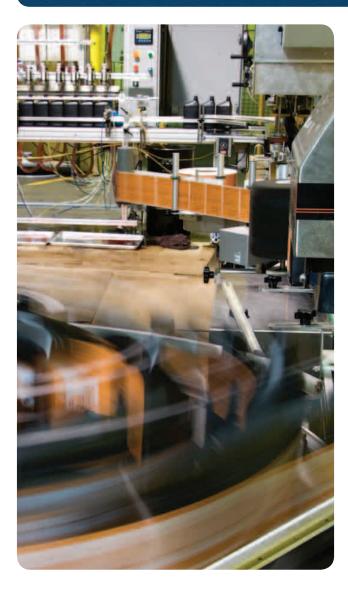
## Making Motion Matter Build a Better Machine with Kollmorgen







### KOLLMORGEN

Because Motion Matters™



# Increase throughput OUC

Envision a revolutionary machine – one that sets your business apart from the competition for years to come.

At Kollmorgen, we live that vision every day. Where others see obstacles, we see opportunities. Based on a full understanding of your requirements, we'll work with you to co-engineer solutions that set new standards in machine performance, reliability and ease-of-use.

Our best-in-class solutions are backed by more than 70 years of engineering expertise, design knowledge across the industries we serve and a global manufacturing and support footprint, as well as financial stability.

Motion is at our core. We offer the broadest high-performance line of standard and custom products, along with the industry knowledge to help you build an irrefutable advantage into your machines – and your value proposition. That's why Kollmorgen is the motion leader. Because Motion Matters<sup>™</sup>.

# Enhance accuracy and

# Reduce time to market

Reduce waste

KOLLMORGEN



Wherever motion drives industry, motion matters. Here are just a few of the key industries we serve:







#### roou & Beverage

# Improve reliability



Pharmaceutical



Converting

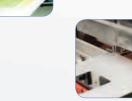




Printing



Medical



Save energy

Material Forming

### The Kollmorgen Global Enterprise.

- 2,000 employees
- \$500 million in revenues
- Global design and manufacturing in North America, the European Union and Asia



# A Proven Pathway to Performance.

Kollmorgen is backed by the strength and stability of Danaher – a \$13 billion diversified technology leader with strong brand names across the globe, including Fluke, Tektronix, Leica Microsystems, Videojet Technologies and many others.

Danaher means more than market access and financial resources. Everything we do is driven by the Danaher Business System – a philosophy, value set and series of management processes based on the concept of continuous improvement as a way of life. It's a complete way of doing business – from recruiting, developing and retaining the best talent, to listening to customers and consistently delivering solutions that exceed expectations for quality, delivery, cost and innovation.

www.kollmorgen.com



# Differentiate Your Machine – Differentiate Your Business.

Because we offer the highest quality and broadest range of machine components, we can supply standard, modified or customized solutions to meet virtually any need. What's more, we co-engineer solutions to meet your most difficult motion challenges and advance your competitive position. Here are just a few examples of how Kollmorgen delivers real value to companies like yours.



30% Increase in Throughput

50% Increase in Accuracy and Quality

25% Increase in Reliability (Overall Equipment Effectiveness)

50% Reduction in Waste



KOLLMORGEN

### Why Motion Matters

- · Low inertia servomotors
- · High bandwidth servo loops
- Simple, accurate, graphical programming tools
- Kollmorgen Co-Engineering Results

Using Kollmorgen Automation Suite<sup>TM</sup>'s graphical camming design tool, Pipe Network<sup>TM</sup> and low-inertia AKM motors, a major supplier of medical equipment increased throughput by more than 30% while improving accuracy and reducing scrap.

- · Low cogging servomotors
- Advanced observers and bi-quad filters
- Fast control loop update rates (0.67µs)

Using our AKD™, a CT scanning manufacturer achieved more than so% improvement in velocity ripple to produce the most accurate and detailed medical images possible while overcoming an extremely high moment of inertia.

- Innovative Cartridge DDR<sup>™</sup> technology
- · Eliminating parts on the machine
- · No additional wearing components
- Superior motor/drive system bandwidth
- · DDR TH technology:
  - eliminates gearbox
  - 20 × more accurate than geared solution

We helped a manufacturer of pharmaceutical packaging machines incorporate Housed DDR  $^{TM}$  motors to increase the throughput by 35% and

Using Kollmorgen's award winning Cartridge DDR

60 parts in a die cutting machine and increased the

servomotor technology, we eliminated more than

reduce scrap by more than so? through more accurate alignment of the capsules.

OEE by 25% and throughput by 20%.



### More Efficient Machines Require More Efficient Components.

With high-performance, compact components correctly matched to each job and performing in perfect synchronization, your machine operates with more precision and reliability, requires less changeover time, and uses less energy. Whether we co-engineer your system or you take advantage of our industry-leading products and support to build your own solution, choose Kollmorgen for a differentiated machine.



**CONTROLS** – Kollmorgen Automation Suite™ speeds your time to market with a complete solution offering Controllers (PAC's), HMI's, I/O and development tools for high-performance, motion-centric automation systems.



**SERVO DRIVES** – Led by the Ethernet-based AKD™/S700 and S300, our servo drives feature the broadest connectivity and most advanced control technology.



**SERVO MOTORS** – AKM<sup>™</sup> Kollmorgen's brushless servo motors deliver cutting-edge performance in a compact footprint.



**DIRECT DRIVE ROTARY MOTORS** – We're the inventor and leader in direct drive technology, and our revolutionary Cartridge DDR<sup>™</sup> and KBM motors use the load's bearings to support the rotor for even greater performance and reliability with less maintenance.



**TRANSMISSIONS** – Our True<sup>™</sup> Planetary gearheads provide high torque and stiffness, low backlash and the ability to accommodate a wide range of inertia ratios. We're also the leader in linear positioning solutions.



**CO-ENGINEERING** – Based on a thorough understanding of you're your present and future requirements, we work with your team to develop an automation solution that gives your machine a quantifiable advantage.

#### KOLLMORGEN





EUS

Precisely controlled motion makes your machine more efficient. It's not just a question of lower upfront and operating costs, a faster development time or better service and support. By choosing the right motion partner, you can count on higher performance, reduced risk, higher quality products and a faster time to market.

We know how to make excellence in motion work for your business. We're ready to help co-engineer better solutions for a better machine – one that differentiates your business in a competitive marketplace today and tomorrow.

Find out how we can work together with your experts to make your machine even better. Contact Kollmorgen at: sales.europe@kollmorgen.com or +49 (0) 2102 9394 0.

www.kollmorgen.com



#### About Kollmorgen

Kollmorgen is a leading provider of motion systems and components for machine builders. Through world-class knowledge in motion, industry-leading quality and deep expertise in linking and integrating standard and custom products, Kollmorgen delivers breakthrough solutions that are unmatched in performance, reliability and ease-of-use, giving machine builders an irrefutable marketplace advantage.

For assistance with your application needs visit www.kollmorgen.com for a global contact list.

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Tokyo
Nagoya

#### KOLLMORGEN

Because Motion Matters™

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