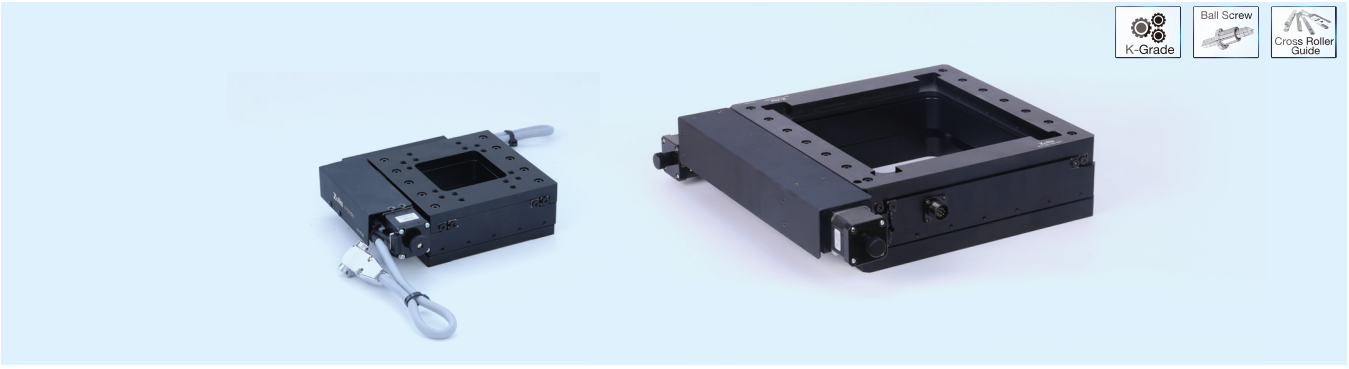
2D- or 3D motorized alignment stages

Motorized XY series all-in-one two-axis stages



Description:

They are best application scenarios for motorized XY series all-in-one two-axis stages in which workpieces treated in production lines with high precise and high repetition rate scanning. XY series products are designed according to all-in-one principle and employ cross-roller guides and ball screws to construct transmission mechanism to ensure high orthogonality and motion accuracy. A distinct of this series is that selected large-size rectangular light-through hole at the center of stages. Optional glass cover or aluminum-alloy c cover could help operators to realize scanning or alignment with transmission mode or reflection mode separately.

Main characteristics:

- Using ball screws to meet the requirement of high precise and high repetition operations
- Better motion accuracy is guaranteed by employing cross-roller guides
- Rectangular light-through hole is provided, with optional glass or aluminum-alloy covers
- Two-phase stepping motors are standard. Five-phase stepping or servo motors are optional

Naming rules:

XY 120 120(-NH)(-ST528)

- Series code: XY:All-in-one XY two-axis stages
- Travel range of X-axis: 50: 50mm 120: 120mm
- Travel range of Y-axis: 50: 50mm 120: 120mm
- Central light-through hole and covers: None (default): central hole, without any cover GC: central hole with glass cover AC:central hole with aluminum-alloy cover NH: No central hole
- Type of motors: None (default):standard two-phase stepping motors ST5xx:Optional five-phase stepping motors.xx refers to model number of motors ASPx: Optional Panasonic servo motors. x refers to power code of servo motors Note: partial products can not employ servo motors

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Selection chart:

Model number		XY5050	XY120120
Mechanical specifications	Travel range(mm)	Xaxis：50 Yaxis：50	Xaxis：120 Yaxis：120
	Table dimensions(mm)	125×125	280×280
	Central light-through hole dimension (mm)	60×64	188×188
	Light-through dimension at extreme position (mm)	35×47	128×128
	Transmission mechanism	Fine ball screws, ϕ6×1	Fine ball screws, ϕ16×4
	Guides (guiding mechanism)	Cross-roller guides	Cross-roller guides
	Main body materials and surface treatments	Black anodic-oxidation aluminum-alloy	
	Shaft coupling (external diameter-diameter of aperture 1-diameter of aperture 2) (mm)	13-3-5	20-5-10
	Weight (Kg)	2.2	7
Accuracy specifications	Resolution (step/half-step) (μm)	5/2.5	20/10
	20-fine-subdivision resolution (μm)	0.25	1
	Highest speed (mm/s) *	10	40
	Repositioning accuracy (μm)	≤±1.5	≤±3
	Backlash clearance (μm)	≤3	≤5
	Static parallelism (mm)	≤0.1	
	Motion straightness(μm/100mm)	≤10	
	Motional parallelism (μm)	≤25	
	Error on orthogonality ((μm)	≤15	≤60
Electrical specifications	Brand and model number of motor	Shinano, STP-28D1003-08	Shinano,SST43D2126-2410
	Working current (A)	1.3	1.7
	Holding torque of motor (N·m)	0.0785	0.456
	Brand and model number of stepping driver (optional)	Moons, SR2	
	Type of plugs for stages	1*DB9 (pin)	1*Aviation plug (9 pins)
	Type of connection cable	High flexible cables (Helukabel, Germany)	/
	Length of connection cable	0.2	/
	Position-limit sensors (built-in), for each axis	2*GP1S09xHCPI (Sharp, Japan)	2*PM-L25 (SUNX, Japan)
	Origin-point sensors (built-in), for each axis	1*GP1S09xHCPI (Sharp, Japan)	/
	Voltage of power supply for sensors (V)	DC5~24V ±10%	
	Output for control	NPN open-collector output	NPN open-collector output
	Status of output ports	output ON when sensor is blocked	
Operating load	Horizontal direction (Kg)	4	20

* Highest speed is measured with the conditions of zero-load and motors being worked at 600rpm

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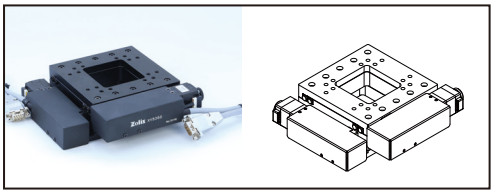
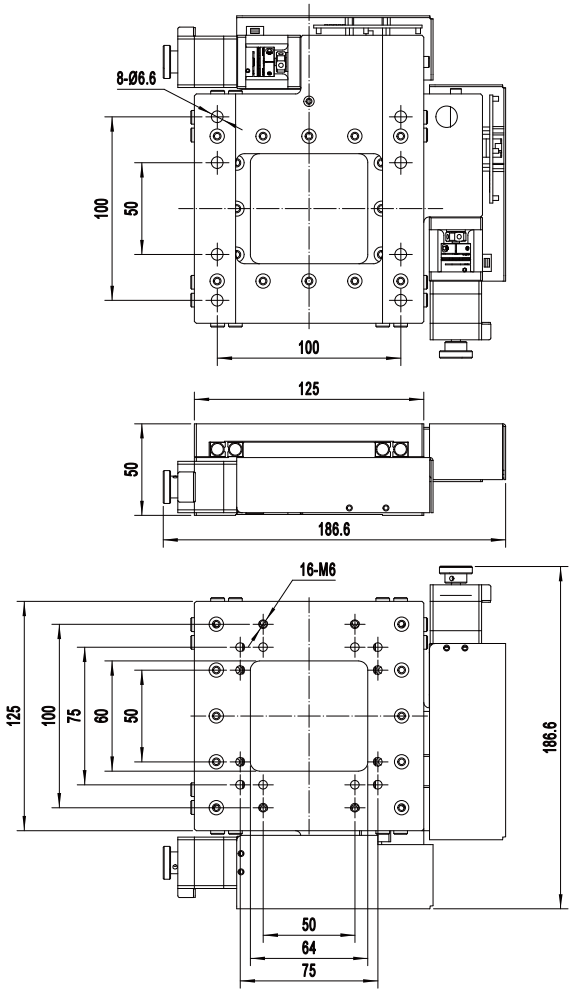
Dimensions:

XY5050





XY120120