

ANCA Launches the New GCX Linear to Meet the Needs of a Growing Skiving Cutter Market

Tailored to finish all operations for skiving cutters and shaper cutters in a single setup, the GCX Linear offers a comprehensive gear cutting tool package

October 10, 2019: The new GCX Linear builds on the best aspects of ANCA's proven technology to offer a purpose-built solution for manufacturing and sharpening skiving cutters. With a five axis CNC grinder powered by LinX linear motor technology on X, Y and Z axes, the GCX Linear also comes with features specially designed for skiving cutters and shaper cutters.

Century old invention finally realising its full potential – ANCA enters the skiving market

Xiaoyu Wang, Product Manager at ANCA said: "ANCA is responding to the increasing popularity of skiving and resulting surge in demand for skiving cutters. We want our customers to have a complete solution for manufacturing and sharpening skiving cutters and the GCX Linear will set the new benchmark for skiving cutter grinding."

"Dressing the complex wheel profile is critical, ANCA developed the latest acoustic emission monitoring system (AEMS). AEMS can be taught to pick up the right sound of perfect dressing even in a noisy production environment. Built upon supervised machine learning algorithm, AEMS ensures the wheel profile is dressed within micron accuracy with the least possible time while minimising the reduction in size."

Tailored features and industry firsts of ANCA's new GCX Linear

- Motor temperature control (patent pending), minimises machine warmup time, and delivers optimal thermal stability during grinding.
- Full process virtualisation on design station before grinding: Design, Optimise, 3D Simulation, MRR Estimation and more.
- In-process dressing with acoustic emission monitoring system (AEMS) and supervised machine learning algorithm.
- Dedicated gear cutting tool software package.
- Five axis CNC grinder, with LinX linear motor technology on X, Y and Z axes.
- 37kW (49HP) peak power direct drive spindle with BigPlus arbor.
- High accuracy headstock offers greatly improved index positional accuracy.

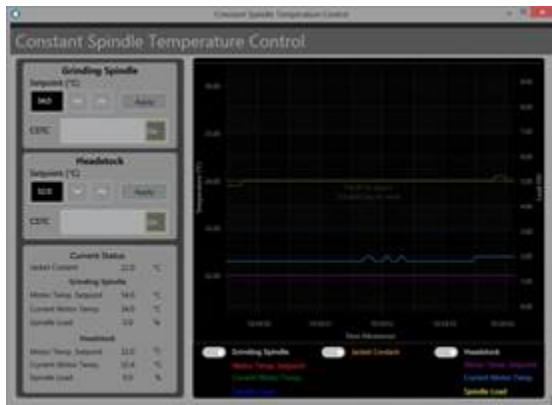
Introducing another ANCA innovation:

Motion Temperature Control (MTC)

MTC is a patent pending innovation built into the motor spindle drive firmware. Smart control algorithm actively manages and maintains the temperature of motorised spindles in the GCX Linear. Benefits delivered by this feature include:

- Dramatically reduced machine warmup time, meaning you can start grinding tools sooner, knowing the machine has reached thermal stability. This improves productivity and machine utilisation.

- Consistent thermal stability of the spindle over time regardless of changes in spindle load or speed, or spindle cooling coolant temperature. This greatly improves dimensional stability of grinding results.



GCX Linear powered by LinX

Offering reliability and high performance through its unique cylindrical design

Our LinX linear motor technology for axis motion (X, Y and Z axes), in conjunction with linear scales, achieves superior precision and performance. Specially designed for a lifetime of operation in harsh grinding environments, the LinX motors have a cylindrical magnetic field which means there is no additional down force on the rails or machine base.

With no temperature variations (meaning no need for a separate chiller unit), and being sealed to IP67, there is minimal wear and tear so that the machine accuracy remains over the lifetime of the machine. The LinX linear motor has higher axis speed and acceleration, leading to reduced cycle times while maintaining a smooth axis motion.



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For further information, please contact:

Johanna Boland

Group Corporate Communications Manager, ANCA

M: +61 407799779

Johanna.Boland@anca.com

ANCA is a market leading manufacturer of CNC grinding machines. It was founded in 1974 in Melbourne, Australia where the company still has its global headquarters. ANCA has offices in the UK, Germany, China, Thailand, India, Japan, Brazil and the USA as well as a comprehensive network of representatives and agents worldwide. ANCA CNC grinders are used for manufacturing.

ANCA CNC grinders are used for manufacturing precision cutting tools and components across a diverse range of competitive industries including cutting tool manufacture, automotive, aerospace, electronics and medical.