

ZR motor series

The ZR motor series features ironless with a high-precision optical encoder for its Z-axis, and an integrated, long-axis miniature direct drive (DD) motor for its R-axis.

This compact and lightweight design offers high repeatability and, when combined with high-rigidity guide rails, enables high-precision force control.

It's widely used in equipment for force-controlled applications such as pick-and-place, dispensing/mounting, and micro-assembly.



Modular Design & Simplified Assembly

The ZR Motor Series boasts a compact design with high integration. Its modular design significantly reduces equipment development and production time.



High-Precision Positioning & Control

Achieve micrometer-level position control with the ZR Motor Series. It offers a linear repeat positioning accuracy of $\pm 0.5\mu\text{m}$ and a rotary repeat positioning accuracy of $\pm 0.01^\circ$.

Furthermore, programmable control enables equipment to gently touch component surfaces with precise force ($< \pm 1\text{g}$), minimizing damage.



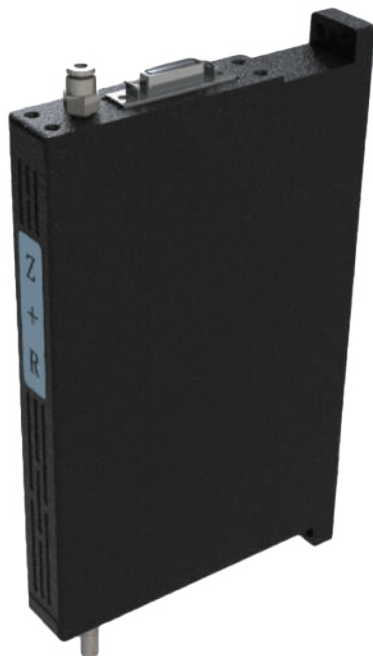
High Speed & Acceleration

Compared to traditional rotary servo motor and ball screw combinations, ZR-axis linear motors offer a clear advantage in speed, capable of achieving higher speeds and accelerations.



Low Electrical Interference & High Stability

There's no need for complicated wiring between the ZR motor, driver, and the controller. This design minimizes electrical wiring and interference factors



	Open-Loop		Close-Loop
Model	GZR-25	GZR-35	GZR-35C
Dimension(mm)	214.5*110*20	199.5*110*20	210*115*23
Weight(Kg)	0.73	0.78	0.8
Linear Axial Motor Parameters			
Continuous thrust(N)	6.5	6.5	6.5
Max thrust(N)	24	24	24
FORCE REPETITION ACCURACY(20~50g)	$< \pm 2\text{g}$	$< \pm 2\text{g}$	$< \pm 1\text{g}$
FORCE REPETITION ACCURACY(50~400g)	$< \pm 3\text{g}$	$< \pm 3\text{g}$	$< \pm 2\text{g}$
Repeatability Precision (μm)	± 0.5	± 0.5	± 0.5
Encoder Type	Incremental Encoder	Incremental Encoder	Incremental Encoder
Stroke(mm)	-3~19	-3~28	0~33
Rotary Motor Parameters			
Continuous Torque(N · m)	0.006	0.009	0.009
Peak Torque(N · m)	0.018	0.027	0.027
Inertia of rotor(Kg · m ²)	1×10^{-7}	1×10^{-7}	1×10^{-7}
Torque Constant(N-m/Arms)	0.0129	0.0129	0.0129
Motor constant (N-m/ $\sqrt{\text{W}}$)	0.0039	0.0039	0.0039
Repeatability Precision($^\circ$)	$\pm 0.01^\circ$	$\pm 0.01^\circ$	$\pm 0.01^\circ$
Encoder Type	Incremental Encoder	Incremental Encoder	Incremental Encoder
Stroke($^\circ$)	360	360	360



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