

Features



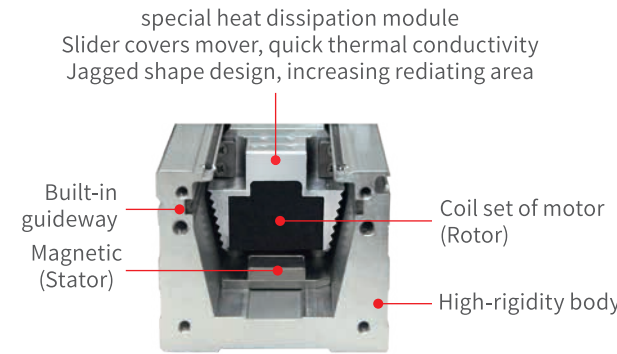
Features

Special heat dissipation mechanism, high efficiency heat dissipation of the motor

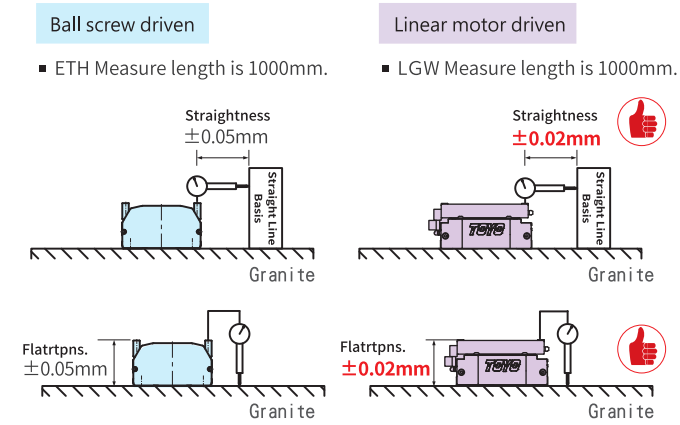
The self-developed special heat dissipation mechanism is covered on the outside of the coil to make motor dissipate heat quickly during operation & increase the efficiency.

Inner Structure of Radiating Module

(Picture: LGF)



Straightness and flatness



LSF series can be customized for <±0.01mm straightness and flatness

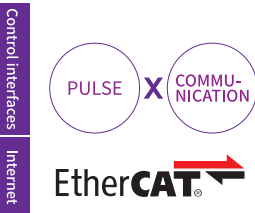
Cost-saving and short delivery time

More than 80% of the components are made by TOYO, so it is possible to effectively shorten the delivery and control the costs, so that customers can buy a linear motor driver module with ballscrew driven module.



New control standard

Standard controller can provide PULSE, and communications, two different control interfaces. Also, CAN Open and EtherCat can be option.



Optional with different brand driver

Brand : Servotronics, Mitsubishi, Panasonic, Delta

Stable Running Speed

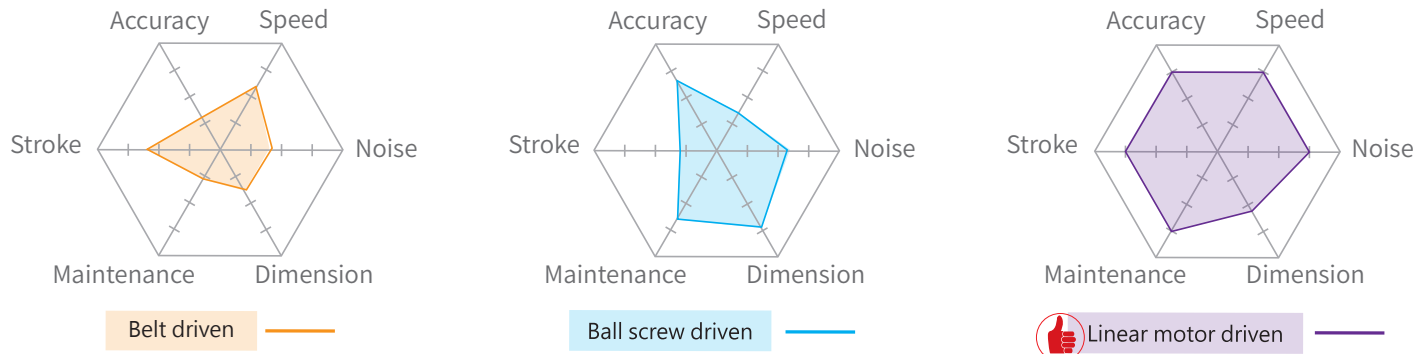
- The ballscrew actuator will reduce the moving speed due to the long effective stroke, avoiding the ballscrew resonance. The linear motor will not reduce the speed even at the long stroke but also maintain the full stroke at maximum speed of 3000mm/s.

- When the working speed is 1000 mm/s, the transitional speed fluctuation can be controlled at 1% or less. It is suitable for detection equipment in the visual system of image-taking devices.

Recommended specification: LMR Series LAU Series

Long Stroke / High Accuracy / High Speed / Low Noise Level Can Be Achieved Simultaneously

For long stroke, it is ensured that repeatability of ±0.002mm, maximum speed of 3000mm/s and low noise.



LGW New Released

Flat wide Design

Wall Mountable

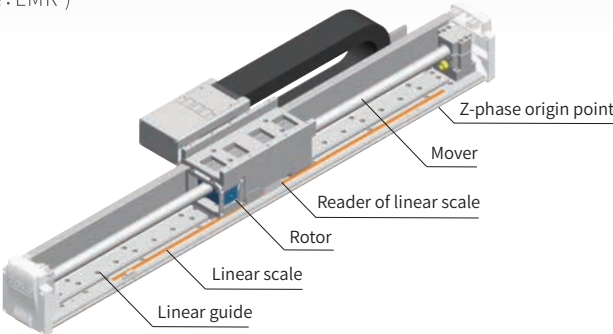
135kg Max. payload LGW85

Welcome to apply for onsite exhibition service

Linear Motor Exhibition Car

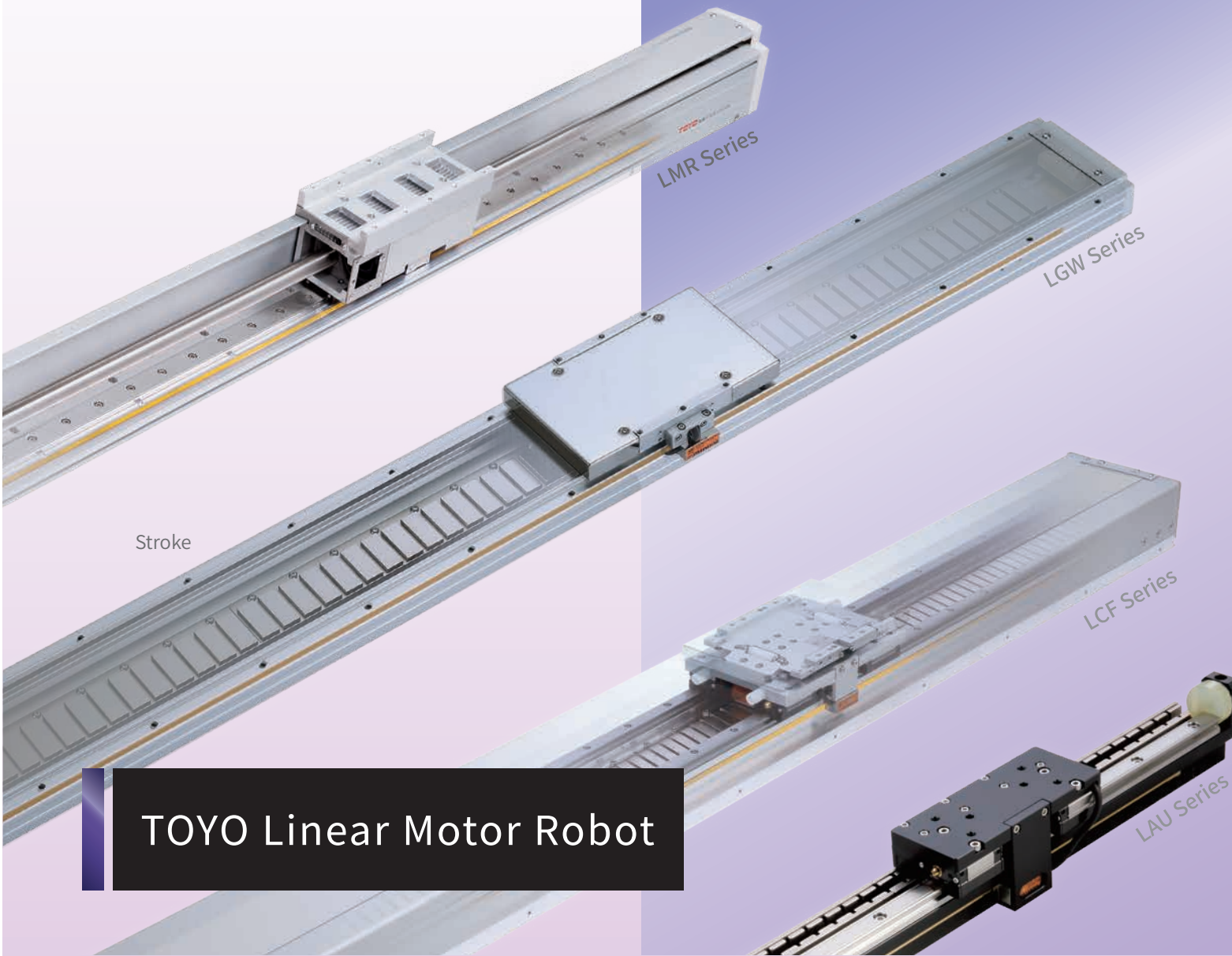
Inner Structure of LMR Series

(Picture: LMR)



Revolution of Transmission

A new generation for linear motor robot substitution.



- Low Cost
- High Precision
- High Speed
- Compact
- Low Noise
- Short Delivery
- Easy Assembly



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Inner Structure of LG Series

Slider

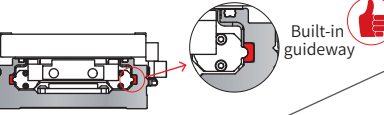
■ Slider



Linear guide

■ Adopt High Accurate Built-in Ball Type Guideway

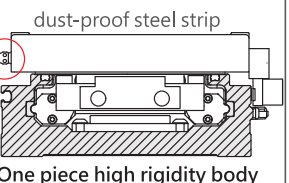
- Body width greatly reduced, working very silent.
- Straightness / Flatness $\pm 0.02\text{mm/m}$.
- Repeatability accuracy $\pm 2\mu$.






Frame body

■ External greasing nipple / High rigidity body & cover / dust-proof steel strip

- External greasing nipple
- No need to remove the cover, easy maintenance



Application :



High speed pick and place

Laser processing

Automatic machine

Mover

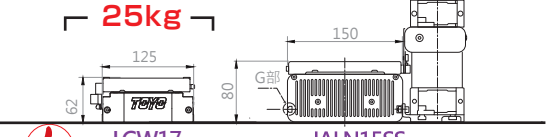
(The same load ratio compared to other brands)

Stator

Direct Greasing, Easy Maintenance

Class 100

■ Body width greatly reduced



40% smaller of the volume under same thrust

Encoder

■ Optical scale or magnetic scale is optional

- Magnetic scale can achieve an accuracy of 0.001mm.

■ Optical scale resolution

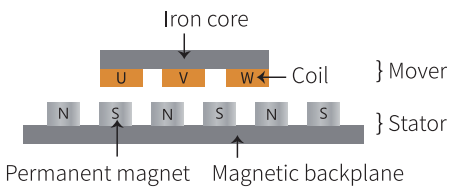
- Optional 0.1 / 0.5um resolution optical scale.

Kind of Linear Motor Robot

Iron Core Linear Motor Module

Long stroke, suit for large pushing force

Internal structure of linear motor with core



Max. speed : 3000mm/s

Max. stroke : 3700mm

Horizontal payload : 5~135kg

Repeatability : $\pm 1\sim 2\mu$

LGF Series

Standard type

Clean room type

LGW Series

Standard type

Clean room type

LGF5

LGF15

LGW17

LGW22

LGW35

LGW42

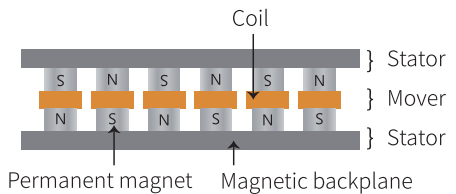
LGW45

LGW85

U Type Linear Motor Without Iron Core

Long stroke, high stable of speed, high response

Internal structure of linear motor without core



Max. speed : 3000mm/s

Max. stroke : 1290mm

Horizontal payload : 4~15kg

Repeatability : $\pm 1\sim 2\mu$

LAU Series

Standard type

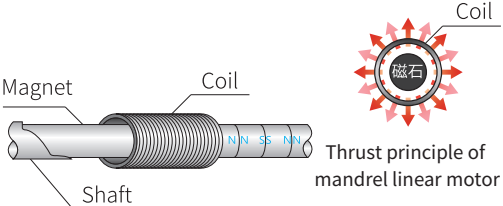
LAU3

LAU5

Shaft Bar Linear Motor Module

Small cubage, small fluctuation of speed

Internal structure of linear shaft motor



Max. speed : 3000mm/s

Max. stroke : 1940mm

Horizontal payload : 15~51kg

Repeatability : $\pm 1\sim 2\mu$

LMR Series

Standard type

LMR20

LMR25

LMR32

TOYO

Features

React to the fast evolution of the bigger and faster production in the factory, we develop linear motor to fulfill the request of long stroke, high speed and high accuracy. Carry multiple top fixture , can use in multiple electronic and mechanical component like bolt, assemble, transport ,screw, topping glue, solder.

High Payload

By designing with high-density coil, maximum continuous thrust of LGW85 can be up to 610N, horizontal payload can be up to 135N, Withthe dual-axis synchronous drive model, thrust can be double than standard. This design is suitable for large area workpiecesvisual scanning detection and screen printing, gluing.....etc.

Recommended specification : LTF Series 120kg LGW Series 135kg

LGW85 Max. payload 135 kg

High Accuracy

Actuator	Linear motor driven	Ball Screw driven	Ball Screw driven
Driven by	Linear scale Resolution: 0.001mm	C7 grade ballscrew	C5 grinding ballscrew
Repeatability	$\pm 2\mu$	$\pm 10\mu$	$\pm 5\mu$

- Due to direct driving, it can eliminate backlash and the cumulative error cause by many additional conversion mechanism.
- Suitable for application like IT equipment precise assembly and testing equipment positioning.

Long Stroke

The linear motor can be used up to 8000mm according to the way of use & can be extended according to customer needs or requirement.

Ball screw module

2400mm

ETH22M-2400

Belt module

3500mm

ETB22M-3500

Linear motor module

8000mm

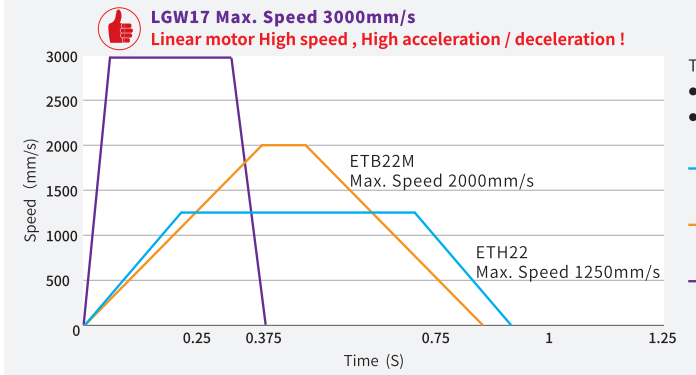
LCF75-8000

Recommended specification : LTF/LCF Series 8000mm LGW Series 3700mm LGF Series 2000mm LMR Series 1940mm

High Speed and Acceleration/Deceleration

Linear motor can reach high acceleration/deceleration speed of 4G maximum, and also high speed of 3000mm/s , which can significantly shorten the working time and increase production efficiency.

Speed comparison between linear motor and belt, ballscrew driven actuator.



Maximum acceleration and deceleration 4G

Max. speed 3000mm/s

1

2

3