



# HYBRID LINEAR ACTUATORS

High Performance Stepper Motor Linear Actuators

## MOTOR

Model Number	SMA - 8	SMA - 11	SMA - 14	SMA - 17	SMA - 23
Frame Size	NEMA 8	NEMA 11	NEMA 14	NEMA 17	NEMA 23
Step Size [°]	1.8	1.8	1.8	1.8	1.8
Max. Axial Load (3) [lbs (N)]	10 (45)	20 (89)	50 (222)	75 (334)	200 (890)
Max. Radial Play [in @ lbs (mm @ N)]	0.001 @ 1 (0.03 @ 4)				
End Play [in @ lbs (mm @ N)]	0.002 @ 2 (0.05 @ 9)				
Concentricity of Mounting Pilot to Shaft [in (mm)] 0.003 (0.08) TIR	0.003 (0.08) TIR				
Perpendicularity of Shaft to Mounting Face [in (mm)]	0.003 (0.08) TIR				
Max. Case Temperature [ °F (°C)]	140 (60)		176 (80)		
Storage Temperature [ °F (°C)]	-4 to 122 (-20 to 50)				
Max. Humidity (non-condensing) [%]	85				
Magnet Wire Insulation	Class B 130 °C (266 °F)				
Insulation Resistance	100 Mohm @ 500 VDC				
Dielectric Strength	500 VAC for 1 minute				

## ASSEMBLY

Max. Backlash with Standard Nut [in (mm)]	0.010 (0.25)
Max. Backlash with Helix Anti-Backlash Nut [in (mm)]	0 (0)
Runout [in/ft (µm/300 mm)]	0.007 (175)
Operating Temperature [ °F (°C)]	15 to 125 (- 10 to 50)