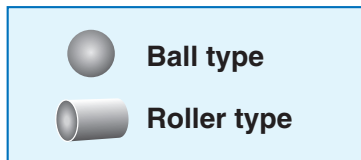


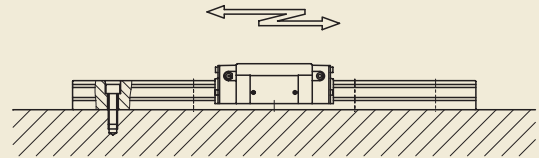
Types of IKO Linear Motion Rolling Guides

IKO Linear Motion Rolling Guides are classified according to the guide type, motion type and rolling element type. Three guide types, namely, rail guide type, shaft guide type and flat guide type are available. Each of them is divided into the endless motion type in which rolling elements are re-circulated to achieve endless linear motion and the limited motion type without rolling element re-circulation. These types are divided again into ball types and roller types. Each of these guides has its own features.



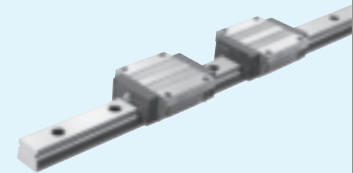
Rail guide type

The rail guide type achieves linear motion along a rail. This product can receive a complex load and features high performance, excellent total balance and easy handling.

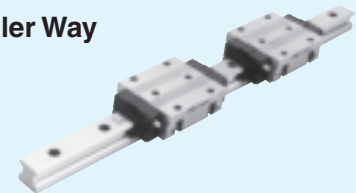


Endless linear motion

Linear Way

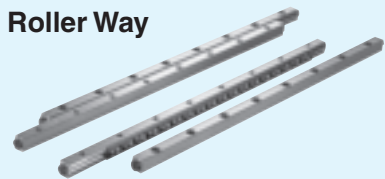


Linear Roller Way

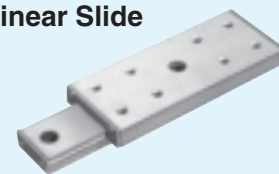


Limited linear motion

Crossed Roller Way

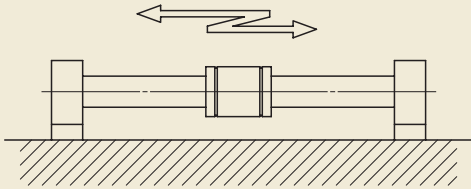


Precision Linear Slide



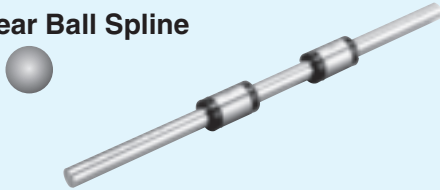
Shaft guide type

The shaft guide type achieves linear motion along a shaft. This product is easy to handle and suitable for relatively low load conditions. Some shaft guide products can achieve both rotation and reciprocating linear motion.

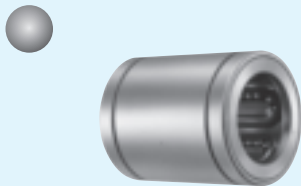


Endless linear motion

Linear Ball Spline

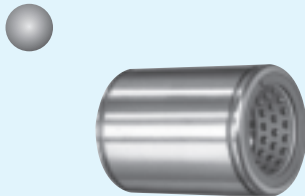


Linear Bushing



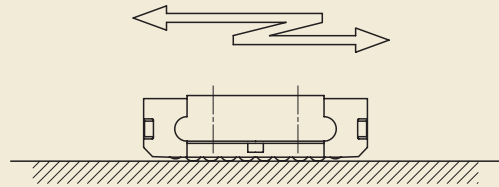
Limited linear motion and rotation

Stroke Rotary Bushing



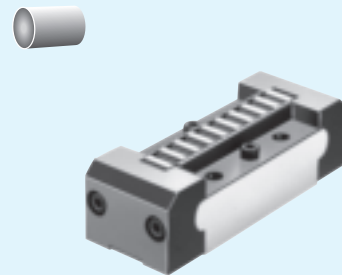
Flat guide type

The flat guide type achieves linear motion along a flat plate. It can receive only a unidirectional load but has a large load carrying capacity.



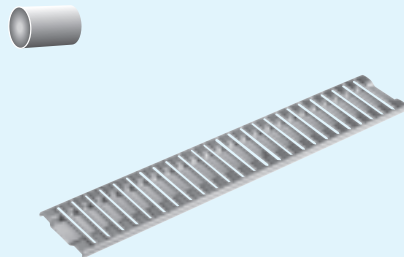
Endless linear motion

Roller Way



Limited linear motion

Flat Roller Cage



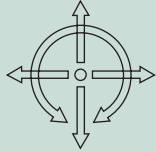





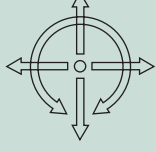


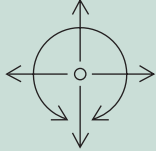


Rail guide type

Rail guide type linear motion rolling guides are easy to mount and can receive complex loads. Man-hours for mounting them on machines and equipment and for designing the guide mechanism can be saved, and consequently the overall machine cost can be reduced greatly. Linear Roller Way can be used for applications subjected to a large load and Linear Way for general-purpose applications.

For applications with a relatively small load requiring smooth and precise motion, use Crossed Roller Way or Precision Linear Slide.

Rail guide type

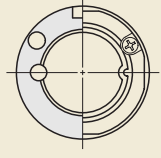

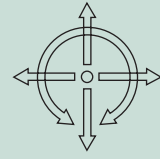
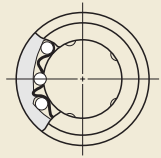

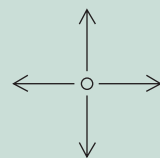
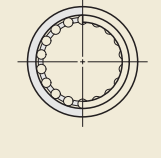

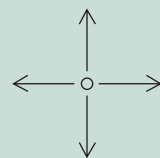
		Type of rolling element	Type of motion		Load direction and load carrying capacity	Rigidity	Frictional characteristic	Ease of mounting	General applications	
Endless linear motion	Linear Way	 Ball	 Endless linear motion		 Complex load, medium to heavy load	○	○	◎	<ul style="list-style-type: none"> · NC machine tool · Precision working machine · Robot · Material transfer machine 	Page A-2~ Page B-2~
	Linear Roller Way	 Roller	 Endless linear motion		 Complex load, heavy to extra-heavy load	◎	○	◎	<ul style="list-style-type: none"> · Heavy duty machine tool · Large working machine · High-rigidity robot 	Page C-2~
Limited linear motion	Crossed Roller Way	 Roller	 Limited linear motion		 Complex load, medium load	○	◎	◎	<ul style="list-style-type: none"> · Precision working machine · Electronic parts assembling machine · Precision measuring instrument 	Page E-2~
	Precision Linear Slide	 Ball	 Limited linear motion		 Complex load, light to medium load	△	◎	◎	<ul style="list-style-type: none"> · Electronic parts assembling machine 	Page E-84~

Remarks: ◎ Excellent, ○ Good, △ Fair

Shaft Guide Type

Shaft guide type linear motion rolling guides feature easy mounting. These guides can be used to reduce man-hours for mounting them on machines and equipment, and consequently to save greatly the overall system cost. Stroke Rotary Bushings make both linear reciprocating motion and rotation and can be used on rotary shafts. Linear Ball Splines can be used as rotary shafts to transmit torque when combined with shaft support bearings.

Shaft Guide Type

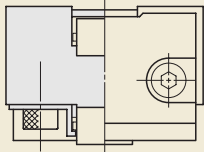






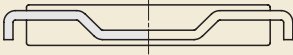






		Type of rolling element	Type of motion		Load direction and load carrying capacity	Rigidity	Frictional characteristic	Ease of mounting	General applications	
Endless linear motion	Linear Ball Spline 	Ball	 Endless linear motion		 Complex load, medium to heavy load	○	○	○	<ul style="list-style-type: none"> • Robot • Testing and inspection equipment • Material transfer machine 	Page D-28~
	Linear Bushing 	Ball	 Endless linear motion		 Radial load, light load	△	○	○	<ul style="list-style-type: none"> • Packaging machine • Measuring instrument • Medical equipment 	Page E-112~
Limited linear motion + rotation	Stroke Rotary Bushing 	Ball	 Limited linear motion + rotation		 Radial load, light load	△	◎	○	<ul style="list-style-type: none"> • Printing press • Press die set • Precision measuring instrument 	Page E-176~

Remarks: ◎ Excellent, ○ Good, △ Fair

Flat Guide Type

Flat guide type linear motion rolling guides can receive only a uni-directional load but feature high rigidity in the load direction. A guide surface must be prepared for these rolling guides by surface hardening such as heat treatment and precision surface finishing.

Flat Guide Type

		Type of rolling element	Type of motion		Load direction and load carrying capacity	Rigidity	Frictional characteristic	Ease of mounting	General applications	
Endless linear motion	Roller Way 	 Roller	 Endless linear motion		 One-directional load, extra-heavy load				<ul style="list-style-type: none"> NC machine tool Precision working machine 	Page E-202~
Limited linear motion	Flat Roller Cage 	 Roller	 Limited linear motion		 One-directional load, extra-heavy load				<ul style="list-style-type: none"> Precision working machine Optical measuring instrument 	Page E-218~

Remarks: ◎ Excellent, ○ Good, △ Fair

