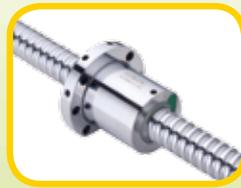
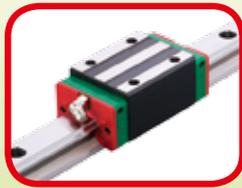
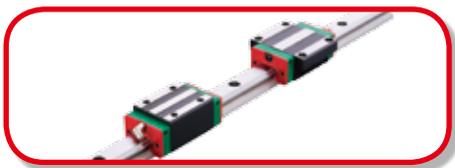


# Product Directory



***Motion Control and  
System Technology***

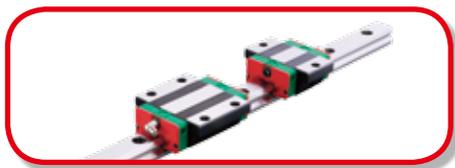
# Linear Guideway



**△ HG Series** (Heavy Load Ball Type Linear Guideway)

HG series linear guideways are designed with circular-arc groove and structure optimization for high load capacity and rigidity better than similar guideway offerings.

- Size: 15mm to 65mm - Accuracy: C to UP
- Basic Dynamic Load: 11.38kN - 208.36kN
- Equal load ratings in radial, reverse radial and lateral directions
- Self-alignment to absorb installation-error
- Heavy loads, high speed, high accuracy



**△ EG Series** (Low Profile Ball Type Linear Guideway)

The EG series offers a low profile, high load capacity, and high rigidity. Lower assembly height and the shorter length make the EG series suitable for high-speed, automation machines and space limited applications.

- Size: 15mm to 35mm - Accuracy: C to UP
- Basic Dynamic Load: 5.35kN - 33.35kN
- Equal load ratings in all 4 directions
- Self-alignment to absorb installation-error
- High speed, very high accuracy



**△ WE Series** (Four-Row Wide Rail Linear Guideway)

The WE series features a wide rail for high loads, moments and rigidity and meets high accuracy standards. The ability to use a single rail with a low profile and low center of gravity is ideal where space is limited or high moments are required.

- Size: 15mm to 35mm - Accuracy: C to UP
- Basic Dynamic Load: 5.23kN - 29.8kN
- Equal load ratings in radial, reverse radial and lateral directions
- Self-alignment to limit installation-error
- Very low profile, high accuracy



**△ CG Series**

The new CG linear guideway features an O-Type bearing configuration greatly improving moment load capacity. The series also offers a rail cover strip for enhanced resistance to dust and other contaminants and an improved lubrication path.

- Superior load ratings
- Quick installation
- Longer service life
- Size: 15mm to 45mm - Accuracy: C to UP
- Basic Dynamic Load: 13.8kN - 124.43



**△ RG Series** (High Rigidity Roller Type Linear Guideway)

The RG series features cylindrical rolling elements with a 45-degree contact angle. Elastic deformation is reduced for greater rigidity and higher load capacities in all 4 directions. The RG series offers higher performance than ball bearing guideways.

- Size: 15mm to 65mm - Accuracy: H to UP
- Basic Dynamic Load: 11.3kN - 275.3kN
- Very high load capacity - High Precision
- Longer running life



**△ MG Series** (Miniature Linear Guideway)

The MG series is a compact miniature linear guideway with a Gothic arch contact design for high stiffness and high rigidity. The MG series offers anti-corrosion protection with high grade stainless steel on all surfaces. The MG is available in a narrow (MGN) and wide width(MGW) block.

- Size: 5mm to 15mm - Accuracy: C to P
- Basic Dynamic Load: 0.54kN - 8.93kN
- Compact design
- Stainless steel



**△ QH/QE/QW/QR** (Quiet Linear Guideway)

The HIWIN QH/QE/QW/QR Series linear guideways have HIWIN's Patented SynchMotion™ Technology and are interchangeable with the HG/EG/WE/RG series respectively.

- Superior lubrication - High speed
- Quiet operation
- Reduced dust generation
- Longer running life

## Linear Guideway Accessories



### △ SE Type (Metallic End Cap Linear Guideway)

SE series guideways are a metallic block option that increases temperature resistance and supports high accelerations. This option enables guideway blocks to function at service temperatures up to 150°C and instance temperatures up to 200°C. Steel scrapers and copper bolt caps are available for additional protection. Suitable for vacuum applications.



### △ E2 Series (Self-Lubricant Linear Guideway)

The E2 kit is a rail raceway lubricator, installed between the end cap and end seal of a linear guideway block. Equipped with a replaceable/ refillable oil cartridge, the E2 is designed to extend distance between maintenance cycles by as much as 10,000km.

## Positioning Guideway

HIWIN offers positioning guideway systems with non-contact magnetic encoders for integration with a linear guideway. A magnetic strip is embedded in the rail to prevent contact damage and damage caused by materials such as oil, water and dust. The non-contact sensor prevents wear and increases service life.

- Repeatability: to 2µm
- Resolution: to 1µm
- Maximum Length: 30m
- Max Speed: 10m/sec
- Protection Class: IP67



## Positioning Measurement System

Position measurement systems with non-contact magnetic encoders for integration with positioning systems. Analog and digital options supported. Multiple 1 and 3 axis display options with selectable resolutions are available.

- Repeatability: to 1µm
- Resolution: to 1µm
- Maximum Length: 30m
- Max Speed: 10m/sec
- Protection Class: IP67
- Compact design



## AC Servo Motor & Drive

HIWIN AC servo motors and drives complement our product offerings for complete linear motion solutions

### △ AC Motors

- Encoders to 17 bits
- High resolution and positional accuracy
- Low heat generation
- Low noise and vibration
- Motor sizes: 50W to 1KW
- Optional brake

### △ Drives

- Fully digital, vector-controlled drive amplifier
- Auto-tuning function
- Vibration suppression
- Error compensation
- Easily programmable



## Ballscrews



### △ Super S series

The Super S series features a patented internal recirculation cassette that reduces noise and nut size, and improves performance.

- Low noise: 5-7 dB lower than external recirculation
- Space Saving: 18% - 32% smaller
- Acceleration: 9.8m/sec<sup>2</sup>
- JIS Accuracy: C0-C7 (ground ballscrew)  
C6-C10 (rolled ballscrew)
- Exceptional Dm-N Value: to 220,000



### △ Heavy load ballscrews-RD series

Heavy load ballscrews offer 2-3 times higher load capacity than a standard ballscrew series with a reinforced circulation system suitable for high speed conditions and a longer service life.

- High Static Load: to 496,160kg
- High Acceleration
- JIS Accuracy: C7
- Dm-N Value: to 160,000



### △ Dustproof options

- SS (Scrape wiper)  
Flexible spring-loaded fingers extended from ends eliminate gap between wiper and shaft surface for dust-proof protection.
- SH (Scrape wiper + felt)  
Finger wiper plus high density felt ring for improved dust resistance.
- EW/ NW  
TPU/rubber wiper for standard DIN ball nuts on rolled ballscrews.



### △ Super T series

The Super T series features an external recirculation design that reduces noise and vibration below standard ballscrew designs.

- Low noise: 3-5 dB lower than external recirculation
- Static Load: to 58,851kg
- JIS Accuracy: C0-C7 (ground ballscrew)  
C6-C10 (rolled ballscrew)
- Dm-N Value: to 160,000



### △ Rotating nut ballscrews - R1 series

Rotating nut ballscrews integrate a nut and support bearing into a single design allowing a fixed shaft design.

- Low Noise - High Axial Load : 45° contact angle
- JIS Accuracy: C6-C10 (rolled ballscrew)



### △ Cool Type I&II ballscrews

Cool type series ballscrews utilize forced fluid cooling to minimize heat generation and thermal expansion. Constant temperature eliminates warm-up time and thermal distortion.

- High Acceleration: to 4.9m/sec<sup>2</sup>
- JIS Accuracy: C3C7 (ground ballscrew)
- High Dm-N Value: to 200,000



### △ E2 Self-lubricant options

Efficient and economical lubrication option.

- Extend maintenance cycle
- Ideal lubrication position - Easy to install and refill
- Clean and environmental friendly
- Interchangeable oil selection
- Suited for harsh environments: e.g., excess moisture and dust

## Single-Axis Robot - Ballscrew or Belt Driven Stage



### △ KK Series

The KK single-axis robot is a ballscrew driven guideway with an optimized U-rail for high stiffness and accuracy.

- Accuracy: to 20-50µm
- Repeatability: to 3µm
- Static Load: to 8650kg
- Speed: to 1500mm/s
- Travel: to 1.5m



### △ SK Series

The SK single-axis robot incorporates SynchMotion™ into the KK series design for quieter operation, self lubrication and longer service life.

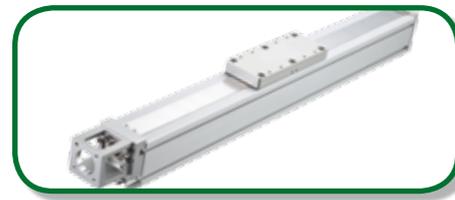
- Accuracy: to 20-40µm
- Repeatability: to 3µm
- Static Load: 3600kg
- Speed: to 1500mm/s
- Travel: to .8m



### △ KA Series

The KA single-axis robot is a ballscrew or belt driven guideway with an aluminum base for a light-weight design.

- Repeatability: to 20µm
- Max Load: 239kg
- Speed: to 1800mm/s
- Travel: to 3m



### △ KU Series

The KU single-axis robot is a light-weight ballscrew driven guideway with a dustproof strip to control particle transmission.

- Repeatability: to 20µm
- Max Load: 95kg
- Speed: to 1000mm/s
- Travel: to 1.1m



### △ KS Series

The KS single-axis robot is a Light-weight ballscrew or belt driven guideway with enclosed motor, dustproof strip and internal air pressurization to control particle transmission.

- Repeatability: to 20µm
- Max Load: 95kg
- Speed: to 1800mm/s
- Travel: to 3m



### △ KE Series

The KE single-axis robot is a compact, light-weight ballscrew driven guideway with a dustproof strip and corrosion protection.

- Repeatability: to 20µm
- Max Load: 25kg
- Speed: to 500mm/s
- Travel: to .6m

## Single-Axis Robot - Multi-Axis Solutions

### △ Multi-Axis Positioning Systems

- Off-the-shelf / Assembly ready
- Complete motor, drive and accessory solutions
- Single and multi-axis designs
- Customizable XYZ configurations
- Competitive prices – Save as much as 50%
- Prompt delivery – Fully assembled systems in as little a 2-4 weeks



## Precision Bearing



### △ Crossed Roller Bearings

- Patented high rigidity and high load capacity
- Higher accuracy than the ISO standard
- Space saving construction
- Supports combination of both radial and thrust loads
- Easy installation
- Multiple specifications



### △ Ballscrew Bearings

- Space saving
- Easy installation and adjustment
- Can be supplied with Hiwin ballscrews for a total solution



### △ Support Units

- Standard type and High capacity type
- Matched with high accuracy, high stiffness angular contact ball bearings
- Black Oxide surface coating
- Easy installation and adjustment
- Various Support unit types and dimensions to meet customer requirements
- Can be assembled with Hiwin Ballscrews for a total solution

## Linear Actuator

### △ LAS1

- Max. thrust/pull: 600-1200N
- Max speed: 12-25mm/sec
- Standard stroke: 50-250mm
- Protection: IP54/IP65
- Weight: 1.04kg
- Working temp: +5°C~40°C
- Connection Type: Audio/DIN 4pin

### △ LAS2

- Max. thrust/pull: 1200-1800N
- Max speed: 7-15mm/sec
- Standard stroke: 50-250mm
- Protection: IP54/IP65
- Weight: 1.3kg
- Working temp: +5°C~40°C
- Connection Type: Audio/DIN 4pin
- Position feedback

### △ LAS3

- Max. thrust/pull: 600-1200N
- Max speed: 12-25mm/sec
- Standard stroke: 50-250mm
- Protection: IP54/IP65
- Weight: 1.27kg
- Working temp: +5°C~40°C
- Connection Type: Audio/DIN 4pin
- Position feedback

### △ LAS4

- Max. thrust/pull: 300-800N
- Max speed: 15-46mm/sec
- Standard stroke: 100-300mm
- Protection: IP54/IP65
- Weight: 1.36kg
- Working temp: +5°C~40°C
- Connection Type: Audio/DIN 4pin
- Position feedback

### △ LAS5

- Max. thrust/pull: 300-2000N
- Max speed: 4-8.5mm/sec
- Standard stroke: 100-300mm
- Protection: IP54/IP66
- Weight: 1.5kg
- Working temp: +5°C~40°C
- Connection Type: Audio/DIN 4pin

### △ Other available series

LAI, LAM, LAN



## Torque Motor (Direct Drive Motor)

### △ Torque Motor Rotary Tables

**Features:**

- Max. Torque: 450Nm
- Repeatability:  $\pm 3$  arc/sec.
- Max. Speed: 700 rpm
- Resolution: 4,320,000 p/rev

**Applications:**

- Automation industry
- PCB/AOI examination
- Touch panel testing machines
- Tooling machine industry



### △ TMRW Torque Motor

**Features:**

- Water cooled
- Maximum speed up to 3200 rpm
- Maximum torque up to 5100 Nm

**Applications:**

- Index tables
- Machining heads
- Turrets



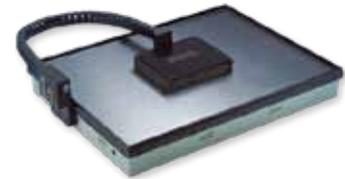
## Linear Motor

### △ Ironcore Motors

- High thrust 20,827N
- Max. acceleration 10G
- Machine tool

### △ Shaft Motors

- Circle stator
- No cogging force
- Smooth motion profile application



### △ Ironless Motors

- Lower velocity ripple
- No cogging force
- Semiconductor industry

### △ Products

- LMS Series, LMSA Series,  
 LMF Series, LMFA Series,  
 LMSC Series, LMC Series,  
 LMT Series, LMSP Series



### △ Planar Motors

- Air bearing for wear-free operation
- Built-in position feedback system
- Magnetoresistive stepping motor



### △ Complete Motion Systems

**Features:**

- Customized design
- The deviation in synchronization movement  $< 5\mu\text{m}$
- Total system can have up to 18 axes
- Best positioning feedback system resolution 50nm
- Max. Velocity 5 m/s
- Max. Acceleration 3.5G

**Applications:**

- Automation pick and place
- FPD equipment
- Solar energy equipment
- PCB/ AOI equipment
- Water jet
- Machine tool
- Laser scanning and cutting equipment



## NEW Articulated Robots

### △ RA Series – 6-Axis Robots

- RA Series robots are a compact and agile automation solution with multiple configurations
- 5kg, 10kg and 20kg weight capacities
- Multiple electric and pneumatic ports
- Motors with Brakes and Absolute Encoders on all 6 axes
- IP65 and Clean Room Class 2 – ISO14644



### △ RD Series – Delta Robots

- RD Series 4-axis parallel robots perform high speed motions with high accuracy and stability
- 1kg and 3kg weight capacities
- Built-in conveyor tracking system



### △ XEG Series – Electric Grippers

- Adjustable gripping force, position, velocity and acceleration
- Easily grip deformable parts, rubber, glass, etc. without damage
- Sort parts based on size, with no need for vision system
- Compact size with high speed, accuracy and stiffness



### △ RJ Series– Rotary Joints

- Eliminates wire interference and damage at end effector
- Reduces application time
- Compact design minimizes load requirement and increases reach
- Electric and Pneumatic options



**HIWIN**<sup>®</sup>  
 Motion Control and System Technology

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