

## PiezoMike Linear Actuator

MINIMUM DIMENSIONS, HIGH FORCES, STABLE POSITIONING



### N-470

- Holding force >100 N
- Step size 20 nm
- Travel range 7.5 mm
- Compact design
- Feed force 22 N
- Lifetime >1.000.000.000 steps

#### Linear actuator with PIShift piezomotor

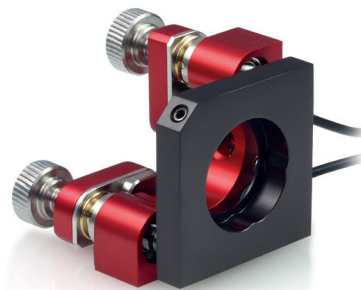
Linear screw-type actuator with PIShift piezo inertia drive for high-resolution and stable positioning. Open-loop operation

#### PIShift piezomotors

Compact, cost-effective inertia drive (Stick-Slip). When at rest, the drive is self-locking and therefore requires no current and generates no heat. It holds the position with maximum force

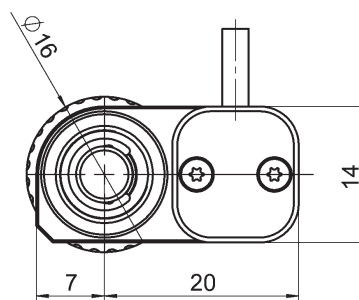
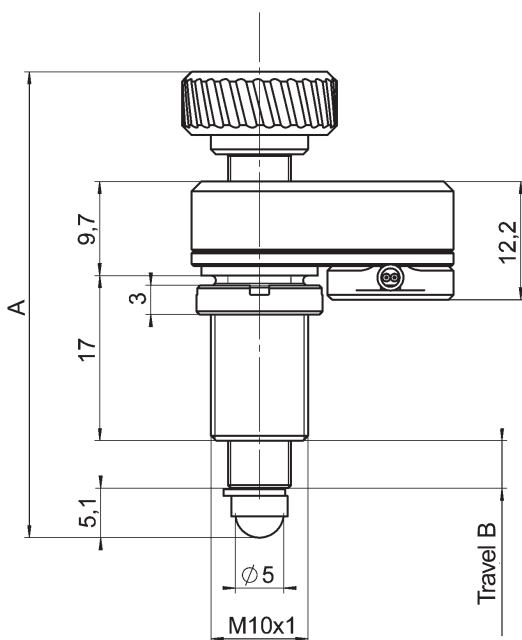
#### Alignment of mechanical and optical components

Stable alignment of optical paths. Long-term positioning stability: High stability in target position, reliable start-up even after longer downtimes. High holding force and resolution by combining piezo actuators with mechanical thread translation. Optionally vacuum-compatible to  $10^{-9}$  hPa



PiezoMike linear actuators replace manual micrometer screws in tip/tilt mirror mechanics

	N-470 Radiant Dyes	Unit
Active axes	X	
<b>Motion and positioning</b>		
Travel range	7.5	mm
Max. step size	30	nm
Typical step size	20	nm
Max. step frequency	2000	Hz
Max. velocity in full-step mode	3	mm/minute
Typical velocity in full-step mode	2	mm/minute
<b>Mechanical properties</b>		
Stiffness in motion direction	15.5	N/ $\mu$ m
Feed force (active)	22	N
Holding force (passive)	>100	N
Permissible lateral force	1	N
<b>Drive properties</b>		
Drive type	PIShift piezomotor	
Max. operating voltage	80	V
Max. power consumption	6.4	W
<b>Miscellaneous</b>		
Operating temperature range	10 to 40	$^{\circ}$ C
Material	Screw: Stainless steel, Case: Aluminum	
Dimensions	14 mm $\times$ 28 mm $\times$ 48 mm	
Mass	80	g
Cable length	2	m
Connector	DIN 4-pin	
Recommended driver	E-870 PIShift drive electronics	



A	48 mm
B	7,5 mm

N-470, dimensions in mm