

Linear Motion | Precision Positioning



PRECISION MOTION SOLUTIONS

Motorized Precision Positioning Stages

Engineered for Photonics, Laser Systems & Optical Alignment

High Repeatability
Repeatability down to ±1μm

Ultra-Smooth Motion
High positioning accuracy

Compact & Modular
Multiple configurations

Versatile Compatibility
Servo or stepper drive options available



Photonics & Laser Systems | Optical Alignment | Microscopy & Imaging | Precision Inspection | Semiconductor Metrology

Key Performance

Travel Range	15-150mm
Repeatability	±1 μm
Resolution	0.625-1.25μm
Speed	Up to 50 mm/s
Load Capacity	Up to 30 kg
Drive Type	Stepper /Servo Motor

Need a Custom Positioning Stage?

Send your motion requirements for technical consultation & quotation.

https://hcyautomation.com/

Engineering Support
From concept to application

Reliable Quality
Reliable performance you can trust

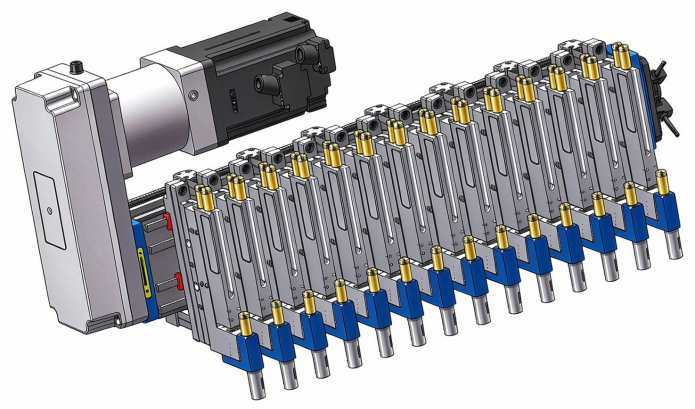
Global Support
Fast response, worldwide delivery

One-Stop Motion Supplier

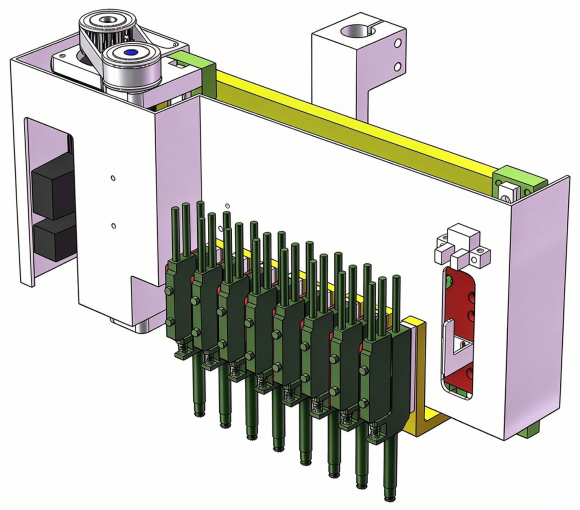
INDUSTRIAL AUTOMATION / MOTION CONTROL

Servo-Driven Variable Pitch Module

Flexible multi-position adjustment for automated production lines



ASSEMBLY VIEW



MECHANISM ILLUSTRATION

KEY FEATURES & BENEFITS

01

MULTI-STATION SYNCHRONIZATION

Coordinated movement of multiple stations for consistent operation.

02

VARIABLE PITCH ADJUSTMENT

Flexible spacing to accommodate different product sizes and layouts.

03

FULLY CUSTOMIZABLE

Station count, pitch range, stroke, load capacity and drive configuration.

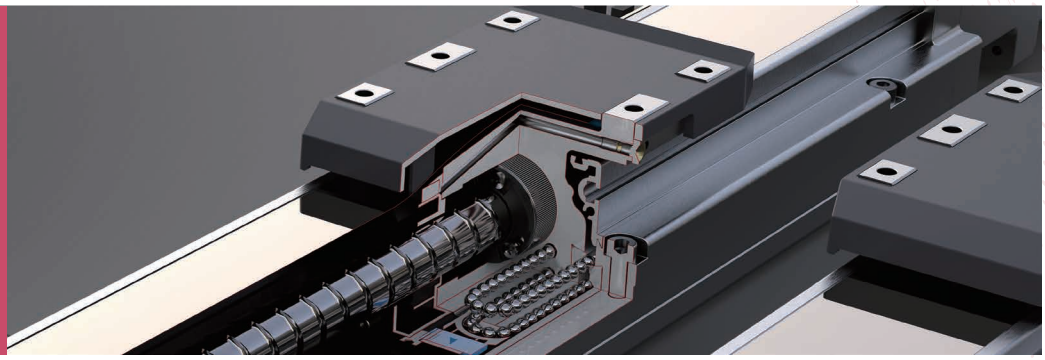
TYPICAL APPLICATIONS

Pick-and-Place / Packaging / Assembly / Material Handling

NEED A CUSTOM VARIABLE PITCH SOLUTION?

Contact our engineering team for a tailored configuration.

Ball Screw Actuator

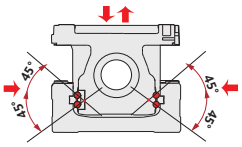


Features

It is widely used in CNC machine tools, industrial robots, precision measuring equipment and other fields that require high-precision and high-efficiency transmission.

GSH Rail embedded four-row ball screw actuator

Small size, long life, easier assembly



1 High precision, high efficiency

- Small friction loss, high positioning accuracy, and small gap during transmission.

2 High load

- Horizontal maximum load: 150kg
  Vertical load: 55kg

3 Long life

- Rolling friction, less wear, longer service life, and low maintenance cost.

Product lineup

Screw drive Type **GSH**

*Extra long travel
GSH10S
GSH14S
GSH17S
GSH20S



GSH6/8/10/14/17/20/10s/14s/17s/20s

Body width	60~200mm
Repeatability	±0.005mm/±0.01mm
Max.stroke	2600mm
Maximum load	Horizontal:150kg/vertical:55kg
Maximum speed	2000mm/s

Screw drive Type **RMH**



RMH12/14/17/22/28/17S/22S

Body width	102~280mm
Repeatability	±0.01mm
Max.stroke	2400mm
Maximum load	Horizontal:320kg/vertical:150kg
Maximum speed	2000mm/s

Screw drive Type **GRH**



GRH4/5/7/8/12/15/5M/8M/12M

Body width	44~150mm
Repeatability	±0.01mm
Max.stroke	1350mm
Maximum load	Horizontal:120kg/vertical:40kg
Maximum speed	2000mm/s

Screw drive Type **EC** Electric Cylinder



EC50/65/80

Body width	52~80mm
Repeatability	±0.01mm
Max.stroke	1200mm
Maximum load	Horizontal:200kg/vertical:65kg
Maximum speed	1250mm/s

Screw drive Type **GEC**



GEC4/5/8/12

Body width	44~120mm
Repeatability	±0.01mm
Max.stroke	800mm
Maximum load	Horizontal:110kg/vertical:33kg
Maximum speed	1000mm/s

Screw drive Type **KKS**



KKS40/50/60/86

Body width	40~86mm
Repeatability	±0.01mm
Max.stroke	940mm
Maximum load	Horizontal:50kg/vertical:15kg
Maximum speed	1000mm/s

【Cleam Room】

Fab SGS

Screw drive Type **GSD**



GSD6/8/10/14/17/20

Body width	54~200mm
Repeatability	±0.005mm/±0.01mm
Max.stroke	2600mm
Maximum load	Horizontal:2150kg/vertical:55kg
Maximum speed	2000mm/s

Screw drive Type **GRC**



GRC4/5/8/12/15

Body width	54~150mm
Repeatability	±0.01mm
Max.stroke	1350mm
Maximum load	Horizontal:120kg/vertical:50kg
Maximum speed	2000mm/s

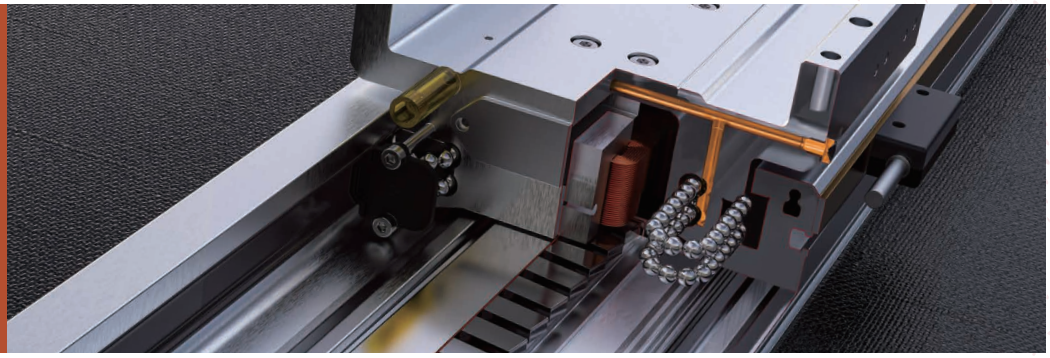
Screw drive Type **RMD**



RMD12/14/17/22/28

Body width	102~280mm
Repeatability	±0.01mm
Max.stroke	2400mm
Maximum load	Horizontal:350kg/vertical:150kg
Maximum speed	2000mm/s

Linear motor Actuator

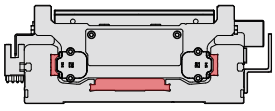


Features

Linear motors are widely used in high-precision CNC machine tools, semiconductor manufacturing equipment, precision measuring instruments, industrial automation equipment and other fields. With their excellent performance, they meet the needs of high precision and high dynamic response.

GSL Zron Core Embedded Linear Motor Series

Low height, low center of gravity, good stability



The magnetic plate is fixed with a riveting structure design.

a world first!

1 High speed and acceleration

- Extremely high motion speed and acceleration applied in the case of high speed sound and high dynamic performance.

2 High accuracy

- There are no mechanical transmission parts eliminating backlash and transmission errors achieving high-precision positioning and motion control, and long service life.

3 Long stroke

- The stroke length is not limited by the mechanical transmission components, as long as the linear guide is long enough.

Product lineup

Linear motor Type **GSL**



GSL7

Body width	75mm
Repeatability	±0.003mm
Max.stroke	1824mm
Maximum load	Horizontal:10kg
Maximum speed	2500mm/s

Linear motor Type **GSL**



GSL8

Body width	85mm
Repeatability	±0.003mm
Max.stroke	1824mm
Maximum load	Horizontal:20kg
Maximum speed	2500mm/s

Linear motor Type **GSL**



GSL14

Body width	135mm
Repeatability	±0.003mm
Max.stroke	3744mm
Maximum load	Horizontal:25kg
Maximum speed	2500mm/s

Linear motor Type **GSL**



GSL16

Body width	154mm
Repeatability	±0.003mm
Max.stroke	3744mm
Maximum load	Horizontal:50kg
Maximum speed	2500mm/s

Linear motor Type **GSL**



GSL18

Body width	178mm
Repeatability	±0.003mm
Max.stroke	3744mm
Maximum load	Horizontal:70kg
Maximum speed	2500mm/s

Linear motor Type **LPH**



LPH12

Body width	125mm
Repeatability	±0.003mm
Max.stroke	7500mm
Maximum load	Horizontal:25kg
Maximum speed	3000mm/s

Linear motor Type **LPH**



LPH14

Body width	135mm
Repeatability	±0.003mm
Max.stroke	7500mm
Maximum load	Horizontal:50kg
Maximum speed	3000mm/s

Linear motor Type **LPH**



LPH16

Body width	155mm
Repeatability	±0.003mm
Max.stroke	7500mm
Maximum load	Horizontal:60kg
Maximum speed	3000mm/s

Linear motor Type **LPH**

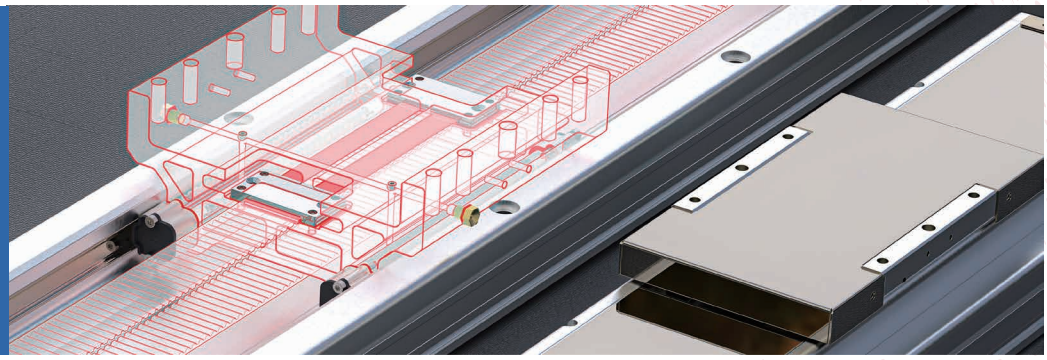


LPH20

Body width	200mm
Repeatability	±0.003mm
Max.stroke	7500mm
Maximum load	Horizontal:100kg
Maximum speed	3000mm/s

*If you need a longer trip, please contact sales!

Embedded Belt Actuator

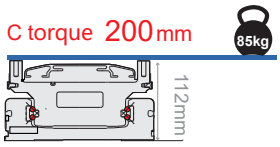


Features

It is suitable for transmission needs that require simplicity, economy and stable operation, and is widely used in automobiles, home appliances, agricultural machinery and other fields.

GSP Track embedded four-row ball belt actuator

Long life, high load, high transmission efficiency



1 Simple and economical

- The belt drive has a simple structure, low cost, and is easy to install and maintain.

2 Vibration and noise reduction

- Since the belt itself has a certain elasticity, it has a good effect on reducing the vibration and noise of the transmission system.

3 Significantly reduced size

- Compared with the previous generation, it has a smaller size and lower installation height.

Product lineup

Belt drive Type **GSP**



NEW

GSP14/17/20

Body width	135~200mm
Repeatability	±0.04mm
Max.stroke	3650mm
Maximum load	Horizontal:85kg
Maximum speed	2000mm/s

Belt drive Type **GRP**



GRP5/8/12/15/5M/8M/12M

Body width	54~120mm
Repeatability	±0.04mm
Max.stroke	3050mm
Maximum load	Horizontal:45kg
Maximum speed	2000mm/s

Belt drive Type **RMP**



RMP14S/17S/22S/28R/28RN

Body width	135~280mm
Repeatability	±0.04mm
Max.stroke	4600mm
Maximum load	Horizontal:230kg
Maximum speed	2000mm/s

Belt drive Type **MKR**



MKR40/65/80/110

Body width	44~110mm
Repeatability	±0.1mm
Max.stroke	7500mm
Maximum load	Horizontal:200kg
Maximum speed	2000mm/s

*If you need a longer trip, please contact sales!

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SGS

Belt drive Type **GSF**



NEW

GSF14/17/20

Body width	135~220mm
Repeatability	±0.04
Max.stroke	3650mm
Maximum load	Horizontal:85kg
Maximum speed	2000mm/s

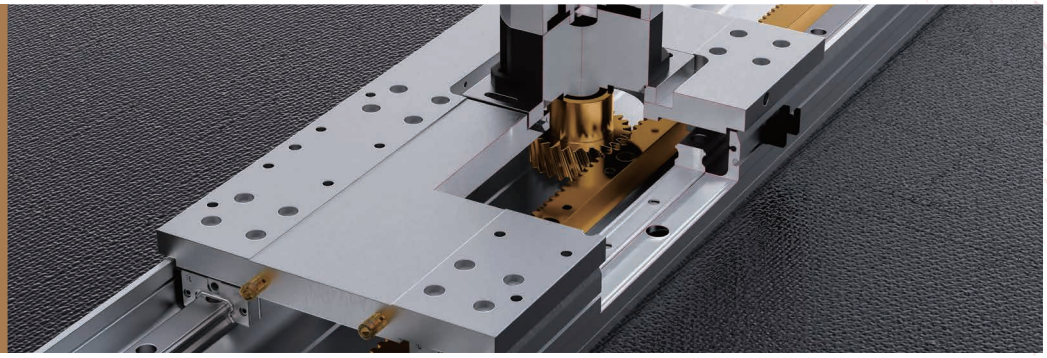
Belt drive Type **RMF**



RMF14/17/22/28R/28RN

Body width	135~280mm
Repeatability	±0.04mm
Max.stroke	6150mm
Maximum load	Horizontal:230kg
Maximum speed	2000mm/s

Rack and Pinion Actuator

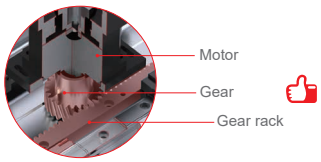


Features

Suitable for laser cutting machines, glass cutting machines, steel plate CNC cutting machines, gantry milling machines, construction lifts and aluminum materials.

ZRH Gear and Rack Drive Module

Heavy load, supports long travel splicing



1 Strong carrying capacity

- Gear and pinion transmission can withstand larger loads and is suitable for heavy load occasions.

2 Max.stroke

- Infinite length linear motion can be achieved.

3 Strong adaptability

- Suitable for a variety of working environments.

Product lineup

Gear and Rack Type ZRH



NEW

ZRH17

Body width	170mm
Repeatability	±0.08mm
Max.stroke	7000mm
Maximum load	Horizontal:75kg/vertical:50kg
Maximum speed	1833mm/s

Gear and Rack Type ZRH



ZRH22

Body width	220mm
Repeatability	±0.08mm
Max.stroke	7000mm
Maximum load	Horizontal:170kg/vertical:130kg
Maximum speed	1666mm/s

Gear and Rack Type ZRH



ZRH28

Body width	280mm
Repeatability	±0.08mm
Max.stroke	7000mm
Maximum load	Horizontal:350kg/vertical:155kg
Maximum speed	1249mm/s

【With accordion cover specifications】

Gear and Rack Type ZRD



NEW

ZRD17

Body width	170mm
Repeatability	±0.08mm
Max.stroke	7000mm
Maximum load	Horizontal:75kg/vertical:50kg
Maximum speed	1833mm/s

Gear and Rack Type ZRD



ZRD22

Body width	220mm
Repeatability	±0.08mm
Max.stroke	7000mm
Maximum load	Horizontal:170kg/vertical:130kg
Maximum speed	1666mm/s

Gear and Rack Type ZRD



ZRD28

Body width	280mm
Repeatability	±0.08mm
Max.stroke	7000mm
Maximum load	Horizontal:350kg/vertical:155kg
Maximum speed	1249mm/s

Multi-axis Ball Screw Actuator

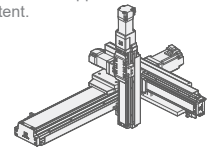
Multi-axis



Features

Multi-axis Multi-axis series Actuator

Reduce the customer's equipment assembly man-hours, apply it to the equipment, and in creaseThe appearance is beautiful and cons istent.



1. XYGH Low price compared to vertical articulated robots
2. XYMH The ingenious mechanical design realizes a highly rigid orthogonal robot with reduced vibration and deformation
3. XYMP A wide range of possible combinations of single-axis slides

Product lineup

Screw drive Type **XYGH** Low payload



210-A/320-A/321-A/430-A/432-A/440-A

Max.stroke	X axis 1250mm	Y axis 600mm	Z axis 250mm
Maximum load	57kg		
Max.Maximum speed	X axis 1000mm/s	Y axis 1000mm/s	Z axis 250mm/s

Screw drive Type **XYMH** High payload



440-A/650-A/760-A/870-A/764-A

Max.stroke	X axis 1550mm	Y axis 750mm	Z axis 350mm
Maximum load	50kg		
Max.Maximum speed	X axis 1250mm/s	Y axis 1000mm/s	Z axis 500mm/s

Screw drive Type **XYMH** High payload



650-P/760-P/880-P/-764-P/886-P

Max.stroke	X axis 1250mm	Y axis 650mm	Z axis 350mm
Maximum load	35kg		
Max.Maximum speed	X axis 1250mm/s	Y axis 500mm/s	Z axis 500mm/s

Belt drive Type **XYMP** A-Type



650-A/760-A/870-A/653-A/764-A/876-A

Max.stroke	X axis 3050mm	Y axis 650mm	Z axis 350mm
Maximum load	50kg		
Max.Maximum speed	X axis 2000mm/s	Y axis 1000mm/s	Z axis 500mm/s

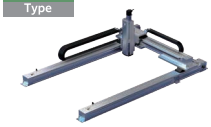
Belt drive Type **XYMP** G-Type



870-G/876-G

Max.stroke	X axis 3550mm	Y axis 750mm	Z axis 550mm
Maximum load	50kg		
Max.Maximum speed	X axis 2000mm/s	Y axis 1000mm/s	Z axis 500mm/s

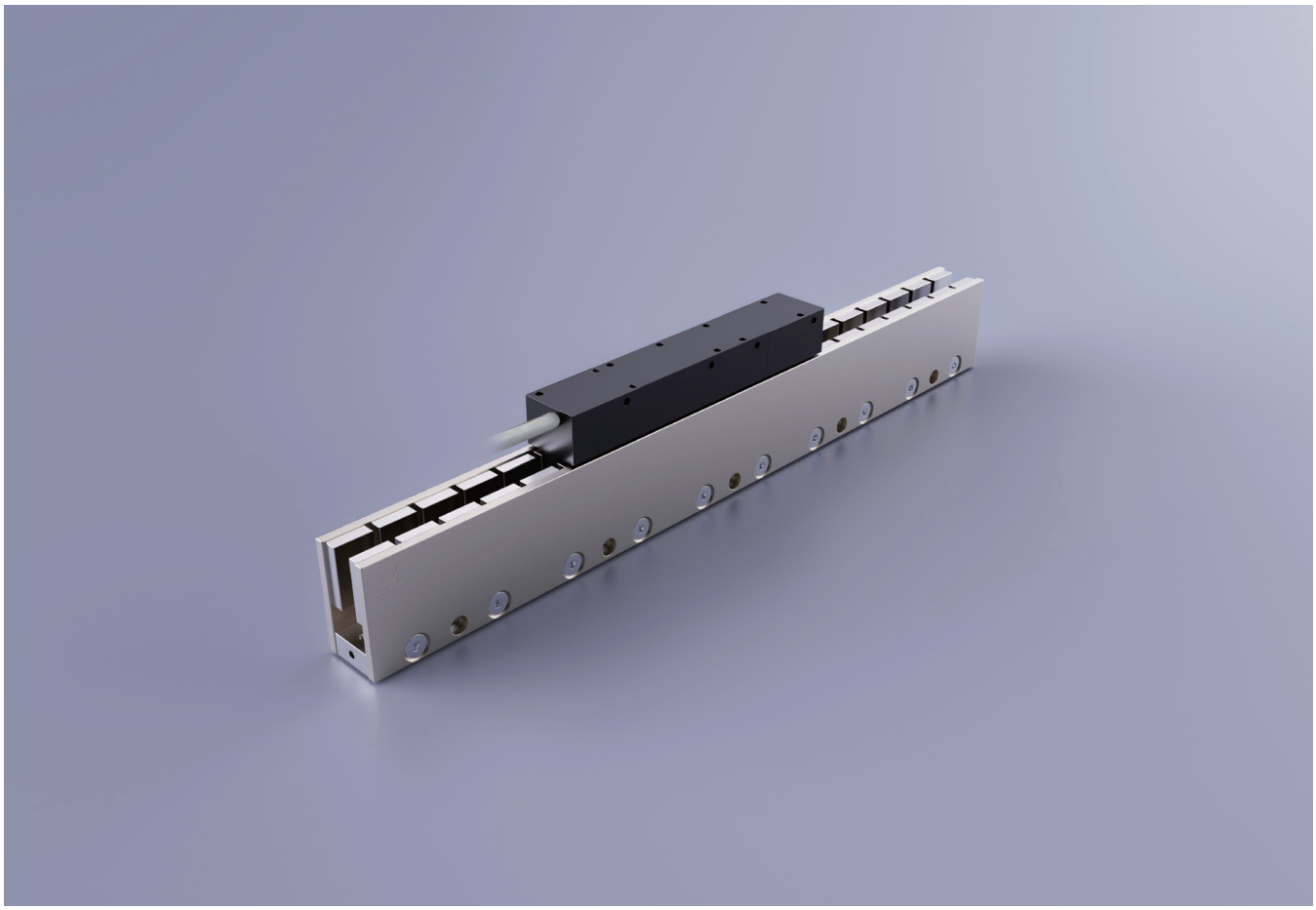
Belt drive Type **XYMP** Cross type-F



630-F/740-F

Max.stroke	X axis 1000mm	Z axis 800mm
Maximum load	100kg	
Max.Maximum speed	X axis 2000mm/s	Z axis 500mm/s

*If you need a longer trip, please contact sales!



Ordering Method

Ordering Method

PUI2 - C1 - S - 0001*

本體型號 Model

特注式樣 Customization order no.

動子长度 Actuator length

C1	31(mm)
C2	61(mm)
C3	91(mm)
C4	121(mm)

绕组类型 Actuator width

S	S1
P	P1

定子表示方式 Ordering Method

PUI2 - TL1 - 0001*

本體型號 Model

特注式樣 Customization order no.

定子长度 Stator length

TL1	120(mm)
TL2	180(mm)
TL3	240(mm)
TL4	300(mm)

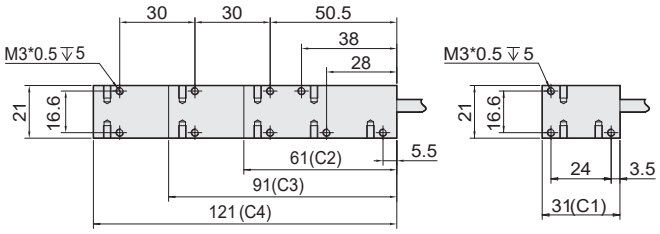
PUI2

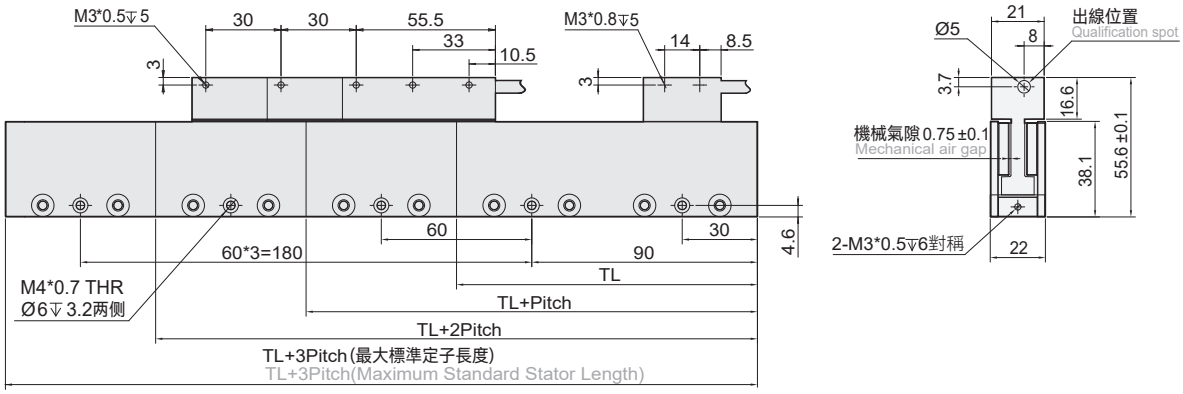
Unit:mm

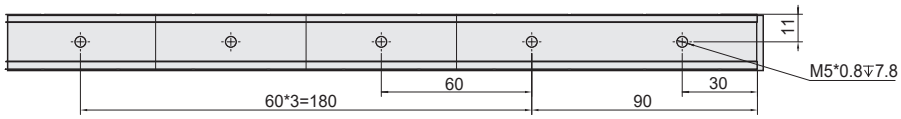
2D CAD 3D CAD

CAD畫面可至www.pi-robot.com.cn下載

Please do wnload the CAD file from www.pi-robot.com.cn





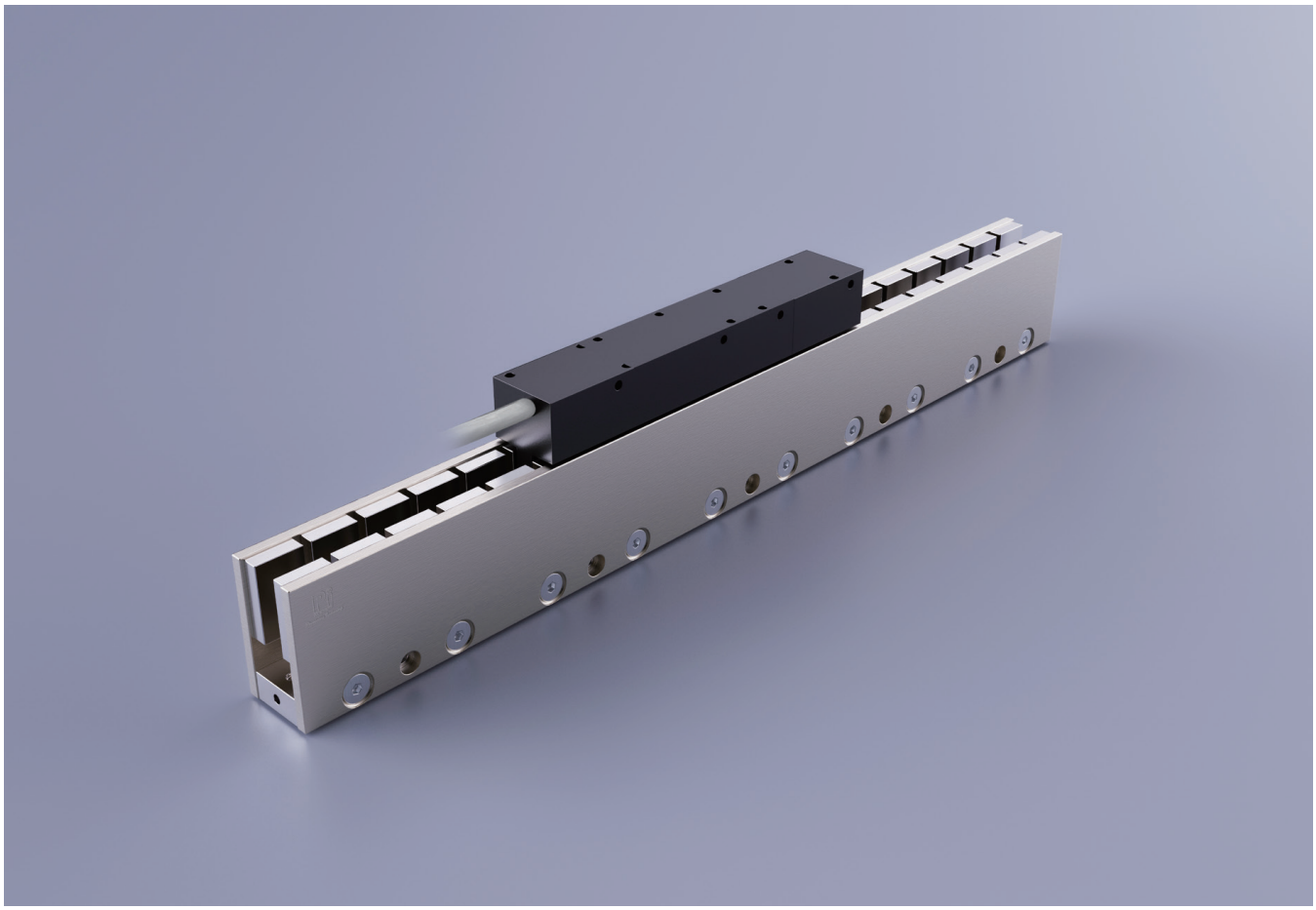


名稱 name	數值(mm) numerical value
TL	120
Pitch	60

PUI3

Standard type

Brushless, Core-less Motor Products



Ordering Method

Ordering Method

PUI3 - C1 - S - 0001*

本體型號 Model

特注式様 Customization order no.

動子长度 Actuator length

C1	61(mm)
C2	121(mm)
C3	181(mm)
C4	241(mm)
C5	301(mm)
C6	361(mm)

绕组类型 Actuator width

S	S1
P	P1

定子表示方式 Ordering Method

PUI3 - TL1 - 0001*

本體型號 Model

特注式様 Customization order no.

定子长度 Stator length

TL1	120(mm)
TL2	180(mm)
TL3	240(mm)
TL4	300(mm)

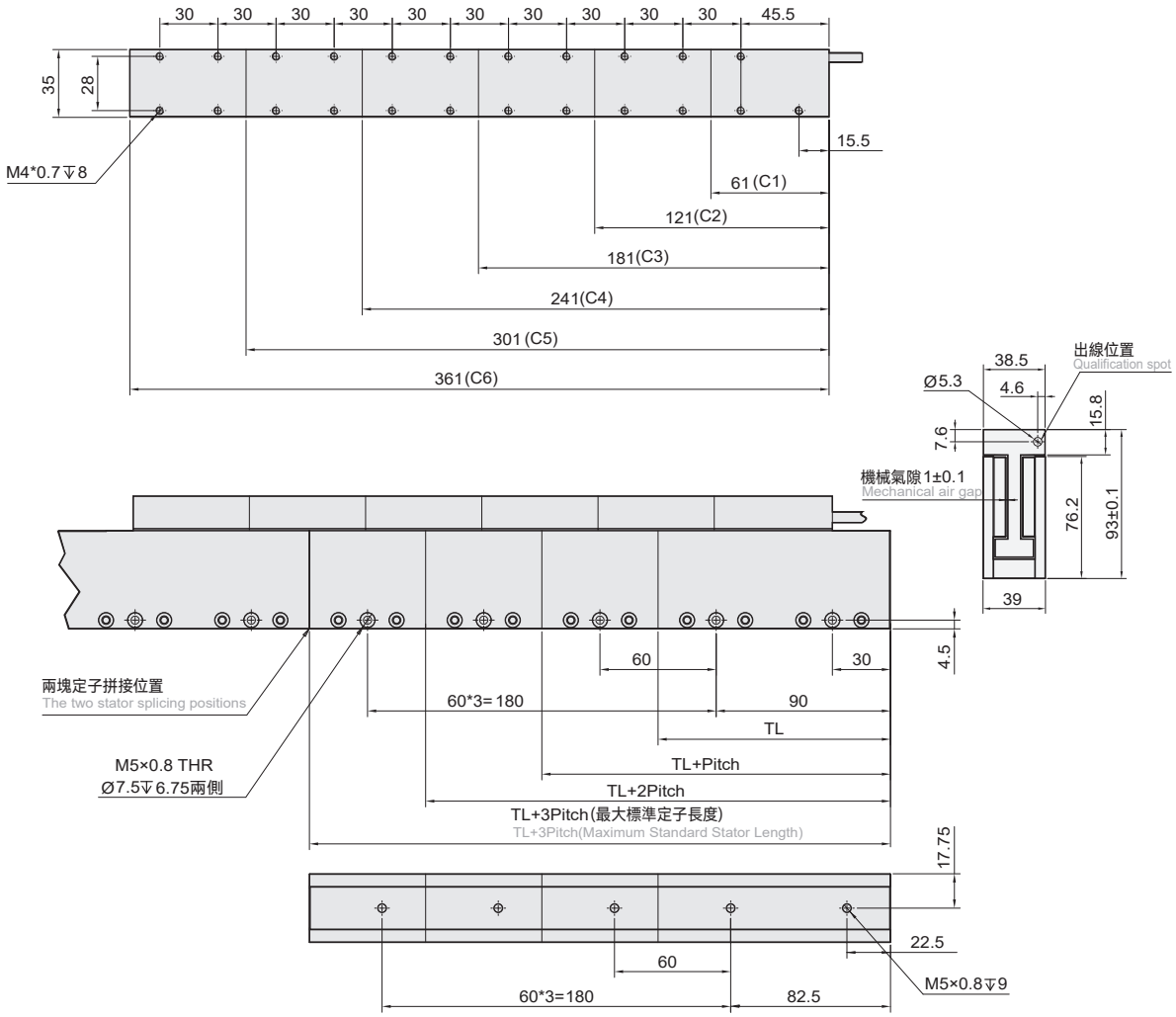
PUI3

Unit:mm

2D CAD 3D CAD

CAD畫面可至www.pi-robot.com.cn下載

Please do wnload the CAD file from www.pi-robot.com.cn

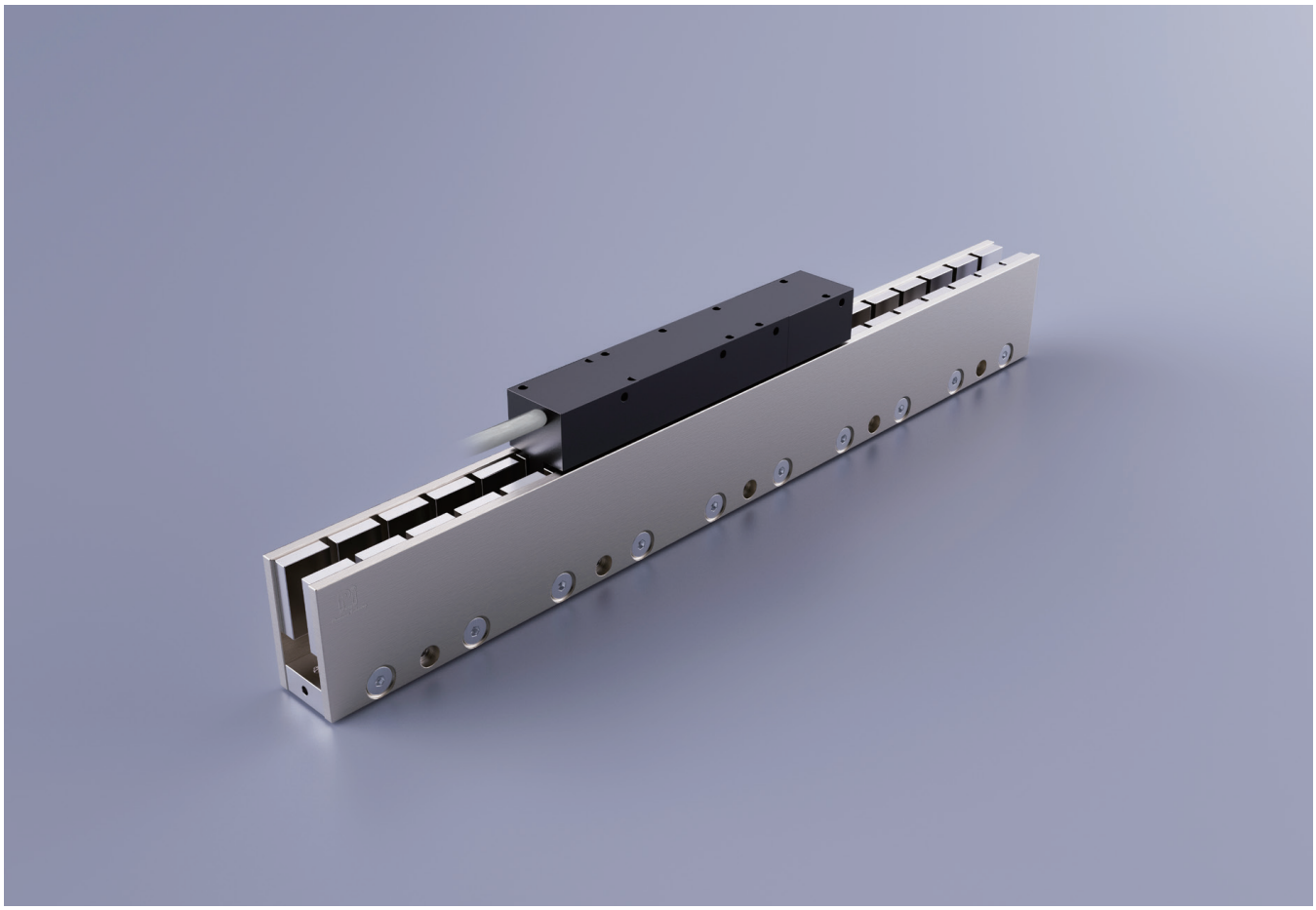


名稱 name	數值(mm) numerical value
TL	120
Pitch	60

PUI4

Standard type

Brushless, Core-less Motor Products



Ordering Method

Ordering Method

PUI4 - C1 - S - 0001*

本體型號 Model

特注式様 Customization order no.

動子长度 Actuator length

C1	61(mm)
C2	121(mm)
C3	181(mm)
C4	241(mm)
C5	301(mm)
C6	361(mm)

绕组类型 Actuator width

S	S1
P	P1

定子表示方式 Ordering Method

PUI4 - TL1 - 0001*

本體型號 Model

特注式様 Customization order no.

定子长度 Stator length

TL1	120(mm)
TL2	180(mm)
TL3	240(mm)
TL4	300(mm)

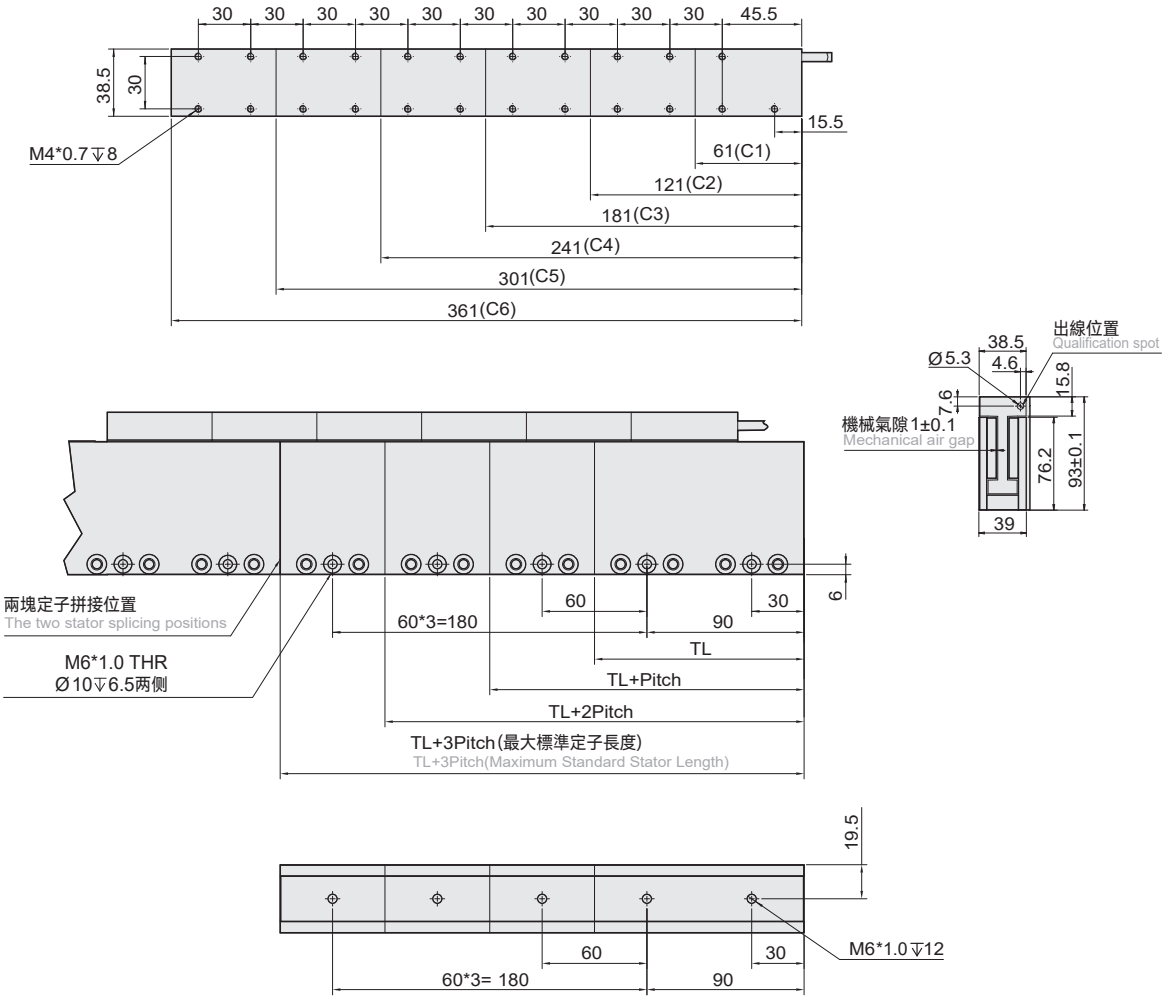
PUI4

Unit:mm

2D CAD 3D CAD

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Please do wnload the CAD file from www.pi-robot.com.cn



名稱 name	數值(mm) numerical value
TL	120
Pitch	60