

DRIVE TECHNOLOGY ▷ LINEAR ▷ ROTARY ▷ DIRECT ▷ CONVENTIONAL

TAKE THE LEAD

LINEAR MOTION TECHNOLOGY GMBH **KML**[®]

SYSTEM SOLUTIONS FROM KML



STANDARD AND INDIVIDUAL SOLUTIONS

ENTER A WORLD OF DYNAMICS AND PRECISION:

as a competent, experienced and professional partner it is our task to fulfil your individual needs and to satisfy the high requirements for dynamics, precision, operating efficiency and reliability. As a leading innovation specialist for complex linear motor systems, we conceive and implement for you and in cooperation with you, complete standard and customized solutions with linear and rotary direct drives, as well as with a comprehensive range of conventional drive technologies.

All standard linear motor systems and torque motors can also be combined to form multiple axis solutions with plug-in energy chains, cables and controls. With our drive and control electronics you can create the perfect solution for virtually unlimited applications. Take the lead with us.

Take the Lead – with innovation & passion.



STANDARD LINEAR MOTOR SYSTEMS AND TORQUE MOTORS

LMS 2 series

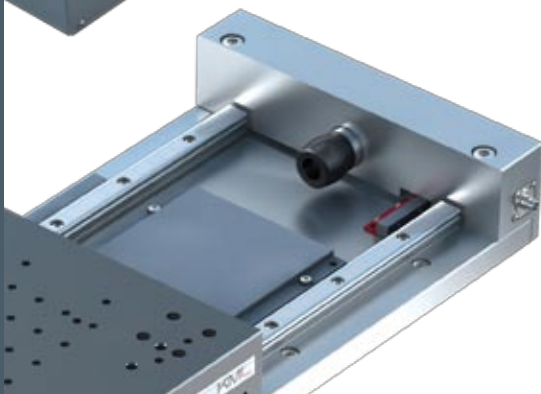
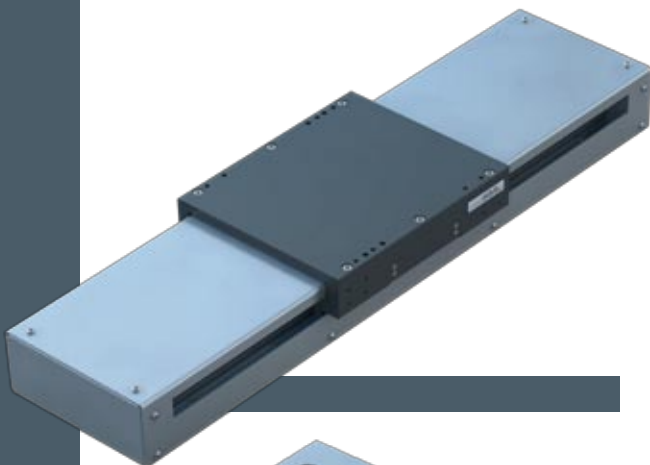
The LMS 2 series of KML standard linear motor systems was developed to accurately position small to medium loads with high dynamics. The series is characterized by a high power spectrum based on compact design and the use of high performance iron-core linear motors.

Features:

- Different sizes and performance ratings
- High absolute accuracy and repeatability
- Rigid design
- Precise running performance
- Cover plates optional
- Virtually maintenance-free

Fields of application:

- Precision applications
- Cross table
- Robotics
- Laser machining
- X-rays
- AOI applications
- Pick & place machines
- Test systems
- Printers
- Handling



LMS E² series

The LMS E² series was developed specifically as alternative for conventional drive systems such as tooth belts or ball screw driven axles. The LMS E² series is designed for highly dynamic movements of small to medium loads. The compact and simple design not only make these linear motor systems economical, they are also well suited for extremely tough conditions.

Features:

- Different sizes and performance ratings
- Measuring system resistant to contamination
- Rigid design
- Maximum dynamics
- Protection class IP65 optional
- Clean room design optional
- Absolute linear encoder system optional

Fields of application:

- High speed handling
- Food processing
- Pick & place systems
- Test equipment
- Transfer systems

LMS U series

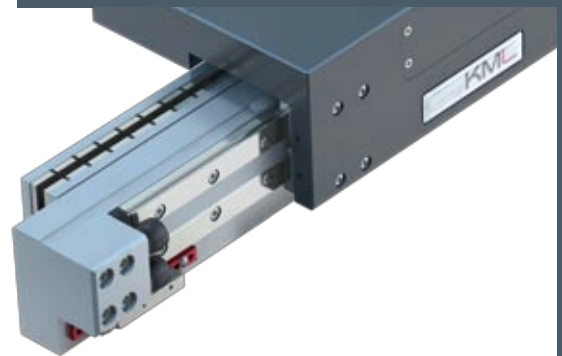
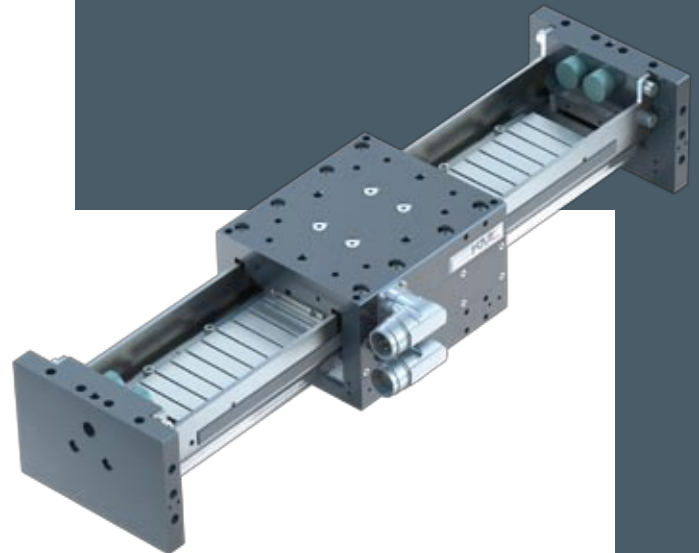
The compact design of the LMS U series allows for its use in applications where space is at a premium. Small to medium loads are positioned with highest dynamics. The primary part of the used linear motors is without an iron core, which ensures a high degree of efficiency and provides for smooth and cogging-free operation.

Features:

- Different sizes and performance ratings
- Maximum dynamics
- Compact design
- Minimal speed ripple
- High absolute accuracy and repeatability
- Precise running behaviour
- Virtually maintenance-free

Fields of application:

- Precision applications
- AOI applications
- High speed pick & place machines
- High speed handling
- Flying shears



LMS V series

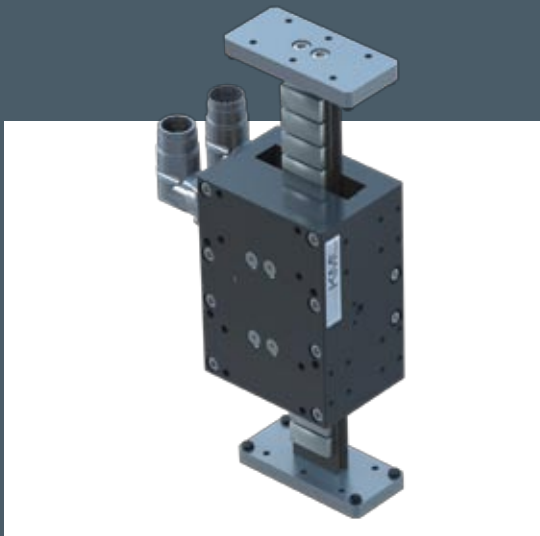
The LMS V series was specifically developed for vertical applications and for moving small to medium loads. The compact and rigid design also maintains a permanent high degree of positioning accuracy at accelerated dynamics. The desired position can be maintained reliably only by the optional use of a weight compensation and a brake system.

Features:

- Different sizes and performance ratings
- Suitable for vertical applications
- Compact design
- Maximum dynamics
- Optimized stroke (max. 400 mm)
- Mass balancing
- Pneumatic holding brake

Fields of application:

- Pick & place
- High speed handling for Z-axis
- Oscillators in Hz range
- High frequency test equipment



LMS M series

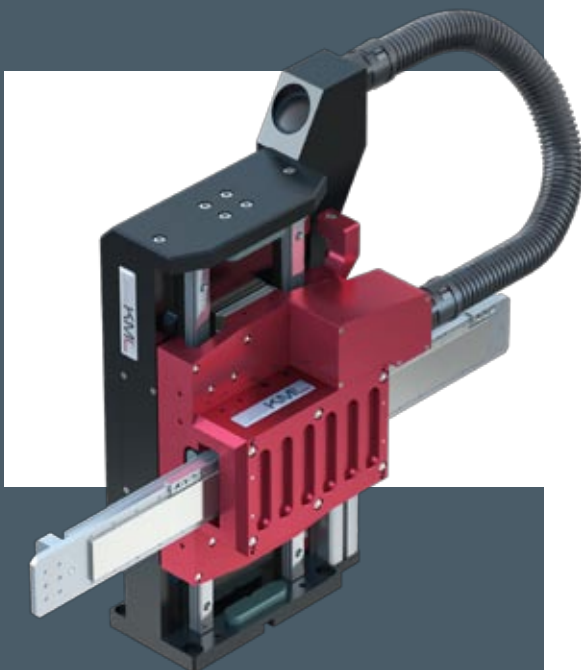
The combined LMS M has two crossed axes, which are directly connected to each other to minimize the weight. The very compact, integral and rigid construction can be used for both standing applications (Z/Y axes) as well as horizontal applications (X/Y axes). Small and medium loads can be positioned with highest dynamics and precision.

Features:

- Different sizes and performance ratings
- Absolute linear encoder system optional
- Suitability for clean rooms & IP65 optional
- Maximum dynamics
- High repeatability

Fields of application:

- High speed pick & place
- High speed assembling
- Dispensing
- Test equipment and testing bays





Torque motors, RDD series

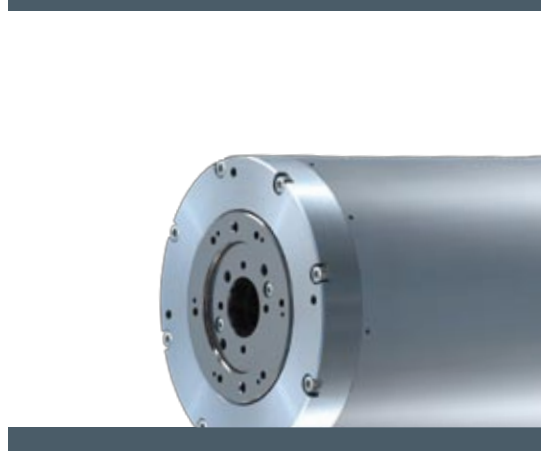
The developed torque motors are equipped with a fixed or moving hollow shaft and offer an extremely high performance spectrum. Constant precise movements and positions can be achieved at high continuous and peak torque in combination with high rotary speeds.

Features:

- Different sizes and performance ratings
- Suitable for high speed rotation (several 1000 min⁻¹)
- High torque
- Compact design
- High absolute accuracy and repeatability
- Precise running performance

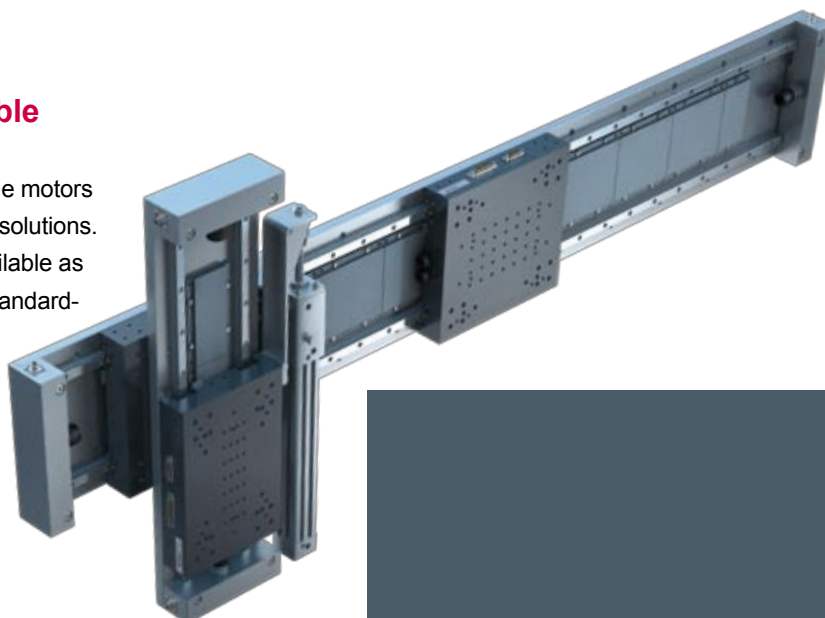
Fields of application:

- Indexing tables
- Winder drives
- Grinding spindle drives
- Precision rotary units



All linear motor systems and torque motors are also available as multiple axis solutions

All standard linear motor systems and torque motors can also be combined to form multiple axis solutions. Energy chains, cables and controls are available as plug-in accessories. The use of qualified, standardized and tested servo and motion controllers allows multiple axis solutions for virtually limitless applications.





▶ ACCESSORIES

All standard systems can be supplied with appropriate accessories on request.

- Rigid support design
- Mounting accessories
- Energy chains
- Plug-in cables and connectors
- Servo drives
- Motion controllers



▶ SERVICES

All systems are subjected to a 100% functional check prior to delivery. For complete motion systems, a set of parameters is supplied for quick and simple start-up. If requested, defined movements are simulated and documented. Measurement and documentation of the system's precision via laser interferometer is possible.

For positioning applications in the sub- μm range, a correction matrix can be provided following joint consultation. A complete combination of mechatronic assemblies with visualized software solutions allows for a rapid integration of our system solution into your plant. Start-up and service on-site as well as training complement our service portfolio.



CUSTOMIZED SOLUTIONS

To meet specific customer requirements not covered by the standard program, perfectly customized solutions are developed in close cooperation with the customer.

Conception

A broad knowledge base for individual requirements in:

- mechanical engineering
- electrical engineering
- measuring technology
- control and drive technology
- programming and visualization

Design and development

Long-standing experience in the implementation of individual system solutions with conventional and direct drive technologies through:

- synergistic networking of the departments drive technology and mechanical design
- broad-based manufacturing know-how from cost-efficient prototypes to mass production
- professional application of cutting edge technologies
 - CFP and ceramic materials
 - various coating technologies (nanotechnology)
 - new production methods to increase cost efficiency
- use of integral concepts in conjunction with casting technologies to optimize functionality, production and costs
- 3D-CAD systems with integrated FEM software allow designs optimized for rigidity, strength, vibration and thermal factors

Quality assurance

Process support and monitoring through:

- comprehensive measuring equipment (laser interferometer)
- qualified test procedures
- preclusion of possible risks already during the development phase by using failure mode and effects analysis (FMEA)

Manufacturing

Realization of sophisticated single and multiple axis solutions

- for flexible manufacturing covering a wide range of production quantities
- with a wide range of equipment for virtually any industrial sector
- for clean room applications (up to Class 3 according to JIS B 9920)

Start-up and measuring

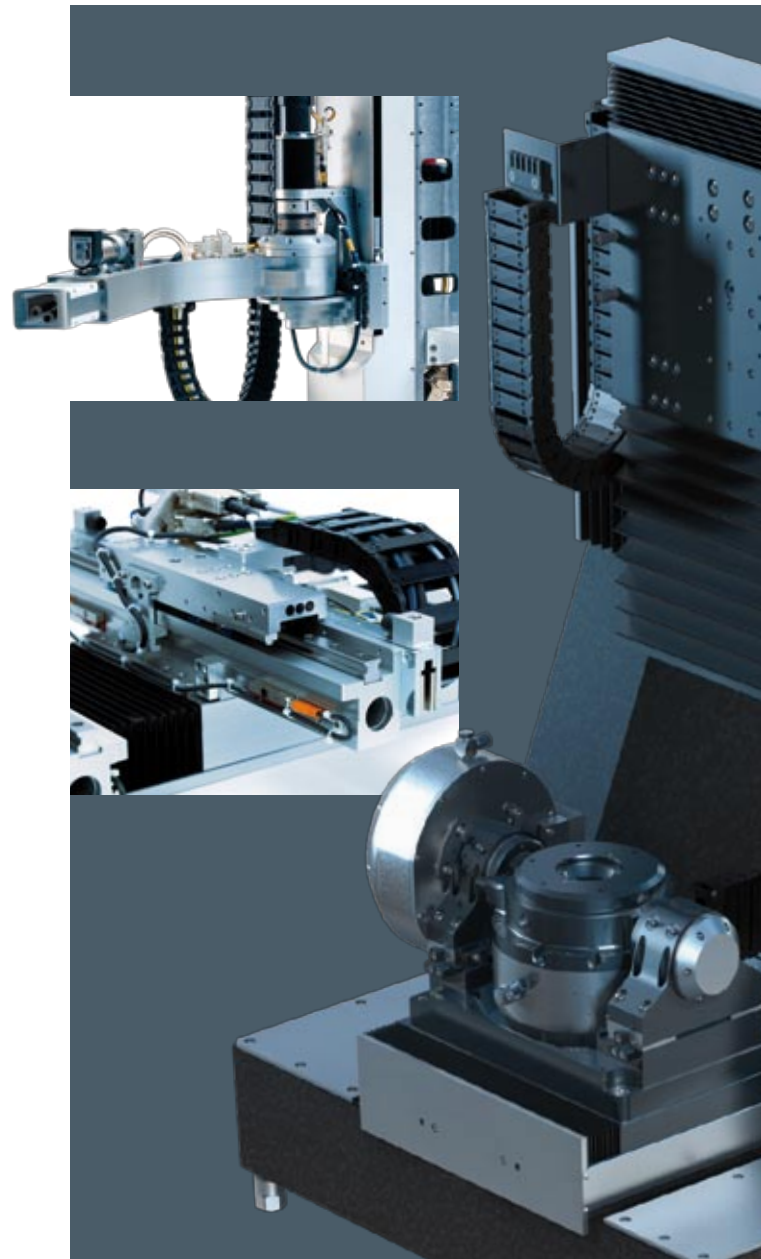
High quality, speedy and reliable machine start-up

- Factory start-up
- Customer specific tests with documentation and measurement

Service and training

Always reliably up to date

- 24 h service hotline
- On-site customer start-up
- Training of employees



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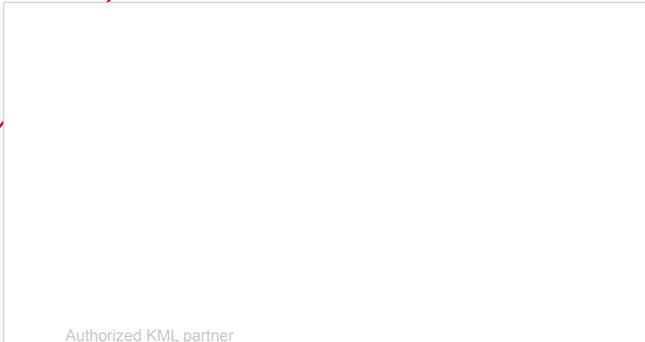
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Authorized KML partner

