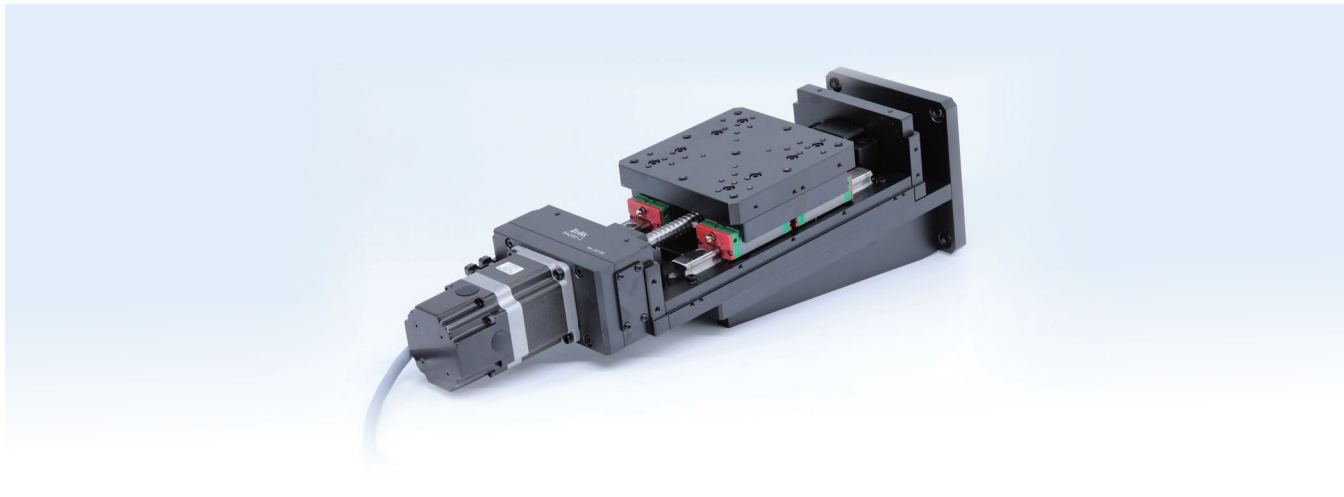


## PAxx-Z Series Precise Motorized Vertical-Motion Stages



### Description:

PAxx-Z series precise motorized vertical-motion stages are new-developed products based on Zolix's standard PA series motorized linear stages, adding a set of right-angle fixing block and power-failure protection unit. Except motion direction and loading capability, other parameters are same as those of standard PAxx products. PAxx-Z is used for fine adjustments in Z-direction.

### Naming rules:

## PA 100-(ST242)(-C)(-SR)-Z

Series code:  
PA: precision, ball  
screws, linear-slider  
guides, aluminum alloy.

Travel range:  
050:50mm  
100:100mm  
150:150mm  
200:200mm  
300:300mm  
400:400mm  
600:600mm  
800:800mm  
1000:1000mm

Motortype:  
None(default): Two-phase 57 stepping  
motor  
ST242: Two-phase 42 stepping motor  
ASP1: Panasonic 100W Ac servo  
motor  
ASY2: Yaskawa 200W AC servo motor  
P1: Panasonic 100w motor mounting  
plate and shaft coupling  
Y2: Yaskawa 200w motor mounting  
plate and shaft coupling

Way to install  
Z: applied in vertical

Sensor position:  
None(default): built in  
SL: external & left side  
SR: external & right side

Type of  
protection: None(default)  
: without protection  
C: with protection

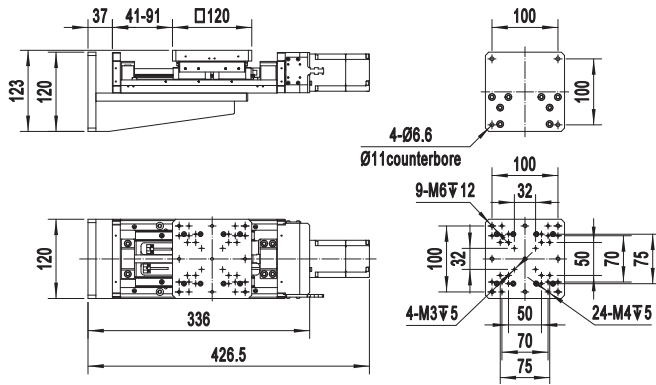
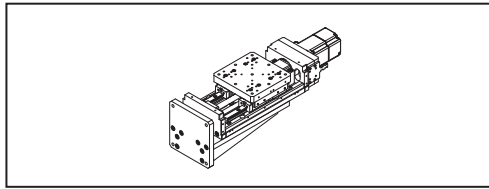
## Selection chart:

Model		PA050-Z	PA100-Z	PA150-Z	PA200-Z	PA300-Z	PA400-Z	PA600-Z	PA800-Z	PA1000-Z	
<b>Mechanical specifications</b>	Travel range(mm)	50	100	150	200	300	400	600	800	1000	
	Stage surface size(mm)	120×120				150X150		200X200			
	Transmission mechanism	precision ball screw Φ12×4				precision ball screw Φ16×5		precision ball screw Φ25×5			
	Guide mechanism	linear-slider guides									
	Main body material, surface treatment	Black anodized aluminum alloy									
	Weight(Kg)	7.6	8.2	9	9.7	12.3	14	29.5	35	40	
	Shaft coupling(OD - OD1-OD2)(mm)	30-6,35-8							32-8-12		
<b>Accuracy specifications</b>	Resolution(μm)	20				25					
	20-fine-subdivision resolution(μm)	1				1.25					
	Highest speed(mm/s)*	40				50					
	Single-direction positioning accuracy	≤30							/		
	Repositioning accuracy(μm)	≤±3							≤±5		
	Static clearance(μm)	≤3									
	Backlash(μm)	≤5									
	Static parallelism(μm)	≤0.1							≤0.12		
	Dynamic straightness(μm)	≤20				≤25		≤15μm/100mm			
	Dynamic parallelism(μm)	≤25				≤30		≤15μm/100mm			
	Yaw(")	≤50							/		
	Pitch(")	≤55				≤60		/			
<b>Electrical specifications</b>	Motor and its stepping angle(°)	Two-phase 57 stepping motor, 1.8									
	Brand and model number of motor	Shinano, SST59D3201						Shinano, SST59D5301-SD			
	Working current(A)	2.0				3.0					
	Holding torque of motor(N·m)	1.3				1.57					
	Brand and model number of stepping driver(optional)	Moons, SR4									
	Type of plug for stage	DB9(pin)									
	Type of cable for stage	High flexibility cable(Helukabel, Germany)									
	Length of connection cable(m)	0.2									
	Position-limit sensors(built-in)	2×PM-L25(SUNX, Japan)									
	Origin-point sensors(built-in)	1×PM-L25(SUNX, Japan)									
	Voltage of power supply for sensors(V)	DC5~24V±10%									
	Current consumption(mA)	<60(total)									
	Control output	NPN open collector output DC5 ~ 24V 8mA or less Residual voltage 0.3V or less(when load current is 2mA)									
Status of output ports	Position limit sensor: output ON when sensor is blocked; Origin-point sensor: output OFF when sensor is blocked;										
<b>Maximum load capacity</b>	Vertical direction-central(Kg)	15						30			

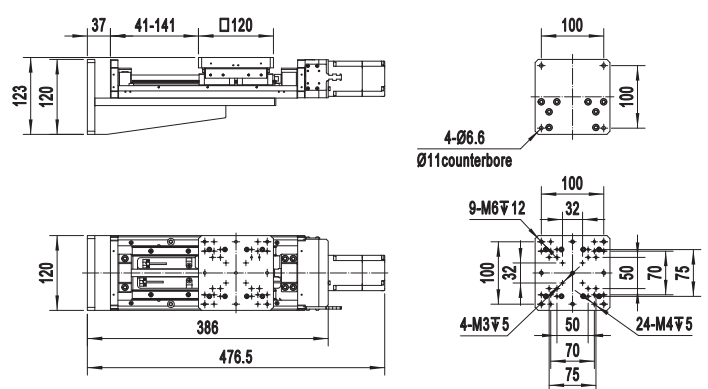
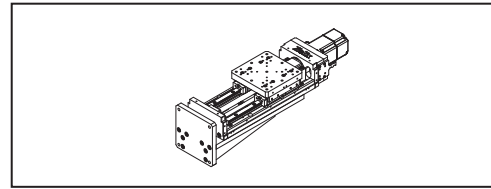
\*Note: Highest speed is measured under zero-load conditions with the motor running at 600 RPM.

# Dimensions:

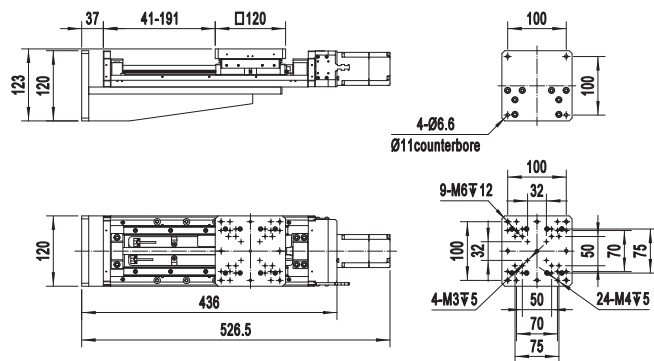
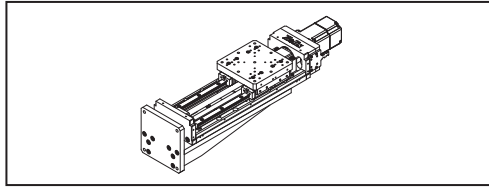
PA050-Z



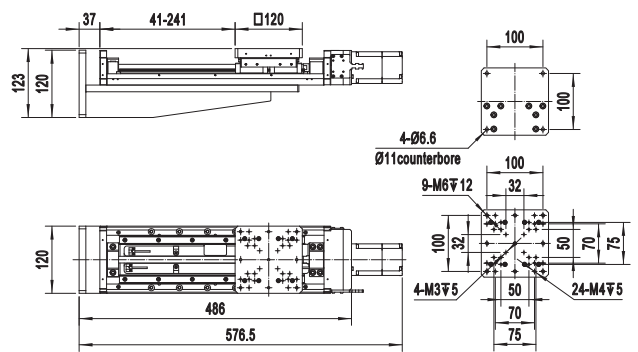
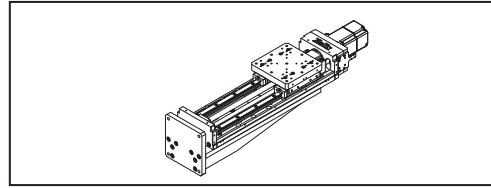
PA100-Z



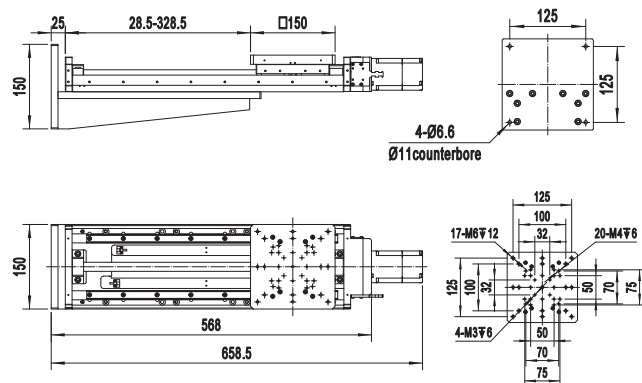
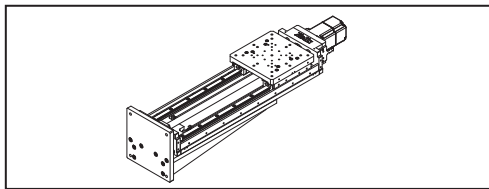
PA150-Z



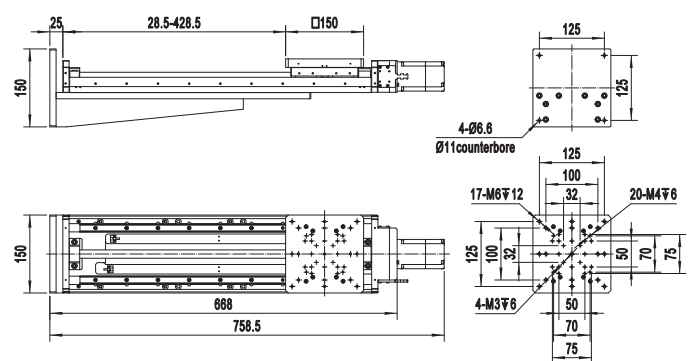
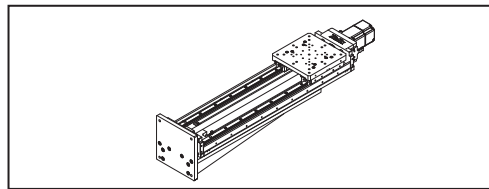
PA200-Z



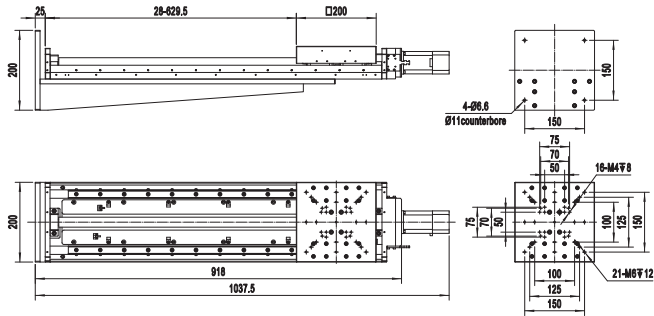
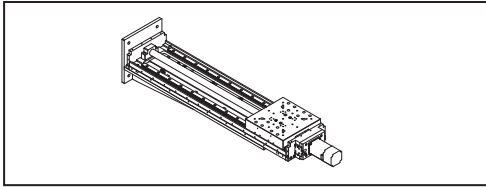
PA300-Z



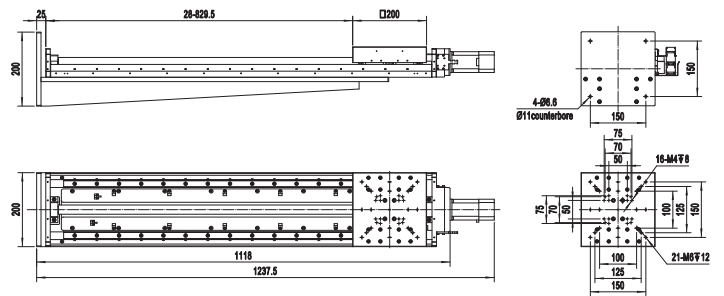
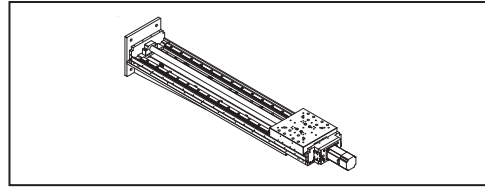
PA400-Z



PA600-Z



PA800-Z



PA1000-Z

