

# Precision Positioning Stage | PPS-70LM

NEW

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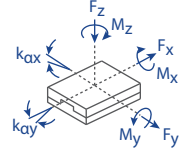
Preliminary

The linear stage PPS-70 allows nanopositioning at high speeds. Anti-creep, crossed roller bearings assure high stiffness for loads up to 30N. Its low profile suits applications in which height is critical and stiffness is a must. The PPS-70 is fully integrated with high resolution encoder (up to 5nm resolution). The PPS-70 can be combined with our rotational stages PR-50, PR-70, Gonio stage PG-50, and our elevation stage ES-50PM for optimal motion solutions. The PPS-70 is compatible with our NanoDrive controller.

## KEY FEATURES

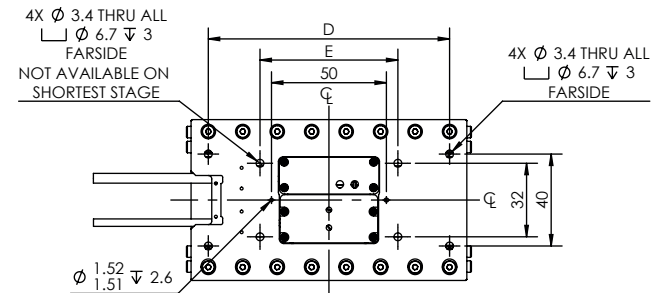
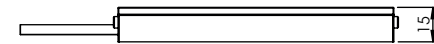
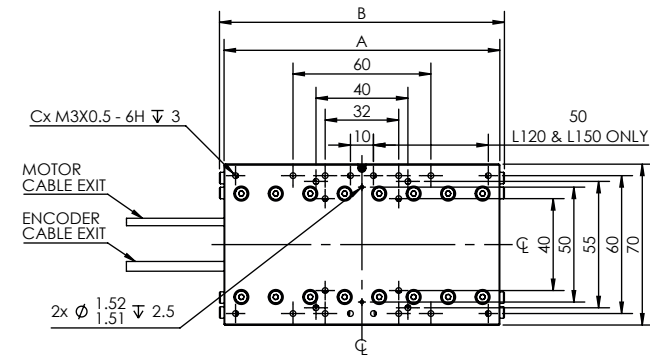
- Standard travel range of up to 100 mm
- Internal digital encoder of 5nm resolution
- Internal absolute encoder of 25nm resolution
- Load capacity up to 3kg (higher on request)
- Crossed roller bearing (anti-creep)
- Low profile, 15mm height

Load, max	$F_x$ [N]	$F_y$ [N]	$F_z$ [N]	$M_x$ [N·m]	$M_y$ [N·m]	$M_z$ [N·m]	$k_{ax}$ [ $\mu$ rad/N·m]	$k_{ay}$ [ $\mu$ rad/N·m]
LM-006	2 Continuous 5 Peak	20	30	0.2	0.2	0.125	-	-



## TECHNICAL DATA

Travel range [mm]	32	51	75	100
Straightness / Flatness [ $\mu$ m]	$\pm 3$	$\pm 5$	$\pm 7$	$\pm 7$
Pitch [ $\mu$ rad]				
Yaw [ $\mu$ rad]				
Weight [g], Closed Loop	175	250	330	400
Motor option	Linear Motor			
Speed, max [mm/s]	150 (Incremental Enc), 300 (Absolute Enc)			
Encoder option	Digital (RS-422)		Absolute (BiSS C)	
Resolution, typical [nm]	5		25	
Repeatability, bi-directional [nm]	$\pm 50$		$\pm 200$	
Repeatability, uni-directional [nm]	50		200	
Materials	aluminum, steel bearing (other materials i.e. stainless steel, titanium, etc. available upon request)			



## ORDERING INFORMATION

PPS-70- 3 1

<b>DRIVE</b>	Linear Motor, LM-006	3
<b>TRAVEL</b>	32 mm	1
	51 mm	2
	75 mm	3
	100 mm	4
<b>ENCODER</b>	Digital (RS-422)	3
	Absolute (BiSS C)	5
<b>LIMIT SWITCH</b>	Magnetic	1
<b>ENVIRONMENT</b>	Atmospheric	0
	High Vacuum (10 <sup>-6</sup> mbar)	6

TRAVEL	A	B	C	D	E
30	60	64	16	55	-
50	90	94	16	80	60
75	120	124	24	105	60
100	150	154	24	135	60

• all dimensions are in millimeters

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PRECISION MOTION SOLUTIONS

Specifications are subject to change without notice.