

	553	10	012	- D1 -	M04	- C293 -	L04	- E00 -	B00															
<b>Table Series</b>																								
553 - 553 carriage																								
554 - 554 carriage																								
555 - 555 carriage																								
<b>Carriage Length</b>																								
10 - 10 inches																								
<b>Travel Length</b> (see page K-6)																								
012 - 12 to 360 inches																								
<b>Drive Shaft</b> (see page K-7)																								
D1 - Right Hand single shaft      D3 - Right Hand thru shaft D2 - Left Hand single shaft      D4 - Left Hand thru shaft																								
<b>Motor Mount</b> (see page K-20)																								
M00 - none; just shaft extension      M04 - NEMA 34 mount (E)      M10 - NEMA 42 mount (E) M99 - other      M05 - NEMA 34 mount (M)      M11 - NEMA 42 mount (M)																								
<b>Coupling Options</b> (see pages K-24 & K-25)																								
C000 - none      C293 to C303 - H197      C573 to C583 - G177      C684 to C691 - G260 C999 - none      C359 to C369 - H225      C639 to C649 - G220																								
<b>Limit &amp; Home Switches</b> (see pages K-21 to K-23)																								
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">L00 - no switches</td> <td style="width: 10%;"></td> <td style="width: 10%;">Reed</td> <td style="width: 10%;">Hall</td> <td style="width: 10%;">Prox (NPN)</td> <td style="width: 10%;">Prox (PNP)</td> </tr> <tr> <td>L99 - other</td> <td>EOT &amp; home switches</td> <td>L04</td> <td>L07</td> <td>L10</td> <td>L13</td> </tr> <tr> <td></td> <td>EOT switches only</td> <td>L05</td> <td>L08</td> <td>L11</td> <td>L14</td> </tr> <tr> <td></td> <td>home switch only</td> <td>L06</td> <td>L09</td> <td>L12</td> <td>L15</td> </tr> </table>	L00 - no switches		Reed	Hall	Prox (NPN)	Prox (PNP)	L99 - other	EOT & home switches	L04	L07	L10	L13		EOT switches only	L05	L08	L11	L14		home switch only	L06	L09	L12	L15
L00 - no switches		Reed	Hall	Prox (NPN)	Prox (PNP)																			
L99 - other	EOT & home switches	L04	L07	L10	L13																			
	EOT switches only	L05	L08	L11	L14																			
	home switch only	L06	L09	L12	L15																			
<b>Encoder Options</b> (see page K-27)																								
E00 - none      E02 - rotary (1000 lines/rev)      E99 - other E01 - rotary (500 lines/rev)      E03 - rotary (1270 lines/rev)																								
<i>note: When selecting any rotary encoder option, the Drive Shaft D3 or D4 above is required.</i>																								
<b>Power-off Brakes</b> (see page K-26)																								
B00 - none      B05 - 24 VDC      B06 - 90 VDC      B99 - other																								
<i>note: When selecting any brake option, the Drive Shaft D3 or D4 above is required.</i>																								

(E) - English Interface  
(M) - Metric Interface

## Specifications

Load Capacities		553 & 554 Carriages		555 Carriage	
<b>Dynamic Horizontal</b>	2 million inches (50 km) of travel	10,500 lbs	( 4763 kg)	9,120 lbs	( 4136 kg) <sup>(1)</sup>
<b>Dynamic Horizontal</b>	50 million inches (1270 km) of travel	3,590 lbs	( 1628 kg)	3,119 lbs	( 1414 kg) <sup>(1)</sup>
<b>Static Horizontal</b>		15,400 lbs	( 6985 kg)	14,700 lbs	( 6668 kg) <sup>(1)</sup>
<b>Dynamic Roll Moment</b>	2 million inches (50 km) of travel	410 ft-lbs	( 556 N-m)	172 ft-lbs	( 233 N-m)
<b>Dynamic Roll Moment</b>	50 million inches (1270 km) of travel	140 ft-lbs	( 190 N-m)	59 ft-lbs	( 80 N-m)
<b>Static Roll Moment</b>		650 ft-lbs	( 881 N-m)	285 ft-lbs	( 386 N-m)
<b>Dyn. Pitch &amp; Yaw Moment</b>	2 million inches (50 km) of travel	1,215 ft-lbs	( 1647 N-m)	510 ft-lbs	( 690 N-m)
<b>Dyn. Pitch &amp; Yaw Moment</b>	50 million inches (1270 km) of travel	414 ft-lbs	( 561 N-m)	174 ft-lbs	( 236 N-m)
<b>Static Pitch &amp; Yaw Moment</b>		1,775 ft-lbs	( 2406 N-m)	845 ft-lbs	( 1145 N-m)
<b>Each Bearing Dyn. Capacity</b>	2 million inches (50 km) of travel	5,250 lbs	( 2381 kg)	4,560 lbs	( 2068 kg) <sup>(1)</sup>
<b>Each Bearing Dyn. Capacity</b>	50 million inches (1270 km) of travel	1,795 lbs	( 814 kg)	1,559 lbs	( 707 kg) <sup>(1)</sup>
<b>Each Bearing Static Load Capacity</b>		7,700 lbs	( 3493 kg)	7,350 lbs	( 3334 kg) <sup>(1)</sup>
<b>Maximum Belt Tensile Force</b>		675 lbs	( 306 kg)	675 lbs	( 306 kg)
<b>Maximum Carriage Thrust Force</b>		475 lbs	( 215 kg)	475 lbs	( 215 kg)
<b>Maximum Speed</b>		118 in/sec	( 3 m/sec)	197 in/sec	( 5 m/sec)
<b>Maximum Acceleration</b>		1,930 in/sec <sup>2</sup>	( 49,0 m/sec <sup>2</sup> )	1,930 in/sec <sup>2</sup>	( 49,0 m/sec <sup>2</sup> )
<b>d<sub>2</sub></b>	Center to center distance (spacing) of each bearing on a single rail	3.876 in	( 98,4 mm)	3.876 in	( 98,4 mm)
<b>d<sub>r</sub></b>	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
<b>Table Material</b>	Base Extrusion, Carriage, & End Plates - 6061 anodized aluminum
<b>Linear Rail Material</b>	Case Hardened Steel
<b>Belt Properties</b>	Black, 50 mm wide, Polyurethane, Steel reinforced belt
<b>Drive Pulley Weight</b>	1.500 lbs ( 0,68 kg)
<b>Drive Pulley Diameter</b>	2.569 in ( 65,25 mm)
<b>Drive Lead</b>	8.071 in ( 205,00 mm)
<b>Belt Stretch - x Load (lbs or N)</b>	0.00006 in/ft per lbs ( 0,00114 mm/m per N)
<b>Unidirectional Repeatability</b>	+/- 0.001 in (+/- 0,0254 mm)
<b>Bidirectional Repeatability</b>	+/- 0.004 in (+/- 0,1016 mm)
<b>Position Accuracy (Belt) <sup>(2)</sup></b>	< 0.010 in/ft (< 0,254 mm/300mm)
<b>Orthogonality (multi-axis systems)</b>	< 60 arc-seconds
<b>Friction Coefficient</b>	< 0.01
<b>Breakaway Torque <sup>(3)</sup></b>	< 16 lb-in (1,808 N-m)
<b>Motor Mount</b>	NEMA 34 & 42 Mounts, Metric Mounts, and Gearheads
<b>Coupling</b>	Two (2) different styles available

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[sales@electromate.com](mailto:sales@electromate.com)

### Footnotes:

- (1) Derate value by 50 % when load is applied to the open end of the bearing (inverted configuration).
- (2) 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.
- (3) This is a nominal value. Breakaway torque will increase, or decrease, based on belt tension.

## Dimensions & Specifications

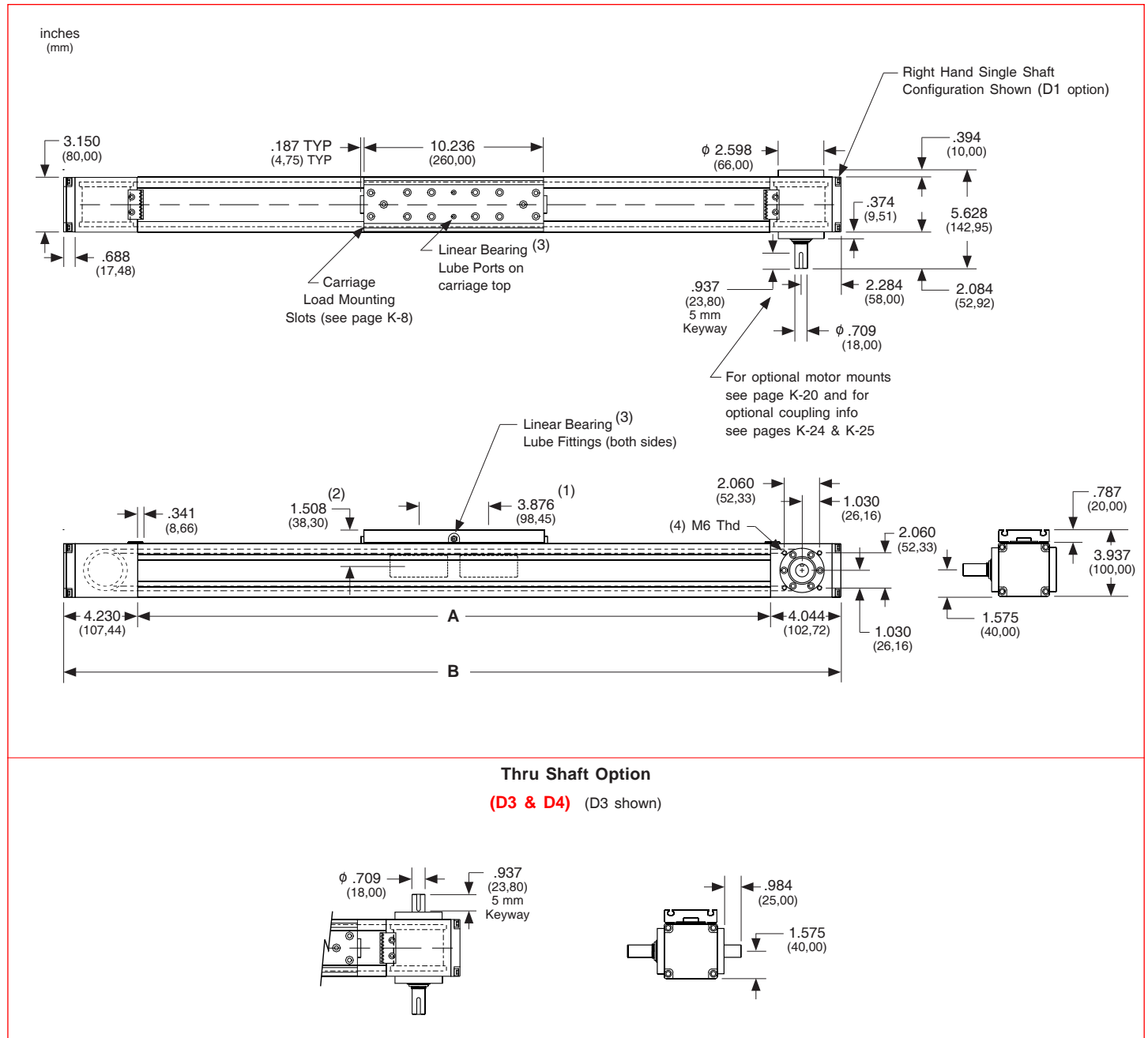
Model Number	Travel <sup>(1)</sup> Length inches (mm)	Table Dimensions inches (mm)		Belt Weight lbs (kg)	Table Weight (553 & 554 Carriages) lbs (kg)	Table Weight (555 Carriage) lbs (kg)
		A	B			
55x10012	12 (300)	24.00 (609,6)	32.275 (819,8)	0.29 (0,13)	24.1 (10,9)	23.0 (10,4)
55x10018	18 (455)	30.00 (762,0)	38.275 (972,2)	0.40 (0,18)	27.3 (12,4)	26.0 (11,8)
55x10024	24 (605)	36.00 (914,4)	44.275 (1124,6)	0.51 (0,23)	30.6 (13,9)	29.2 (13,2)
55x10030	30 (760)	42.00 (1066,8)	50.275 (1277,0)	0.62 (0,28)	33.9 (15,4)	32.3 (14,7)
55x10036	36 (910)	48.00 (1219,2)	56.275 (1429,4)	0.72 (0,33)	37.2 (16,9)	35.5 (16,1)
55x10048	48 (1215)	60.00 (1524,0)	68.275 (1734,2)	0.94 (0,43)	43.8 (19,9)	41.8 (19,0)
55x10060	60 (1520)	72.00 (1828,8)	80.275 (2039,0)	1.15 (0,52)	50.3 (22,8)	48.0 (21,8)
55x10072	72 (1825)	84.00 (2133,6)	92.275 (2343,8)	1.37 (0,62)	56.9 (25,8)	54.3 (24,6)
55x10084	84 (2130)	96.00 (2438,4)	104.275 (2648,6)	1.58 (0,72)	63.5 (28,8)	60.6 (27,5)
55x10096	96 (2435)	108.00 (2743,2)	116.275 (2953,4)	1.80 (0,82)	70.1 (31,8)	66.9 (30,3)
55x10108	108 (2740)	120.00 (3048,0)	128.275 (3258,2)	2.01 (0,91)	76.7 (34,8)	73.2 (33,2)
55x10120	120 (3045)	132.00 (3352,8)	140.275 (3563,0)	2.23 (1,01)	83.2 (37,8)	79.4 (36,0)
55x10132	132 (3350)	144.00 (3657,6)	152.275 (3867,8)	2.44 (1,11)	89.8 (40,8)	85.7 (38,9)
55x10144	144 (3655)	156.00 (3962,4)	164.275 (4172,6)	2.66 (1,21)	96.4 (43,7)	92.0 (41,7)
55x10180	180 (4572)	192.00 (4876,8)	200.275 (5087,0)	3.30 (1,50)	116.1 (52,7)	110.8 (50,3)
55x10240	240 (6096)	252.00 (6400,8)	260.275 (6611,0)	4.38 (1,99)	149.0 (67,6)	142.2 (64,5)
55x10300	300 (7620)	312.00 (7924,8)	320.275 (8135,0)	5.45 (2,47)	181.9 (82,5)	173.6 (78,7)
55x10360	360 (9144)	372.00 (9448,8)	380.275 (9659,0)	6.52 (2,96)	214.8 (97,4)	204.9 (92,9)

- x = 3; 553 Carriage; Carriage weight = 7.98 lbs. (3,62 kg)
- x = 4; 554 Carriage; Carriage weight = 7.98 lbs. (3,62 kg)
- x = 5; 555 Carriage; Carriage weight = 7.14 lbs. (3,24 kg)

### Footnotes:

(1) Longest possible travel is 30 feet (9,1 meters). Any travel length less than 30 feet (9,1 meters) can be provided.

## Dimensions



### Footnotes:

- (1) This value is center to center distance (spacing) of each bearing on a single rail ( $d_2$ ).
- (2) This value is the center distance of the bearing to top of carriage plate surface ( $d_1$ ) for the 553 & 554 carriages. For the 555 carriage  $d_1 = 1.626$  inches (41,3 mm).
- (3) Two lube ports on carriage top and lube fittings on each side of the 553 & 555 carriages are all interconnected. Only one port is required to lubricate both linear bearings. The 554 carriage will not have any lube ports.