

Description:

KA series products are designed as a group of middle-size and middle-travel-range high precise motorized stages. The base plates in this series employ high-rigidity U-type structure to ensure this series could be suitable for the operations in the circumstances of heavy load, high rigidity and multi-dimension combinations. A stainless-steel dustproof cover is optional to protect all inner parts of stages from particles and dust in real operation environments, which could guarantee better stability, durability and the capability to keep a long-term accuracy.

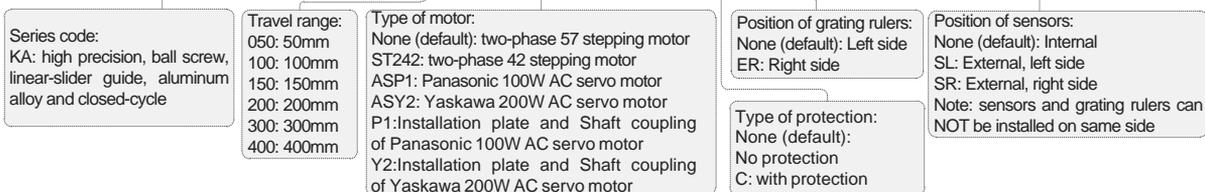
KA series products employ precise-grade ball screws, linear-slider guides and high-performance shaft coupling units. This kind of design offers good adaptabilities for being used in accurate operation scenarios with relative complex environments. An external grating ruler is used with Zolix controllers MC600 or TMC-USB to ensure 1 μ m closed-cycle resolution. The other key specifications of this series are also same or similar as those best ones worldwide.

Main characteristics:

- Fine machining for U-type aluminum alloy base plates, which are treated as black anodic-oxidation. High rigidity and nice appearance.
- External imported grating ruler to ensure 1 μ m closed-cycle resolution
- Precise-grade linear-slider guides are used to guarantee high load capability and high motion accuracy
- Stainless steel dustproof covers are optional
- Two-phase stepping motors standard, servo motors optional

Naming rules:

KA 100-(ST242)(-C)(-ER)(-SR)



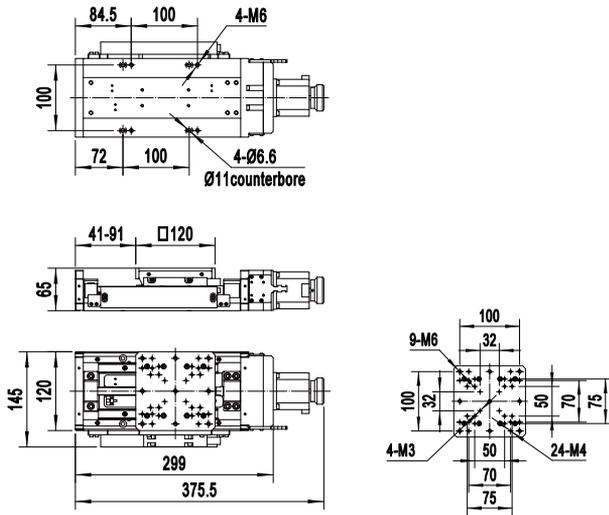
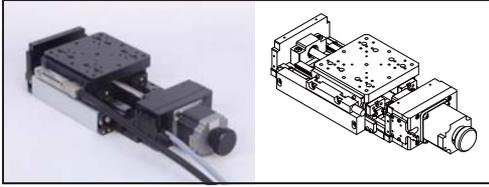
Selection chart:

Model number		KA050	KA100	KA150	KA200	KA300	KA400	KA600	KA800	KA1000	
Mechanical specifications	Table dimensions(mm)	120×120				150×150		200×200			
	Travel range(mm)	50	100	150	200	300	400	600	800	1000	
	Transmission mechanism	precise ball screws Φ 12×4				precise ball screws Φ 16×5		precise ball screws Φ 25×5			
	Guides (guiding mechanism)	linear-slider guides									
	Main body materials and surface treatments	Black anodic-oxidation aluminum-alloy									
	Weight(Kg)	6.6	6.8	7.2	7.6	9.9	10.9	23	26.8	30	
	Shaft coupling (external diameter-diameter of aperture 1-diameter of aperture 2) (mm)	30-6.35-8						32-8-12			
Accuracy specifications	Closed-cycle resolution (μ m)	1									
	Open-cycle 20-fine-subdivision resolution (μ m)	1				1.25					
	Highest speed (mm/s) *	40				50					
	Single-direction positioning accuracy (μ m)	≤ 30						≤ 40			
	Repositioning accuracy (μ m)	$\leq \pm 3$						$\leq \pm 5$			
	Static clearance (μ m)	≤ 3									
	Backlash clearance (μ m)	≤ 5									
	Static parallelism (mm)	≤ 0.1									
	Motion linearity (μ m)	≤ 10				≤ 15		$\leq 10\mu\text{m}/100\text{mm}$			
	Motion parallelism (μ m)	≤ 15				≤ 20		$\leq 10\mu\text{m}/100\text{mm}$			
	Yaw (")	≤ 30				≤ 40		/			
	Pitch (")	≤ 35				≤ 55		/			
	Electrical specifications	Motor and its stepping angle (°)	Two-phase 57 stepping motor, 1.8								
Brand and model number of motor		Shinano, SST-59D3206						Shinano, SST59D5301			
Working current (A)		2.8						3.0			
Torque of motor (N·m)		1.44						1.57			
Brand of grating ruler		Fagor, MX or MKX series									
Brand and model number of stepping driver (optional)		Moons, SR4									
Type of plugs for stages and grating rulers		DB9 (pin)									
Type of cables for stages		High flexible cables (Helukabel, Germany)									
Length of cables for stages(m)		0.2									
Position-limit sensors (built-in)		2*PM-L25 (SUNX, Japan)									
Origin-point sensors (built-in)		11*PM-L25 (SUNX, Japan)									
Voltage of power supply for sensors (V)		DC5~24V \pm 10%									
Consuming current (mA)		<60 (total)									
Output for control		collector of NPN open-circuit output									
Status of output ports		Position limit sensor: output ON when sensor is blocked; Origin-point sensor: output OFF when sensor is blocked									
Operating load	Horizontal direction (Kg)	30				50		80			
	Invert direction (Kg)	15				25		40			
	Vertical direction (Kg)	Using model number "xx-Z" for vertical load operation. Refer to KSAxxx-Z series									

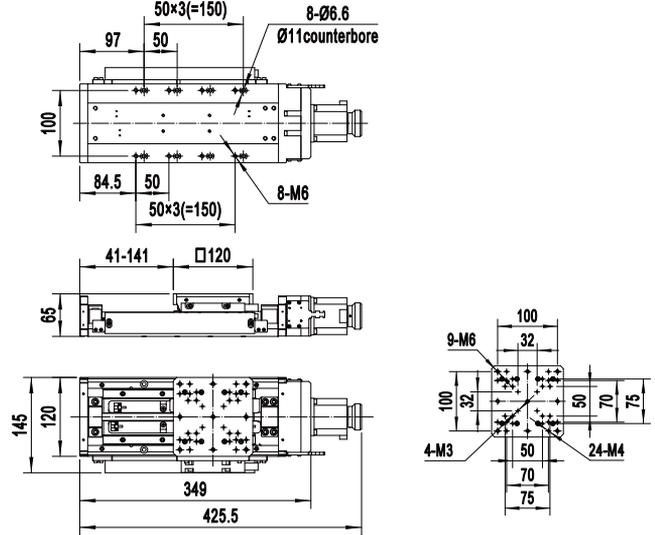
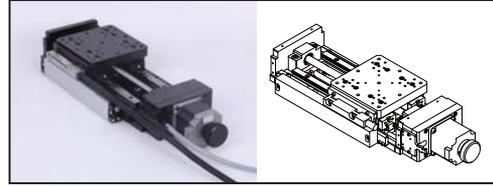
Highest speed is measured with the conditions of zero-load and motors being worked at 600rpm

Dimensions:

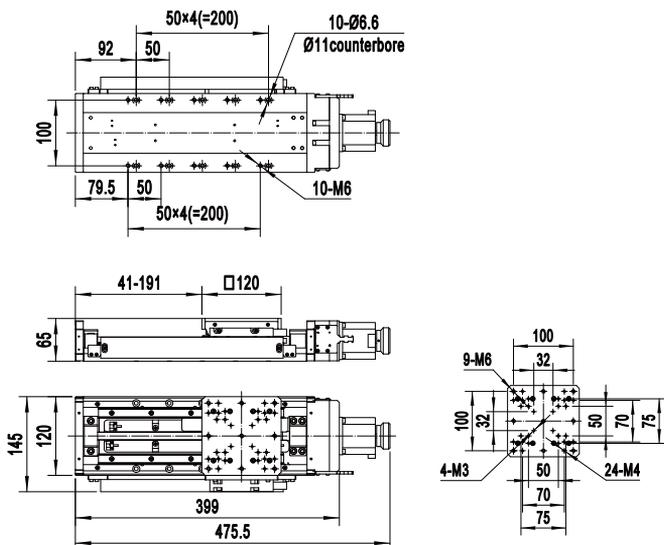
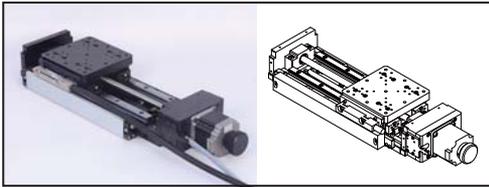
KA050



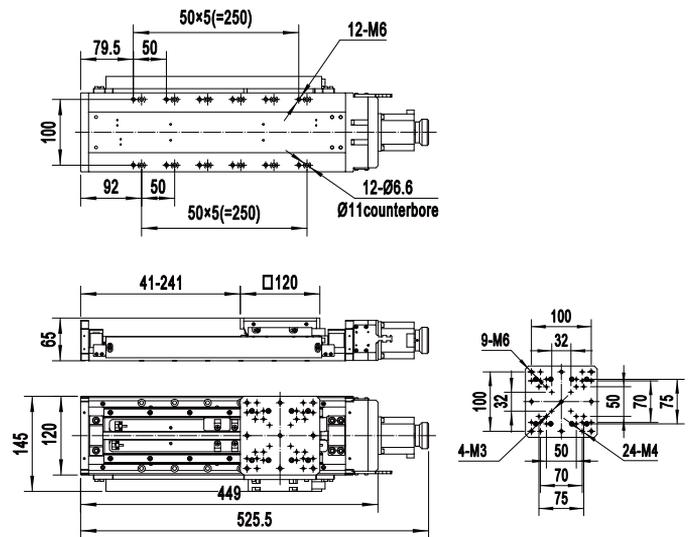
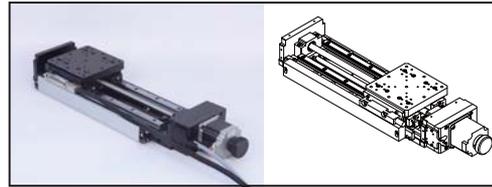
KA100



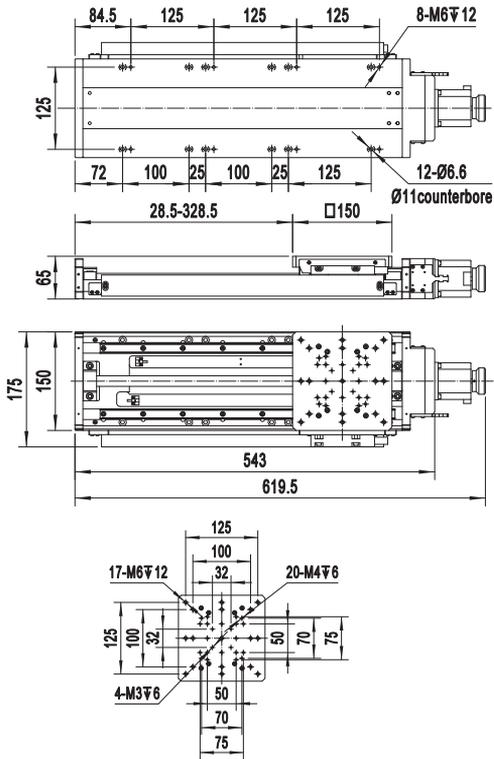
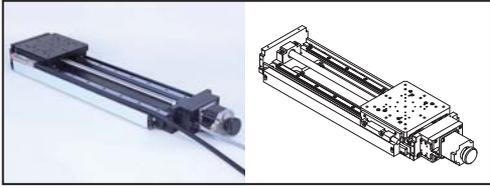
KA150



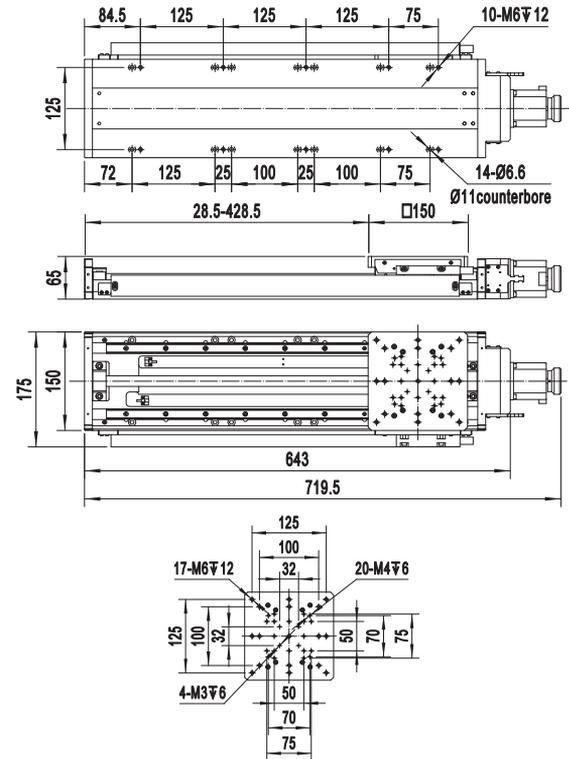
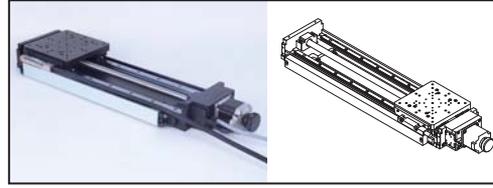
KA200



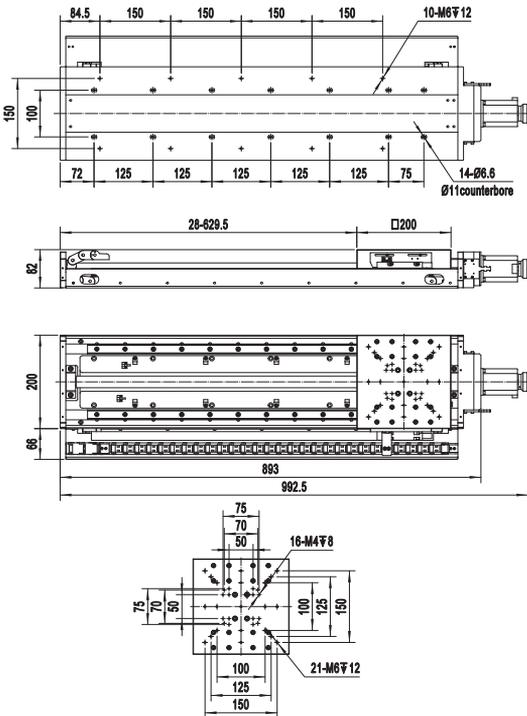
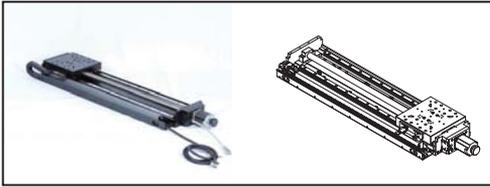
KA300



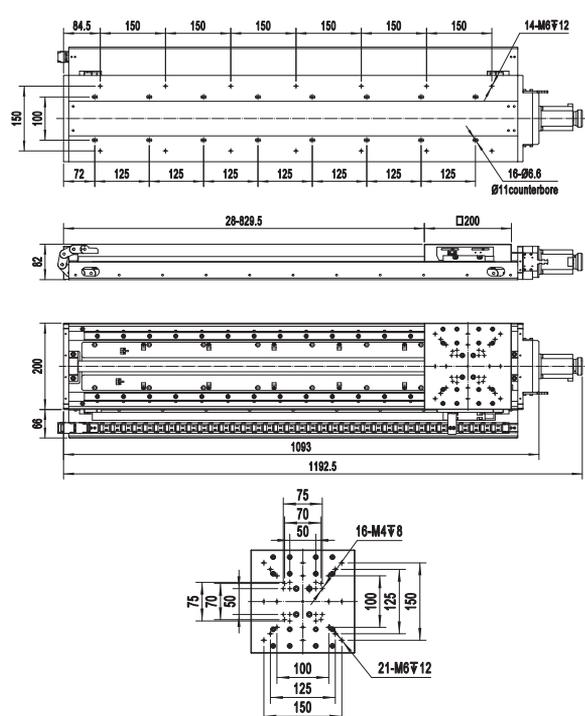
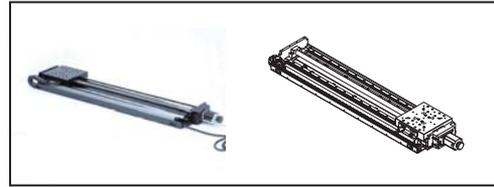
KA400



KA600



KA800



KA1000

