Oriental motor

NEW PRODUCTS

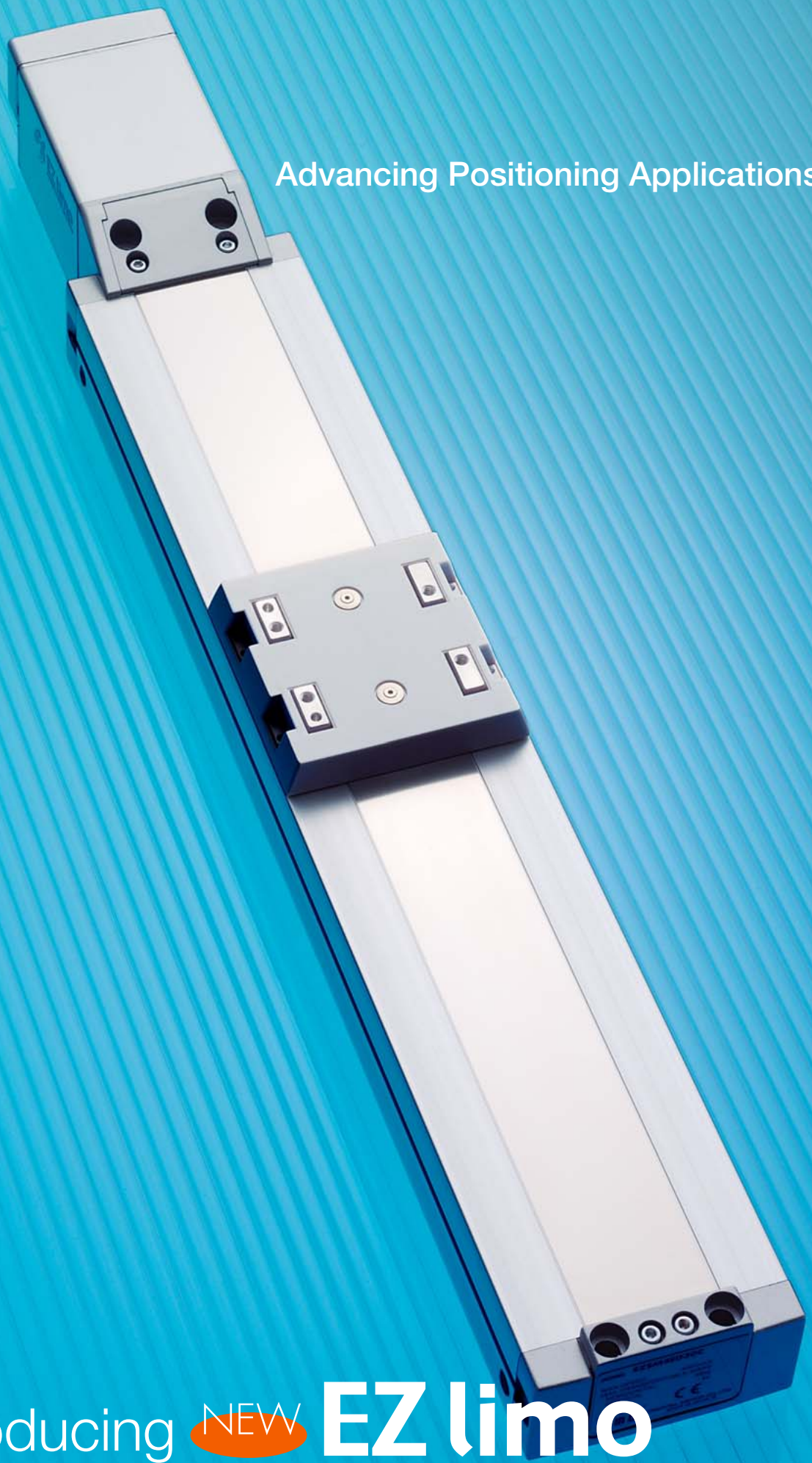
Motorized Linear Slides

EZ limo

EZS Ⅱ Series **SPF Ⅱ** Series **SPR Ⅱ** Series **SPV** Series

EZS Ⅱ Series Without Electromagnetic Brake Stroke 300 mm

Advancing Positioning Applications



Introducing NEW **EZ limo**

Oriental Motor's Motorized Linear Slides
EZ limo

Oriental Motor offers a broad lineup of motorized linear slides, including the **EZS Ⅱ** Series designed for greater ease and higher performance in positioning applications. The drive motor for all models adopts a closed loop α_{STEP} stepping motor. The common controller incorporates features that let the user effortlessly set all functions needed to operate a motorized linear slide. Other accessories–such as the teaching pendant, editing software and cables–are common to all **EZ limo** models.

Custom-design program [FACE]

●**Custom-design program [FACE]**
[FACE] is a program that lets you custom-design a product according to your specific requirements and specifications.
The **EZS Ⅱ** Series is available with various strokes specifiable in increments of 10 mm, so you can always have the desired linear slide with the stroke you need.

A Wide Lineup of Motorized Linear Slides EZ limo

EZSII Series P.12 ~ P.35

Space-Saving Design
Easy Wiring, Easy Assembly

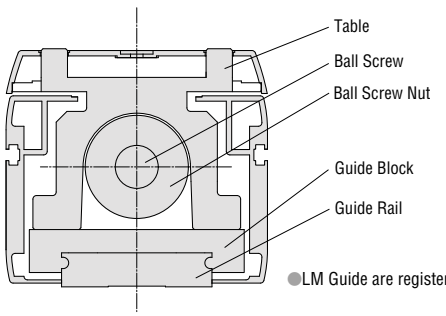
Custom-design program [FACE]

EZSII Series (Adopting αSTEP)

Drive Method: Ball screw	
Maximum Stroke	850 mm
Maximum Speed	800 mm/s
Maximum Transportable Mass	Horizontal 60 kg / Vertical 30 kg
Repetitive Positioning Accuracy	±0.02 mm

The above figures are representative values. For details, refer to the product information page.

A compact, lightweight linear slide adopting an LM Guide® as a frame. Because an accurate LM Guide® is used as a reference when the linear slide is installed, an excellent traveling parallelism of 0.03 mm or below can be achieved.
Our custom-design program [FACE] lets you specify the desired stroke in 10 mm increments.



SPFII Series P.36 ~ P.47

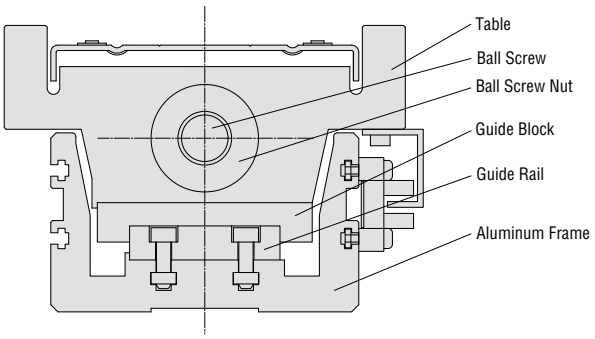
High-Accuracy
Long Stroke

SPFII Series (Adopting αSTEP)

Drive Method: Ball screw	
Maximum Stroke	1000 mm
Maximum Speed	700 mm/s
Maximum Transportable Mass	Horizontal 30 kg / Vertical 8 kg
Repetitive Positioning Accuracy	±0.01 mm

The above figures are representative values. For details, refer to the product information page.

The aluminum frame structure supports long strokes up to 800 mm for the **SPF6** and up to 1000 mm for the **SPF8**.



SPRII Series P.48 ~ P.61

High-Accuracy
High-Rigidity

SPRII Series (Adopting α_{STEP})

Drive Method: Ball screw

Maximum Stroke 500 mm

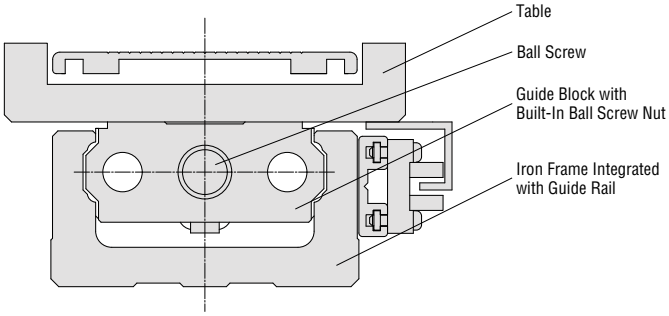
Maximum Speed 500 mm/s

Maximum Transportable Mass Horizontal 40 kg/Vertical 15 kg

Repetitive Positioning Accuracy
SPR4: ±0.005 mm ±0.01 mm

The above figures are representative values. For details, refer to the product information page.

This high-rigidity linear slide employs an iron frame structure and an outer rail, and an integral linear-guide on both sides of a nut block and an integral ball screw nut at the center of the block.
Thanks to a ball screw with a lead pitch of 1 mm, the **SPR4** achieves a repetitive positioning accuracy of ±0.005 mm.



SPV Series P.62 ~ P.71

High-Speed
Long Stroke

SPV Series (Adopting α_{STEP})

Drive Method: Belt

Maximum Stroke 1500 mm

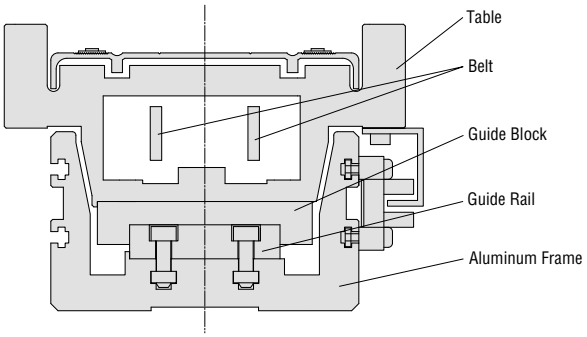
Maximum Speed 1500 mm/s

Maximum Transportable Mass Horizontal 20 kg

Repetitive Positioning Accuracy ±0.05 mm

The above figures are representative values. For details, refer to the product information page.

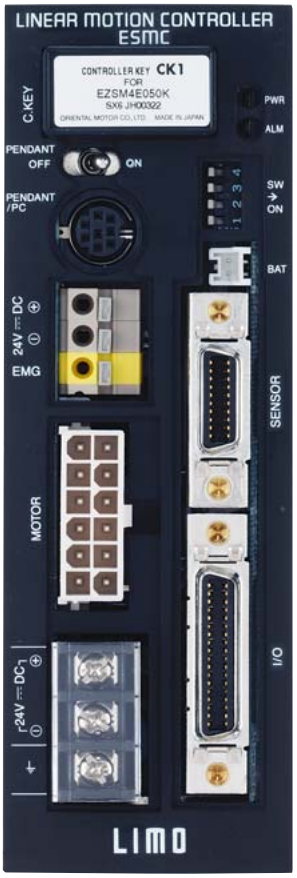
Employing an aluminum frame structure and a belt-and-pulley mechanism, the **SPV6** and **SPV8** support long strokes up to 1000 mm and 1500 mm, respectively.
All models are capable of high-speed operation, achieving a maximum speed of 1500 mm/s.



Combining All Functions Needed to Operate a Linear Slide in Positioning Operations

Each function is common to EZSII Series, SPFII Series, SPRII Series and SPV Series.

This controller lets you operate all the functions required of a motorized linear slide easily.



Common Controller

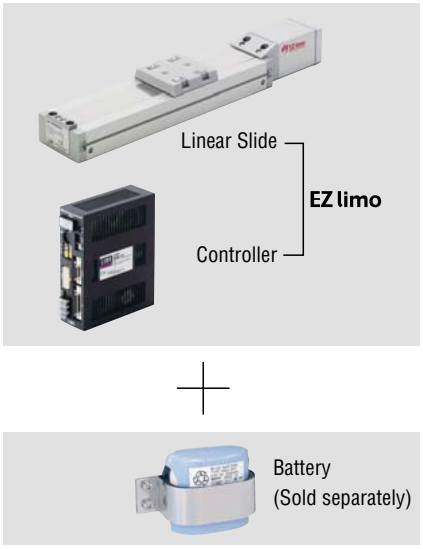
A removable controller key is adopted that stores the parameters of various models. This means that the same controller can be used with the **EZSII** Series, **SPFII** Series, **SPRII** Series and **SPV** Series.

Three Types of Controllers

The controllers are available for three power supply voltages: 24 VDC, single-phase 100-115 VAC and single-phase 200-230 VAC.
Select the controller type that suits your equipment.

Incremental Mode/ Absolute Mode

Specifically, the controller can be used as an absolute unit by connecting an accessory battery (sold separately).

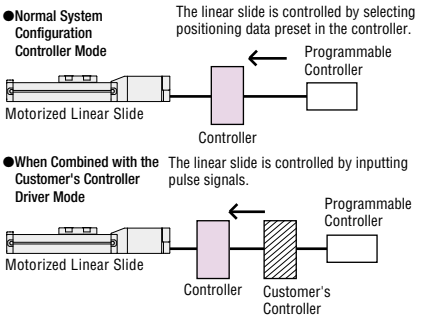


Controller Mode/ Driver Mode

The **EZ limo** can be combined with your existing controller to serve as a driver controlling the linear slide by pulse input.

	Controller Mode	Driver Mode*
Teaching Function	●	×
Monitoring Function	●	×
Pause Function	●	×
Area Output Function	●	×
Absolute Mode	●	●
Return to Home	●	●

*Certain functions cannot be used in the driver mode.



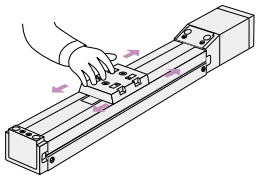
Teaching Function

Positioning data can be set in one of three methods, as specified below.

①Enter the desired travel amount (mm) directly.

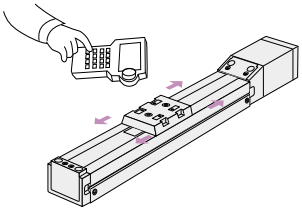
②Direct teaching

Move the table to the target position manually, and store the achieved position as positioning data.



③Remote teaching

Move the table to the target position using a teaching pendant or data editing software, and store the achieved position as positioning data.

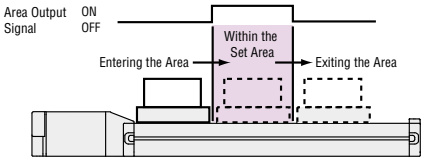


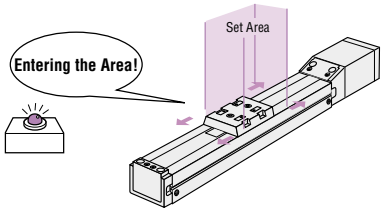
Positioning Data of up to 63 Points

Up to 63 points of positioning data can be set in simple steps. The positioning operation can be performed in one of two ways: using the selective positioning method, where desired data is selected and executed by the signals from the host controller; or the sequential positioning method, in which all data is executed sequentially when a start signal is input.

Area Output Function

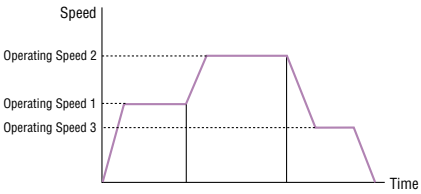
A signal is output when the linear slide table enters a set area arbitrarily set along the stroke. One set area can be set.





Linked Operation

Up to four operation data can be linked, thereby allowing the linear slide to change speeds without stopping.



·Data with the same operation direction can be linked.

Choice of Two Return to Home Methods

●Sensorless Return to Home (Only for EZSII Series)

Return to home is performed without the use of home sensors.

The home position and return to home speed (maximum of 100 mm/s) can be adjusted, and the direction of return to home can also be changed.

●Return to Home Using Sensors

Return to home is performed using home sensors.

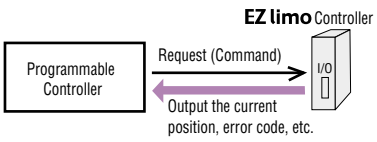
With **EZSII** Series, sensors are sold separately as accessories*.

With **SPFII**, **SPRII** and **SPV** Series, sensors are included in the product.

(*Refer to page 83 for the sensor set.)

Output of Current Position and Error Code

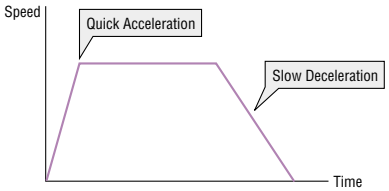
The current position, error code and other data can be output to an external device.



Extensive Adjustment Functions

●Acceleration

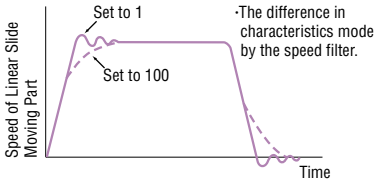
Four patterns of acceleration/deceleration setting are possible according to your operating conditions. Acceleration and deceleration can be set separately.



●Speed Filter

Use this filter to suppress shocks at starting and stopping or to reduce vibration during low-speed operation. With the speed filter function you can control the motor to minimize speed fluctuations even when switching the speed rapidly between operation commands.

The set value can be adjusted digitally (over a range of 1 to 100). Increasing the set value makes the movement smoother while decreasing the synchronism with the command.



Easy Editing of Positioning Data

The teaching pendant and data editing software are available.
Choose an appropriate accessory based on the required functions.

Functions of Teaching Pendant (**EZT1**) and Data Editing Software (**EZED2**)

The table below summarizes the functions available with the teaching pendant (**EZT1**) and data editing software (**EZED2**). Choose an appropriate tool based on the required functions.

Function	Item	
	Teaching Pendant (Model: **EZT1**)	Data Editing Software (Model: **EZED2**)
Cable Length	5 m	5 m*1
Display	LCD 17 characters×4 lines	PC screen
Emergency Stop Button	○	×
Operation Data Setting	○	○
Parameter Setting	○	○
Teaching Function (Direct/Remote)	○	○
Operation Data Monitoring	○	○
I/O & Alarm History Monitoring	○	○
Waveform Monitoring	×	○
Test Operation	○	○
Data Copy	×	○
Printing Function	×	○*2

*1 PC interface cable (included) is used.
*2 The printing function is not available on computers running Windows®98, Me.

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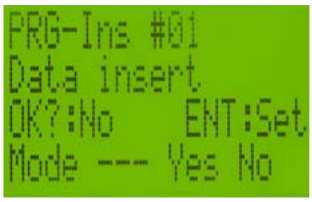
Teaching Pendant (Sold separately) (Model: **EZT1**)

- All functions required for operation and adjustment, including setting of positioning data, test operation and I/O monitoring, are provided.
- The dialogue-type user interface ensures easy operation. All you need is to enter values in the necessary fields.
- No dedicated power supply is necessary. Simply connect the cable to the controller.



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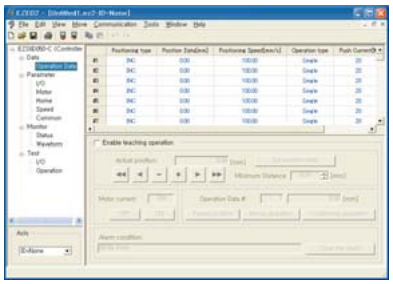
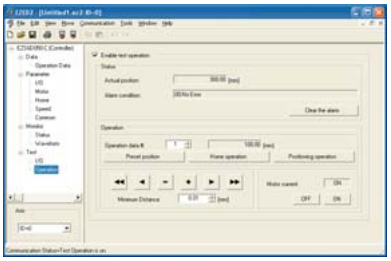
Data Editing Software (Sold separately) (Model: **EZED2**)

- All functions required for operation and adjustment, including setting of positioning data, test operation and I/O monitoring, are provided.
- Running on any Windows computer, the software is a graphic navigation tool that guides you through various operations in easy steps. This user-friendly feature makes this ideal accessory for editing large volumes of data.
- You can also access waveform monitoring, data copy and other features not available on the teaching pendant.

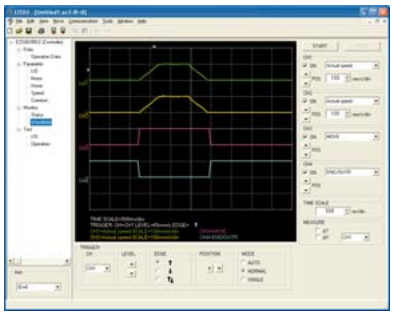
Data Editing



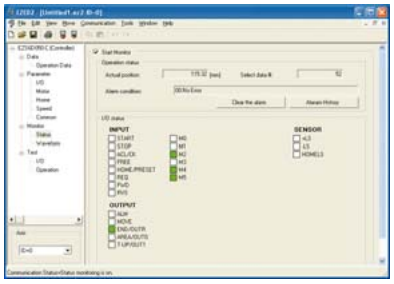
Test Operation



Waveform Monitoring

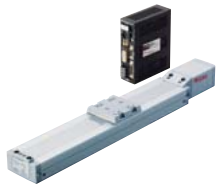


Status Monitoring



Selection of Motorized Linear Slides EZ limo

●For details of product specifications, check the pages where each product is listed.

Series	Linear Slide Size [Linear Slide Width×Height]	Power Supply Voltage	Lead [mm]	Maximum Load Moment [N·m] MP	MY	MR	Maximum Transportable Mass in Horizontal Direction [kg] (10 20 30 40 50 60)	Maximum Transportable Mass in Vertical Direction [kg] (10 20)
EZSII Series Drive Method: Ball screw Space-Saving Design Easy Wiring, Easy Assembly  Custom-design program [FACE]	**EZS3** [54 mm×50 mm]	24 VDC	12	4.2	4.2	10.5	7.5	3.5
			6				15	7
		Single-Phase 100-115 VAC Single-Phase 200-230 VAC	12				7.5	3.5
			6				15	7
	EZS4 [74 mm×50 mm]	24 VDC	12	8	8	27.8	15	7
			6				30	14
		Single-Phase 100-115 VAC Single-Phase 200-230 VAC	12				15	7
			6				30	14
	EZS6 [74 mm×66.5 mm]	24 VDC	12	45.7	37.5	55.6	30	15
			6				60	30
		Single-Phase 100-115 VAC Single-Phase 200-230 VAC	12				30	15
			6				60	30
SPFII Series Drive Method: Ball screw High-Accuracy Long Stroke 	**SPF6** [60 mm×67 mm]	24 VDC	10	17	15	9	15	5
		Single-Phase 100-115 VAC Single-Phase 200-230 VAC	10				15	5
	SPF8 [86 mm×80 mm]	24 VDC	20	31	28	38	30	
			10				30	8
		Single-Phase 100-115 VAC Single-Phase 200-230 VAC	20				30	
			10				30	8
SPRII Series Drive Method: Ball screw High-Accuracy High-Rigidity 	**SPR4** [40 mm×32 mm]	24 VDC	1	3.7	3.7	11	5	
	SPR6 [60 mm×48 mm]	24 VDC	10	11	11	34	20	6
		Single-Phase 100-115 VAC Single-Phase 200-230 VAC	10				20	6
	SPR8 [86 mm×68 mm]	24 VDC	10	39	39	118	40	15
		Single-Phase 100-115 VAC Single-Phase 200-230 VAC	10				40	15
SPV Series Drive Method: Belt High-Speed Long Stroke 	**SPV6** [60 mm×67 mm]	24 VDC	75	18	16	9	10	
		Single-Phase 100-115 VAC Single-Phase 200-230 VAC	75				10	
	SPV8 [86 mm×80 mm]	Single-Phase 100-115 VAC Single-Phase 200-230 VAC	90	33	29	40	20	

*EZSII Series can be ordered with the desired stroke selectable in 10 mm increments under our custom-design program [FACE].

Maximum Speed [mm/s] (100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400)	Repetitive Positioning Accuracy [mm]	Stroke [mm] (100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400)	Electromagnetic Brake: Not Equipped	Electromagnetic Brake: Equipped	Page
600	±0.02	50~700 (50 mm increments)*	●	●	24
300		50~700 (50 mm increments)*	●	●	
800		50~700 (50 mm increments)*	●	●	26
400		50~700 (50 mm increments)*	●	●	
600		50~700 (50 mm increments)*	●	●	28
300		50~700 (50 mm increments)*	●	●	
800		50~700 (50 mm increments)*	●	●	30
400		50~700 (50 mm increments)*	●	●	
600		50~850 (50 mm increments)*	●	●	32
300		50~850 (50 mm increments)*	●	●	
800		50~850 (50 mm increments)*	●	●	34
400		50~850 (50 mm increments)*	●	●	
200	±0.01	50, 100~800 (100 mm increments)	●	●	40
500		50, 100~800 (100 mm increments)	●	●	42
300		100~1000 (100 mm increments)	●	–	44
150		100~1000 (100 mm increments)	●	●	
700		100~1000 (100 mm increments)	●	–	46
350		100~1000 (100 mm increments)	●	●	
50	±0.005	25, 75, 125 mm	●	–	52
100	±0.01	50, 100~500 (100 mm increments)	●	●	54
500		50, 100~500 (100 mm increments)	●	●	56
120		200~500 (100 mm increments)	●	●	58
350		200~500 (100 mm increments)	●	●	60
400	±0.05	100~1000 (100 mm increments)	●	–	66
1500		100~1000 (100 mm increments)	●	–	68
1500		100~1500 (100 mm increments)	●	–	70