

Micro Precision Actuator, UHV | MPA-20

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The MPA-20 linear actuator is designed for ultra high vacuum environments. Typical applications include actuation of manual drive stages and mirror mounts. It utilizes a 2-phase stepper motor and two hermetically sealed mechanical limit switches. The MPA-20 is compatible with the MMC-200 controller.

Not recommended for new designs

KEY FEATURES

- Travel range of 12mm
- 0.5mm pitch lead screw
- 200 steps/rev stepper motor with 4:1 gear reduction
- Load capacity up to 10 kg
- Preloaded spline for low backlash
- Hermetically sealed limit switches, UHV compatible
- Integrated thermal couple

TECHNICAL DATA

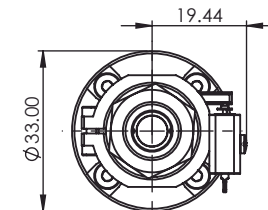
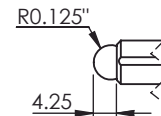
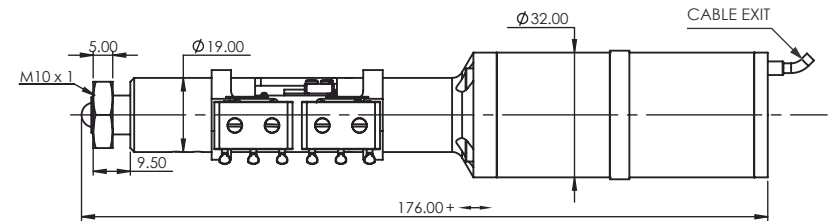
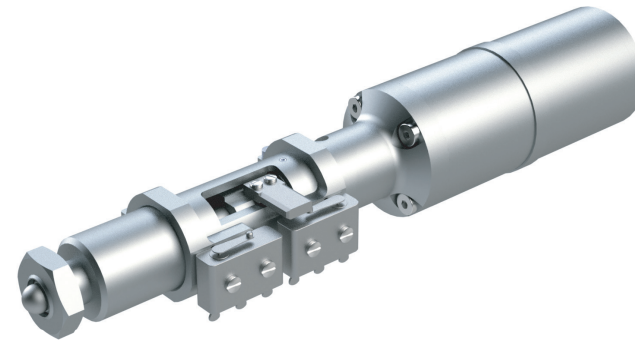
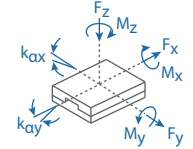
Travel range [mm]	12
Weight [g]	670
Motor option	Stepper Motor
Encoder option	None (open loop)
Resolution, typical [μm]	0.1
Repeatability, bi-directional [μm]	± 1
Repeatability, uni-directional [μm]	1
Materials	stainless steel body and bearings, phosphor bronze nut aluminum limit switch brackets

ORDERING INFORMATION

MPA-20- 1 1 0 1 9

DRIVE	Stepper Motor, SM-005	1
TRAVEL	12 mm	1
ENCODER	None	0
LIMIT SWITCH	Mechanical	1
ENVIRONMENT	Ultra High Vacuum, 10^{-9} mbar	9

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} [$\mu\text{rad}/\text{N}\cdot\text{m}$]	k_{ay} [$\mu\text{rad}/\text{N}\cdot\text{m}$]
SM-005	100	10	10	-	-	-	-	-



Specifications are subject to change without notice.