

13 **2** **4** **02** - **CP0** - **1** - **S114** - **M02** - **C145** - **L01** - **E00** - **B00**

Table Series

Number of Bearings

- 1 - 1 bearing per carriage
- 2 - 2 bearings per carriage

Carriage Length

- 4 - 4 inches

Travel Length (see pages B-6, B-8 & B-10)

- 02 - 2 to 60 inches

Cover Plate

- CP0** - no cover plates
- CP1** - top cover plate only
- CP2** - top & side cover plates

Carriage Inserts (see pages B-7, B-9 & B-11)

- 1 - English mount
- 2 - Metric mount

Screw Options (see pages B-14 to B-19)

<i>Rolled ball screws</i>	<i>Precision ball screws</i>	<i>Ground ball screws</i>
S001 - .500 x .500 NPL	S114 - .625 x .200 NPL	S212 - .625 x .200 PL
S002 - .500 x .500 PL	S115 - .625 x .200 PL	S213 - .625 x .500 PL
S003 - .500 x .500 NPL(T)	S116 - 16 x 5 NPL	S214 - 16 x 5 PL
S004 - .500 x .500 PL(T)	S117 - 16 x 5 PL	S215 - 16 x 16 PL
S005 - .625 x .200 NPL	S118 - 16 x 10 NPL	
S006 - .625 x .200 PL	S119 - 16 x 10 PL	<i>Rolled acme screws</i>
S007 - .625 x .200 NPL(T)	S120 - 16 x 16 NPL	S300 - .625 x .100 NPL
S008 - .625 x .200 PL(T)	S121 - 16 x 16 PL	S301 - .625 x .100 PL
S009 - .625 x 1.000 NPL		S302 - .625 x .200 NPL
S010 - .625 x 1.000 PL		S303 - .625 x .200 PL
S011 - .625 x 1.000 NPL(T)		S304 - 16 x 4 NPL
S012 - .625 x 1.000 PL(T)	S999 - other	S305 - 16 x 4 PL

Motor Mount (see pages B-7, B-9, B-11, B-42 & B-43)

- M00** - none
- M01** - hand crank
- M20 to M98** - see Website
- M99** - other
- M02** - NEMA 23 mount (E)
- M03** - NEMA 23 mount (M)
- M04** - NEMA 34 mount (E)
- M05** - NEMA 34 mount (M)
- M06** - NEMA 23 (RH) wrap
- M07** - NEMA 23 (LH) wrap
- M08** - NEMA 34 (RH) wrap
- M09** - NEMA 34 (LH) wrap

Coupling Options (see pages B-38 to B-39)

- C000** - none
- C020 to C031** - C100
- C040 to C071** - C125
- C125 to C138** - H100
- C145 to C186** - H131
- C187 to C242** - H163
- C400 to C417** - G100
- C425 to C466** - G126
- C470 to C522** - G158

Limit & Home Switches (see pages B-35 to B-37)

- L00** - no switches
- L99** - other
- EOT & home switches
- EOT switches only
- home switch only
- Mechanical**
- Reed**
- Hall**
- Prox (NPN)**
- Prox (PNP)**
- L01**
- L02**
- L03**
- L04**
- L05**
- L06**
- L07**
- L08**
- L09**
- L10**
- L11**
- L12**
- L13**
- L14**
- L15**

Encoder Options (see page B-45)

- E00** - none
- E01** - rotary (500 lines/rev)
- E02** - rotary (1000 lines/rev)
- E03** - rotary (1270 lines/rev)
- E10** - linear (2500 lines/inch)
- E11** - linear (125 lines/mm)
- E99** - other

Power-off Brakes (see page B-44)

- B00** - none
- B01** - 24 VDC
- B02** - 90 VDC
- B99** - other

- (E) - English Interface
- (LH) - Left Hand
- (M) - Metric Interface
- (NPL) - Non Preloaded
- (PL) - Preloaded
- (RH) - Right Hand
- (T) - Turcite Nut

Specifications subject to change without notice

Specifications

Load Capacities		One (1) Bearing Carriage	Two (2) Bearing Carriage
Dynamic Horizontal	2 million inches (50 km) of travel	100 lbs (45 kg)	200 lbs (90 kg)
Dynamic Horizontal	100 million inches (2540 km) of travel	27 lbs (12 kg)	54 lbs (24 kg)
Static Horizontal		200 lbs (90 kg)	400 lbs (180 kg)
Dynamic Roll Moment	2 million inches (50 km) of travel	8 ft-lbs (11 N-m)	16 ft-lbs (22 N-m)
Dynamic Roll Moment	100 million inches (2540 km) of travel	2 ft-lbs (3 N-m)	4 ft-lbs (5 N-m)
Static Roll Moment		14 ft-lbs (19 N-m)	28 ft-lbs (38 N-m)
Dyn. Pitch & Yaw Moment	2 million inches (50 km) of travel	4 ft-lbs (5,4 N-m)	15 ft-lbs (20 N-m)
Dyn. Pitch & Yaw Moment	100 million inches (2540 km) of travel	1 ft-lbs (1,5 N-m)	4 ft-lbs (5 N-m)
Static Pitch & Yaw Moment		8 ft-lbs (10 N-m)	30 ft-lbs (40 N-m)
Each Bearing Dyn. Capacity	2 million inches (50 km) of travel	100 lbs (45 kg)	100 lbs (45 kg)
Each Bearing Dyn. Capacity	100 million inches (2540 km) of travel	27 lbs (12 kg)	27 lbs (12 kg)
Each Bearing Static Load Capacity		200 lbs (90 kg)	200 lbs (90 kg)
Thrust Force Capacity	10 million screw revolutions	665 lbs (302 kg)	665 lbs (302 kg)
Thrust Force Capacity	500 million screw revolutions	180 lbs (82 kg)	180 lbs (82 kg)
Maximum Acceleration		50 in/sec ² (1,3 m/sec ²)	150 in/sec ² (3,8 m/sec ²)
d₂	Center to center distance (spacing) of each bearing on a single rail	-	2.088 in (53,0 mm)
d_r	CP0 version Center distance of the bearing to top of carriage plate surface	0.750 in (19,1 mm)	0.750 in (19,1 mm)
d_r	CP1 version Center distance of the bearing to top of carriage plate surface	1.375 in (34,9 mm)	1.375 in (34,9 mm)

Other	For One (1) & Two (2) Bearing Carriages
Table Material	Base, Carriage, End Plates, & Cover Plate option - 6061 anodized aluminum
Linear Rail Material	Stainless Steel
Screw Material (see pages B-14 to B-19)	Acme Screw - Stainless Steel
Screw Material (see pages B-14 to B-19)	Rolled Ball, Precision Ball, & Ground Ball - Case Hardened Steel
Unidirectional Repeatability	+/- 0.0001 in (2,5 microns) to +/- 0.0002 in (5 microns) - depends on selected screw
Bidirectional Repeatability	+/- 0.0001 in (2,5 microns) to +/- 0.0082 in (208 microns) - depends on selected screw
Straightness	< 0.00013 in/in (< 3,30 microns/25mm)
Flatness	< 0.00013 in/in (< 3,30 microns/25mm)
Orthogonality (multi-axis systems)	< 30 arc-seconds
Friction Coefficient	< 0.01
Motor Mount	NEMA 23 & 34 Mounts, Metric Mounts, Motor Wraps, and Hand Crank Option
Coupling	Three (3) different styles available

Dimensions & Specifications

- Without Cover Plates -

Model Number	Travel Length inches (mm)	Table Dimensions inches (mm)		Mounting Dimensions inches (mm)			Screw Length inches (mm)	Table Weight ⁽¹⁾ lbs (kg)
		A	B	C	E	M		
13x402-CP0	2 (50)	6.0 (152,4)	9.875 (250,8)	0.188 (4,8)	3	8	9.25 (235)	4.8 (2,2)
13x404-CP0	4 (100)	8.0 (203,2)	11.875 (301,6)	1.188 (30,2)	3	8	11.25 (286)	5.3 (2,4)
13x406-CP0	6 (150)	10.0 (254,0)	13.875 (352,4)	0.313 (8,0)	5	12	13.25 (337)	5.8 (2,6)
13x408-CP0	8 (200)	12.0 (304,8)	15.875 (403,2)	1.313 (33,4)	5	12	15.25 (387)	6.3 (2,9)
13x412-CP0	12 (300)	16.0 (406,4)	19.875 (504,8)	1.438 (36,5)	7	16	19.25 (489)	7.3 (3,3)
13x416-CP0	16 (405)	20.0 (508,0)	23.875 (606,4)	1.563 (39,7)	9	20	23.25 (591)	8.3 (3,8)
13x420-CP0	20 (505)	24.0 (609,6)	27.875 (708,0)	1.688 (42,9)	11	24	27.25 (692)	9.3 (4,2)
13x424-CP0	24 (605)	28.0 (711,2)	31.875 (809,6)	1.813 (46,1)	13	28	31.25 (794)	10.3 (4,7)
13x430-CP0	30 (760)	34.0 (863,6)	37.875 (962,0)	1.063 (27,0)	17	36	37.25 (946)	11.8 (5,4)
13x436-CP0	36 (910)	40.0 (1016,0)	43.875 (1114,4)	0.313 (8,0)	21	44	43.25 (1099)	13.3 (6,0)
13x442-CP0	42 (1060)	46.0 (1168,4)	49.875 (1266,8)	1.438 (36,5)	23	48	49.25 (1251)	14.8 (6,7)
13x448-CP0	48 (1215)	52.0 (1320,8)	55.875 (1419,2)	0.688 (17,5)	27	56	55.25 (1403)	16.3 (7,4)
13x454-CP0	54 (1370)	58.0 (1473,2)	61.875 (1571,6)	1.813 (46,1)	29	60	61.25 (1556)	17.8 (8,1)
13x460-CP0	60 (1520)	64.0 (1625,6)	67.875 (1724,0)	1.063 (27,0)	33	68	67.25 (1708)	19.3 (8,8)

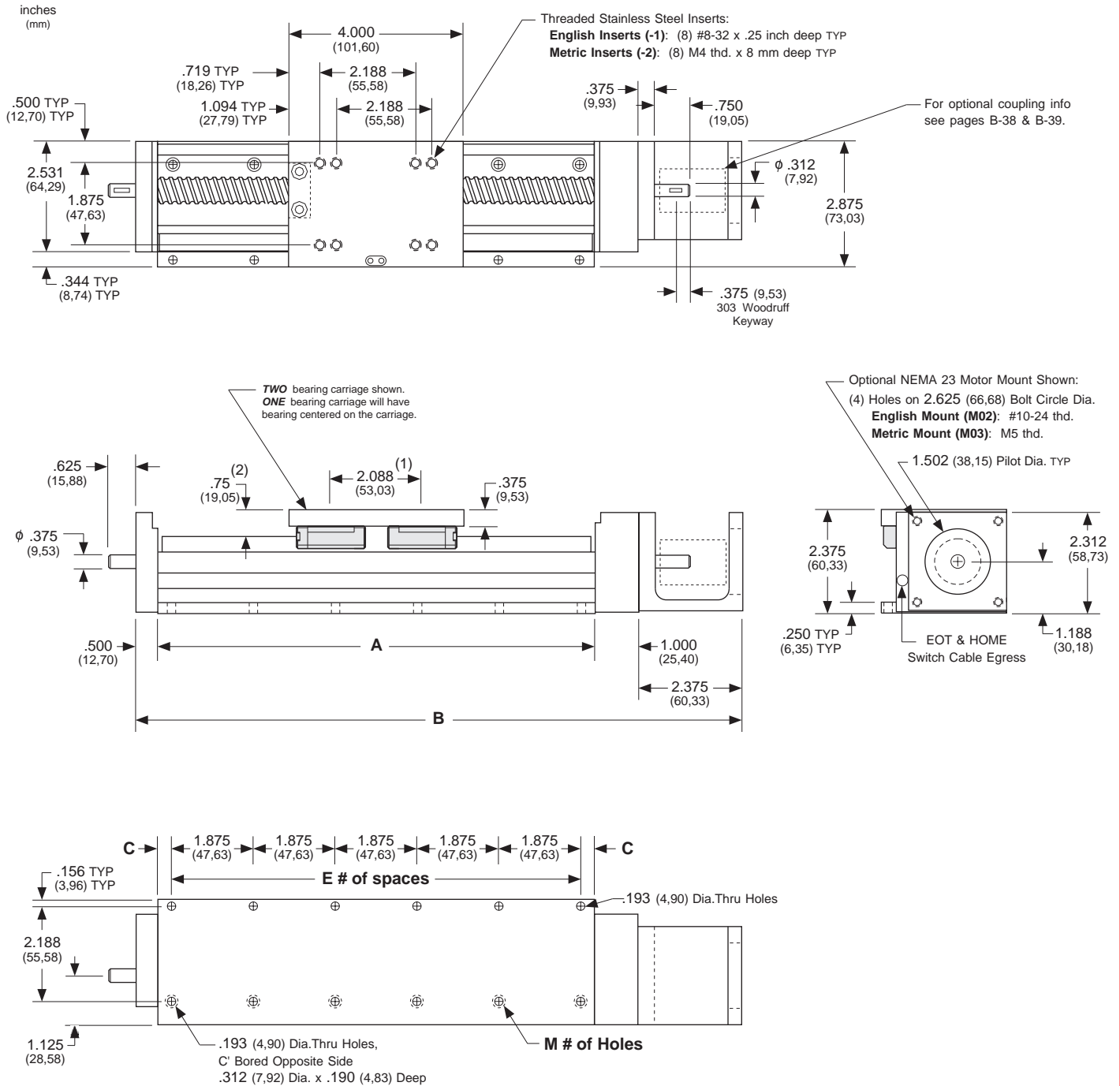
- x = 1; Carriage has 1 bearing; Carriage weight = 1.1 lbs. (0,50 kg)
- x = 2; Carriage has 2 bearings; Carriage weight = 1.2 lbs. (0,55 kg)

Footnotes:

(1) Weight shown is with a 0.625 inch (16 mm) diameter screw, a 1 bearing carriage [1.1 lbs (0,55 kg)], a NEMA 23 motor mount [0.34 lbs (0,16 kg)], and a C100 style [0.09 lbs (0,04 kg)] coupling. When using a 0.500 inch diameter screw subtract 0.022 lbs per inch (0,00039 kg per mm) of screw length for a given model number. When using a 2 bearing carriage add 0.1 lbs (0,05 kg) to each value.

Dimensions

- Without Cover Plates -



- (1) This value is center to center distance (spacing) of the bearings on a single rail (d_2).
- (2) This value is center distance of the bearing to top of carriage plate surface (d_1).

Note: Any 130 series table can be mounted on top of a second 130 series table, in order to create X-Y multiple axis configurations. **LINTECH** recommends that a 2 bearing carriage be used for the bottom axis, and that the top axis should never extend out more than 18 inches in either direction, from the bottom axis carriage edge, without the use of a support bearing system on the outer edges of the top axis. The 130-CP1, 130-CP2 or 140 series requires a **Carriage Adapter Plate** option. The carriage's threaded stainless steel insert hole pattern exactly matches the base mounting hole pattern on each table, therefore no adapter bracket or extra machining is required. However a precision square tool, or micrometer depth gauge, is required in order to obtain an orthogonality between the two tables of < 30 arc-seconds. The table base, carriage top & carriage sides are all precision machined. **LINTECH's** 100 or 120 series tables should be used for the bottom axis in a multiple axes application for better system rigidity, performance, and life.

Dimensions & Specifications

- With Top Cover Plate Only -

Model Number	Travel Length inches (mm)	Table Dimensions inches (mm)		Mounting Dimensions inches (mm)			Screw Length inches (mm)	Table Weight ⁽¹⁾ lbs (kg)
		A	B	C	E	M		
13x402-CP1	2 (50)	6.0 (152,4)	9.875 (250,8)	0.188 (4,8)	3	8	9.25 (235)	5.5 (2,5)
13x404-CP1	4 (100)	8.0 (203,2)	11.875 (301,6)	1.188 (30,2)	3	8	11.25 (286)	6.2 (2,8)
13x406-CP1	6 (150)	10.0 (254,0)	13.875 (352,4)	0.313 (8,0)	5	12	13.25 (337)	6.8 (3,1)
13x408-CP1	8 (200)	12.0 (304,8)	15.875 (403,2)	1.313 (33,4)	5	12	15.25 (387)	7.4 (3,4)
13x412-CP1	12 (300)	16.0 (406,4)	19.875 (504,8)	1.438 (36,5)	7	16	19.25 (489)	8.8 (4,0)
13x416-CP1	16 (405)	20.0 (508,0)	23.875 (606,4)	1.563 (39,7)	9	20	23.25 (591)	10.0 (4,5)
13x420-CP1	20 (505)	24.0 (609,6)	27.875 (708,0)	1.688 (42,9)	11	24	27.25 (692)	11.3 (5,1)
13x424-CP1	24 (605)	28.0 (711,2)	31.875 (809,6)	1.813 (46,1)	13	28	31.25 (794)	12.6 (5,7)
13x430-CP1	30 (760)	34.0 (863,6)	37.875 (962,0)	1.063 (27,0)	17	36	37.25 (946)	14.6 (6,6)
13x436-CP1	36 (910)	40.0 (1016,0)	43.875 (1114,4)	0.313 (8,0)	21	44	43.25 (1099)	16.5 (7,5)
13x442-CP1	42 (1060)	46.0 (1168,4)	49.875 (1266,8)	1.438 (36,5)	23	48	49.25 (1251)	18.4 (8,4)
13x448-CP1	48 (1215)	52.0 (1320,8)	55.875 (1419,2)	0.688 (17,5)	27	56	55.25 (1403)	20.4 (9,3)
13x454-CP1	54 (1370)	58.0 (1473,2)	61.875 (1571,6)	1.813 (46,1)	29	60	61.25 (1556)	22.3 (10,1)
13x460-CP1	60 (1520)	64.0 (1625,6)	67.875 (1724,0)	1.063 (27,0)	33	68	67.25 (1708)	24.3 (11,0)

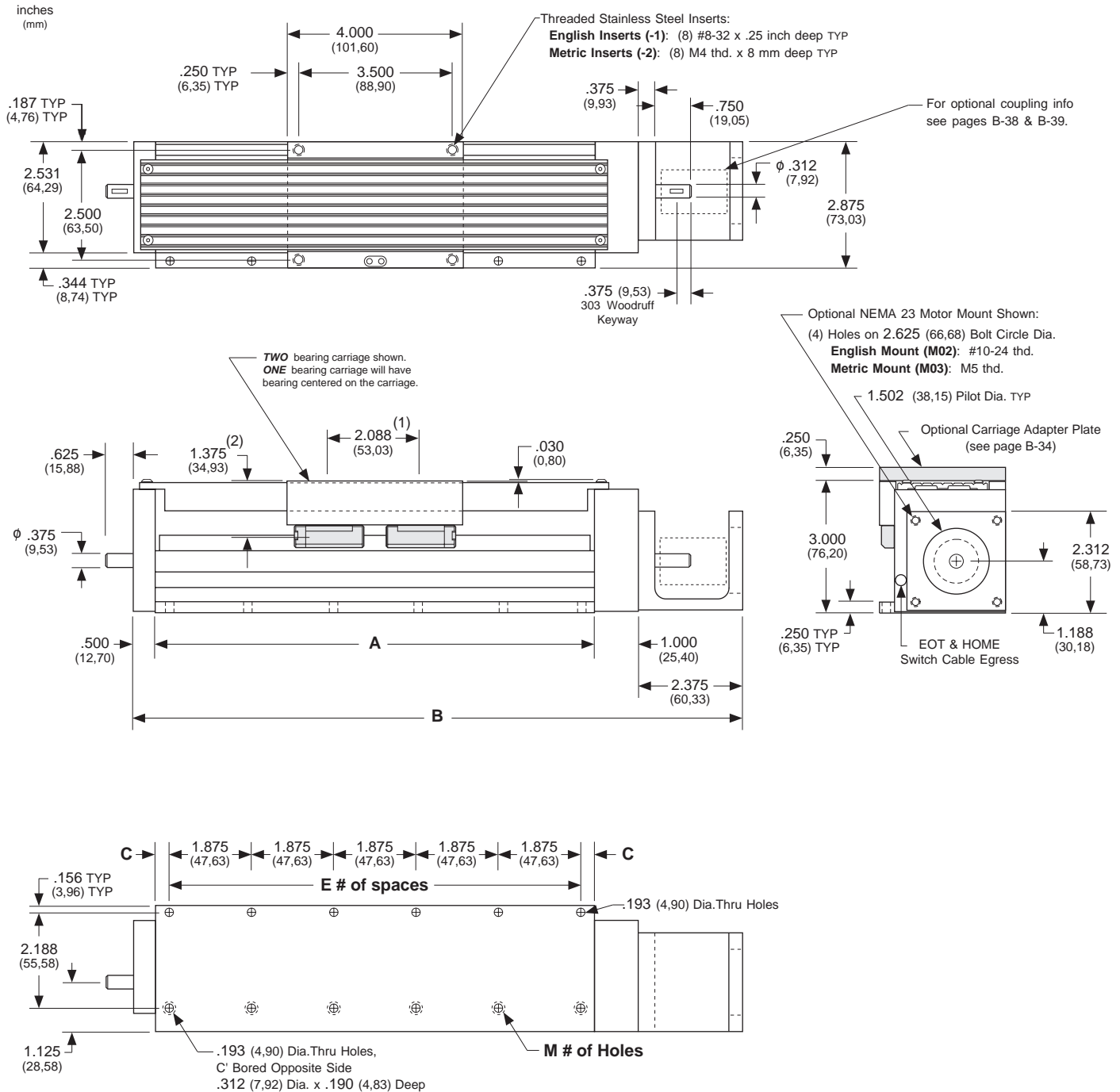
- x = 1; Carriage has 1 bearing; Carriage weight = 1.4 lbs. (0,64 kg)
- x = 2; Carriage has 2 bearings; Carriage weight = 1.5 lbs. (0,68 kg)

Footnotes:

(1) Weight shown is with a 0.625 inch (16 mm) diameter screw, a 1 bearing carriage [1.1 lbs (0,55 kg)], a NEMA 23 motor mount [0.34 lbs (0,16 kg)], and a C100 style [0.09 lbs (0,04 kg)] coupling. When using a 0.500 inch diameter screw subtract 0.022 lbs per inch (0,00039 kg per mm) of screw length for a given model number. When using a 2 bearing carriage add 0.1 lbs (0,05 kg) to each value.

Dimensions

- With Top Cover Plate Only -



- (1) This value is center to center distance (spacing) of the bearings on a single rail (d_2).
- (2) This value is center distance of the bearing to top of carriage plate surface (d_1).

Note: Any 130 series table can be mounted on top of a second 130 series table, in order to create X-Y multiple axis configurations. **LINTECH** recommends that a 2 bearing carriage be used for the bottom axis, and that the top axis should never extend out more than 18 inches in either direction, from the bottom axis carriage edge, without the use of a support bearing system on the outer edges of the top axis. The 130-CP1, 130-CP2 or 140 series requires a **Carriage Adapter Plate** option. The carriage's threaded stainless steel insert hole pattern exactly matches the base mounting hole pattern on each table, therefore no adapter bracket or extra machining is required. However a precision square tool, or micrometer depth gauge, is required in order to obtain an orthogonality between the two tables of < 30 arc-seconds. The table base, carriage top & carriage sides are all precision machined. **LINTECH's** 100 or 120 series tables should be used for the bottom axis in a multiple axes application for better system rigidity, performance, and life.

Dimensions & Specifications

- With Top & Side Cover Plates -

Model Number	Travel Length inches (mm)	Table Dimensions inches (mm)		Mounting Dimensions inches (mm)			Screw Length inches (mm)	Table Weight ⁽¹⁾ lbs (kg)
		A	B	C	E	M		
13x402-CP2	2 (50)	6.0 (152,4)	9.875 (250,8)	0.188 (4,8)	3	8	9.25 (235)	5.7 (2,58)
13x404-CP2	4 (100)	8.0 (203,2)	11.875 (301,6)	1.188 (30,2)	3	8	11.25 (286)	6.4 (2,90)
13x406-CP2	6 (150)	10.0 (254,0)	13.875 (352,4)	0.313 (8,0)	5	12	13.25 (337)	7.0 (3,17)
13x408-CP2	8 (200)	12.0 (304,8)	15.875 (403,2)	1.313 (33,4)	5	12	15.25 (387)	7.6 (3,45)
13x412-CP2	12 (300)	16.0 (406,4)	19.875 (504,8)	1.438 (36,5)	7	16	19.25 (489)	9.1 (4,13)
13x416-CP2	16 (405)	20.0 (508,0)	23.875 (606,4)	1.563 (39,7)	9	20	23.25 (591)	10.4 (4,72)
13x420-CP2	20 (505)	24.0 (609,6)	27.875 (708,0)	1.688 (42,9)	11	24	27.25 (692)	11.7 (5,31)
13x424-CP2	24 (605)	28.0 (711,2)	31.875 (809,6)	1.813 (46,1)	13	28	31.25 (794)	13.1 (5,94)
13x430-CP2	30 (760)	34.0 (863,6)	37.875 (962,0)	1.063 (27,0)	17	36	37.25 (946)	15.1 (6,85)
13x436-CP2	36 (910)	40.0 (1016,0)	43.875 (1114,4)	0.313 (8,0)	21	44	43.25 (1099)	17.1 (7,76)
13x442-CP2	42 (1060)	46.0 (1168,4)	49.875 (1266,8)	1.438 (36,5)	23	48	49.25 (1251)	19.1 (8,66)
13x448-CP2	48 (1215)	52.0 (1320,8)	55.875 (1419,2)	0.688 (17,5)	27	56	55.25 (1403)	21.2 (9,62)
13x454-CP2	54 (1370)	58.0 (1473,2)	61.875 (1571,6)	1.813 (46,1)	29	60	61.25 (1556)	23.2 (10,52)
13x460-CP2	60 (1520)	64.0 (1625,6)	67.875 (1724,0)	1.063 (27,0)	33	68	67.25 (1708)	25.3 (11,47)

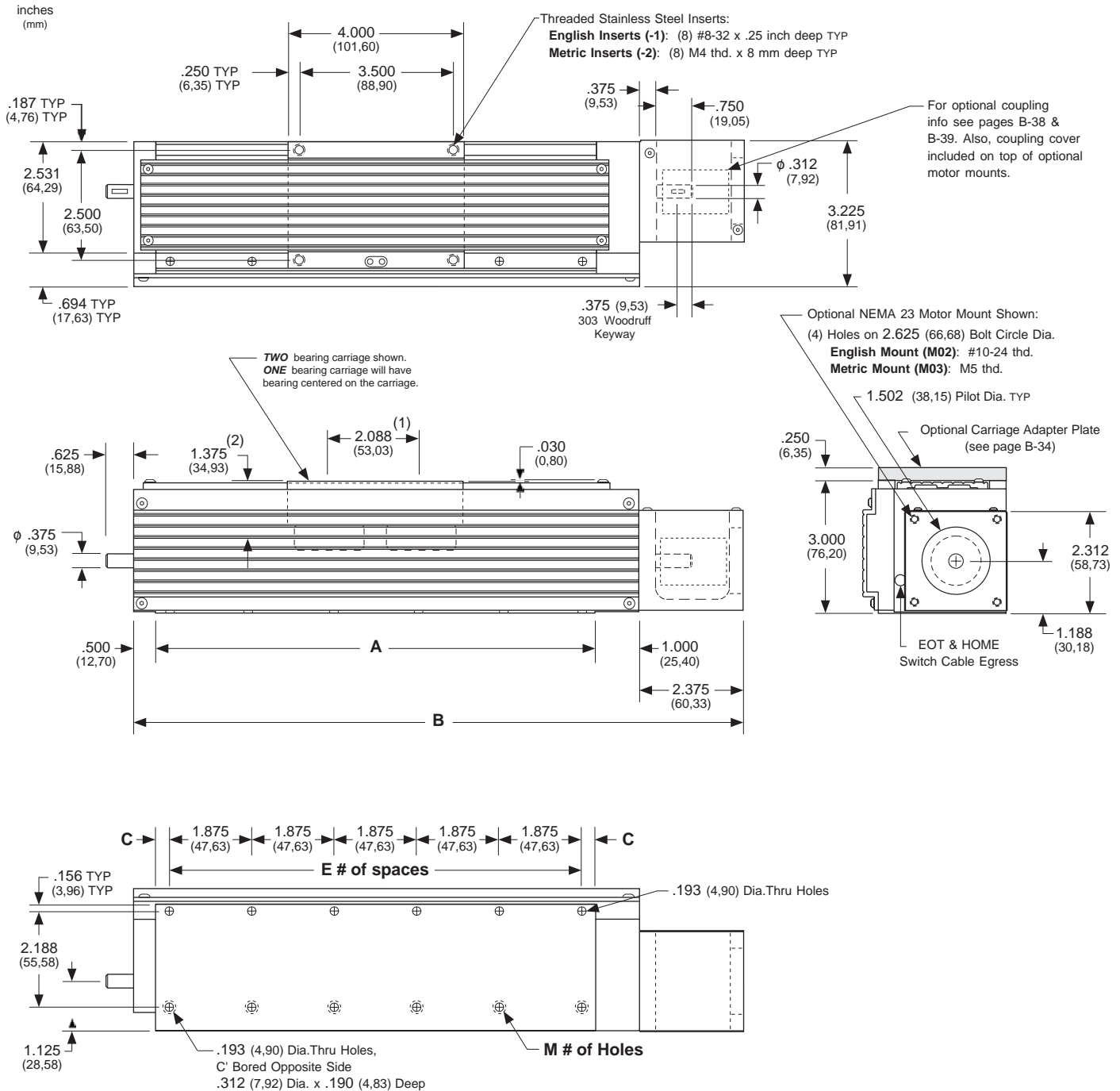
- x = 1; Carriage has 1 bearing; Carriage weight = 1.4 lbs. (0,64 kg)
- x = 2; Carriage has 2 bearings; Carriage weight = 1.5 lbs. (0,68 kg)

Footnotes:

(1) Weight shown is with a 0.625 inch (16 mm) diameter screw, a 1 bearing carriage [1.1 lbs (0,55 kg)], a NEMA 23 motor mount [0.34 lbs (0,16 kg)], and a C100 style [0.09 lbs (0,04 kg)] coupling. When using a 0.500 inch diameter screw subtract 0.022 lbs per inch (0,00039 kg per mm) of screw length for a given model number. When using a 2 bearing carriage add 0.1 lbs (0,05 kg) to each value.

Dimensions

- With Top & Side Cover Plates -



- (1) This value is center to center distance (spacing) of the bearings on a single rail (d_2).
- (2) This value is center distance of the bearing to top of carriage plate surface (d_1). Add .250 inch (6,35 mm) if using a carriage adapter plate.

Note: Any 130 series table can be mounted on top of a second 130 series table, in order to create X-Y multiple axis configurations. **LINTECH** recommends that a 2 bearing carriage be used for the bottom axis, and that the top axis should never extend out more than 18 inches in either direction, from the bottom axis carriage edge, without the use of a support bearing system on the outer edges of the top axis. The 130-CP1, 130-CP2 or 140 series requires a **Carriage Adapter Plate** option. The carriage's threaded stainless steel insert hole pattern exactly matches the base mounting hole pattern on each table, therefore no adapter bracket or extra machining is required. However a precision square tool, or micrometer depth gauge, is required in order to obtain an orthogonality between the two tables of < 30 arc-seconds. The table base, carriage top & carriage sides are all precision machined. **LINTECH's** 100 or 120 series tables should be used for the bottom axis in a multiple axes application for better system rigidity, performance, and life.