

Media Contacts:

Pattea Carpenter
303-447-1130 ext. 113
patteac@kapp-usa.com

Janet Braccio
303-447-7163
jbraccio@BellaVoceCommunications.com

New KAPP KX 500 FLEX Gear Center offers flexibility of generating and profile grinding, or combination of both methods, on a dual workpiece table

KAPP offers flexible dressing solutions on a shared modular platform with rotary table

BOULDER, Colo., (September 14, 2007) — The KAPP Group has introduced the KX 500 FLEX Gear Center, an efficient and economic machine built on a shared modular platform, offering application-specific production solutions that can be configured using process technologies such as continuous generating grinding, discontinuous profile grinding, or a combination of both methods.

The KX 500 FLEX Gear Center grinds external spur and helical gears of modules up to 10 mm (0.4 in) with an outside diameter of maximum 500 mm (19.7 in) and a gear width of up to 520 mm (20.5 in). The machine offers the diverse tooling concepts of dressable ceramic tools for prototype machining and grinding of medium- to high-volume series, and non-dressable tools for manufacturing medium- and high-volume series. It also grinds more challenging gear geometry by using smaller tools.

The KX 500 FLEX design features a rotating circular table that incorporates the tail stock support. The profile dressing unit is rotated into dressing position at the work spindle by the circular table and is flexible enough to use either conventional dressable worms or profile grinding wheels. The unit also accommodates a single or twin spindle dresser. Depending on the applied dresser, different technologies can be used for the dressing process.

The position of the workpiece spindle on the rotary table makes it possible for the KX 500 FLEX to be conveniently loaded by hand or by an automatic unit. For hand loading, the table swivels the part to the operator's door. For automatic loading, it is shifted laterally 90 degrees. A detailed configuration is created for each specific application. Automation options include a standardized combination of pallet conveyer and gantry loader, or a robot system.

The KX 500 FLEX uses a Siemens Sinumerik 840 D control system. The control system works in conjunction with a Windows XP-based operator interface, designed by KAPP, making this machine easy to operate. A total of eight NC-axes perform the linear and rotary motions necessary for the machining process. The circuit table and tail stock are used as NC-axes, too. The part and tool are directly driven.

There is an optional measuring unit for measuring gear profile plus gear or tooth size over span. Combined with the KAPP custom interface, set-up times are diminished. Additionally, a sample inspection of the gear quality can be sequenced to occur periodically during normal production runs.

Visit KAPP booth #244 at Gear Expo in Detroit, Michigan, October 7 to 10, for a video presentation on the KX 500 FLEX Gear Center and where the KAPP KX300 P machine with automation will be on display and NILES will show new progressive machining options.

About the KAPP Group

The KAPP Group offers innovative technology and systems for precision finishing of gears and profiles. KAPP products are present in the automotive, aerospace, construction and compressor industries. NILES products, with their larger application options, can be found in industry segments such as wind energy, railroad engineering, and mining. The KAPP Group operates six locations world wide, with more than 750 employees. Intensive research and development, state-of-the-art engineering and production, as well as an integrated manufacturing package of machines, tools, processes, and support, the KAPP Group offers innovative solutions for the complex challenges of today's manufacturing world.

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