



NEW

GLTH/GLTB Series

(Ball screw)

(Belt)

Low Profile Electric Actuator

01

Lower Cost
Than GTH

5~20%

02

Reduced
Height

20mm

GLTH5 vs GTH5

03

Higher RPM
Support

3600rpm

04

Double
Lead Option

1440mm/s

Vmax

05

See Thru
Coupling
Housing

**Easier
Monitoring**

06

Optional C5 Ballscrew,
Better Repeatability

$\pm 3\mu\text{m}$

07

Caged
Ball Design

**Longer
Life**

08

Black Body

**Low
Reflection
Application**



TOYO AUTOMATION CO., LTD

[GL Feature]

New Generation, New Experience!

All New Low Profile Integrate Bearing Design Actuator

Reduce Cost by 5~20%

Embedded bearing on the profile. Better space utilization.

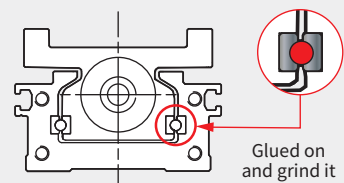
Higher moment load capacity.

Lower profile without sacrificing performance. Less material used, reduce weight, and lower carbon foot print.



NEW

Integrate Bearing Structure



Cost Effective



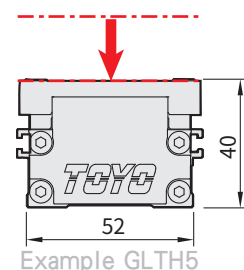
- Better manufacturing process, better cost structure than GTH series. Competitive product!

See Thru Coupling Housing



- Live monitoring. Check coupling without stopping the machine.
- Save time.

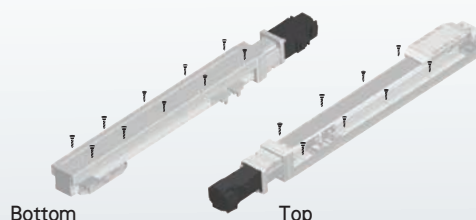
Lower Profile



- Reduced height. Low profile design.
- No matter used as single axis or MAS. Over all height reduced. More compact design that save expensive space cost.

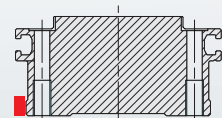
Mounting From Both Direction

- Top down or bottom up mount without remove anything.
- Optional PIN holes.



Datum Plane

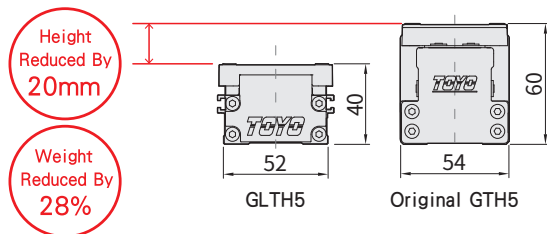
- Datum plane on the side. Provide better positioning precision. Reduce installation time cost.



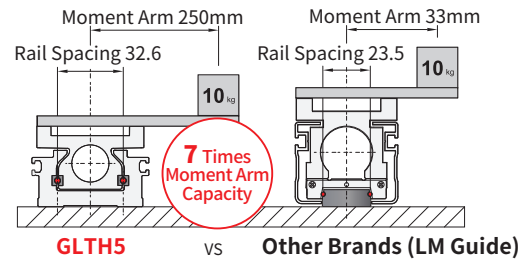
Better Performance Across All Our Competitor. Lowest Profile Ever!

Lower GC, Space Saving

mm



Integrate Bearing, Better Rigidity



All Options



Ultra Long Stroke M Series

GLTH8M
Ball Screw
Longest Stroke **2500 mm**

GLTB8
Belt Drive
Longest Stroke **3000 mm**

Ball Screw Support

Patented ball screw support preventing the screw from whipping.

Multiple Motor Position

- For more flexible design choice.



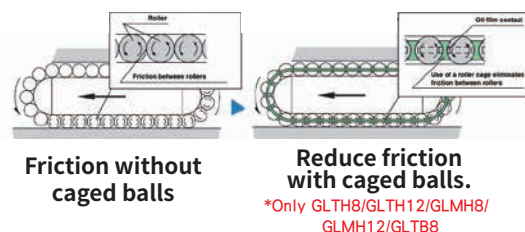
Low Dust Option

- Open design** : Cover sheet as standard option. Effectively prevent object from dropping in.
- Enclosed design** : Sealed cover sheet is the best way to prevent dust.
- Clean room design** : Adding pneumatic ports. Suitable for clean room Class 10 application.



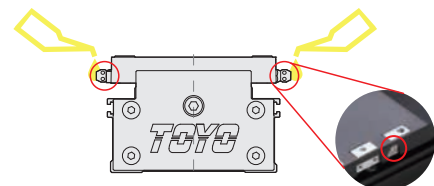
Caged Ball, Reduce Noise, Increase Life

- No contact between balls. Lowering the noise and increasing life.



External Grease Port

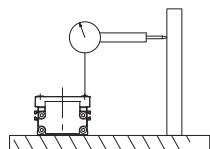
- Easier maintenance. One grease port for both rail and ballscrew.



High Accuracy

GLTH5/8

- Repeatability | $\pm 0.005\text{mm}$
- Straightness / Flatness | $\pm 0.02\text{mm}/800\text{mm}$



optional C5 ball screw

- repeatability up to

$\pm 3\mu\text{m}$

Optional screw grade
C5

Black Body, Optional Cold Plate For Ballscrew

- Black body anodizing, enhancing aesthetics and increasing surface corrosion resistance, wear resistance, and thermal stability.
- Reduce light reflection like normal aluminum color does. Suitable for visual inspection and optical application.
- Optional cold plating ball screw.



[Comparison Between GL and Iron Body]



With so many actuator on the market, should I choose an iron one or a GL aluminum one?

Aluminum GL Series



Iron



Comparison between same width



Max Stroke (Belt) 3000mm
Max Stroke (Ball screw) 2500mm ✓

Other Brand Max Stroke (Belt) 300mm
Max Stroke (Ball screw) 600mm

Weight



300mm Stroke. 1.5 kg ✓

Other Brand 300mm Stroke. 2.4 kg

Transmission



✓ Ball Screw ✓ Belt Drive ✓

✓ Ball Screw

Maintenance



External grease port that maintain both rail and ball screw. ✓

Grease port located in bearing block. Need to disassemble in order to maintain.

Lead time



< 14 days
All self-made components, no waiting required. ✓

> 14 days
Need to wait for machining parts

Customize ability



Can order multi axis configurations directly ✓

Can't customize. Order in single axis.



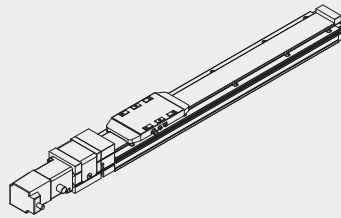
After this review, you should know which one to choose! In short, iron actuator are relatively complex and time-consuming to maintain and assemble. The GL design is simple, easy to integrate, and convenient for assembly personnel to use.



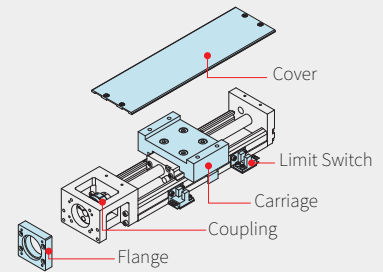
Aluminum Body GL Series

Iron Body

Structure

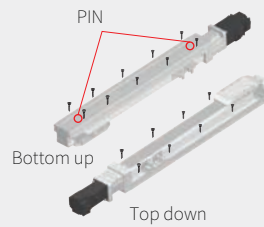


Assemble ready

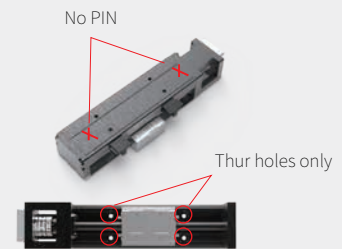


Need to find the blue parts separately

Implementation



Top down/ Bottom up mount / PIN

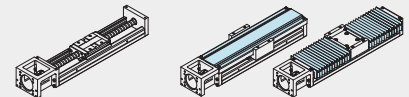


Thur holes only/ No PIN

Variation

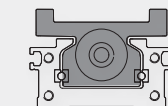


✓ Open ✓ Enclosed ✓ Clean Room

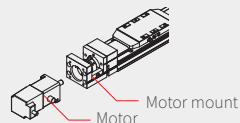


✓ Open ✓ Enclosed, need optional cover

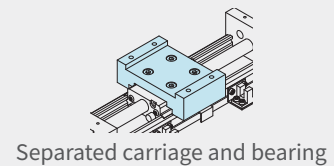
Reliability



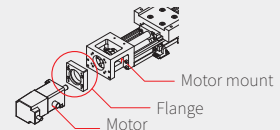
One piece carriage



One piece motor mount.
Reduce stacked tolerance.



Separated carriage and bearing

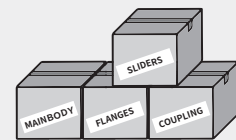


Separated flange.
Tolerance stack-up

One stop shop



One stop shop.
Fast and easy.



Multiple shop. Complex
purchasing procedure

Pricing



Base on same performance, cost is
only 50%~70% of iron actuator



Higher cost

Time cost



Reduce 1/2 of design/assemble/
purchasing time



Time consuming

[LINEUP]

Improved version of GTH series. Smaller volume, same performance, lower cost.

Enclosed

Ball Screw

Short Stroke

GLTH Series



GLTH3

GLTH5

GLTH8

GLTH12

±0.005mm				Reputability
480 mm/s	1200 mm/s	1440 mm/s	1440 mm/s	Vmax
13 kg	30 kg	105 kg	110 kg	Max Payload
50~500 mm	50~1000 mm	50~1250 mm	50~1250 mm	Stroke

GLTHD Series



GLTH5D

GLTH8D

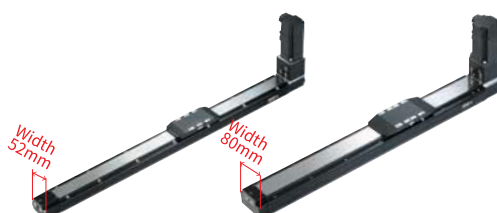
±0.005mm		Reputability
1200 mm/s	1440 mm/s	Vmax
30 kg	105 kg	Max Payload
50~850 mm	50~1050 mm	Stroke

Dual Carriages



- Increasing A/B direction moment load capacity

GLTB Series



GLTB5

GLTB8

±0.06mm		Reputability
1067 mm/s	2000 mm/s	Vmax
5 kg	8 kg	Max Payload
50~3000 mm	50~3000 mm	Stroke

Long Stroke, High Speed

Belt Drive Longes Stroke **3000** mm

- Suitable for over 1500mm stroke long distant high speed point to point applications. Like pick and place, printing or dispensing.



Ball Screw



Belt Drive



Clean Room



Integrate Bearing

Open 

Ball Screw

Short Stroke

■ GLMH Series



GLMH5

GLMH8

±0.005mm		Reputability
1200 mm/s	1440 mm/s	Vmax
30 kg	105 kg	Max Payload
50~1000 mm	50~1250 mm	Stroke

Open Structure



- No friction between carriage and cover sheet.
- Optional cold plating for rail and ball screw.

Long Stroke

■ GLTHM Series



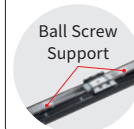
GLTH5M

GLTH8M

±0.005mm		Reputability
1200 mm/s	1440 mm/s	Vmax
30 kg	105 kg	Max Payload
650~2000 mm	700~2500 mm	Stroke

Long Stroke, High Precision

Ball Screw Longest Stroke **2500** mm



- No ball screw whipping anymore.

Clean Room

Class 100

Ball Screw / Belt Drive

Short Stroke

■ GLCH Clean Room Series



GLCH5

GLCH8

GLCH12

GLCH5D
Dual Carriages

GLCH8D
Dual Carriages

GLCB5

GLCB8
*GLCB8 only up to Class 100

Application :



Semi-conductor



Plane Fab



Packaging



Battery Fab



Food Processing



Class 10

Pneumatic port

*By connecting pneumatic port. Run up to Class 10 clean room level.

**Save Cost
immediately**

No more “self assembly and parts choosing.”

And more benefit!!

**Motor installation
& tuning**

tuning

Whole packages!

Contact TOYO sales for more compatible motor brands



TOYO install motor for you!

- Electric actuator undergo strict quality inspection before leaving the factory, ensuring customers can use them with confidence, and they also receive after-sales service and support.
- Send motor to TOYO to avoid self assemble process. Save your time!
- Compatible for multiple motor brand
 - ⊕ Mitsubishi
 - ⊕ Panasonic
 - ⊕ Yaskawa
 - ⊕ Delta
 - ⊕ Oriental



CGLTH CGLTHD CGLTB CGLMH TC100 Drive

Servo Cylinder, the whole package

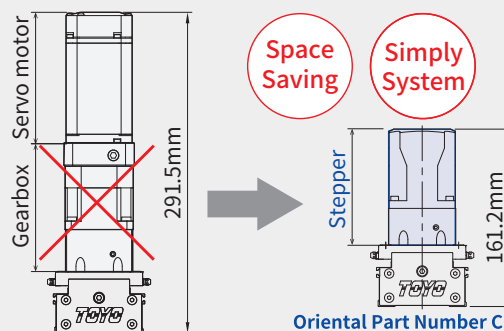
Orientalmotor × TOYO



Stepper with belt drive is recommended! No gearbox required, space saving.

Due to the servo motor's insufficient inertia and the low rigidity of the belt, gain adjustment becomes challenging. To address this, a gearbox needs to be added, which leads to space constraints, reduced speed, and increased costs.

⊕ The AZ series offers advantages such as "no gain adjustment required," "high inertia tolerance," and "insensitivity to mechanism rigidity." These features eliminate the need for a gearbox, making it more suitable for belt-driven slides with long strokes and high-speed positioning.



**Oriental Part Number CGLTB5AZC
CGLTB8AZC**

Free

**Borrow Demo
Machine Now!**

I want to make a change!

YES

We provide free test units to give you a thorough understanding of the product's movement and operational feel that cannot be fully assessed through the catalog alone.
You can either review the product's or use it directly!

Product Info



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