

Linear Rails with Recirculating Ball Slide

A Motorized Linear Rail combines multiple technologies into a single integrated linear motion platform. The system provides excellent load capacity and is engineered for both normal and overhanging loads. High roll, pitch and yaw moment loading capability allows the system to maintain tight accuracy and repeatability, even in applications requiring significant cantilevered loading.

At the heart of the Linear Rail system is a Haydon hybrid linear actuator with a precision 303 stainless steel lead screw. The lead screw drives a machined aluminum carriage mounted to a precision stainless steel ball slide resulting in a rigid, smooth operating motion system. The screw is coated with Kerkote® or Black Ice® TFE coating providing a permanent dry lubrication.

Hybrid Linear Actuator Motor		MLX	EGS04 Std. Carriage	EGS04 Long Carriage	BGS04	BGS06	BGS08
		Size 8 SS Size 8 DS	Size 11 DS Size 17 SS*	Size 11 DS Size 17 SS*	Size 11 DS Size 17 SS*	Size 17 SS* Size 17 DS*	Size 23 SS* Size 23 DS
Max. Stroke Length	in (mm)	4 (100)	40 (1000)	40 (1000)	18 (460)	24 (610)	30 (760)
Max. Load (Horizontal)**	lbs (N)	8 (35.6)	15 (66.7)	22 (100)	22 (100)	135 (600)	225 (1,000)
Roll Moment	lbs-ft (N-m)	0.83 (1.13)	2.39 (3.10)	5.72 (7.75)	5.72 (7.75)	11.62 (15.75)	22.50 (30.5)
Pitch Moment	lbs-ft (N-m)	0.83 (1.13)	3.87 (5.25)	4.88 (6.60)	4.88 (6.60)	7.93 (10.75)	19.36 (26.25)
Yaw Moment	lbs-ft (N-m)	0.66 (0.9)	2.21 (3.00)	5.68 (7.70)	5.68 (7.70)	9.15 (12.40)	22.27 (30.20)
Standard TFE Coating		Kerkote®	Kerkote®	Kerkote®	Black Ice®	Black Ice®	Black Ice®

Nominal Thread Lead		Lead Code	MLX	EGS "S" Carriage	EGS "L" Carriage	BGS04	BGS06	BGS08
inches	mm							
0.012	.30	0012	•					
0.020	.50	0020	•					
0.024	.61	0024	•					
0.025	0.635	0025		•	•	•		
0.039	1.00	0039	•	•	•	•		
0.048	1.22	0048	•					
0.050	1.27	0050		•	•	•	•	
0.0625	1.59	0063		•	•	•		
0.079	2.00	0079	•	•	•	•	•	
0.096	2.24	0096	•					
0.098	2.5	0098						•
0.100	2.54	0100		•	•	•	•	•
0.118	3.00	0118		•	•	•		
0.125	3.18	0125						
0.157	4.00	0157	•				•	
0.197	5.00	0197					•	•
0.200	5.08	0200		•	•	•	•	•
0.250	6.35	0250		•	•	•	•	
0.315	8.00	0315	•					
0.375	9.53	0375					•	
0.394	10.00	0394		•	•	•		
0.400	1.016	0400					•	
0.472	12.00	0472					•	
0.500	12.70	0500		•	•	•	•	•
0.630	16.00	0630						•
0.750	19.05	0750		•	•	•	•	
0.984	25.00	0984					•	
1.000	25.40	1000		•	•	•	•	•
1.200	30.48	1200					•	

Size 8 = 21000 Series | Size 11 = 28000 Series | Size 17 = 43000 Series | Size 23 = 57000 Series

*Size 17 (43000 Series) Single and Double Stack Hybrid Linear Actuator Stepper Motors (BGS06) are available with an optional programmable IDEA™ Drive. IDEA Drives are not available in the BGS08 Linear Rail.

**For vertical load information, see specifications for the Size 8 (21000 Series), Size 11 (28000 Series), Size 17 (43000 Series), and Size 23 (57000 Series) motors.