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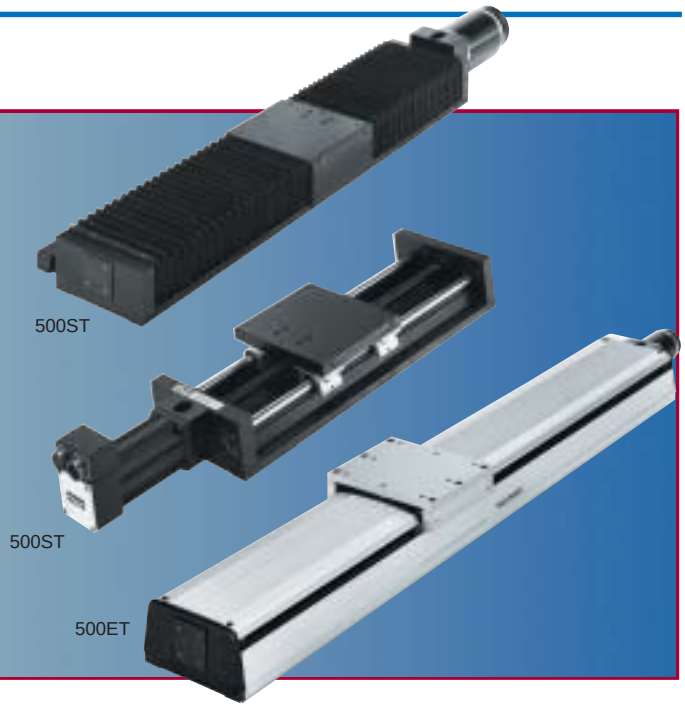
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Find the *Parker / Daedal 506 Series* at our website: ***Click HERE***

500ET & 500ST Series

Features

- Travels up to 60 inches
- Life rating of 100 million inches
- ±0.0002 inch repeatability
- Velocity up to 25 inches / sec
- Cost-effective round rail bearing system
- High efficiency (75%) rolled ballscrew drive



Versatility

Designed as a low-cost, multi-functional linear table for less demanding applications having a load requirement of 200 lb or less. The 500ET and 500ST tables are at home in industrial or automation applications. Typical applications include parts transfer, cutoff machines, part loading, fluid dispensing, and light duty machining.

Quality Design in English or Metric Mounting

The top carriage and supporting base structure are constructed of high strength aluminum alloy and are protected with an anodized surface finish.

The top and bottom mounting surfaces are precision ground to assure flatness. Threaded mounting holes are fitted with locking steel threaded inserts to prevent mounting bolts from working loose. The ST models are available in both English and Metric mounting. The ET design includes a hard shell aluminum cover, while the ST design offers a protective bellows cover as an option.

The linear bearing system utilizes two centerless ground round rails as bearing ways to support four recirculating ball bearing carriage bushings. The drive train is a rolled ballscrew available with a 0.2" lead (5 pitch) or a 0.5" lead (2 pitch) ballscrew. Both ballscrews incorporate a pre-loaded dual nut design to virtually eliminate any 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 windup, while the aluminum and stainless steel helix couplers offer good windup characteristics and high durability at a lower cost.

Motor Mounts

Standard motor mounts are designed for a NEMA 23 motor flange with shaft lengths between 0.65 to 0.83 inches or NEMA 34 frame motor with an industry standard NEMA 34 flange and shafts lengths from 1.0 to 1.50 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. Either mechanical reed switch or optical sensor are available for limit and home. The mechanical switch option can be supplied either inboard (mounted inside the table) or outboard (mounted on the side of the table). The inboard version is more difficult to adjust, while the outboard adds approximately 1.5" to the width, but are easily adjusted. The optical sensor limit and home option is mounted outboard and provides excellent repeatability (±0.0002 in).

Linear Encoders

This option mounts to the side of the table and is used to give direct feedback of the carriage position. English resolution of 0.0001 inch and Metric resolution of 0,001 mm are available.

NOTE: ***Refer to Daedal's web site www.daedalpositioning.com or contact a Daedal applications engineer for additional detailed information pertaining to any of these options or accessories.***

500ET & 500ST Series Characteristics

Common Characteristics

	Units	Value
Performance		
Positional Repeatability (bidirectional)	x 0.001 in (µm)	+/- 0.6 (+/- 14)
Life Rating	x 1 million in (km)	100 (2540)
Duty Cycle	%	100
Acceleration (Max.)	in/sec² (m/sec²)	772 (20)
Rated Capacity		
Load Capacity	lbs (N)	
Normal		200 (889)
Inverted		100 (444)
Side		168 (747)
Axial		160 (711)
Motor Sizing		
Ballscrew Diameter	in (mm)	
0.20 Lead, for travel ≤ 36 in (900 mm)		0.625 (15,9)
0.20 Lead, for travel > 36 in (900 mm)		0.750 (19,1)
0.50 Lead, for all travel		0.750 (19,1)
Drive Screw Efficiency	%	75
Breakaway Torque (Max.)	oz - in (N-m)	26 (0,19)
Running Torque (Max.)	oz - in (N-m)	24 (0,17)
Coefficient of Friction - Linear Brg.		0.01
Carriage Weight	lbs (kgf)	
ET Series		2.56 (1,2)
ST Series		2.26 (1,02)

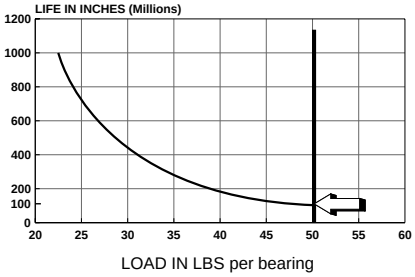
Travel Dependent Characteristics

Model	Travel* inches (mm)	Positional Accuracy x 0.001 in (µm)	Straight & Flatness Accuracy x 0.001 in (µm)	Input Inertia 10^{-3} oz-in-sec² 10^{-5} kg-m²	Maximum Screw Speed rps	Table Weight ET Series lbs (kgf)	Table Weight ST Series lbs (kgf)
506004	4.0 (100)	3.0 (76)	0.8 (20)	2.40 (1,69)	50	14.7 (6,7)	13.2 (6,0)
506006	6.0 (150)	3.0 (76)	1.2 (30)	2.77 (1,96)	50	16.0 (7,3)	14.2 (6,5)
506008	8.0 (200)	3.4 (86)	1.5 (38)	3.13 (2,21)	50	17.3 (7,9)	15.3 (6,9)
506010	10.0 (250)	4.1 (104)	1.5 (38)	3.49 (2,46)	50	18.8 (8,5)	16.5 (7,5)
506012	12.0 (300)	4.8 (121)	1.5 (38)	3.86 (2,73)	50	20.3 (9,2)	17.8 (8,2)
506014	14.0 (350)	5.4 (138)	1.9 (48)	4.22 (2,98)	50	21.8 (9,9)	19.0 (8,6)
506016	16.0 (405)	6.1 (156)	2.3 (58)	4.31 (3,04)	50	23.3 (10,6)	20.3 (9,2)
506018	18.0 (450)	6.7 (170)	2.7 (69)	4.95 (3,50)	50	24.8 (11,3)	21.5 (9,8)
506020	20.0 (500)	7.3 (186)	3.0 (76)	5.31 (3,75)	45	26.2 (11,9)	22.7 (10,3)
506022	22.0 (550)	7.9 (201)	3.0 (76)	5.67 (4,00)	39	27.7 (12,6)	23.9 (10,8)
506024	24.0 (600)	8.5 (216)	3.0 (76)	6.04 (4,27)	34	29.0 (13,2)	25.0 (11,3)
506030	30.0 (750)	10.3 (261)	4.2 (107)	7.13 (5,03)	23	33.3 (15,1)	28.5 (12,9)
506036	36.0 (900)	12.0 (304)	4.5 (114)	8.22 (5,80)	16	37.6 (17,1)	32.1 (14,6)
506042	42.0 (1050)	13.6 (346)	5.7 (145)	18.69 (13,20)	18	43.9 (19,9)	37.6 (17,1)
506048	48.0 (1200)	15.2 (387)	6.0 (152)	20.89 (14,75)	14	48.6 (22,0)	41.6 (18,9)
506054	54.0 (1350)	16.8 (427)	7.2 (183)	23.07 (16,29)	12	53.4 (24,2)	45.6 (20,7)
506060	60.0 (1500)	18.3 (466)	7.5 (191)	25.27 (17,84)	10	58.2 (26,4)	49.7 (22,5)

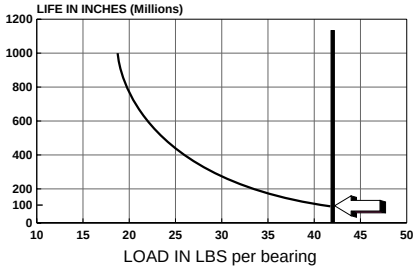
*Travel is reduced by 2 inches when equipped with 2 pitch ballscrew.

Life/Load Performance

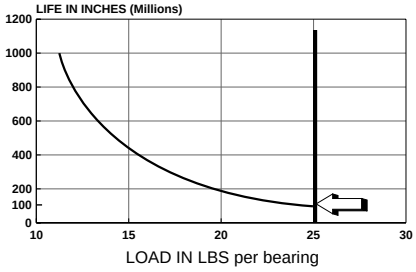
Life with Compression Load



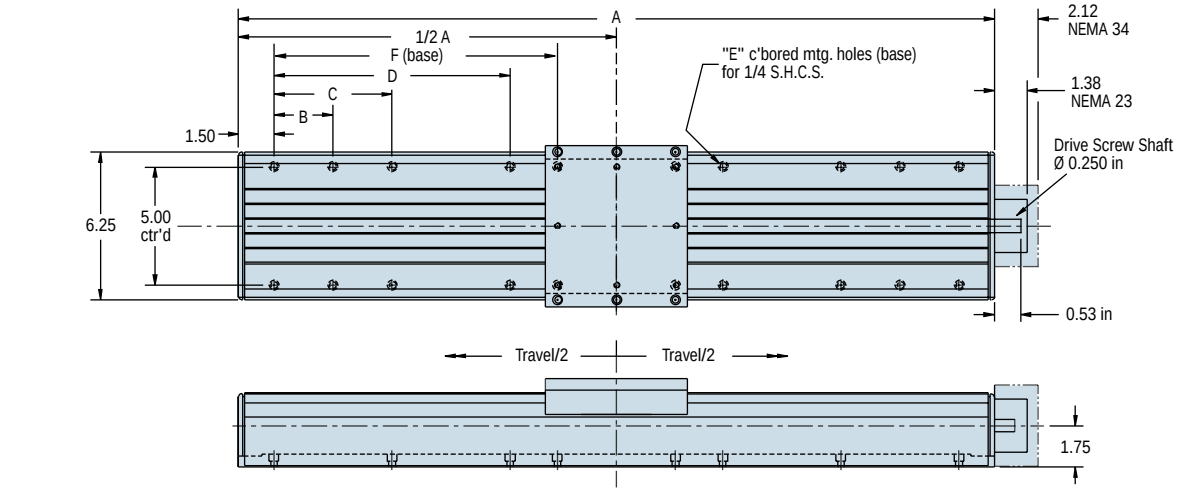
Life with Side Load

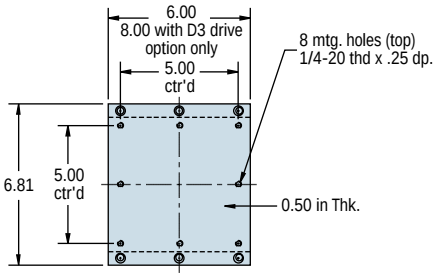


Life with Tension Load

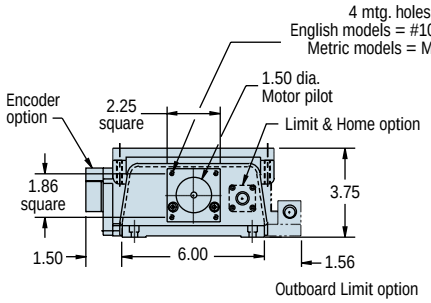


500ET Series Dimensions (inch)

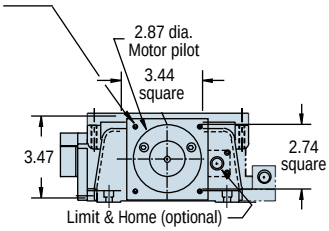




Standard Mounting Plate



End View
NEMA 23 Motor Mount

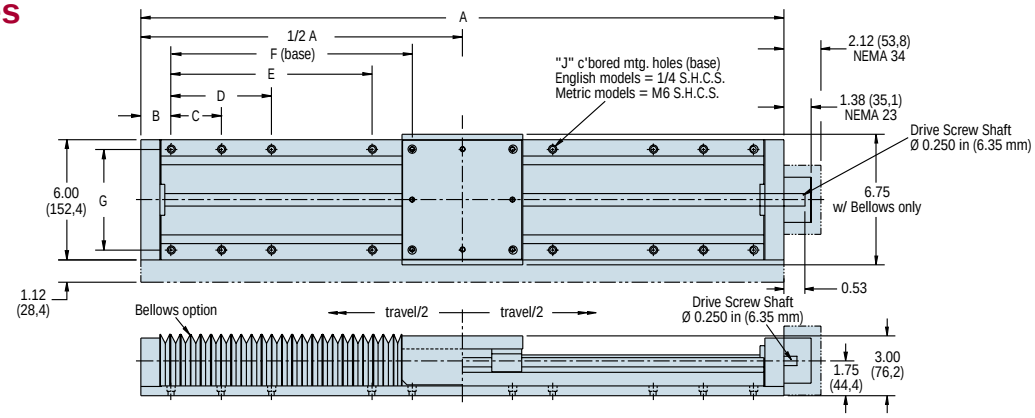


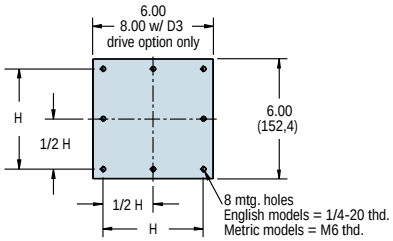
End View
NEMA 34 Motor Mount

English Model	Travel D1 and D2*	Travel D3*	A	B	C	D	Quantity E	F	Drive Screw Diameter D2*	D3*
506004ET	4 in	2 in	12 in	–	–	–	8	2 in	.625 in	.750 in
506006ET	6 in	4 in	14 in	–	–	–	8	3 in	.625 in	.750 in
506008ET	8 in	6 in	16 in	–	–	–	8	4 in	.625 in	.750 in
506010ET	10 in	8 in	18 in	–	–	–	8	5 in	.625 in	.750 in
506012ET	12 in	10 in	20 in	5 in	–	–	12	6 in	.625 in	.750 in
506014ET	14 in	12 in	22 in	5 in	–	–	12	7 in	.625 in	.750 in
506016ET	16 in	14 in	24 in	5 in	–	–	12	8 in	.625 in	.750 in
506018ET	18 in	16 in	26 in	5 in	–	–	12	9 in	.625 in	.750 in
506020ET	20 in	18 in	28 in	5 in	–	–	12	10 in	.625 in	.750 in
506022ET	22 in	20 in	30 in	5 in	–	–	12	11 in	.625 in	.750 in
506024ET	24 in	22 in	32 in	5 in	10 in	–	16	12 in	.625 in	.750 in
506030ET	30 in	28 in	38 in	5 in	10 in	–	16	15 in	.625 in	.750 in
506036ET	36 in	34 in	44 in	5 in	10 in	–	16	18 in	.625 in	.750 in
506042ET	42 in	40 in	50 in	5 in	15 in	–	16	21 in	.750 in	.750 in
506048ET	48 in	46 in	56 in	5 in	15 in	–	16	24 in	.750 in	.750 in
506054ET	54 in	52 in	62 in	5 in	15 in	25 in	20	27 in	.750 in	.750 in
506060ET	60 in	58 in	68 in	5 in	15 in	25 in	20	30 in	.750 in	.750 in

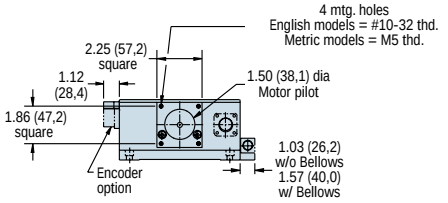
*See Drive Type on “How to Order”.

500ST Series
Dimensions
inch (mm)

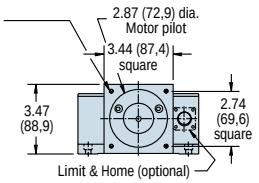




Standard Carrier Plate



End View
NEMA 23 Motor Mount



End View
NEMA 34 Motor Mount

Model	Travel D1 and D2	Travel w/ Bellows D1 and D2	Travel D3	Travel w/ Bellows D3	A	B	C	D	E	F	G	H	Quantity J	
506004ST-E	4 in	2.1 in	2 in	–	12 in	1.5 in	–	–	–	2 in	5 in	5 in	8	English
506006ST-E	6 in	4 in	4 in	2 in	14 in	1.5 in	–	–	–	3 in	5 in	5 in	8	
506008ST-E	8 in	5.2 in	6 in	3.2 in	16 in	1.5 in	–	–	–	4 in	5 in	5 in	8	
506010ST-E	10 in	7.2 in	8 in	5.2 in	18 in	1.5 in	–	–	–	5 in	5 in	5 in	8	
506012ST-E	12 in	8 in	10 in	6 in	20 in	1.5 in	5 in	–	–	6 in	5 in	5 in	12	
506014ST-E	14 in	9.8 in	12 in	7.8 in	22 in	1.5 in	5 in	–	–	7 in	5 in	5 in	12	
506016ST-E	16 in	12 in	14 in	10 in	24 in	1.5 in	5 in	–	–	8 in	5 in	5 in	12	
506018ST-E	18 in	13 in	16 in	11 in	26 in	1.5 in	5 in	–	–	9 in	5 in	5 in	12	
506020ST-E	20 in	14.5 in	18 in	12.5 in	28 in	1.5 in	5 in	–	–	10 in	5 in	5 in	12	
506022ST-E	22 in	16.1 in	20 in	14.1 in	30 in	1.5 in	5 in	–	–	11 in	5 in	5 in	12	
506024ST-E	24 in	18 in	22 in	16 in	32 in	1.5 in	5 in	10 in	–	12 in	5 in	5 in	16	
506030ST-E	30 in	22.3 in	28 in	20.3 in	38 in	1.5 in	5 in	10 in	–	15 in	5 in	5 in	16	
506036ST-E	36 in	27 in	34 in	25 in	44 in	1.5 in	5 in	10 in	–	18 in	5 in	5 in	16	
506042ST-E	42 in	31.6 in	40 in	29.6 in	50 in	1.5 in	5 in	15 in	–	21 in	5 in	5 in	16	
506048ST-E	48 in	36.3 in	46 in	34.3 in	56 in	1.5 in	5 in	15 in	–	24 in	5 in	5 in	16	
506054ST-E	54 in	41 in	52 in	39 in	62 in	1.5 in	5 in	15 in	25 in	27 in	5 in	5 in	20	
506060ST-E	60 in	45.6 in	58 in	43.6 in	68 in	1.5 in	5 in	15 in	25 in	30 in	5 in	5 in	20	
506004ST-M	100 mm	53,3 mm	50 mm	–	304,8 mm	39,9 mm	–	–	–	50 mm	125 mm	125 mm	8	Metric
506006ST-M	150 mm	101,6 mm	100 mm	50,8 mm	355,5 mm	40,3 mm	–	–	–	75 mm	125 mm	125 mm	8	
506008ST-M	200 mm	132,1 mm	150 mm	81,3 mm	406,4 mm	40,7 mm	–	–	–	100 mm	125 mm	125 mm	8	
506010ST-M	250 mm	182,9 mm	200 mm	132,1 mm	457,2 mm	41,1 mm	–	–	–	125 mm	125 mm	125 mm	8	
506012ST-M	300 mm	210,8 mm	250 mm	152,4 mm	508,0 mm	41,5 mm	75 mm	–	–	150 mm	125 mm	125 mm	12	
506014ST-M	350 mm	249,0 mm	300 mm	198,1 mm	558,8 mm	66,9 mm	75 mm	–	–	150 mm	125 mm	125 mm	12	
506016ST-M	400 mm	304,8 mm	350 mm	254,0 mm	609,6 mm	42,3 mm	100 mm	–	–	200 mm	125 mm	125 mm	12	
506018ST-M	450 mm	330,2 mm	400 mm	279,4 mm	660,4 mm	67,7 mm	100 mm	–	–	200 mm	125 mm	125 mm	12	
506020ST-M	500 mm	368,3 mm	450 mm	317,5 mm	711,2 mm	43,1 mm	125 mm	–	–	250 mm	125 mm	125 mm	12	
506022ST-M	550 mm	408,9 mm	500 mm	358,1 mm	762,0 mm	68,5 mm	125 mm	–	–	250 mm	125 mm	125 mm	12	
506024ST-M	600 mm	457,2 mm	550 mm	406,4 mm	812,8 mm	43,9 mm	100 mm	200 mm	–	300 mm	125 mm	125 mm	16	
506030ST-M	750 mm	566,4 mm	700 mm	515,6 mm	965,2 mm	120,1 mm	100 mm	200 mm	–	300 mm	125 mm	125 mm	16	
506036ST-M	900 mm	685,8 mm	850 mm	635,0 mm	1117,5 mm	46,3 mm	150 mm	300 mm	–	450 mm	125 mm	125 mm	16	
506042ST-M	1050 mm	802,6 mm	1000 mm	751,8 mm	1270,0 mm	72,5 mm	125 mm	250 mm	375 mm	500 mm	125 mm	125 mm	20	
506048ST-M	1200 mm	922,0 mm	1150 mm	871,2 mm	1422,4 mm	48,7 mm	200 mm	400 mm	–	600 mm	125 mm	125 mm	16	
506054ST-M	1350 mm	1041,4 mm	1300 mm	990,6 mm	1574,8 mm	49,9 mm	150 mm	325 mm	500 mm	675 mm	125 mm	125 mm	20	
506060ST-M	1500 mm	1158,2 mm	1450 mm	1107,4 mm	1727,0 mm	101,0 mm	175 mm	350 mm	525 mm	700 mm	125 mm	125 mm	20	

500ET & 500ST Series How to Order

Order Example 5 | 06 | 020 | ST | M | S | D2 | L3 | C2 | M2 | E3 | W1

Model Series 5

Table Width
6 in ... 150 mm 06

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 ... 500 mm	020		

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

Table Style ..... ST / ET

Mounting
English ..... E
Metric (ST style only) ..... M

Grade
Standard Grade ..... S

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 in 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, English 0.0001 in Resolution E2
Linear Encoder, Metric 1,0 µm Resolution E3

Way Covers
Basic ST (with no cover) or Basic ET (with hardshell cover) W1
Bellows* (ST Style only) W2

*Overall travel will be shorter with this selection – refer to dimensional drawings for actual table travel.

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