded to conform with future cutting tool developments. The hobbing machine is engineered with a gray cast iron base to optimize vibration damping and has an integrated cooling unit. Work areas are designed with smooth, steep surfaces to facilitate chip evacuation when dry machining.

The chamfering/deburring unit used is a modular solution that comprises an electrowelded steel structure with two slideways that command two tool spindle heads. A chamfering tool group and deburring tool group are generally mounted on these heads, although it's also possible to use a chamfer-roller group for applications where uniform chamfering and optimal removal of residual material is required and a deburring group for the removal of hobbing burrs.

The S 200 CDM can be integrated into various production lines. The portal loader is made of aluminum and the reduced weight of the moving masses equates to an ability to withstand sudden acceleration while guaranteeing fast workpiece change. During hobbing, the loader remains outside the work area, where it's sheltered from dust. The loading/unloading system is engineered with rotating grippers that correctly position the workpiece axis for the specific machining phase at hand. A Siemens 840D control unit supervises all machine operations and can be integrated into customers' operating systems. ■

For more information:

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BRECOflex's

TIMING BELTS IMPROVE PITCH STABILITY

The new timing belts from BRECOflex Co. include a bifilar tension member arrangement.

According to the company's press release, the belt concept is a significant advancement in tension member placement.

The design represents tension members set up with "S" (left hand lay) and "Z" (right hand lay). Tension members alternate to prevent the formation of lateral forces, balancing the timing belts for true tracking. Bifilar technology eliminates friction forces significantly, leading to improved positioning accuracy in belt drives, according to the company's press release.

Bifilar technology can also improve pitch stability by minimizing the deviation of timing belt materials. ■

For more information:

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Methods Machine Tools'

TURNING CENTER COMBINES TURNING AND MILLING CAPABILITIES

The Super NTJX multitasking turning center from Nakamura-Tome helps eliminate lost productivity due to tool changes.

With Y axes on both the upper and lower turrets, the machine is designed for parts with angular faces, and its long upper Y axis accommodates larger parts. It has milling/drilling capability (including Y-axis machining) on both upper and lower turrets and a B-axis tool spindle with 40-station ATC. With more than 12 left/right-top/bottom-milling/turning combinations, the NTJX permits 100% stock-on conditions and allows flexibility to optimize process machining and minimize part cycle times, according to the company's press release.

A maximum of 34.9/24.8 hp is available for synchronized shaft/work turning with two spindle motors. The NTJX has a maximum turning diameter of 9.65", a maximum turning length of 42.91" and a bar capacity of 2". Machining may be performed using the upper B-axis spindle or lower turret tools. With a Y-axis stroke of 5.5" and a B-axis positioning range of 230°, the 10/5 hp and 8,000 rpm spindle is designed for larger parts. A 40-station servo driven ATC provides 1.3-second tool change (tool-to-tool). The 7.4/5 hp and 6,000 rpm driven lower turret accommodates 12 rotating or 24 fixed tools and has a Y-axis stroke of 2.75".

Additional features include a Fanuc 31iA CNC control with nanometer resolution for smooth movement and improved accuracy. ■

For more information:

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Romax Technology

DEVELOPS SOFTWARE LINE

Romax Technology Ltd. launched the Romax Designer R12.3 for transmission and driveline design and development teams.

According to the company's press release, the new software modeling tool allows engineering teams to design and test systems before they leave the computer screen, negating the need for physical testing and allowing multiple virtual product tests to be conducted accurately.

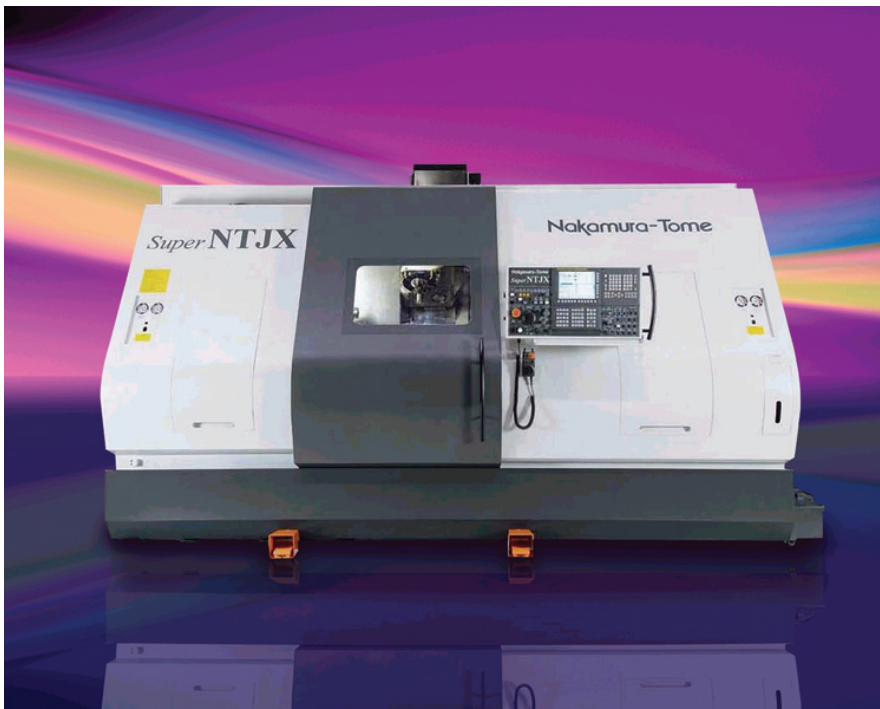
The package includes new features and upgrades to improve flexibility for teams. It increases design control by incorporating analysis into the first stages of the design process while simultaneously boasting greater connectivity with Abaqus and ANSYS packages to help the flow of data.

The package has also been localized to offer both English and Chinese language options and allow users to work within various international gear and bearings standards.

Romax Technology offers software and consulting services for the global transmission industry. ■

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Andantex

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INTEGRATED MACHINE
SUB-ASSEMBLY



The SRP servo reducer from Andantex achieves added versatility as an integrated machine sub-assembly due to its robust output bearing design.

According to the company's press release, the SRP combines a precision gear train with high capacity tapered roller bearings supporting an ISO 9409 output flange to provide superior radial and torsional stiffness, minimum backlash and torque density required to take on precision motion control tasks.

With eight different ratios from 5:1 through 91:1 and five sizes, the SRP serves as a modular solution for numerous precision applications. Torque capacity up to 4,400 lb.-ft. permits high acceleration rates. Input options include in-line or right-angle servo motor flange mounting for many servo motors. ■

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PROCESS EQUIPMENT COMPANY

Edgetek's

MACHINES DECREASE CYCLE TIME FOR SINTERED PARTS

Edgetek's superabrasive machining technology reduces cycle times for producing automotive parts manufactured from sintered metals and simultaneously producing a larger number of components between tool changes.

According to the company's press release, sintered metals are utilized more frequently due to the requirements for vehicles to go longer intervals between services. As a result, there is a move away from engine drive technology based on rubber belts and pulleys to chain drives, sprockets and gears. The technology can

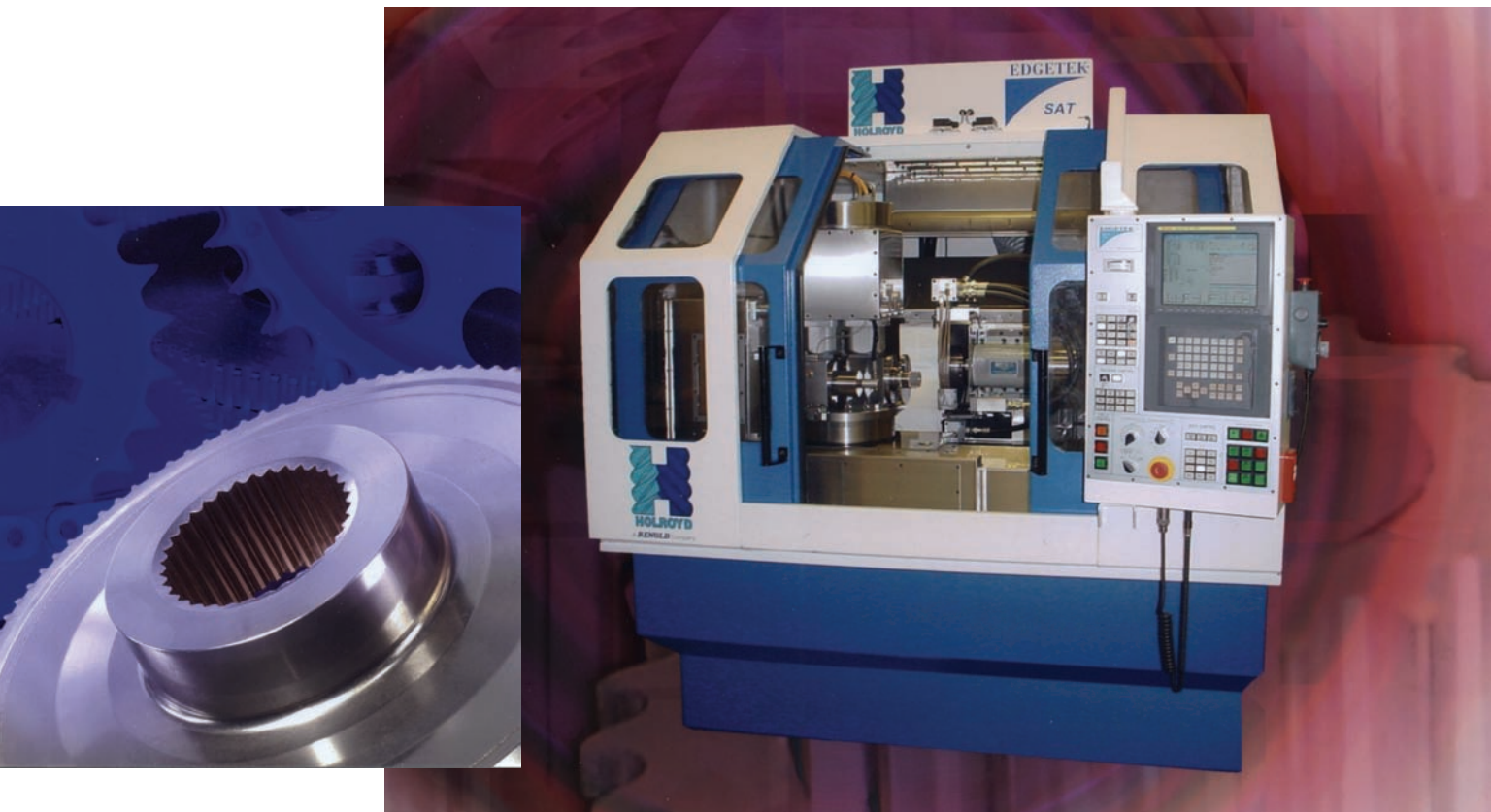
be tailored to suit various requirements. Materials that have undergone the sintering process have traditionally been difficult to machine and unsuitable for conventional turning. The high efficiency deep grinding techniques provided by the Edgetek machines have enabled automotive manufacturers to machine powdered metal timing sprockets and reduce tooling costs by 75% as a result of the Edgetek's ability to perform uninterrupted cuts, says Holroyd.

The Edgetek machines are used in the manufacture of rotors and impellers,

medical instruments, hand tools, airframe actuation components and more. These components are often manufactured from difficult-to-machine materials including ceramics, nickel, tool steel, waspalloy, hastelloy and stellite. ■

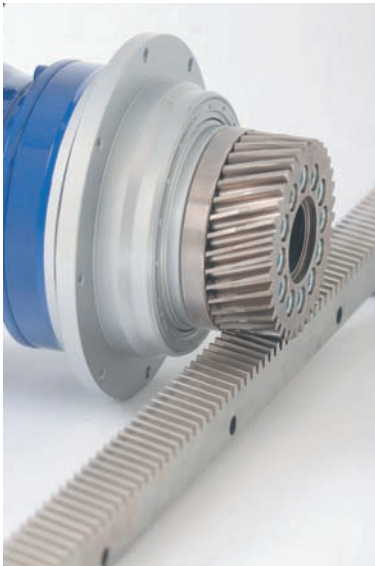
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Alpha Gear Drive's

LINEAR ACTUATOR
DEVELOPED FOR
MACHINE TOOLS



The alpha actuator system from alpha gear drives Inc. is based on a combination of several elements, including production and test engineering for rack-and-pinion units, a servo motor and transmission technology, and calculation of the complete system in tandem with the type of connection between various system elements.

The system consists of a high-precision rack-and-pinion unit (positioning accuracy is less than 12 microns) and a rotary actuator, which moves the load on this unit. The system was developed for high-end machine building application. Compared to conventional ball screw technology, the actuator system allows five times faster speed and up to three times better positioning accuracy with no increase in machinery room volume, according to the company's press release. A constant, high rigidity is assured over the complete travel distance. ■

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