Compact Linear Actuators

DRS2 Series α_{STEP} AZ Equipped

CE

● For detailed information about regulations and standards, please see the Oriental Motor website.

Type with a Guide
Built-in Controller

Type without a Guide
Pulse Input

The **DRS2** Series uses the α_{STEP} **AZ** Series equipped with the Absolute Sensor for the driving motor. The Absolute Sensor is a mechanical multi-turn Absolute Sensor, so an external sensor is not required. The **DRS2** Series helps to save space and reduce wiring, as well as offer a more compact and lightweight design for the equipment.

- Optimized for Providing Micromovements and High Positioning Accuracy
- Reduces Startup Time
- Saves Space and Reduces Wiring with the Absolute Sensor
- Highly Efficient Push-Motion Operation

See Full Product Details Online
www.orientalmotor.com

● Manual ● Specifications ● Dimensions
● CAD ● Characteristics ● Connection and Operation

Features

Perfect for Micromovements and High Positioning Accuracy

● The Product Integrates a Stepper Motor with a Ball Screw

The hollow rotor and ball screw nut have been integrated. Since no connecting parts are necessary, there is less backlash than when coupling rigidity, etc. combines other parts, and highly accurate positioning can be achieved.

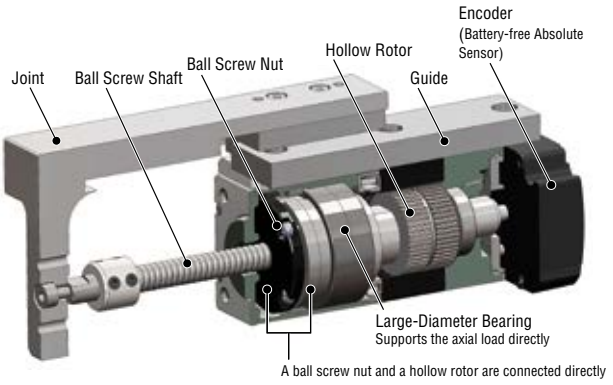
● Driven by Ground Ball Screw or Rolled Ball Screw

[Min. Traveling Amount]
0.001 mm
[Repetitive Positioning Accuracy]
Ground ball screw: ±**0.003** mm Rolled ball screw: ±**0.01** mm

● High Transportable Mass and High Speed are Achieved

● Type with a Guide
[Maximum Transportable Mass]
- Horizontal direction: **10** kg (Lead 2 mm), **5** kg (Lead 8 mm)
- Vertical direction: **10** kg (Lead 2 mm), **5** kg (Lead 8 mm)

[Maximum Speed]
50 mm/sec (Lead 2 mm), **200** mm/sec (Lead 8 mm)



● Absolute Sensor
This is the battery-free mechanical multi-turn absolute sensor.
The inclusion of this compact and low-cost absolute system saves space and wiring, because a home sensor is not required.

Startup Time Reduced

●Compact Body Houses Entire Linear Motion Mechanism

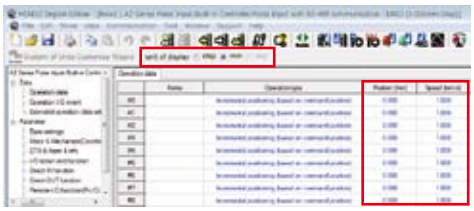
- Since customers do not need to provide parts, the time needed for installing, designing, and selecting parts can be reduced.
- The number of man-hours required for assembly and adjusting the installation accuracy can be reduced, contributing to higher productivity.

●Parameters Set at Operation

[Min. Traveling Amount]
Built-in Controller Type: 0.001 mm
Pulse Input Type : 0.001 mm

●Setting in Millimeters

The traveling amount can be set on the millimeter unit.

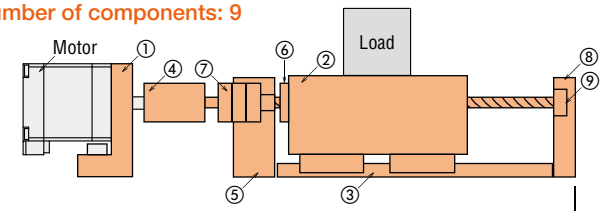


●Comparison of the Number of Components

Configuration examples of cases where the load is driven by the same stroke

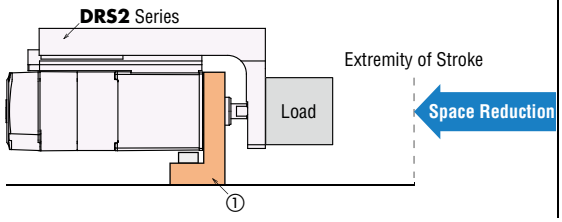
◇If Made by Customers

Number of components: 9



◇**DRS2** Series, Using the Guide Type

Number of components: 1



[Parts Used] ①Installation plate ②Transportation table ③Linear guide ④Coupling ⑤Fixed-side block ⑥Ball screw ⑦Fixed-side bearing ⑧Support-side block ⑨Support-side bearing

■Selection of Compact Linear Actuators

●Type with a Guide

DRSM42

Product	Frame Size [mm]	Ball Screw Type	Accuracy: Repetitive Positioning Accuracy [mm]	Accuracy: Lost Motion [mm]	Lead Screw Pitch [mm]	Stroke [mm]	Speed [mm/s] (10 20 30 40 50)	Thrust Force [N] (50 100 150 200)	Transportable Mass [kg]: Horizontal	Transportable Mass [kg]: Vertical	Dynamic Permissible Moment [N·m]: MP	MY	MR	Reference Page
DRSM42	42	Rolled	0.01[0.02]*	0.05	2	40	50	200	10	10	1.3	1	2.5	F-32
					8		200	50	5	5				
		Ground	0.003[0.005]*	0.02	2		50	200	10	10				

✻Specifications will vary according to conditions. For details, check the specifications for each product.

●Type without a Guide

DRSM42

DRSM60

Product	Frame Size [mm]	Ball Screw Type	Accuracy: Repetitive Positioning Accuracy [mm]	Accuracy: Lost Motion [mm]	Lead Screw Pitch [mm]	Stroke [mm]	Speed [mm/s] (10 20 30 40 50)	Thrust Force [N] (50 100 150 200)	Transportable Mass [kg]: Horizontal	Transportable Mass [kg]: Vertical	Reference Page
DRSM42	42	Rolled	0.01	0.05	2	40	50	200	40	20	F-32
			0.01		8		200	50	10	5	
		Ground	0.003	0.02	2		50	200	40	20	
DRSM60	60	Rolled	0.01	0.05	4	50	50	500	50	50	