

PSAV Series Long Travel Range Motorized Vertical-Motion Stages



Description:

The PSAV series motorized vertical-motion stages utilize ball screw reducers to ensure ultra-high load capacity. The backlash of ball screw is smaller than grinding screw, which enhances motion and positioning accuracy. Smooth operation is guaranteed by the use of high-quality aluminum alloy and four linear bearing guides. This series offers a wide travel range of 50-400mm, catering to most customers' needs. These motorized vertical stages are ideal for applications requiring higher load capacity and longer travel ranges in optical experiments.

Features:

- Longer travel range and higher loading capability are guaranteed by using ball screw reducers.
- Four pieces of linear bearing guides constitute guiding mechanism to ensure high motion accuracy and smooth running.
- Long travel range is up to 400mm
- Reliable standard two-phase 57 stepping motors feature high torque and high loading capability

Naming rules:

PSAV 100-240 ZF

Series code:
PSAV: standard precision,
ball screw, linear bearing
guides and aluminum alloy.

Travel range:
50:50mm
100:100mm
200:200mm
300:300mm
400:400mm

ZF:horizontal driving

Dimension of table:
240:240mm×240mm

Selection chart:

Model		PSAV50-240ZF	PSAV100-240ZF	PSAV200-240ZF	PSAV300-240ZF	PSAV400-240ZF
Mechanical specifications	Travel range(mm)	50	100	200	300	400
	Stage surface size(mm)	240×240				
	Transmission mechanism	φ40×5 Ball screws reducer, reduction ratio is 4: 1				
	Guide mechanism	4* linear-bearing guides				
	Main body material, surface treatment	Black anodized aluminum alloy				
	Weight(Kg)	14	16	20	24	28
Accuracy specifications	Resolution(step/half-step)(μm)	6.25/3.125				
	8-fine-subdivision resolution(μm)	0.781				
	Highest speed(mm/s)*	12.5				
Electrical specifications	Motor and its stepping angle(°)	Two-phase 57 stepping motor, 1.8				
	Model number of motor**	MS-57BYG250CSC				
	Working current(A)	2.4				
	Holding torque of motor (mN·m)	1900				
	Brand and model number of stepping driver(optional)	Moons, SR4				
	Type of plug for stage	DB9(pin)				
	Position-limit sensors(built-in)	2×KX-SS-5GL2				
	Voltage of power supply for sensors(V)	DC5 ~ 24V±10%				
	Control output	Dry contact point output				
	Status of output ports	Output ON when sensor is triggered				
Maximum load capacity	Horizontal load(Kg)***	200	180	150	120	100

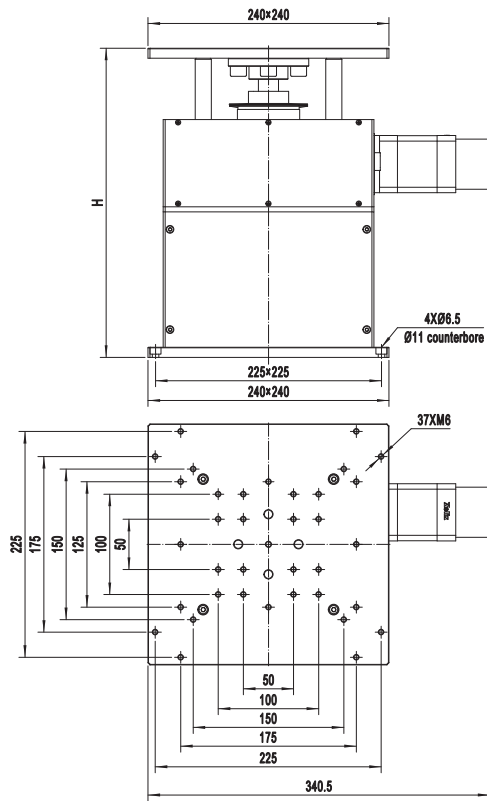
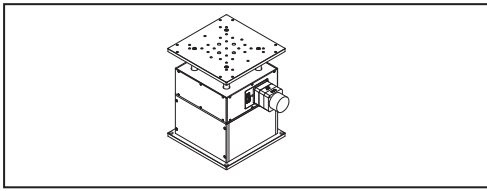
*Note: Highest speed is measured with the conditions of zero-load and motors being worked at 600rpm

**Note: Power failure protector must be turned on before motors running

***Note: Time-delay protection circuits need to be added when loading is higher than 50Kg

Dimensions:

PSAVxx-240ZF



Model	PSAV50-240ZF	PSAV100-240ZF	PSAV200-240ZF	PSAV300-240ZF	PSAV400-240ZF
Overall height(mm)	251~301	308~408	411~611	515~815	627~1027