

Specifications

Load Capacities		553 & 554 Carriages		555 Carriage	
Dynamic Horizontal	2 million inches (50 km) of travel	12,650 lbs	(5740 kg)	12,650 lbs	(5740 kg)
Dynamic Horizontal	100 million inches (2540 km) of travel	3,400 lbs	(1540 kg)	3,400 lbs	(1540 kg)
Static Horizontal		19,000 lbs	(8620 kg)	19,000 lbs	(8620 kg)
Dynamic Roll Moment	2 million inches (50 km) of travel	560 ft-lbs	(760 N-m)	560 ft-lbs	(760 N-m)
Dynamic Roll Moment	100 million inches (2540 km) of travel	150 ft-lbs	(200 N-m)	150 ft-lbs	(200 N-m)
Static Roll Moment		790 ft-lbs	(1070 N-m)	790 ft-lbs	(1070 N-m)
Dyn. Pitch & Yaw Moment	2 million inches (50 km) of travel	1,710 ft-lbs	(2320 N-m)	1,710 ft-lbs	(2320 N-m)
Dyn. Pitch & Yaw Moment	100 million inches (2540 km) of travel	460 ft-lbs	(625 N-m)	460 ft-lbs	(625 N-m)
Static Pitch & Yaw Moment		1,775 ft-lbs	(2406 N-m)	845 ft-lbs	(1145 N-m)
Each Bearing Dyn. Capacity	2 million inches (50 km) of travel	6,325 lbs	(2870 kg)	6,325 lbs	(2870 kg)
Each Bearing Dyn. Capacity	100 million inches (2540 km) of travel	1,700 lbs	(770 kg)	1,700 lbs	(770 kg)
Each Bearing Static Load Capacity		9,500 lbs	(4310 kg)	9,500 lbs	(4310 kg)
Maximum Belt Tensile Force		675 lbs	(306 kg)	675 lbs	(306 kg)
Maximum Carriage Thrust Force		475 lbs	(215 kg)	475 lbs	(215 kg)
Maximum Speed		118 in/sec	(3 m/sec)	197 in/sec	(5 m/sec)
Maximum Acceleration		1,930 in/sec ²	(49,0 m/sec ²)	1,930 in/sec ²	(49,0 m/sec ²)
d₂	Center to center distance (spacing) of each bearing on a single rail	3.876 in	(98,4 mm)	3.876 in	(98,4 mm)
d_r	Center distance of the bearing to top of carriage plate surface	1.508 in	(38,3 mm)	1.626 in	(41,3 mm)

Other	553, 554 & 555 Carriages
Table Material	Base Extrusion, Carriage, & End Plates - 6061 anodized aluminum
Linear Rail Material	Case Hardened Steel
Belt Properties	Black, 50 mm wide, Polyurethane, Steel reinforced belt
Drive Pulley Weight	1.500 lbs (0,68 kg)
Drive Pulley Diameter	2.569 in (65,25 mm)
Drive Lead	8.071 in (205,00 mm)
Belt Stretch - x Load (lbs or N)	0.00006 in/ft per lbs (0,00114 mm/m per N)
Unidirectional Repeatability	+/- 0.001 in (+/- 0,0254 mm)
Bidirectional Repeatability	+/- 0.004 in (+/- 0,1016 mm)
Position Accuracy (Belt) ⁽¹⁾	< 0.010 in/ft (< 0,254 mm/300mm)
Orthogonality (multi-axis systems)	< 60 arc-seconds
Friction Coefficient	< 0.01
Breakaway Torque ⁽²⁾	< 16 lb-in (1,808 N-m)
Motor Mount	NEMA 34 & 42 Mounts, Metric Mounts, and Gearheads
Coupling	Two (2) different styles available

Footnotes:

- (1) Position accuracy varies based on belt stretch. The given rating is based upon a carriage speed of 5 inches/sec (127 mm/sec) and a no load condition.
 (2) This is a nominal value. Breakaway torque will increase, or decrease, based on belt tension.