Translation Stage | VT-21L

The low cost VT-21L linear stage excels in applications with very limited space due to its compact design. The stage utilizes a 2-phase stepper motor and is equipped with two mechanical limit switches. A pre-loaded ball slide creates high stiffness and superior performance. The VT-21L is available with an optional linear encoder with 50 nm resolution. The stages can be mounted in XY or XYZ configuration in a space-saving arrangement. Versions capable of operation in vacuum (10^{-6} mbar) are available. The VT-21L is compatible with the MMC-200 controller.

KEY FEATURES

- Travel range of 26 mm
- 50 nm closed loop encoder resolution
- Load capacity up to 1 kg
- Ball slide
- Integrated mechanical limit switches
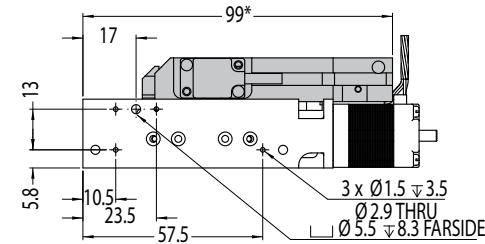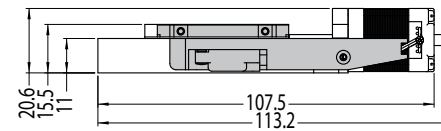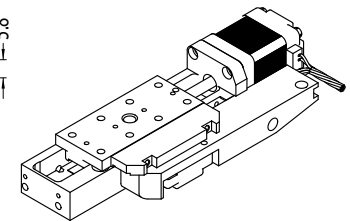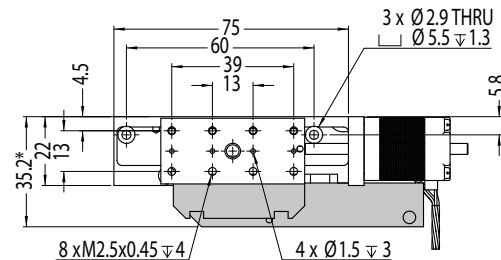- Vacuum versions available

TECHNICAL DATA

Travel range [mm]	26			
Straightness / Flatness [μm]	± 3			
Pitch [μrad]	± 180			
Yaw [μrad]	± 180			
Weight [g]	120			
Motor option	2-Phase Stepper Motor			
Speed, max [mm/s]	5			
Encoder option	None (open loop)	Analog (1 V_{pp})	Digital (RS-422)	Digital Low Cost
Resolution, typical [μm]	0.5	0.05	0.05	0.5
Repeatability, bi-directional [μm]	± 4	± 0.2	± 0.2	± 1
Repeatability, uni-directional [μm]	0.5	0.2	0.2	1
Materials	aluminum body, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)			

ORDERING INFORMATION

VT-21- **1** **2** ☐ **1** ☐

DRIVE	Stepper Motor, SM-001	1
TRAVEL	26 mm	2
ENCODER	None	0
	Analog (1 V_{pp})	2
	Digital (RS-422)	3
	Digital low cost, 0.5 μm	4
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} [μrad/N·m]	k_{ay} [μrad/N·m]
SM-001	10	10	10	0.4	0.6	0.5	-	-

* grey parts for closed loop version only
* all dimensions are in millimeters

micronix USA
PRECISION MOTION SOLUTIONS