

500000ET Series

Added Benefit

The 500000ET series retains all the benefits of the 500000ST series, such as high load, long life, round rail linear bearings and precision rolled *preloaded double nut* ball screws at a reduced cost. Also standard is a hard shell extruded cover over the bearings and screw assembly. The 500000ET series can be applied in applications such as welding, parts transfer, gantry units, part loading and fluid dispensing.



500000ET

	506004ET	506006ET	506008ET	506010ET	506012ET	506014ET	506016ET	506018ET
Travel – inches (mm)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)	14 (350)	16 (400)	18 (450)
Life* @ Listed Specifications – x 1 million in (km)	100 (2540)	100 (2540)	100 (2540)	100 (2540)	100 (2540)	100 (2540)	100 (2540)	100 (2540)
Positional Accuracy** – x 0.001 in (µm)	1.0 (20)	1.5 (30)	2.0 (40)	2.5 (50)	3.0 (60)	3.5 (70)	4.0 (80)	4.5 (90)
Positional Repeatability – x 0.001 in (µm)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)
Straight Line Accuracy** – x 0.001 in (µm)	0.8 (20)	1.2 (30)	1.5 (38)	1.5 (38)	1.5 (38)	1.9 (48)	2.3 (58)	2.7 (69)
Flatness Accuracy** – x 0.001 in (µm)	0.8 (20)	1.2 (30)	1.5 (38)	1.5 (38)	1.5 (38)	1.9 (48)	2.3 (58)	2.7 (69)
Max Screw Speed – rps	50	50	50	50	50	50	50	50
Max Acceleration – in/sec ² (m/sec ²)	772 (20)	772 (20)	772 (20)	772 (20)	772 (20)	772 (20)	772 (20)	772 (20)
Duty Cycle – % of motion to dwell cycle	100%	100%	100%	100%	100%	100%	100%	100%
Direct Loading* – lbs (kgf)								
Normal	200 (90)	200 (90)	200 (90)	200 (90)	200 (90)	200 (90)	200 (90)	200 (90)
Inverted	100 (45)	100 (45)	100 (45)	100 (45)	100 (45)	100 (45)	100 (45)	100 (45)
Side	168 (76)	168 (76)	168 (76)	68 (76)	168 (76)	168 (76)	168 (76)	168 (76)
Axial Loading – lbs (kgf) Smooth Operation***	160 (73)	160 (73)	160 (73)	160 (73)	160 (73)	160 (73)	160 (73)	160 (73)
Input Inertia**** – 10 ⁻³ oz-in-sec ² (10 ⁻⁶ kg-m-sec ²)	2.40 (1,73)	2.77 (1,99)	3.13 (2,25)	3.49 (2,52)	3.86 (2,77)	4.22 (3,04)	4.31 (3,11)	4.95 (3,56)
Maximum Running Torque – oz-in (N-m)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)
Maximum Breakaway Torque – oz-in (N-m)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)
Drive Screw Efficiency – %	75	75	75	75	75	75	75	75
Coefficient of Linear Bearing Friction	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Carriage Weight – lbs (kgf)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)
Longitudinal Span between Bearing Truck Centers (d1) – in (mm)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)
Lateral Span between Bearing Rail Centers (d2) – in (mm)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)
Bearing Rail Center to Carriage Mounting Surface (da) – in (mm)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)
Table Weight – lbs (kgf)	14.7 (6,7)	16.0 (7,3)	17.3 (7,9)	18.8 (8,5)	20.3 (9,2)	21.8 (9,9)	23.3 (10,6)	24.8 (11,3)

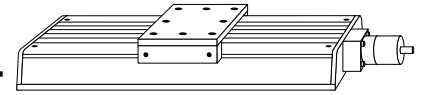
* See page B59 for Life/Load Performance ratings. Compression, tension and side loads values for 500000ET are same as for 500000ST and 500000PD Series.

** Over total table travel

*** For applications with vibration, consult factory for axial loads.

**** Based on 5 pitch (0.2 inch lead) ballscrew

Enclosed Rail Tables



Quality Design

The table body is constructed of high quality aluminum alloy with a black anodize surface finish. The hard shell cover has a clear anodized finish. The top and bottom mounting surfaces are precision ground to assure flatness and all mounting holes are fitted with locking steel threaded inserts to prevent mounting bolts from working loose. The linear ways are made from centerless ground rails and recirculating ball bearing bushings. The drive train is a precision rolled 0.2" lead (5 pitch) ball screw or for higher speeds, a 0.5" lead (2 pitch) ball screw is available. *Note: travel is reduced by 2 inches when equipped with 2 pitch ball screw. See dimensions chart on page B59.* Both the 0.2" lead and 0.5" lead ball screws incorporate a preload dual nut design to virtually eliminate backlash.

Options:

Motor Couplings

A wide range of coupling styles and bores are available to match your motor requirements. Bellows-style couplings offer the lowest radial wind up, while the aluminum and stainless steel helix couplers offer good wind up characteristics and high durability at a lower cost.

Motor Mounts

The standard motor mount is designed for an industry standard NEMA 23 motor flange with shaft lengths between 0.65 to 0.85 inches long. An optional NEMA 34 frame motor mount is available, accepting motors with an industry standard NEMA 34 flange and shafts with lengths from 1.0 to 1.25 inches.

Limit and Home Switches

Limit switches provide a signal when the table is approaching the end of travel and is used to command the motor to stop. The Home sensor provides a fixed reference point to which the table can always return. Refer to page B78 for Limit and Home switch details.

Either mechanical reed switch or optical sensor type limit and home switch assemblies are available. The mechanical reed switch option can be supplied either inboard (mounted inside the nominal table width) or outboard (mounted on the side of the table). The inboard version does not

increase table width; however, it is more difficult to adjust. While the outboard style adds approximately 1.5" to the width, it is easy to adjust. The optical sensor limit and home option is mounted outboard and provides excellent repeatability.

Linear Encoders

This option mounts to the side of the table and is used to give direct positional feedback of the carriage. Imperial resolution of 0.0001 inch and metric resolutions of 0.001 mm are available. Refer to page B80 for linear encoder details.

500000ET

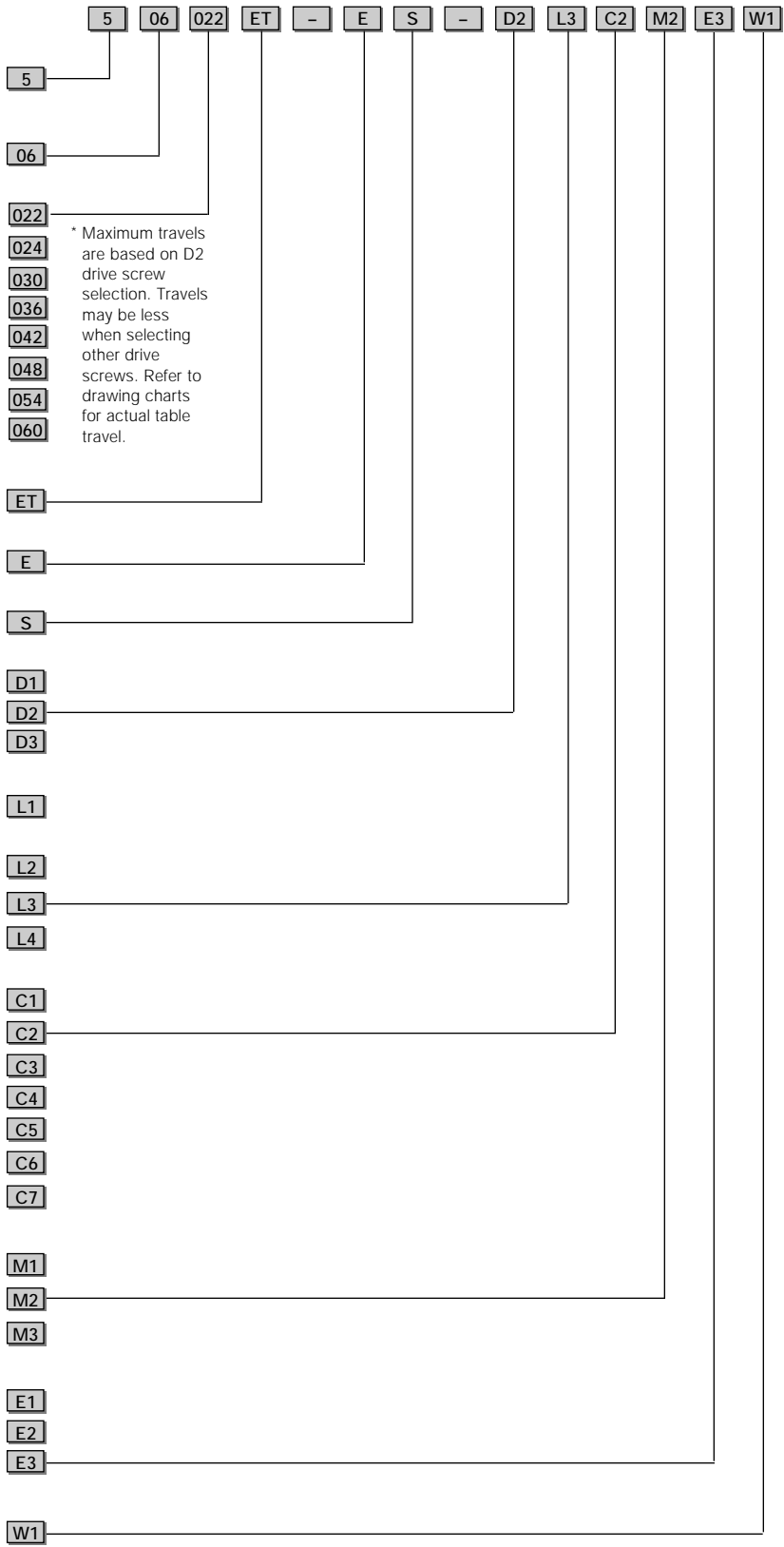
506020ET	506022ET	506024ET	506030ET	506036ET	506042ET	506048ET	506054ET	506060ET
20 (500)	22 (550)	24 (600)	30 (750)	36 (900)	42 (1050)	48 (1200)	54 (1350)	60 (1500)
100 (2540)	100 (2540)	100 (2540)	100 (2540)	100 (2540)	100 (2540)	100 (2540)	100 (2540)	100 (2540)
5.0 (100)	5.5 (110)	6.0 (120)	7.5 (150)	9.0 (180)	10.5 (210)	12 (240)	13.5 (270)	15 (300)
±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)	±0.2 (±5)
3.0 (76)	3.0 (76)	3.0 (76)	4.2 (107)	4.5 (114)	5.7 (145)	6.0 (152)	7.2 (183)	7.5 (191)
3.0 (76)	3.0 (76)	3.0 (76)	4.2 (107)	4.5 (114)	5.7 (145)	6.0 (152)	7.2 (183)	7.5 (191)
45	39	34	23	16	18	14	12	10
772 (20)	772 (20)	772 (20)	772 (20)	772 (20)	772 (20)	772 (20)	772 (20)	772 (20)
100%	100%	100%	100%	100%	100%	100%	100%	100%
200 (90)	200 (90)	200 (90)	200 (90)	200 (90)	200 (90)	200 (90)	200 (90)	200 (90)
100 (45)	100 (45)	100 (45)	100 (45)	100 (45)	100 (45)	100 (45)	100 (45)	100 (45)
168 (76)	168 (76)	168 (76)	168 (76)	168 (76)	168 (76)	168 (76)	168 (76)	168 (76)
160 (73)	160 (73)	160 (73)	160 (73)	160 (73)	160 (73)	160 (73)	160 (73)	160 (73)
5.31 (3,82)	5.67 (4,09)	6.04 (4,34)	7.13 (5,15)	8.22 (5,91)	18.69 (13,4)	20.89 (15,0)	23.07 (16,6)	25.27 (18,2)
24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)	24 (0,17)
26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)	26 (0,19)
75	75	75	75	75	75	75	75	75
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)	2.56 (1,2)
4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)	4.4 (111,8)
3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)	3.9 (99,1)
2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)	2.08 (52,8)
26.2 (11,9)	27.7 (12,6)	29.0 (13,2)	33.3 (15,1)	37.6 (17,1)	43.9 (19,9)	48.6 (22,0)	54.4 (24,2)	58.2 (26,4)

500000ET Series

Order Example

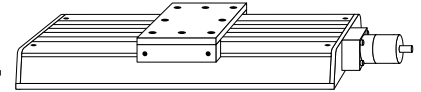
How to Order

- Model Series**
- Table Width**
6 in 150 mm
- Table Travel***
4 in 100 mm **004** 22 in 550 mm **022**
6 in 150 mm **006** 24 in 600 mm **024**
8 in 200 mm **008** 30 in 750 mm **030**
10 in 250 mm **010** 36 in 900 mm **036**
12 in 300 mm **012** 42 in 1000 mm **042**
14 in 350 mm **014** 48 in 1200 mm **048**
16 in 400 mm **016** 54 in 1375 mm **054**
18 in 450 mm **018** 60 in 1525 mm **060**
20 in 500mm **020**
- Table Style**
- Mounting**
Imperial
- Grade**
Standard Grade
- Drive Type**
Free Travel **D1**
0.20 in Lead (5 Pitch) Rolled Ballscrew **D2**
0.50 in Lead (2 Pitch) Rolled Ballscrew **D3**
- Limit/Home**
No Limit/Home Switches **L1**
Magnetic Limit/Home Switches-Inboard
(Not available on 4" travel tables) **L2**
Magnetic Limit/Home Switches-Outboard **L3**
Optical Limit/Home Sensors-Outboard **L4**
- Motor Coupling**
No Coupling **C1**
0.25 in Bore, Helix, Aluminum **C2**
0.25 in Bore, Helix, Stainless Steel **C3**
0.25 in Bore, Bellows **C4**
0.375 in Bore, Helix, Aluminum **C5**
0.375 in Bore, Helix, Stainless Steel **C6**
0.375 in Bore, Bellows **C7**
- Motor Mount**
No Motor Mount **M1**
23 Frame Size **M2**
34 Frame Size **M3**
- Encoder**
No Encoder **E1**
Linear Encoder, Imperial, 0.0001 in Resolution **E2**
Linear Encoder, Metric 1.0 µm Resolution **E3**
- Way Covers**
Hard Shell Cover

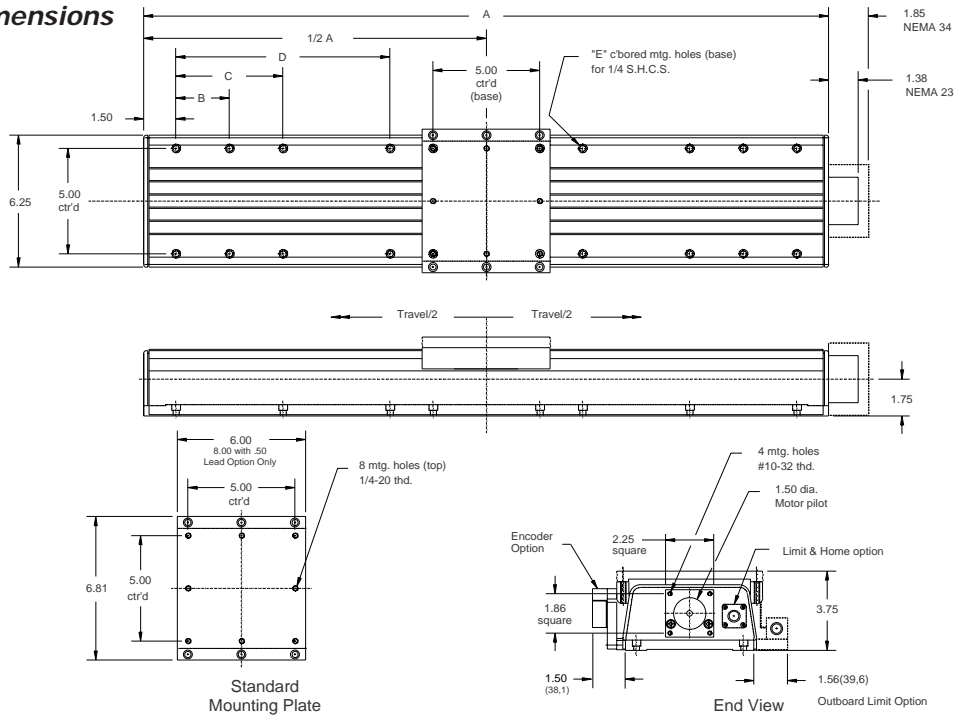


* Maximum travels are based on D2 drive screw selection. Travels may be less when selecting other drive screws. Refer to drawing charts for actual table travel.

Enclosed Rail Tables

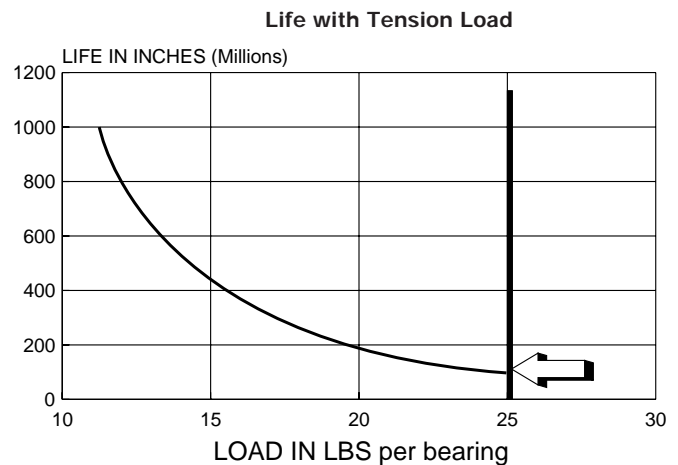
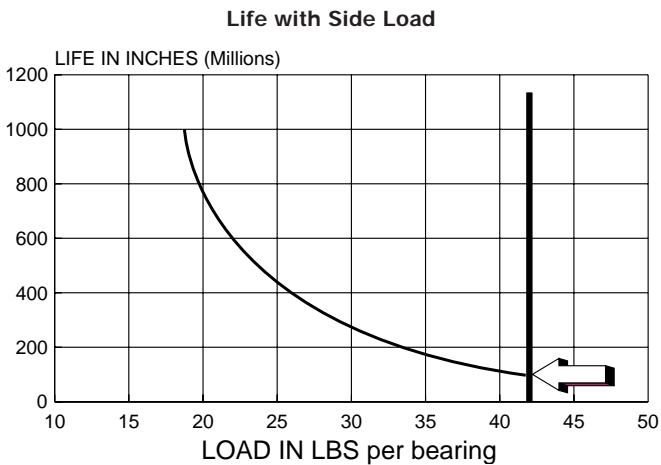
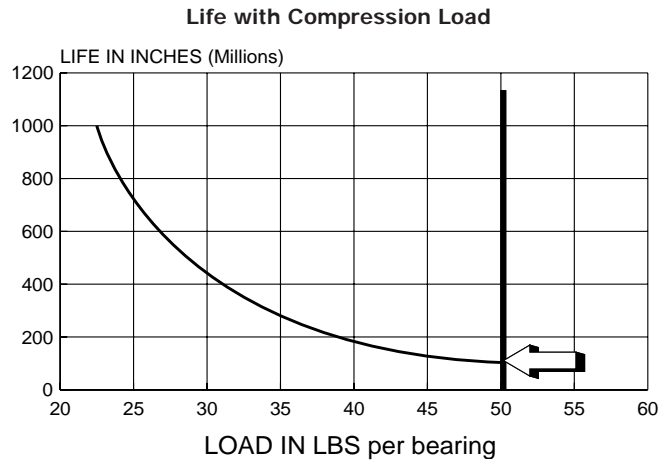


500000ET Dimensions



Imperial Model	Travel D1 and D2	Travel D3	A	B	C	D	E	Quantity
506004ET	4 in	2 in	12 in	—	—	—	—	8
506006ET	6 in	4 in	14 in	—	—	—	—	8
506008ET	8 in	6 in	16 in	—	—	—	—	8
506010ET	10 in	8 in	18 in	—	—	—	—	8
506012ET	12 in	10 in	20 in	5 in	—	—	—	12
506014ET	14 in	12 in	22 in	5 in	—	—	—	12
506016ET	16 in	14 in	24 in	5 in	—	—	—	12
506018ET	18 in	16 in	26 in	5 in	—	—	—	12
506020ET	20 in	18 in	28 in	5 in	—	—	—	12
506022ET	22 in	20 in	30 in	5 in	—	—	—	12
506024ET	24 in	22 in	32 in	5 in	10 in	—	—	16
506030ET	30 in	28 in	38 in	5 in	10 in	—	—	16
506036ET	36 in	34 in	44 in	5 in	10 in	—	—	16
506042ET	42 in	40 in	50 in	5 in	15 in	—	—	16
506048ET	48 in	46 in	56 in	5 in	15 in	—	—	16
506054ET	54 in	52 in	62 in	5 in	15 in	25 in	—	20
506060ET	60 in	58 in	68 in	5 in	15 in	25 in	—	20

Life/Load Performance*



*Life/Load Performance values are same for 500000ST and 500000PD Series.

500000ET