

Micro Pusher | Micromike-30S & L

The Micromike-30 linear actuator is designed for applications with very limited space conditions and high load requirements. Typical applications include actuation of manual drive stage and mirror mounts. It utilizes a 2-phase stepper motor and a mechanical limit switches for homing (custom options include an integrated encoder). Versions are capable of operation in vacuum (10^{-6} mbar) are available. The Micromike-30 is compatible with the MMC-200 and NanoDrive controllers.

KEY FEATURES

- Travel range of 12 and 25 mm
- 0.1 μm open loop resolution
- Maximum force of 70N at 3mm/s
- Ball spline with zero backlash, non-rotating tip
- Integrated mechanical limit switch
- Vacuum versions available
- Optional encoder available

TECHNICAL DATA

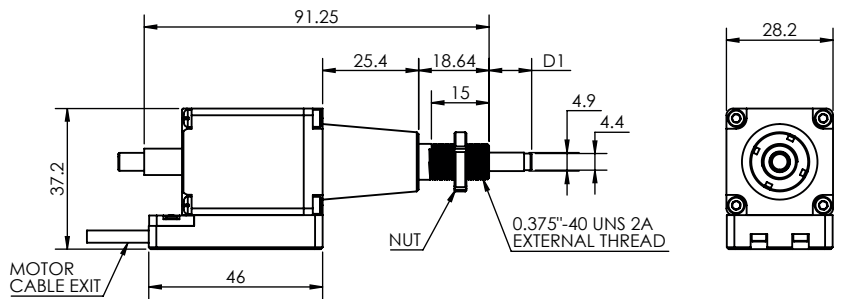
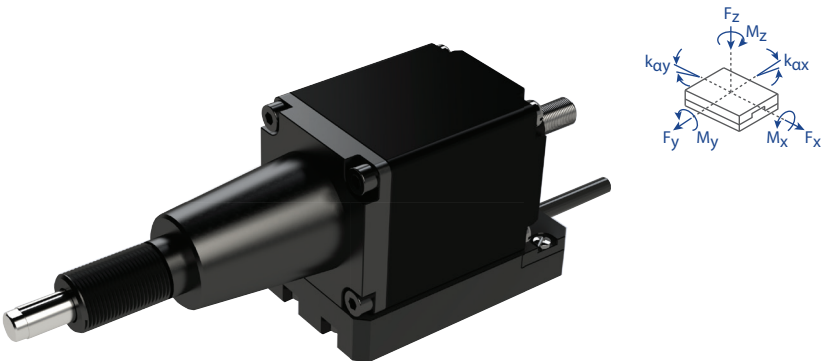
Travel range [mm]	12	25
Straightness / Flatness [μm]	-	-
Pitch [μrad]	-	-
Yaw [μrad]	-	-
Weight [g]	160	170
Motor option	2-Phase Stepper Motor	
Speed, max [mm/s]	10mm/s	
Encoder option	None (open loop)	
Resolution, typical [μm]	0.1	
Repeatability, bi-directional [μm]	± 0.5	
Repeatability, uni-directional [μm]	2	
Materials	aluminum body, stainless steel ball spline (other materials i.e. stainless steel, titanium, etc. available upon request)	

ORDERING INFORMATION

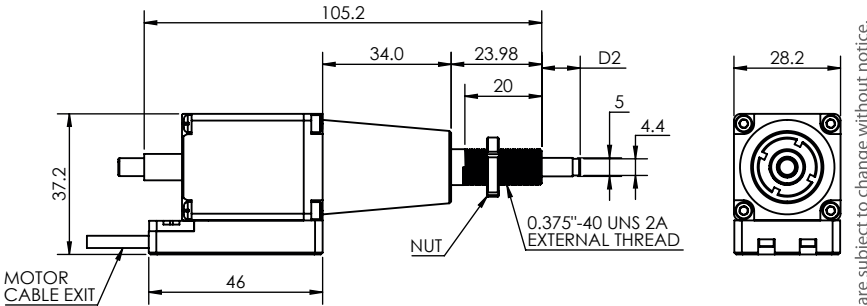
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DRIVE	Stepper Motor, SM-010	2
TRAVEL	12 mm	1
	25 mm	2
ENCODER	Optional	0
LIMIT SWITCH	Mechanical	1
ENVIRONMENT	Atmospheric	0
	High vacuum, 10^{-6} mbar	6

Load, max	F_x [N]	F_y [N]	F_z [N]	M_x [N-m]	M_y [N-m]	M_z [N-m]	k_{ax} [$\mu\text{rad/N-m}$]	k_{ay} [$\mu\text{rad/N-m}$]
SM-001	70	0	0	-	-	-	-	-



* 12 mm travel version shown above
* 25 mm travel version shown below
* all dimensions are in millimeters



TIP LOCATION	D1	D2
Negative Limit (retraction)	3.5 ± 0.5	2.5 ± 0.5
Positive Limit (extension)	15 ± 0.5	26 ± 0.5
Negative Hardstop	3 ± 0.5	2 ± 0.5
Positive Hardstop	32 ± 2	38 ± 2

Specifications are subject to change without notice.