



**Industrial  
Automation**

Our product brands:

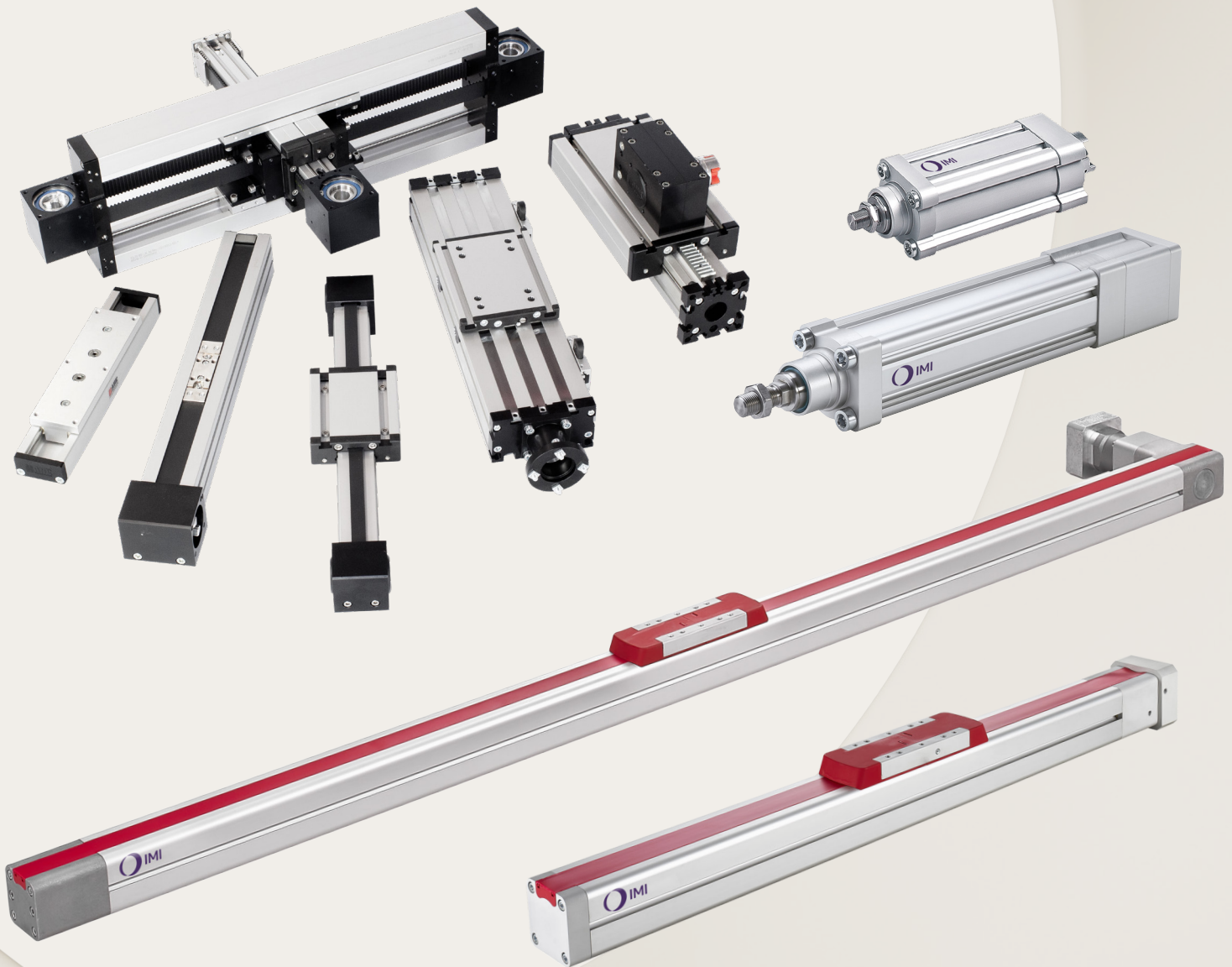
IMI Norgren

IMI Bimba

IMI Bahr

# Electric Motion

Electric Cylinders, Linear Axis  
and Multi Axis Systems



Breakthrough  
engineering for  
a better world

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## Breakthrough Engineering for a Better World

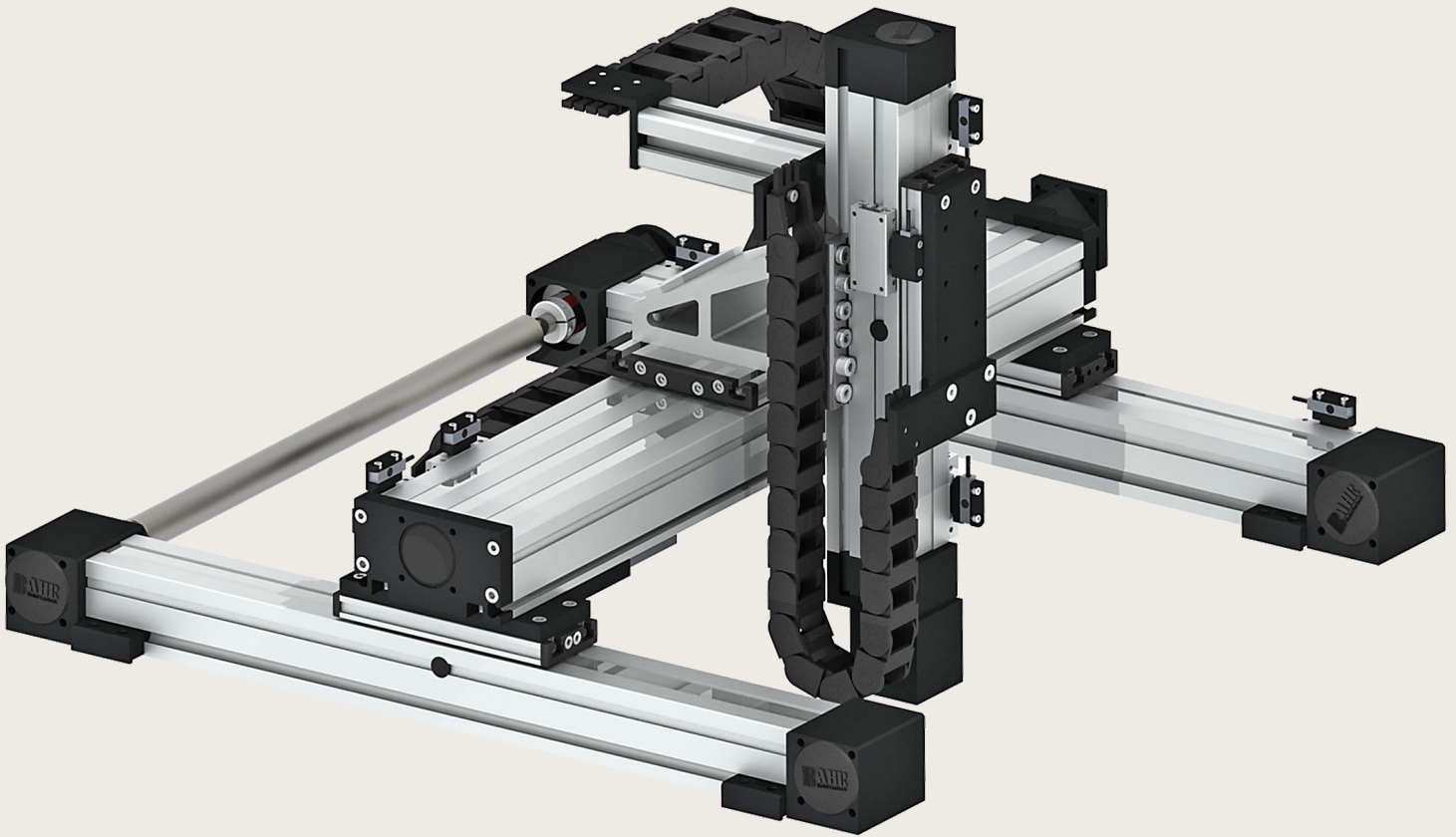
We create solutions for our customers which enable smarter, safer, more productive and sustainable factories, production lines and warehouse operations. Our pneumatic and electric motion systems help machine builders and end users around the world automate and optimize manufacturing and warehousing processes.

We have partnered with customers in industrial automation for over a century, applying our experience and innovation to create lasting value for their businesses. Our solutions support critical industries such as automotive, food and beverage, pharmaceuticals and even the space industry. We support the automation of precision manufacturing, product assembly, testing and packaging.

We use the latest digital technologies in our automation products and constantly innovate in close partnership with our customers. By applying our deep expertise, we can solve their toughest automation challenges, today and tomorrow. Through increased productivity, efficiency and safety, our customers can serve their own customers better, creating sustainable competitive advantage and delivering growth.

Our world-class product portfolio includes IMI Norgren, IMI Bimba and IMI Bahr.

Breakthrough engineering you can count on.



## Benefits of Electric Motion

Requirements for modern industrial automation applications are becoming increasingly complex. It is essential to select the best possible solution for each application.

Electric Motion offers exceptional performance where precise control, accurate positioning and repeatability is essential.

Electric Motion offers distinct advantages over pneumatic motion. Acceleration and speed are controllable, and multiple intermediate positions are possible with high precision and repeatability. This positioning flexibility allows multiple cylinders to move in sync and change speed without needing to stop or overrunning position. Acceleration and deceleration control

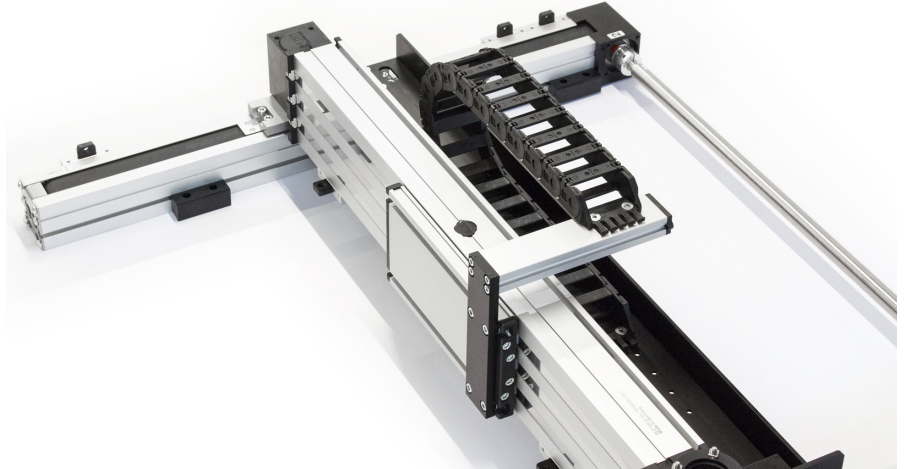
also allows the cylinders to glide into position without stopping abruptly, making them ideal for applications where vibrations and disruptive movement is not acceptable.

With no need for compressed air, Electric Motion offers a cleaner, quieter solution, and total cost of ownership can be greatly reduced.

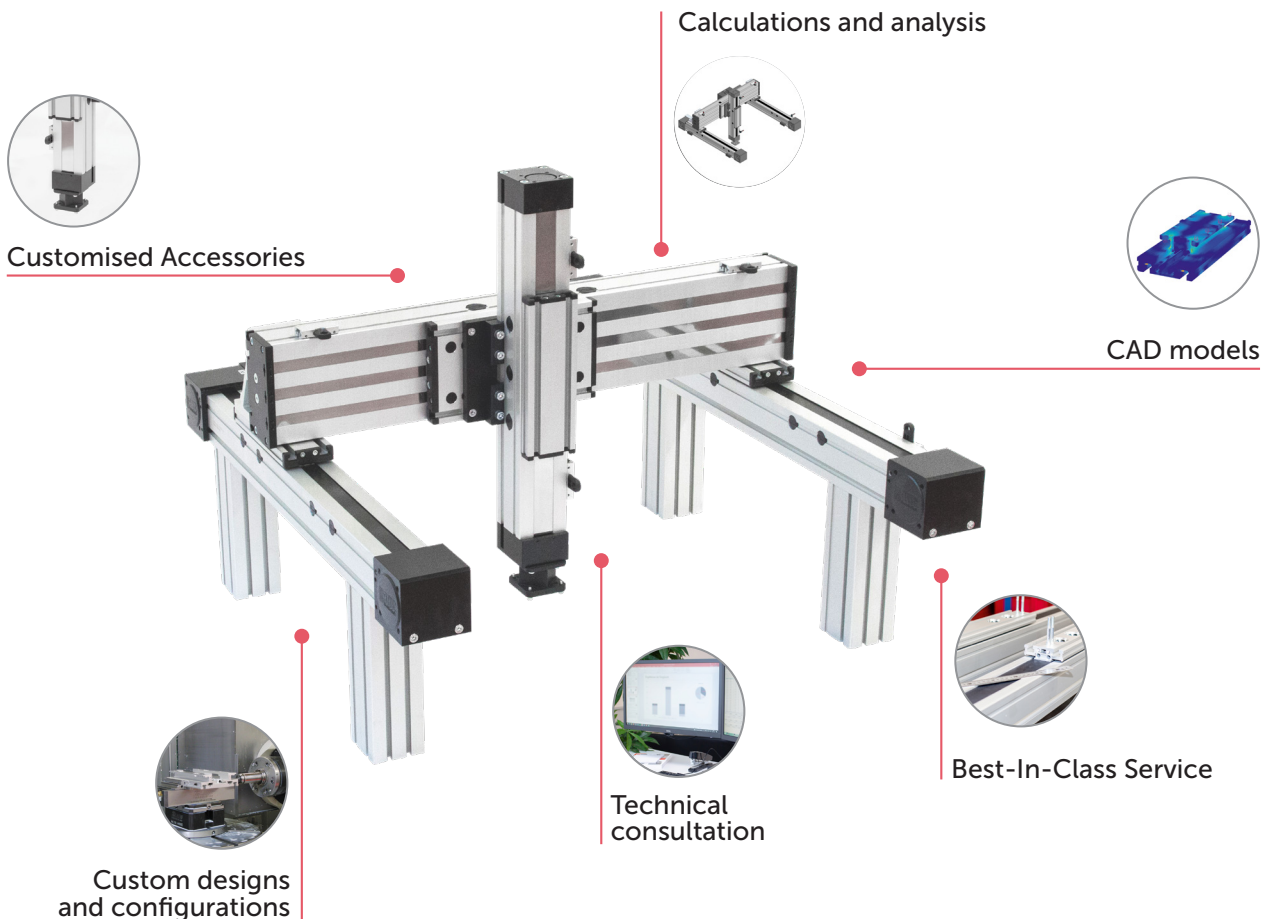
**High performance Electric Motion solutions suitable for industrial applications**

# Commitment to Engineering and Service

As a Global manufacturer of a premium range of high performing and reliable motion control solutions, IMI Norgren is continually innovating a range of connected and custom systems to future-proof our customer's long-term security, success, and growth.



We offer a one-stop shop for your Electric Motion needs.



# Expert Application Support

IMI Norgren Electric Motion solutions are designed by engineers, to the most demanding standards. To ensure you make the correct decision, our dedicated technical team are available to help you specify the correct product for your application and provide full support throughout purchase and delivery.

- Maintenance, repair and spare parts with fast delivery
- Complete offer with 3D model, drawings, life and cycle time calculation
- Gearbox and motor dimensions on request
- Structural analysis for critical applications on request

**Fast and expert technical support single or multi axis systems**

 Find out more  
[imiplc.com](http://imiplc.com)

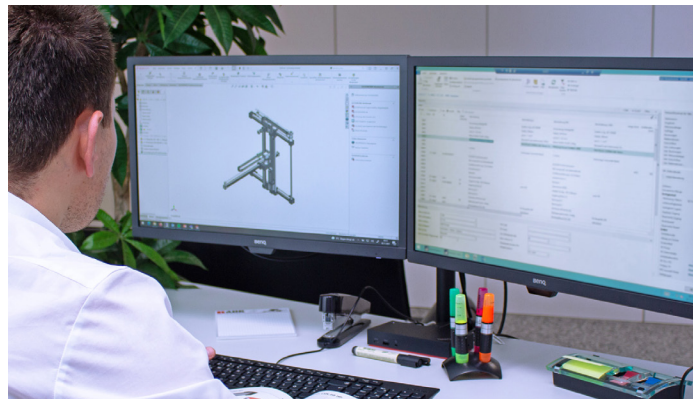
Breakthrough engineering  
for a better world



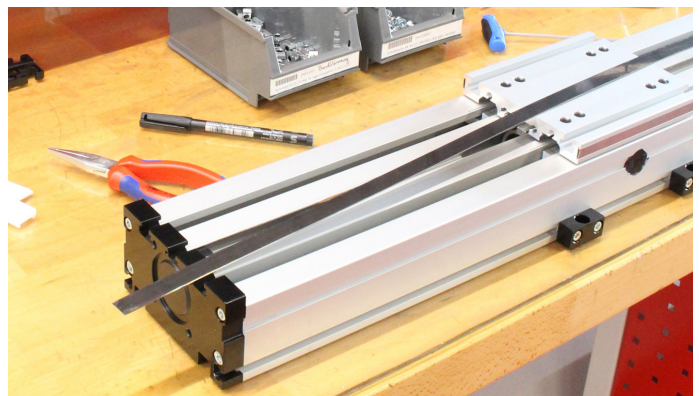
Fast Response



Application Engineering



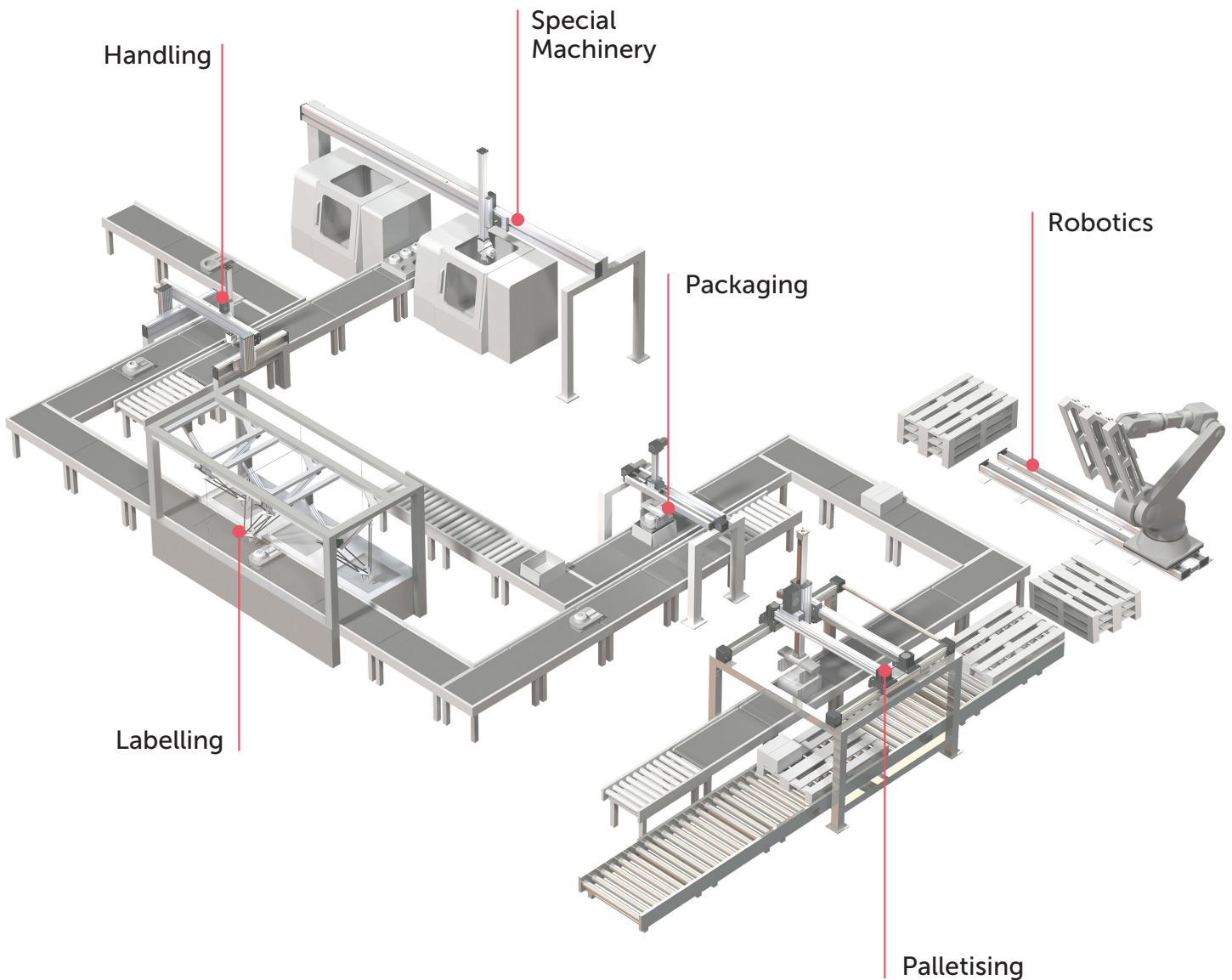
After Sales Service & Support



# Fully Customised Solutions for Electric Motion Applications

Designed to meet our customers' requirements, our high-performance Electric Motion solutions are suitable for a variety of industrial applications.

From improving speed, productivity, reliability and efficiency of equipment, to generating significant energy savings, or lowering total cost of ownership across many industries, our products deliver Breakthrough Engineering you can count on.

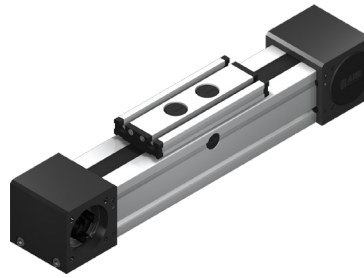


# Electric Motion

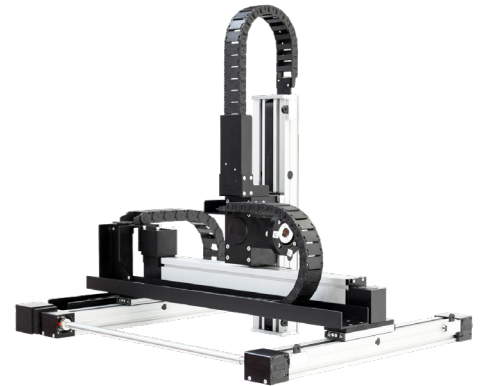
ELECTRIC CYLINDERS



LINEAR AXIS



MULTI AXIS



## Drive Options and Accessories

The IMI Norgren Electric Motion range is supported by one of the largest ranges of accessories on the market, including drives, motors, mountings, switches and cables.



Spindle Drive



Toothbelt Drive



Rack & Pinion Drive



Linear Motor Drive



AC Servo Motors



Servo Drive & Protocols



Accessories

# Rod-Style Electric Cylinder Range

A range of ISO standard rod-style, ball screw electromechanical linear cylinders available with or without servo motors, in 6 bore sizes with 2 motor mounting options.



- Accurate and Repeatable**  
 Ball screw and servo motor provides accurate and repeatable positioning
- Long Life**  
 Ball screws and bearing mechanisms enable high cycle life
- Ease of Installation**  
 Based on ISO 15552 standard with universal mounting options
- Environment**  
 IP65 options for both axial and parallel mounted motors ensure cylinders will continue to operate in dusty and wet environments
- Performance Monitoring**  
 Integral sensors and external switches monitor cylinder performance and enable planned maintenance
- Energy Saving**  
 Electromechanical components efficiently convert electricity to mechanical power, only energised when movement is required, reducing energy consumption and the cost of ownership
- Safety in Service**  
 Servo motor with optional integrated holding brake enables cylinders to self-lock when the power is isolated
- Industries**  
 Carefully selected materials and product specifications suitable for a variety of applications
- Smart Configurations**  
 Our online configurator enables quick and easy product selection based on customer application input
- Flexible Service**  
 Customised motor interfaces allow customers to fit their own preferred motors
- One-Stop Shop**  
 Motors, drives and accessories are available

## Technical Specifications

- Ball screw cylinders with or without servo motor
- 6 bore sizes
- 2 motor mounting options
- Robust construction
- Based on ISO 15552
- Maintenance free
- IP65 protection (optional)
- Built on reliable & long-life IMI Norgren technology
- Wide range of motors, drives & accessories

## Optional

- Piston rod extension
- Internally threaded piston rod
- Piston rod bellows



- 32, 40, 50, 63, 80, 100mm



- 100mm - 1500mm stroke



- Up to 30.4kN



- Max. 1.6m/s



- Operating temperature Cylinder: 0°C to +80°C
- Ambient temperature Motor: 0°C to +40°C

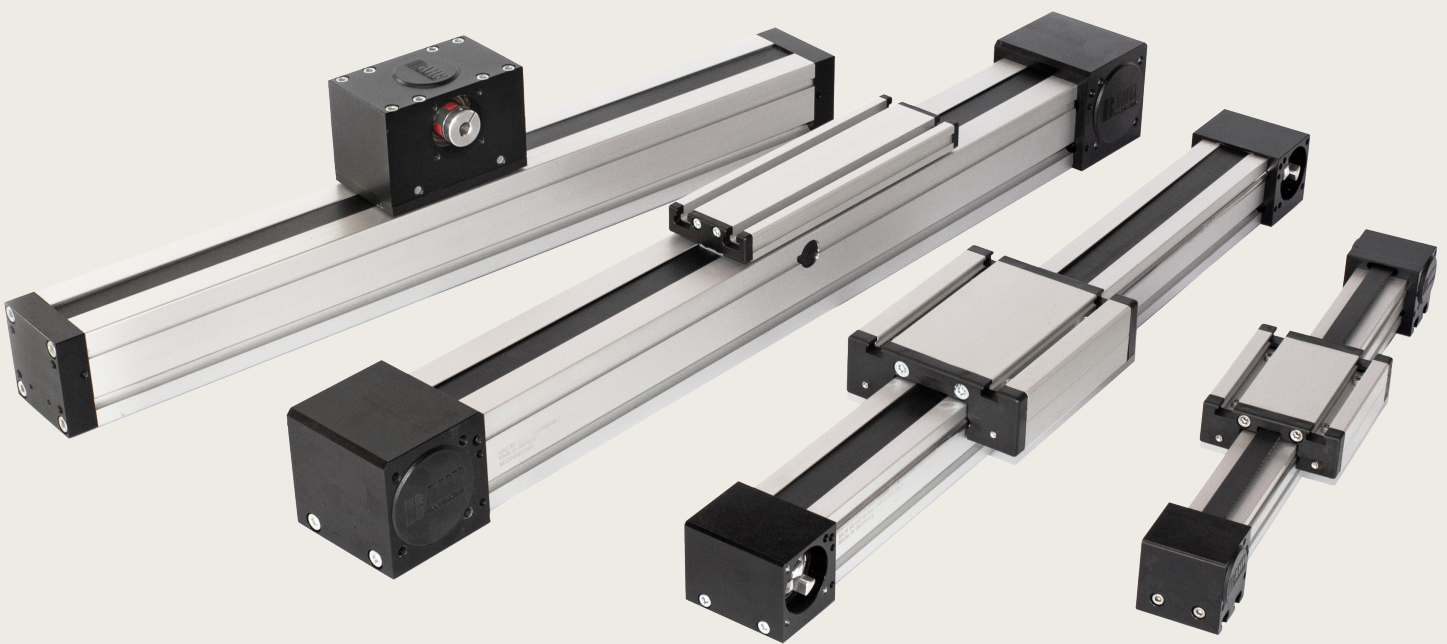


- Protection Class IP40 or IP65



# Linear Axis Range

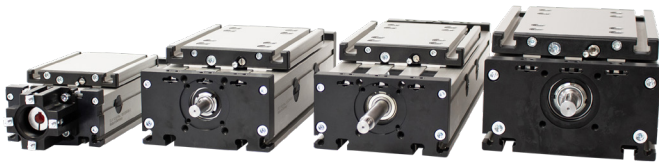
A range of high-performance linear axis with 2 main drive options: toothbelt and ball screw. The toothbelt drive provides the highest speeds and longest strokes, and the ball screw drive can move higher loads with extremely accurate and repeatable positioning.



- Accurate and Repeatable**  
 Drive technologies and servo motor provides accurate and repeatable positioning. Ball screw and ball screw nut achieves +/- 0.02 mm. Toothbelt and pulley drive achieves +/- 0.1 mm.
- High Speed & Fast Response**  
 Toothbelt allows fast acceleration and a highly dynamic control with speeds up to 14m/s. A choice of gearboxes allows different speed ranges to be selected.
- Tolerates Offset Loads**  
 Internal guidance systems counteract load moments
- High Load Capability**  
 Precision ball screw and ball screw nut can withstand high loads
- Long Life**  
 Drive technologies and bearing mechanisms enable high cycle life
- Resistant to the Environment**  
 Cover strips protect drive mechanisms from environmental factors. Carriage wipers remove contamination and guidance system is protected inside the actuator. High quality materials, surface finishes and product specifications suitable for a variety of applications.
- Energy Saving**  
 Electromechanical drives have lower energy consumption than other motion technologies, reducing the cost of ownership
- Smart Configurations**  
 Online configurator enables quick and easy product selection based on customer application input
- Flexible Service**  
 Customised motor interfaces allow customers to fit their own preferred motors
- One-Stop Shop**  
 Motors, drives and accessories are available

## Technical Specifications and Options

- All drive and guide systems available
- High degree of customization
- Internal and external guidance
- Environmental cover strip
- Robust construction
- Compatible with all drive systems
- Built on reliable and long-life due to high quality components
- Certified for difficult environmental conditions



- Size 30 – 200 mm



- Strokes up to 60 m



- Load max. 1000kg and more in combination



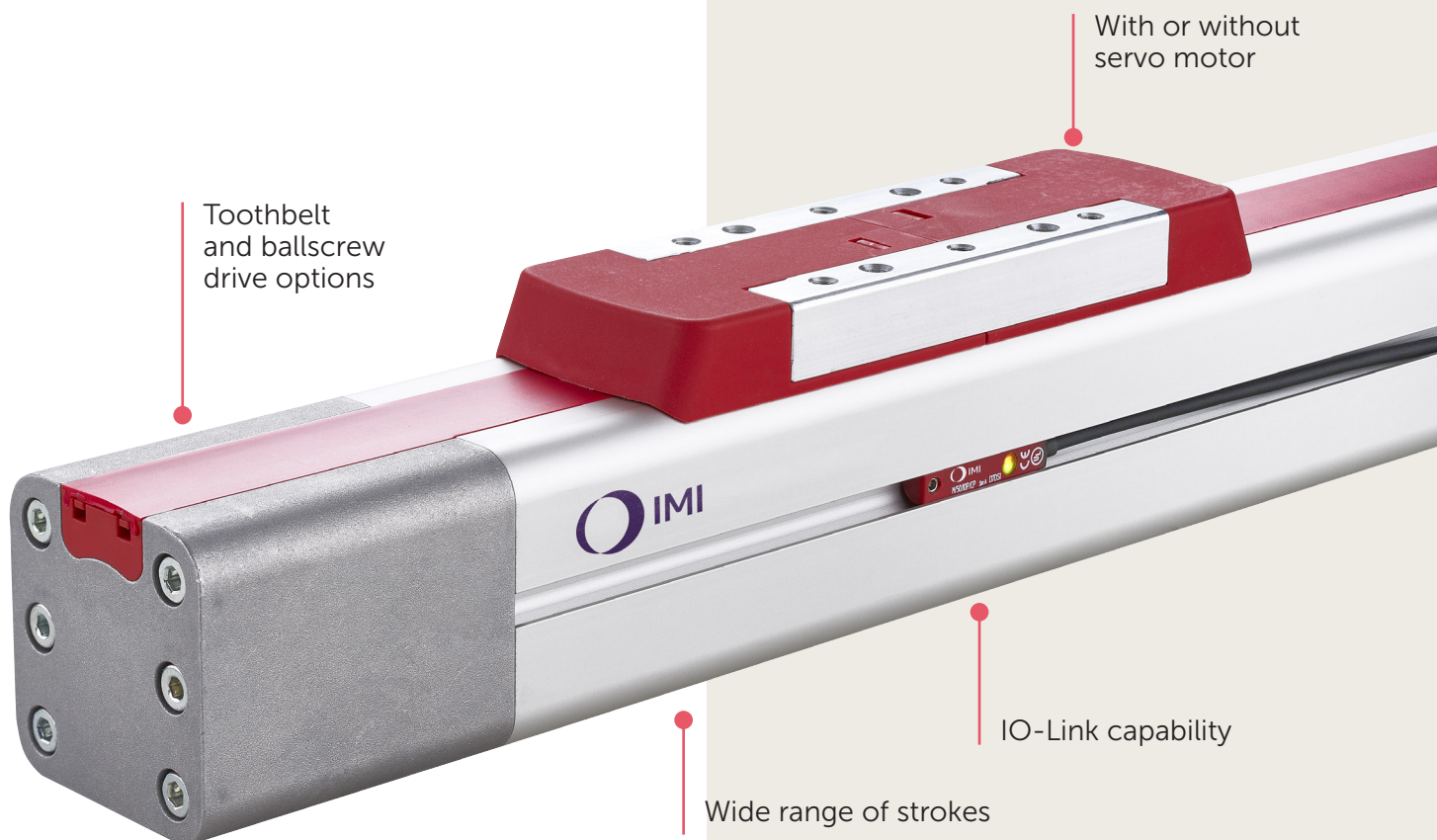
- Speed max. 14 m/s
- Acceleration max. 100 m/s<sup>2</sup>



- Operating temperature -40°C ... 60°C



- Repeatability 0.02 – 0.1 mm



Toothbelt  
and ballscrew  
drive options

With or without  
servo motor

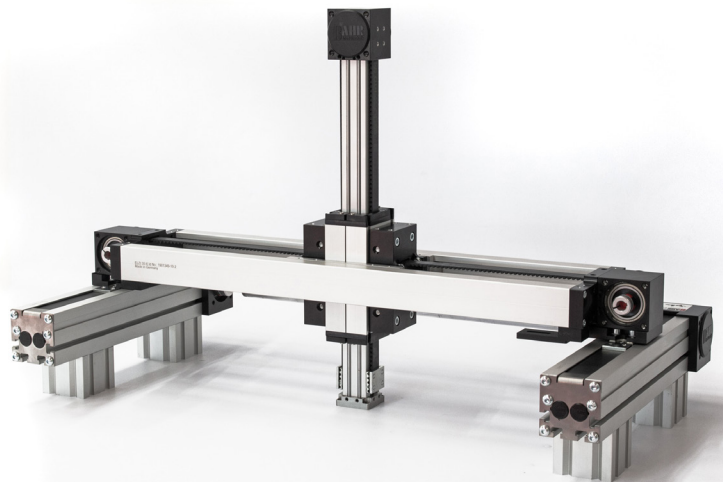
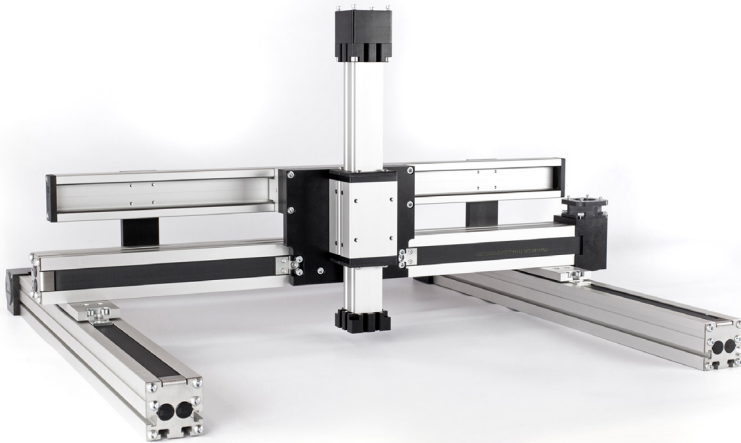
IO-Link capability

Wide range of strokes

# Multi Axis Systems

**Complex multi axis systems** are essential in today's industrial world, and they play an increasingly significant role in machine construction. To ensure we meet our customers' exact specifications, our experienced technical team are on hand to provide comprehensive needs assessment, advice and technical support from design through to delivery.

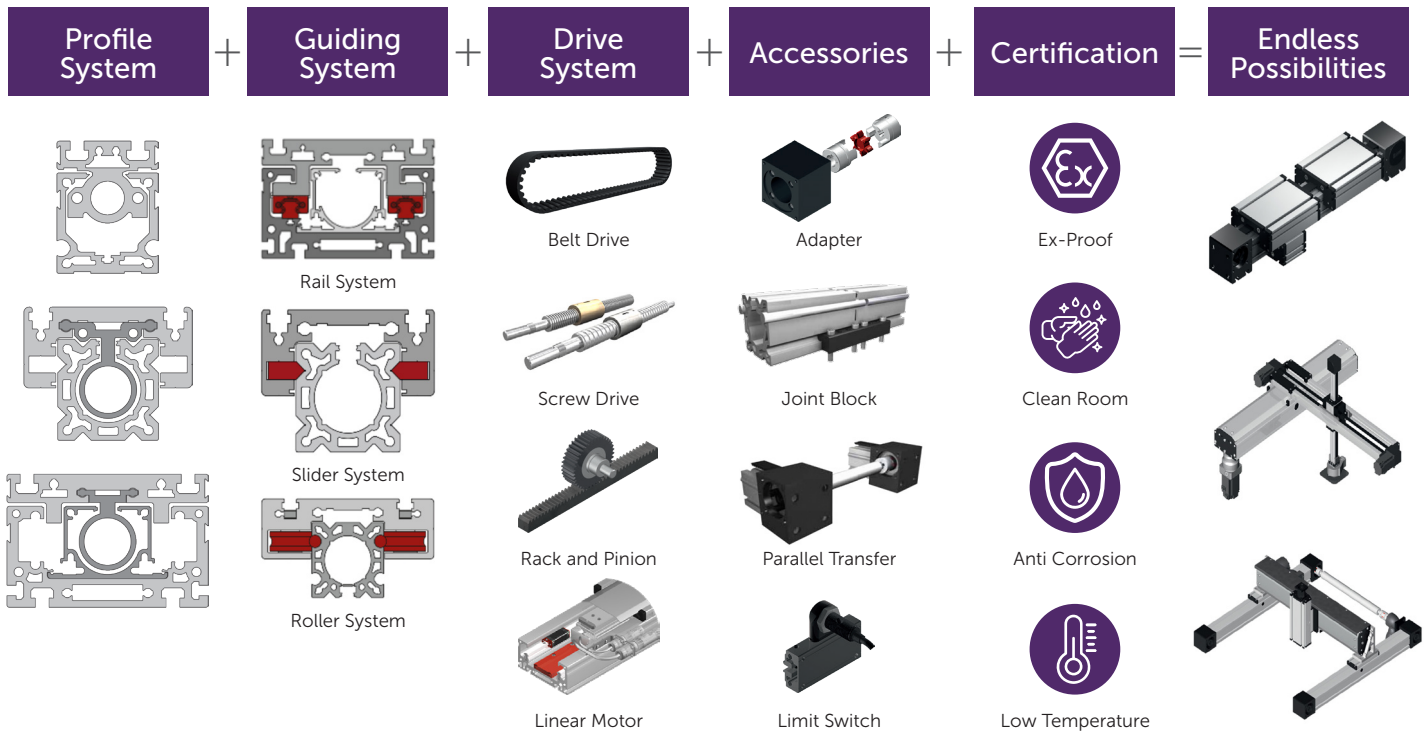
- Comprehensive requirement assessment and advice
- Fast quote: 48 hours with CAD models.
- Standard project fulfilment target: 4 to 6 weeks
- Unlimited configuration
- On-site training and support
- Continuous customer service



## Total design flexibility for made-to-measure multi axis systems

- Profile widths: From 30 to 200 mm
- Drive options: Toothbelt, ball/trapezoidal screw, rack & pinion, linear motor
- Stroke lengths: From 100 mm to 4 m
- Loads: up to 300 kg
- Positioning Repeatability:  $\pm 0.02$  to 0.1 mm





1

Modularity provides flexibility and customisation for all customer applications.

2

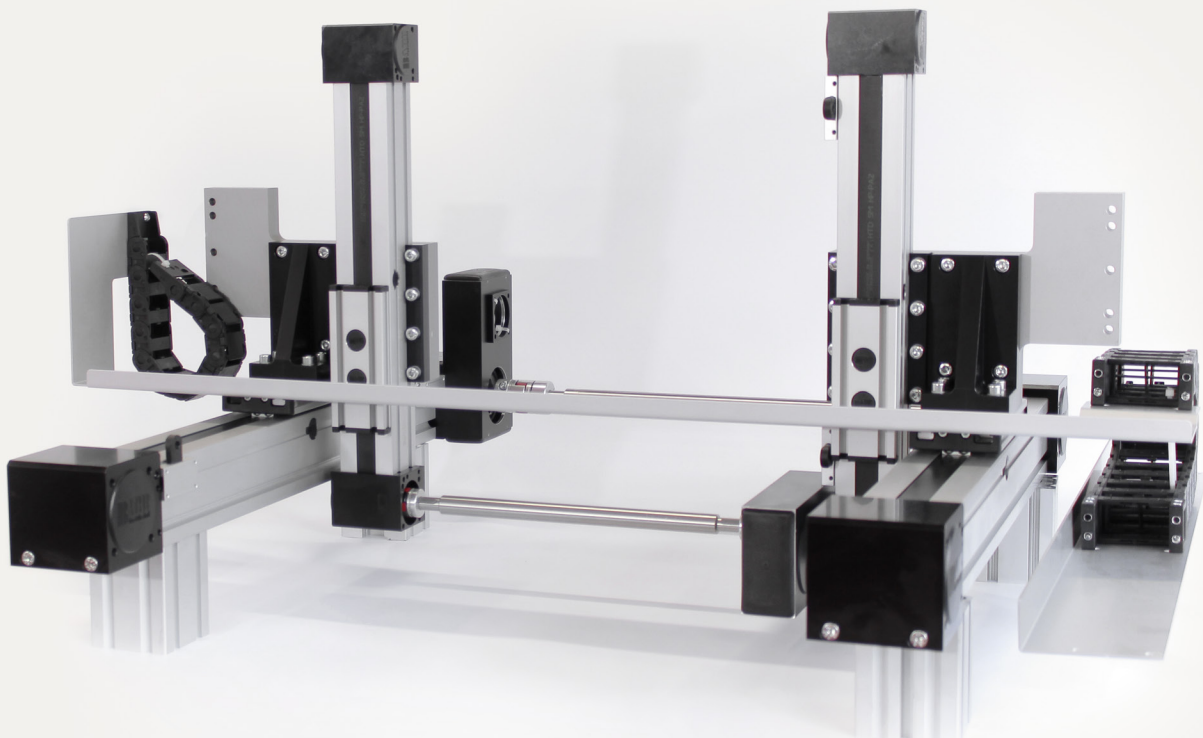
Modularity and high-quality profiles simplify assembly, providing responsiveness and flexibility from small batch to serial production.

3

Full compatibility with motors, gearboxes and controllers by from all external providers.

4

Motors and drives available through application engineering or self service with online configurator.



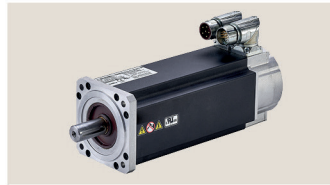
# Accessories & Drives

To ensure optimal performance, a range of accessories are available to enhance the functionality and reliability of our Electric Motion products.

- Products are compatible with motors from all manufacturers
- Delivery with or without motor possible. Motor and gearbox specification on request
- 3 variants of servo drives with built-in RS485 communication. Protocols include Ethernet/IP, PROFINET, PROFIBUS, EtherCAT, CANopen and DeviceNet

## Electric Accessories

### AC Servo Motor



- Axially or parallel assembly in four positions
- Wide torque range
- IP65 (motor only)
- Low inertia for high dynamic performance
- UL/CUL, CE and RoHS Compliant

### Compatible products:

#### Electric Cylinders & Linear Axis



### Servo Drive & Protocols



- Supports range of machine control options
- Advanced motion controller on board
- Small footprint, just 40 mm wide
- Protocols: Ethernet/IP, PROFINET, PROFIBUS, EtherCAT, CANopen and DeviceNet

### Accessories

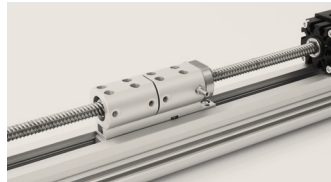


Wide range of:

- Switches
- Cables
- Connecting & fastening elements

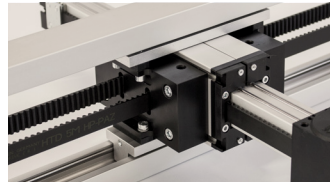
## Linear Drive Systems

### Spindle Drive



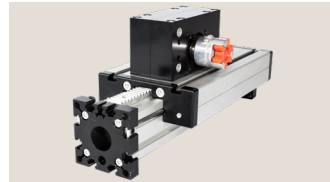
- Excellent positioning and repeat accuracy
- Long service life and operational reliability
- High drive stiffness
- High thrust forces
- Smooth and quiet motion
- Low breakaway and drive torque
- High efficiency with the ball screw drive

### Toothbelt Drive



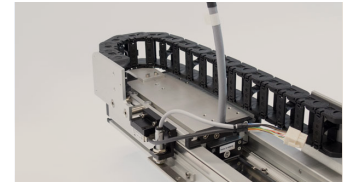
- High speed and acceleration
- Long service life
- Long strokes possible
- Low wear due to hardened tracks
- Low maintenance
- Low noise
- Temperature range from -25°C to +75°C

### Rack & Pinion Drive



- High precision
- Long service life and operational reliability
- Long strokes possible
- High dynamism
- High drive stiffness
- High thrust forces
- High load capacity

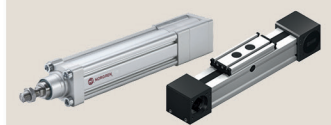
### Linear Motor Drive



- Unbeatable positioning and repeat accuracy
- High speeds and accelerations
- Long travelling distances possible
- Low noise emission
- Low maintenance and low wear

### Compatible products:

#### Electric Cylinders & Linear Axis



#### Linear Axis



#### Linear Axis



#### Linear Axis



# Application Examples

We offer customised solutions to suit every application. From individual parts to series production, we offer the right linear motion technology for your industry and specific application.



## Mechanical and systems engineering

- Coating, painting, welding, measuring and forming plants; glass, stone and woodworking machinery



## Chemical and pharmaceutical industry

- Mixing, testing and dosing equipment
- Laboratory applications
- Clean-room conditions



## Automation and electrical engineering

- Assembly lines and storage systems
- Assembly and handling systems
- Measuring and inspection equipment



## Pharmacy Automation

- Automated picking system



## Lifting and materials handling technology

- Bottling and dosing systems
- Electro-mechanical lifting systems
- Lift systems
- Pick and place systems



## Packaging technology

- Labelling and packaging equipment
- Systems for cartoning, loading, packaging and delivery



## Food industry

- Food and animal food production
- Resistant against cleaning agents



## 3D printing

- Rapid prototyping
- Industrial 3D printing
- Sintered metal processing
- Architectural projects

Our Industrial Automation sector operates four global centers of technical excellence and a sales and service network in 50 countries, as well as manufacturing capability in Europe, Americas and Asia Pacific.

Supported by distributors worldwide.

For further information, scan this QR code or visit:

[www.imiplc.com/industrial-automation](http://www.imiplc.com/industrial-automation)



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