

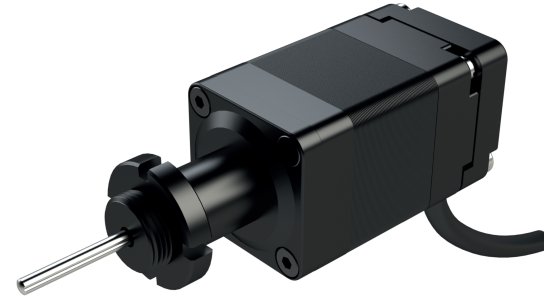
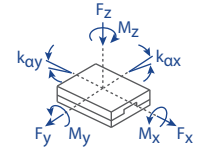
Micro Pusher | MP-21S/MP-21L

The MP-21 linear actuator is designed for applications with very limited space conditions. Typical applications include actuation of manual drive stage and mirror mounts. It utilizes a 2-phase stepper motor and a mechanical limit switch for homing (custom options include an integrated encoder). Versions are capable of operation in vacuum (10^{-6} mbar) are available. The MP-21 is compatible with the MMC-200 and NanoDrive™ controllers.

KEY FEATURES

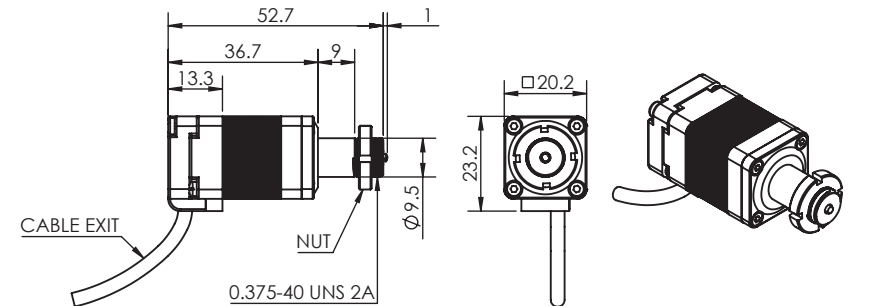
- Travel range of 12 and 25 mm
- 0.1 μm open loop resolution
- Maximum force of 20 N
- Ball spline with zero backlash, non-rotating tip
- Integrated mechanical limit switch
- Vacuum versions available
- Optional encoder available

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	20	0	0	-	-	-	-	-

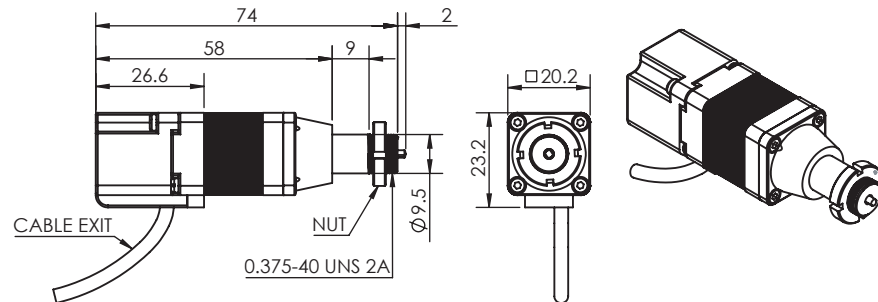


TECHNICAL DATA

	MP-21S	MP-21L
Travel range [mm]	12	25
Straightness / Flatness [μm]	-	-
Pitch [μrad]	-	-
Yaw [μrad]	-	-
Weight [g]	60	70
Motor option	2-Phase Stepper Motor	
Speed, max [mm/s]	5	
Encoder option	None (open loop)	
Resolution, typical [μm]	0.1	
Repeatability, bi-directional [μm]	± 0.5	
Repeatability, uni-directional [μm]	0.4	
Materials	aluminum body, stainless steel ball spline (other materials i.e. stainless steel, titanium, etc. available upon request)	



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



ORDERING INFORMATION

	MP-21-	1		0	1	
DRIVE	Stepper Motor, SM-001	1				
TRAVEL	12 mm	1				
	25 mm		2			
ENCODER	Optional			0		
LIMIT SWITCH	Mechanical				1	
ENVIRONMENT	Atmospheric					0
	High vacuum, 10^{-6} mbar.....					6

Specifications are subject to change without notice.