

# pbba

S Y S T E M S

[www.pbasystems.com.sg](http://www.pbasystems.com.sg)

ROBOTICS AUTOMATION INDUSTRIAL 4.0



# Motion Control

PBA Systems offers motion control products such as direct drive motors, servo motors & drives, motion controllers encoders, robotics & components. As an ISO certified company, we are an OEM for motion control products, including linear motor modules, voice coil modules, large XYZ Theta stages & other special customised solutions.

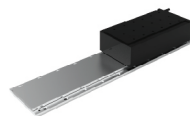


## Direct Drive Motors



**Ironless Linear Motor (DX Series)**

- Ironless design
- High force output
- Integrated with hall sensor
- Smooth & precise motion



**Ironcore Linear Motor (PIX Series)**

- High force output
- Compact design & high structural rigidity
- Low cogging force
- Large air gap for easy installation



**Ironless Arc Motor (ARC Series)**

- Versatile Motion Adaptability
  - Large Clear Aperture
  - Arc Motion
  - 360 & Multi-Turn Rotational Motion
- Exceptionally Smooth & Precise Motion
  - High Positional Repetability & Accuracy
  - Flexible Design Configuration



**Linear Shaft Motor (PSM/PSME Series)**

- Compact & rigid design
- Big clearance for easy installation
- Integrated with hall sensor
- No contact, no cogging, smooth motion
- Precise high continuous force



## Direct Drive Motors



**Direct Drive Rotary Motor (PDDR Series)**

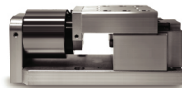
- High rpm, speed & precision
- Zero backlash
- Resolution over 1 million
- Axial run-out below 10um



**Circular Voice Coil Motor (CVC Series)**

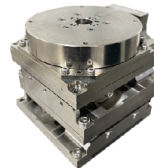
- Direct drive, cogging free
- Fast response & low moving mass
- No contact between core & coil movement
- Excellent reliability

## Actuators



**Circular Voice Coil Actuator (CVCA Series)**

- For high-speed positioning applications
- Cross roller bearing for precision & rigidity
- Direct drive, cogging free
- Low moving mass, fast response
- Integrated linear encoder



**PAS Series Alignment Stage (PAS Series)**

- Cross Roller Bearing
- Stackable Configuration
- Low Moving Mass, Fast Response
- Integrated High Precision Linear Encoder
- Zero Cogging, Backlash, And Hysteresis



**Rectangular Voice Coil Actuator (RVCA Series)**

- For high-speed pick & place applications
- Cross roller bearing for precision & rigidity
- Direct drive, cogging free
- Low moving mass, fast response
- Integrated linear encoders

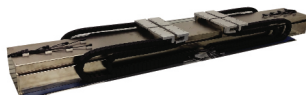


## Actuators



**PLA Series Linear Actuator**

- High-performance linear actuator for production applications.
- Compact, fast, precise, and has zero backlashes.
- Low-maintenance and suitable for clean environments.
- Modular design includes precision linear encoders and linear guideways for optimal performance.



**Multi-Headed Linear Actuator (OCTO Series) Multi-Axis Module**

- Single/multi-axis modules
- Integrated with PBA ironless linear servo motors
- Dual land operations allow overtaking
- Effective stroke up to 4m
- Cost effective solutions

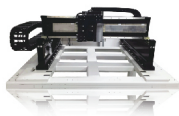
## Peripherals



- Supports virtually any motor & feedback type
- Handles any I/O requirements
- EtherCAT, CANopen, Fieldbus available
- Stepping motor drives
- A complete range of stepping motors drives featuring more than 60 models, divided into six main typologies:
  - Step & direction
  - Step & direction advanced
  - Analog input
  - Programmable CANopen
  - EtherCAT

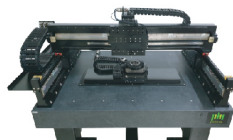


## Gantries & Stages



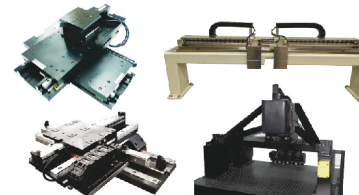
**T-Gantry**

- Multi-axis cartesian linear servo robots
- Designed for high precision/high speed pick & place, vision inspection & dispensing stations
- Available with PBA ironcore or ironless linear servo motors in T or H gantry configurations



**Flex Precision Gantry System (PFG Series)**

- High accuracy and rigidity gantry
- Large air gap for easy installation
- IronCore or Ironless Direct drive motors
- Available in T or H gantry configuration
- Linear encoder resolutions of up to 0.8nm resolution



**Other Custom Solutions**

- We offer custom made stages
  - XY + rotary vision inspection alignment stages
  - Nano precision piezo stages
  - High-speed XYZ + theta pick & place stages
  - High precision flex gantry with air bearing granite base



**REDISCOVER  
LINEAR MOTION**

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**STXi Motion**  
Motion. Optimized.