

SHL-1D80N-1 - High Load Stage

Linear stages of the SHL series are specifically designed to handle heavy loads. The mechanical design is based on an actuated wedge which guarantees highest resolution of the stages motion. A separate guideway assures a straight movement along the load direction and allows an integration of a position sensor for direct position feedback and closed loop operation. Stages which are intended for pure vertical motion to lift components or equipment can be equipped with an additional constant force spring to offset the payload to even higher values. Accordingly, nano-encoded stages which can lift up to 10 kilogramms over several millimeter are possible as well as multi-axis systems based on linear stages of the SHL Series which offer high blocking forces in all three dimensions.

While offering high payloads, SmarAct SHL stages remain very compact and are suitable also for setups with space contraints High load vertical stage that is able to lift 80 N over a travel range of 1 mm with nanometer precision.

	Mechanical
Degrees of Freedom	1
Travel [mm]	1
Max. Lift Force [N]	80
Dimensions [mm]	41 x 86 x 50
Weight [g]	340
	Open-loop
Velocity [mm/s]	> 1
	Closed-Loop
Sensor Resolution MCS2 [nm]	1 (S), 4 (L)
Uni-Directional Repeatability MCS2 [nm]	± 40 (S,L)
Sensor Resolution (H)CU [nm]	100 (L)
Uni-Directional Repeatability (H)CU [nm]	± 200 (S,L)
	Options

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Material Options	Aluminum as standard; Steel base (-ST); Titanium base (-TI); Black anodized (-BK)
Vacuum Options	HV (1E-6 mbar); UHV (1E-11 mbar)

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