

Media Release

The NCFE Joining Module from Kistler: the New Alternative for Machinery Manufacturers and Power Pack Operators

Winterthur, 10 October 2016 – Kistler is unveiling a new addition to its portfolio of electromechanical joining modules. The NCFE joining module is specifically designed for simple joining processes – so plant manufacturers and power pack operators now have a cost-effective alternative to conventional pneumatic or hydraulic systems.

Kistler is launching its new NCFE joining module, developed especially for plant manufacturers who nowadays build their own joining units and also for operators of conventional power packs. This innovation unlocks entirely new possibilities for all those customers who previously found it unprofitable to use Kistler's electromechanical joining systems. The new joining module is specifically intended for simple joining processes that feature low requirements as regards cycle times, design and measuring ranges. As compared to hydraulic or pneumatic units, the NCFE module (the 'E' stands for Economy) offers convincing advantages such as low energy consumption, simple handling and fast commissioning. The new NCFE joining module is designed for applications in the 10 – 80 kN measuring range.

A New Era Dawns for Plant Manufacturers and Power Pack Operators

Every day, customers all over the world benefit from Kistler's enormous stock of know-how in the field of electromechanical joining systems. Kistler set out to identify additional markets where its flexible, energy-saving joining units could be used. The Swiss sensor manufacturer singled out two particularly important target groups: operators of conventionally pneumatically driven power packs, and plant manufacturers. Alexander Müller, Product Manager for NC Joining Systems, explains that Kistler's existing portfolio of joining systems does not fully cover the highly specific requirements of these users. This prompted Kistler's product management team to develop a new joining module for this target group.

Alexander Müller adds that the new module opens up entirely new prospects for all plant manufacturers who previously developed their own joining systems. The NCFE module offers them a cost-effective alternative to developing their own systems. All the systems are pre-tested, so fast commissioning is guaranteed. Thanks to the advantage of integrated sensor technology, this module provides plant manufacturers and power pack operators with complete, end-to-end monitoring and control of the entire joining process. Installation as well as handling are made far simpler, so plant manufacturers can present convincing arguments to their customers on points such as energy savings, short delivery times and flexibility.

Comprehensive Control Thanks to the maXYmos NC Monitoring System

The joining process is monitored by the maXYmos NC monitoring system, which evaluates and documents XY curves for joining and press-fit processes in conjunction with the NC joining modules and the IndraDrive servo amplifier that is included in the system. The patterns of measurement curves can be used to monitor the quality of a single production step, a sub-assembly or an entire product, with control in real time via SERCOS III. The benefits: optimal cycle times can be achieved with maximum repeat accuracy, downtime is minimized and machine availability is increased – adding up to a boost in productivity for the entire manufacturing process.

Thanks to integrated sequence control (sequencer mode), processes can be mapped with no need to rely on costly external PLC programming. The programs can be set up quickly and easily with the help of the intuitive user interface on the touch display. A total of up to 128 programs can be saved and for each program, an independent sequence with as many as 255 objects can be defined. Processes are evaluated with the help of profiles for two interrelated measurands that are assessed as good (OK) or bad (NOK). Ten Evaluation Objects (EOs) are available for each program, so process deviations can be detected and complex process sequences can be regulated and controlled.

The Right Joining System for Every Application

Alexander Müller sums up the benefits for new users in a nutshell: "As compared to pneumatic or hydraulic processes, the NCFE module offers substantially higher efficiency – like all Kistler's joining systems. Savings potential with the electrical process is up to 77% as compared to the hydraulic process, and about 90% in relation to the pneumatic process. Maintenance outlay for these systems is minimal – so users can save even more on their already low production costs. What's more, scrap is reduced because 100% quality control is achieved with this module."

As the product manager responsible for joining systems, Müller is especially proud that Kistler can now offer its highly advanced NC joining technology to a broader market thanks to this cost-effective new development: "With this new bandwidth of products – from compact high-end joining modules (NCFH) through to simple joining units (NCFE) – Kistler now offers the right system to meet every requirement. Another plus: seamless integration into an overarching production environment is possible thanks to the flexible interfaces that are included in maXYmos NC as standard. This means that we have passed another milestone in our success story as a global provider of joining systems: with the NCFE module, we can now offer our customers even more specific support as they endeavor to cut costs, save time and strengthen their competitive edge on the market!"



Illustration 1



Illustration 2



Illustration 3

Captions

Illustration 1: As compared to hydraulic or pneumatic units, the NCFE module (the 'E' stands for Economy) offers convincing advantages such as low energy consumption, simple handling and fast commissioning.

Illustration 2: Thanks to their uniform operating philosophy, products in the maXYmos family are user-friendly and intuitive to operate. These features mean that commissioning of electromechanical NC joining systems is simple and fast.

Illustration 3: The maXYmos NC actuates the NC joining module via the servo amplifiers for linear and rotary movements, thanks to integrated sequence control (sequencer mode). An independent sequence can be defined for each of the programs (up to 128 in number).

About the Kistler Group

Kistler, the originator of piezoelectric measuring technology, is the global leader in dynamic pressure, force, torque and acceleration measurement. Cutting-edge technologies provide the basis for Kistler's modular systems and services.

Customers in industry, research and development benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure sustainable competitive edge. This owner-managed Swiss corporation plays a key part in the evolution of automobile production and industrial automation, and its innovative sensor technology also helps foster the development of many newly emerging sectors. Drawing on its extensive application expertise, and always with an absolute commitment to quality, Kistler drives innovations ahead in lightweight construction, vehicle safety, emission reduction and Industry 4.0.

Some 1,500 employees at 56 facilities across the globe are dedicated to the development of new measurement solutions, and they offer individual application-specific support at the local level. Ever since it was founded in 1959, the Kistler Group has grown hand-in-hand with its customers and in 2015, it posted sales of CHF 329 million. About 10% of this figure is reinvested in innovation and research – with the aim of delivering better results for every customer.

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