

AX AND EX: TWO MACHINE CONCEPTS FOR DIFFERENT PRODUCTION REQUIREMENTS

Optimal solutions for specific industry sectors

Munich, June 8, 2010 – Electric or hydraulic? That’s a question often facing processors planning to invest in injection molding machines. And within the category “all-electric” machines, there is still wide variation. The immense pressure on prices, continuously escalating component specifications and rising energy prices are compelling arguments against a one-size-fits-all solution. Processors need to choose the most cost-effective machine concept for a specific production task. Each industry sector imposes its own standards and often complex requirements, demanding at least application-specific production systems. With its AX and EX ranges, KraussMaffei offers two completely different concepts for all-electric machines; increasing the likelihood that processors will find exactly the right machine for a particular set of production requirements.

Efficiency and precision for technical moldings – the AX series

Producing technical components for the electrical/electronics sector and the automotive industry, the emphasis must be on resource-efficient production and high repeatability. The machine’s price/performance ratio is another important factor. Injection molding machines from KraussMaffei’s AX series meet all these requirements.

The optimized double toggle design, efficient servo motors and the easy action of its mechanical systems all contribute to the outstanding efficiency of an AX machine. Energy consumption on AX machines can be up to 60% lower than with hydraulic machine concepts. Trailblazing control systems and absolute positioning accuracy guarantee precision molding and highly dynamic responses. The AX series offers the optimal basis for cost-efficient, precision molding. AX machines enable processors to work flexibly and reliably, and to keep unit costs low – even for slow cycling applications.

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Machines from KraussMaffei’s AX series guarantee precision and cost-effective molding for a wide range of products.



Hallmarks of KraussMaffei’s EX series are excellent dynamics and uncompromising precision and cleanliness.

No compromises on cleanliness – the EX machine range

Injection molding for the medical and life sciences sectors makes huge demands on the production environment. Production systems must be engineered for extremely low emissions of particles, heat and noise. KraussMaffei is currently the only machine manufacturer capable of meeting these requirements with its EX machines.

The EX series was engineered from the start to be used in high-spec cleanrooms. Both its clamp and the injection unit feature extreme cleanliness. The clamp unit with its patented Z toggle guarantees a very clean environment. Having fewer pivot points – all encapsulated – and tiebars that no longer act as guides for the moving platen eliminates potential sources of contamination and minimizes the contamination risk. Plasticizing and injection are driven by two coupled direct drives. This means forces are transmitted to the screw centrally and directly in the direction of travel, eliminating belts, another potential contamination source. The result is high precision and dynamics combined with absolute cleanliness.

The minimal sound emissions from the EX direct drives are in the low frequency range. The electric main drives are water cooled, so that heat is removed directly, keeping the production environment cooler. This is a clear advantage compared with air-cooled drives. Lower sound and heat emissions are both important considerations in air-conditioned, sound-reflecting cleanrooms.

Dynamic responses for packaging applications – the “Ultra” version of the EX series

Manufacturing for the packaging industry means achieving very high productivity through fast cycles and constant product quality. These are hallmarks of EX machines. A key feature of the patented Z toggle is direct implementation of movements. This results in clamping process kinematics that are close to optimal and highly dynamic responses. Thanks to the Z toggle, EX machines turn in the fastest dry cycle times in the industry.

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EX machines can be upgraded with an “Ultra” high-performance injection unit. Ultra injection units achieve extraordinarily high injection speeds – up to 600 mm/s. This makes EX machines ideal also for molding thin-walled products. The machines’ high precision allows production within very tight tolerances.

All-electric? – Yes, but fit for purpose too

All-electric machines can have a positive impact on manufacturing costs. But the choice of machine for optimal return on investment has to be based on absolute clarity about production goals, standards and specifications. This comparison aims to clarify the key differences between KraussMaffei’s two ranges of electric injection molding machines – the EX and AX. Each is engineered to a concept that best meets a particular set of production requirements. Visitors to the K’10 will be able to see at firsthand how the performance of these machines corresponds with the requirements of their core customer base.

KraussMaffei is at K2010 in Hall 15, Stand C24

Photos

Photo AX.jpg: Machines from KraussMaffei’s AX series guarantee precision and cost-effective molding for a wide range of products.

Photo EX.jpg: Hallmarks of KraussMaffei’s EX series are excellent dynamics and uncompromising precision and cleanliness.

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