



Model No.: MTSCREW-75-18

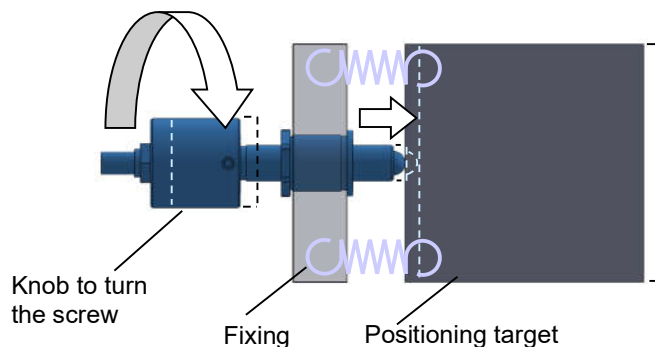
The MTSCREW is a positioning screw and piezo actuator equipped with both coarse (manual) and fine (piezo) adjustment functions.



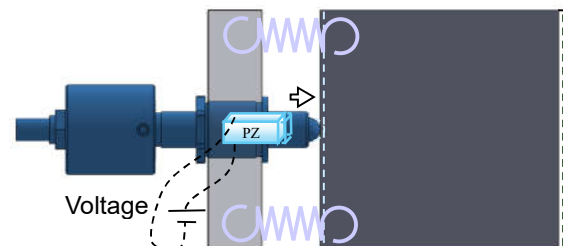
Specifications

MODEL No. MTSCREW-75-18	
Range	Travel by screw drive: 12mm Travel by piezo drive: 17μm (min), 22μm(max)
Resolution	Mechanical: ~0.25 mm/rev Piezo: 0.013μm for a 0.1 V Step (Theoretical calculated value)
Load (Recommended)	100 N (*Theoretical estimated output force)
Adjusters	Manually adjustable M6P0.25 screw with built-in piezo element
Piezo Control Voltage	-5 to 75 V
Piezo Connectors	Male SMB
Piezo Capacitance	0.8 μF
Mounting Interface:	
Mounting	A machined hole is required to mount the bushing (See figure on page 2).
Vacuum Compatibility	Not compatible (*A version compatible with vacuum environments is available separately.)
Operating Temperature	-25 to 85°C

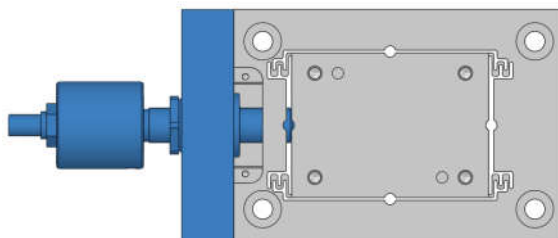
How To Use Coarse Adjustment



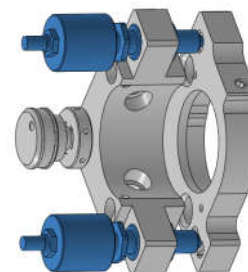
How To Use Fine Adjustment



Application examples



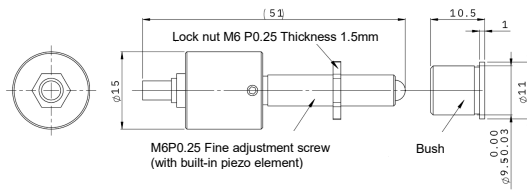
Piezo Precision Stage



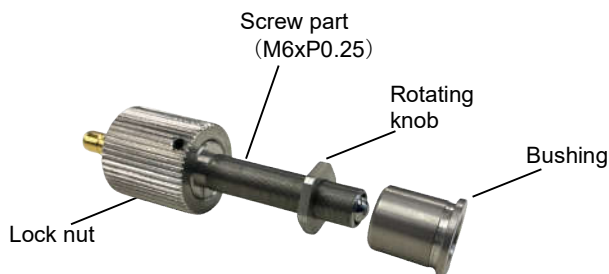
Mirror Mount



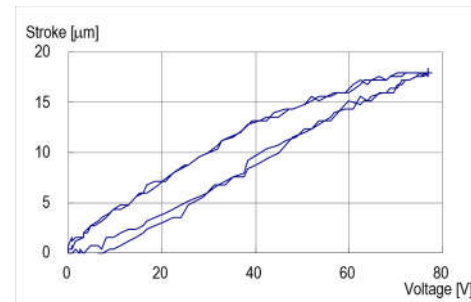
Outline Drawing



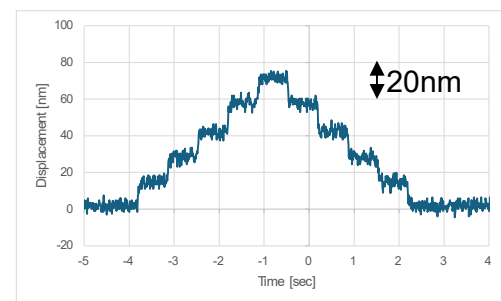
MTSCREW Main Components



Voltage and Stroke

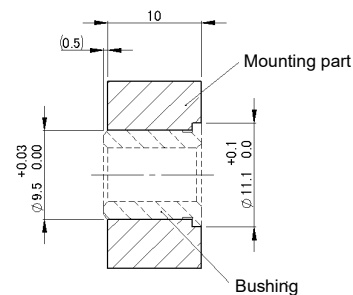


Resolution



The following is an explanation of the proper installation method for the MTSCREW.

1. Before gluing the bushing to the mating part, remove the actuator (male thread side) from the bushing.
2. The mating part must be thinner than the length of the bushing. Please refer to the figure below.
3. The following figure shows the mounting method.



Precautions

Please follow the guidelines below when using the MTSCREW-75-18.

1. Do not drop the MTSCREW. It may be damaged by external impact.
2. The MTSCREW is very sensitive to external force, so please handle it with care.
3. Store the MTSCREW under the following recommended conditions:
Temperature: -5°C to +40°C / Ambient humidity: 40%RH or less. No condensation.
4. If the MTSCREW is used in a high-humidity environment (70%RH or higher) with a constant DC voltage applied for a long period of time, migration may occur at the internal electrodes of the piezoelectric element, which can degrade the insulation resistance.
5. The operating temperature range is -20°C to +85°C. During operation, please also take into account the temperature rise of the piezoelectric element itself.
6. Piezoelectric actuators can be damaged by rapid charging and discharging (such as pulse waves). Therefore, make sure the input voltage changes gradually. As an alternative, inserting a resistor between the amplifier and the MTSCREW is also effective. Also, to prevent unintended charging and discharging, always turn off the power before connecting the SMB cable.
7. Voltages below -10 V or above 75 V may cause permanent damage to the piezoelectric element.

