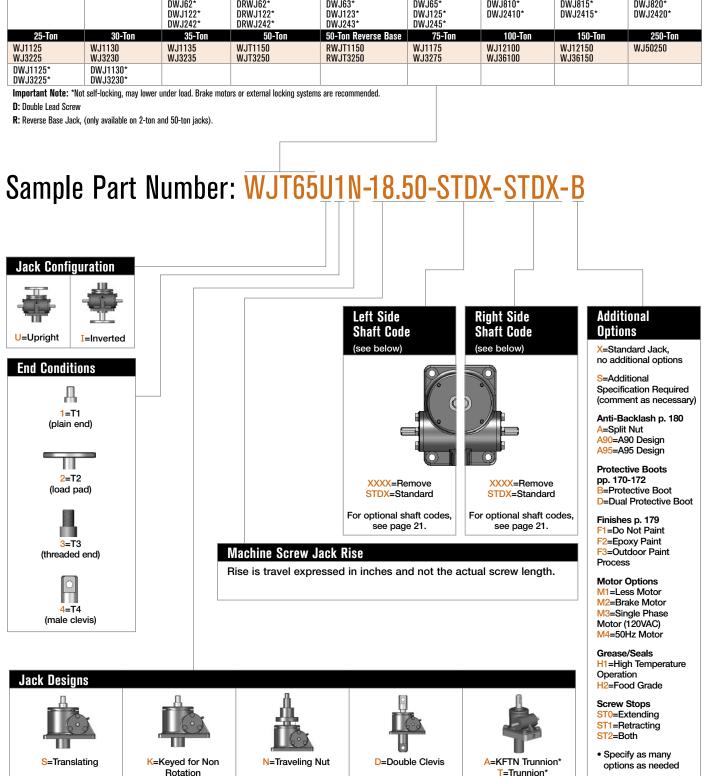


# MACHINE SCREW JACKS ORDERING INFORMATION

#### Instructions: Select a model number from this chart.

Miniature	1-Ton	2-Ton	2-Ton Reverse Base	3-Ton	5-Ton	10-Ton	15-Ton	20-Ton
WJ250	WJ51	WJT62	RWJT62	WJ63	WJT65	WJ810	WJ815_	WJ820
WJ500* WJ1000	WJ201	WJT122 WJT242	RWJT122 RWJT242	WJ123 WJ243	WJT125 WJT245	WJ2410 WJ2510	WJ2415 WJ2515	WJ2420 WJ2520
WJIUUU		WJT252	RWJT252	WJ253	WJT255	WJZJIU	WJZJIJ	WJZJZU
		DWJ62*	DRWJ62*	DWJ63*	DWJ65*	DWJ810*	DWJ815*	DWJ820*
		DWJ122* DWJ242*	DRWJ122* DRWJ242*	DWJ123* DWJ243*	DWJ125* DWJ245*	DWJ2410*	DWJ2415*	DWJ2420*
25-Ton	30-Ton	35-Ton	50-Ton	50-Ton Reverse Base	75-Ton	100-Ton	150-Ton	250-Ton
WJ1125	WJ1130	WJ1135	WJT1150	RWJT1150	WJ1175	WJ12100	WJ12150	WJ50250
WJ3225	WJ3230	WJ3235	WJT3250	RWJT3250	WJ3275	WJ36100	WJ36150	
DWJ1125*	DWJ1130*							
DWJ3225*	DWJ3230*							





options as needed

<sup>\*</sup>Standard trunnion mounts available on 2-ton through 20-ton jacks. (See page 173)

#### MACHINE SCREW JACKS SHAFT CODES

**Instructions:** Select the appropriate shaft codes for both right and left hand shafts. One shaft code must be specified for each side of the jack.

#### Screw Stops (p. 10) and Boots (pp. 170-172)

Screw stops are optional on machine screw jacks. When specified, the closed height of the jack and/or the protection tube length may be increased.

When boots are added to machine screw jacks, the closed height of the jack may be increased.

#### **Mechanical Counters (p. 177)**

CNT0=0.001" Increments Note: Contact Joyce/Dayton for availability and options.



#### Hand Wheels (p. 177)

HW04=4" dia HW06=6" dia



HW08=8" dia

HW10=10" dia Recommended for self-locking HW12=12" dia iacks only.

#### Geared Potentiometers (p. 176)

POTA=0-10V (IP65)

POTB=4-20MA (IP65)

POTC=0-10V w/2 switches\* POTD=4-20MA w/2 switches\*

\*Optional IP65 rating available

#### **Encoders and Electronic Limit Switches**

ENCX=Encoder (p. 178)

**ELS2=2 Position Electronic Switch** 

ELS4=4 Position Electronic Switch

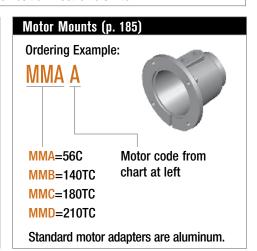
**ELS6=6** Position Electronic Switch



#### Motors for Systems and Direct Drives (p. 185)

- All standard motors are 3-phase, 208-230/460 VAC or 230/460 VAC. Other motor options are available. Specify the appropriate motor size from the chart on the right.
- Refer to the "Additional Options" chart on the preceding page as needed.
- Brake motors (M2) are recommended for jacks that are not self-locking, and jacks with double lead screws.
- If the motor frequency will be varied to provide a "soft" start an inverter duty motor may be required.

Motors	
Size	Code
1/4 HP	K
1/3 HP	Α
1/2 HP	В
3/4 HP	С
1 HP	D
1-1/2 HP	Е
2 HP	F
3 HP	L
5 HP	G
7-1/2 HP	Н
10 HP	I
15 HP	J



#### Mechanical Limit Switches (pp. 174-175)

Ordering Example: LA13

Wodels	
Model	Code
LS7-402	LI
LS8-402	LA
LS8-404	LB
LS9-502	LC
LS9-503	LD
LS9-504	LE
LS9-505	LF
LS9-506	LG
LS9-507	LH

Number of **DPDT Switches** (see p. 175)

NOTF: Will always be 0 for LS7 models

Available	e Positions	3						
	1	2*	3	4	5	6*	7	8
Left Side Shaft Options								
Right Side Shaft Options								

- 2, 3, 5, 10, 15, and 20 ton jacks are available with positions #1, #3, and #5
- 25, 30, 35, 50, 75, 100, and 150 ton jacks are available with positions #1, #4, #7, and #8 \*These positions are not standard. Contact Joyce/Dayton with your requirements.

# MACHINE SCREW JACKS SPECIFICATIONS

Model	Capacity	Screw Diameter (Inches)	Thread Pitch/Lead	Worm Gear Ratio	Worm Shaft Turns for 1" Travel	Tare Torque (Inch Lbs.)	Starting Torque (Inch Lbs.)	Operating Torque (Inch Lbs.)	Efficiency Rating % Approx.	Screw Torque (Inch Lbs.)	Basic Jack Weight (Lbs.)	Jack Weight per Inch Travel (Lbs.)																	
WJ250	250 lbs.	1/2	.125 pitch STUB ACME	5:1	40	1	.025W*	.018W* @ 500 RPM	23.0	.050W*	1.2	0.1																	
WJ500	500 lbs.	5/8	.125 pitch .250 lead STUB ACME	5:1	20	1	.041W*	.030W* @ 500 RPM	27.2	.079W*	1.3	0.1																	
WJ1000	1,000 lbs.	5/8	.125 pitch STUB ACME	5:1	40	1	.030W*	.021W* @ 500 RPM	19.9	.059W*	1.3	0.1																	
WJ51	4.			.200 pitch	5:1	25	3	.038W*	.026W* @ 500 RPM	25.0	.075W*	6	0.3																
WJ201	1 ton	3/4	ACMÈ 2C	20:1	100	3	.017W*	.009W* @ 500 RPM	15.9	.U73WV	0	0.3																	
(R)WJT62				6:1	24		.041W*	.028W* @ 500 RPM	24.2		15																		
(R)WJT122			.250 pitch	12:1	48		.025W*	.015W* @ 500 RPM	22.0	.098W*																			
(R)WJT242			ACME 2C	24:1	96		.018W*	.009W* @ 500 RPM	18.3	.03000																			
(R)WJT252	2 ton	1		25:1	100	4	.015W*	.0085W* @ 500 RPM	17.0			0.3																	
D(R)WJ62			.250 pitch	6:1	12		.057W*	.039W* @ 500 RPM	33.7																				
D(R)WJ122			.500 lead ACME 2C	12:1	24		.035W*	.022W* @ 500 RPM	30.5	.139W*																			
D(R)WJ242			AGIIIE EG	24:1	48		.025W*	.013W* @ 500 RPM	25.4																				
WJ63		1								6:1	24		.040W*	.029W* @ 500 RPM	24.3														
WJ123			.250 pitch	12:1	48	_	.025W*	.016W* @ 500 RPM	22.2	.098W*																			
WJ243			ACMÉ 2C	24:1	96		.017W*	.009W* @ 500 RPM	18.5																				
WJ253	3 ton		1		25:1	100	6	.0155W*	.009W* @ 500 RPM	17.8		17	0.4																
DWJ63								.250	.250 pitch	6:1	12		.055W*	.041W* @ 500 RPM	33.8														
DWJ123				.500 lead ACME 2C	12:1	24		.034W*	.022W* @ 500 RPM	30.7	.139W*																		
DWJ243				24:1	48		.024W*	.013W* @ 500 RPM	25.6																				
WJT65									075	6:1	16		.065W*	.044W* @ 300 RPM	23.0														
WJT125			.375 pitch STUB ACME	12:1	32		.041W*	.025W* @ 300 RPM	20.6	.151W*																			
WJT245																				250 11 1	24:1	64		.029W*	.015W* @ 300 RPM	16.7			
WJT255	5 ton	1 1/2	.250 pitch ACME 2C	25:1	100	10	.022W*	011W* @ 300 RPM	13.4	.131W*	32	0.7																	
DWJ65						250 nite	.250 pitch	6:1	12		.072W*	.050W* @ 300 RPM	26.8																
DWJ125				.500 lead ACME 2C	12:1	24		.045W*	.028W* @ 300 RPM	23.9	.171W*																		
DWJ245				24:1	48		.033W*	.017W* @ 300 RPM	19.6																				
WJ810		on 2 2 A	.500 pitch	8:1	16		.061W*	.043W* @ 200 RPM	23.1	.195W*																			
WJ2410	10 ton		ACME 2C		24:1	48		.030W*	.018W* @ 200 RPM	18.8																			
WJ2510			2 .250 pitch ACME 2C .333 pitch .666 lead	25:1	100	20	.024W*	.014W* @ 200 RPM	11.3	.161W*	43	1.3																	
DWJ810				8:1	12		.070W*	.062W* @ 200 RPM	31.9	.228W*																			
DWJ2410			ACME 2C	24:1	36		.035W*	.026W* @ 200 RPM	25.9																				

Important Note: Series DWJ double lead screw jacks and WJ500 screw jacks are not self-locking. Brake motors or external locking systems are recommended.

(R): Reverse Base Jack.

 ${}^{\star}W$ : Load in pounds.

Tare Torque: Initial torque to overcome seal and normal assembly drag. This value must be added to starting torque or operating torque values.

Starting Torque: Torque value required to start moving a given load (dissipates to operating torque values once the load begins moving).

Operating Torque: Torque required to continuously raise a given load at the input RPM listed.

Note: If your actual input RPM is 20% higher or lower than the listed RPM, please refer to our JAX® program to determine actual torque values at your RPM.

Screw Torque: Torque required to resist screw rotation (Translating Design Jacks) and traveling nut rotation (Keyed for Traveling Nut Design Jacks).

 $\boldsymbol{\textbf{Lead:}}$  The distance traveled axially in one rotation of the lifting screw.

Pitch: The distance from a point on a screw thread to a corresponding point on the next thread, measured axially.

### MACHINE SCREW JACKS SPECIFICATIONS

Model	Capacity	Screw Diameter (Inches)	Thread Pitch/Lead	Worm Gear Ratio	Worm Shaft Turns for 1" Travel	Tare Torque (Inch Lbs.)	Starting Torque (Inch Lbs.)	Operating Torque (Inch Lbs.)	Efficiency Rating % Approx	Screw Torque (Inch Lbs.)	Basic Jack Weight (Lbs.)	Jack Weight per Inch Travel (Lbs.)				
WJ815							.500 pitch	8:1	16		.069W*	.047W* @ 200 RPM	21.1	.210W*		
WJ2415	2 1/4	2 1/4	ACMĖ 2C	24:1	48		.036W*	.020W* @ 200 RPM	16.6	.21000						
WJ2515			.250 pitch ACME 2C	25:1	100	30	.026W*	.015W* @ 200 RPM	10.2	.178W*	59	1.4				
DWJ815		0.1/4	.333 pitch	8:1	12		.079W*	.058W* @ 200 RPM	34.4	044144						
DWJ2415		2 1/4	.666 lead ACME 2C	24:1	36		.041W*	.025W* @ 200 RPM	27.0	.244W*						
WJ820			.500 pitch	8:1	16		.075W*	.051W* @ 200 RPM	19.6	00714/4						
WJ2420		2 1/2	ACMĖ 2C	24:1	48		.039W*	.022W* @ 200 RPM	15.4	.227W*						
WJ2520	20 ton		.250 pitch ACME 2C	25:1	100	40	.029W*	.016W* @ 200 RPM	9.4	.194W*	77	1.9				
DWJ820		0.1/0	.375 pitch	8:1	10.67		.088W*	.061W* @ 200 RPM	24.5	0.70\\/*						
DWJ2420		2 1/2	.750 lead ACME 2C	24:1	32		.046W*	.026W* @ 200 RPM	19.3	.272W*						
WJ1125		2.270	.666 pitch	11:1	16		.088W*	.055W* @ 200 RPM	18.3	01014/*						
WJ3225	05 +	3 3/8	3 3/8	3 3/8	3 3/8	Stub ACME	32:1	48		.053W*	.025W* @ 200 RPM	13.5	313W*	164	3.1	
DWJ1125	25 ton	2.270	.562 pitch 1.125 lead	11:1	9.5	50	.106W*	.067W* @ 200 RPM	25.1	20414/*	104	3.1				
DWJ3225		3 3/8	ACME 2C	32:1	28.5		.063W*	.030W* @ 200 RPM	18.6	384W*						
WJ1130		0.1/0	3 1/2	.666 pitch	11:1	16		.088W*	.055W* @ 200 RPM	18.3	.313W*					
WJ3230	20 ton	3 1/2	ACMÈ 2C	32:1	48	60	.052W*	.025W* @ 200 RPM	13.5	.31300	164	3.0				
DWJ1130	30 ton	0.1/0	3 1/2	0.1/0	0.1/0	.5625 pitch	11:1	9.5	60	.107W*	.067W* @ 200 RPM	25.1	2041//*	164	J.U	
DWJ3230		3 1/2	1.125 lead ACME 2C	32:1	28.5		.064W*	.030W* @ 200 RPM	18.6	.384W*						
WJ1135	25 ton	3 3/4	.666 pitch	11:1	16	70	.093W*	.057W* @ 200 RPM	17.4	200///*	040	3.4				
WJ3235	35 ton	3 3/4	ACMĖ 2C	32:1	48	70	.055W*	.026W* @ 200 RPM	12.9	.328W*	240	3.4				
(R)WJT1150	50 ton	4 1/2	.666 pitch	11:1	16	100	.095W*	.063W* @ 150 RPM	15.8	.378W*	387	R 1				
(R)WJT3250	30 (011	4 1/2	ACMÉ 2C	32:1	48	100	.050W*	.027W* @ 150 RPM	12.4	.37000	307	6.1				
WJ1175	75 ton	5	.666 pitch	11:1	16	155	.107W*	.067W* @ 150 RPM	14.8	/11 O\N/*	610	6.5				
WJ3275	75 (011	J	ACME 2C	32:1	48	100	.056W*	.028W* @ 150 RPM	11.7	.418W*	610					
WJ12100	100 ton	c .75	6 .750 pitch	12:1	16	205	.112W*	.072W* @ 90 RPM	13.9	.495W*	1010	10.0				
WJ36100	100 (011	u	ACMĖ 2C	36:1	48	200	.059W*	.031W* @ 90 RPM	10.8	.45077						
WJ12150	150 ton	7 1.0	7 1.00 pitch	12:1	12	200	.134W*	.084W* @ 90 RPM	15.7	F0514/4	1350	12.2				
WJ36150	150 (011		ACMÉ 2C	36:1	36	300	.070W*	.037W* @ 90 RPM	12.1	.595W*						
WJ50250	250 ton	9	1.00 pitch ACME 2C	50:1	50	500		.036W* @ 60 RPM	8.8	.711W*	3415	21.0				

Important Note: Series DWJ double lead screw jacks and WJ500 screw jacks are not self-locking. Brake motors or external locking systems are recommended.

(R): Reverse Base Jack.
\*W: Load in pounds.

Tare Torque: Initial torque to overcome seal and normal assembly drag. This value must be added to starting torque or operating torque values.

Starting Torque: Torque value required to start moving a given load (dissipates to operating torque values once the load begins moving).

Operating Torque: Torque required to continuously raise a given load at the input RPM listed.

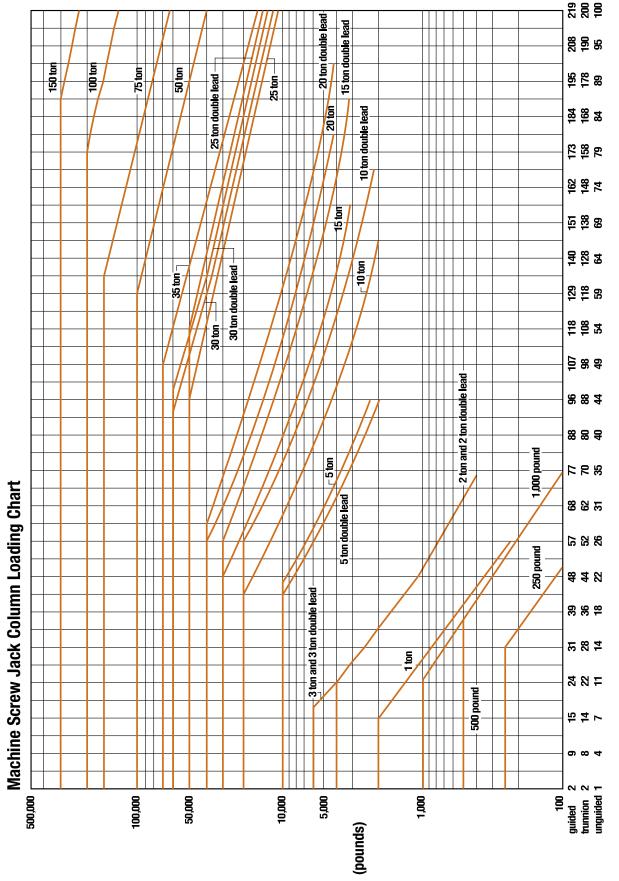
Note: If your actual input RPM is 20% higher or lower than the listed RPM, please refer to our JAX® program to determine actual torque values at your RPM.

Screw Torque: Torque required to resist screw rotation (Translating Design Jacks) and traveling nut rotation (Keyed for Traveling Nut Design Jacks).

Lead: The distance traveled axially in one rotation of the lifting screw.

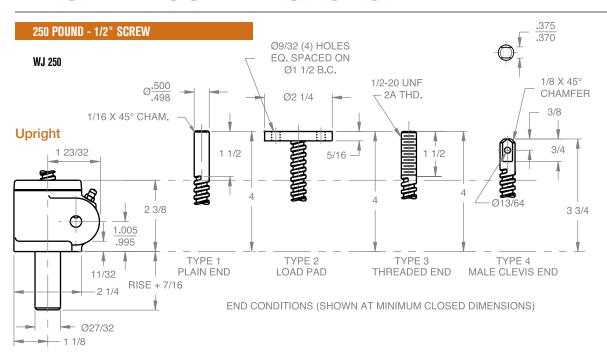
**Pitch:** The distance from a point on a screw thread to a corresponding point on the next thread, measured axially.

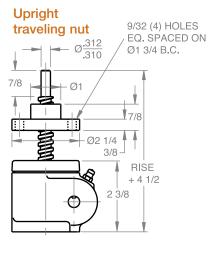
# MACHINE SCREW JACKS COLUMN LOADING

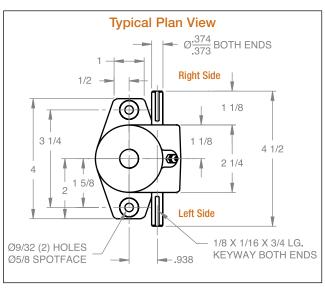


Screw Length (inches)

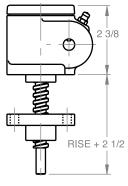
This chart includes a 2:1 Factor-of-Safety based on the Euler-Johnson equation for column loading (Oberg, Erik et al: Machinery's Handbook, 24th Edition. c. 1992 Industrial Press Inc.) The horizontal portion of each line represents the jack's maximum dynamic capacity. Under static conditions, these lines can be exceeded. Please contact factory for assistance.

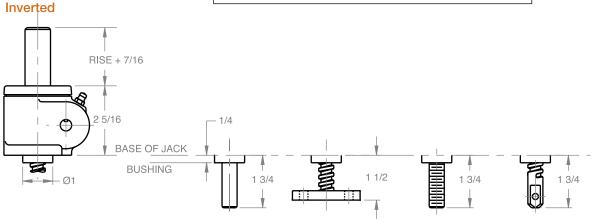




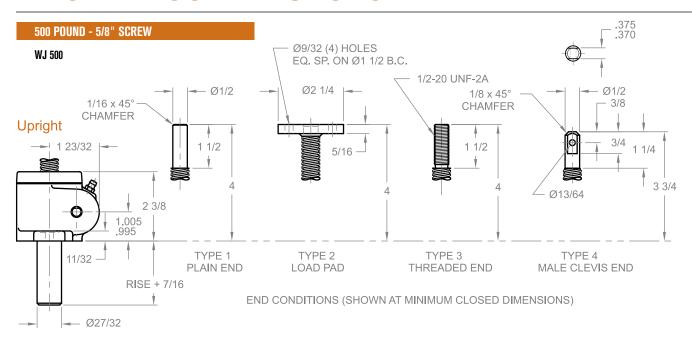


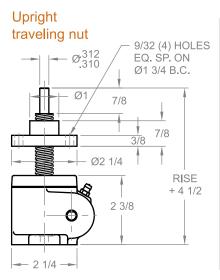
# Inverted traveling nut

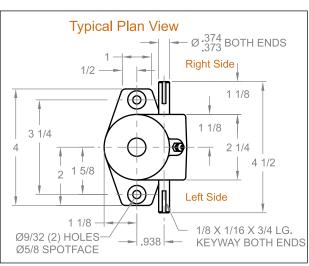




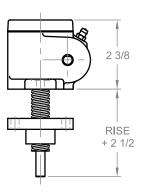
Material Notes: Housing and protection tube are aluminum. Lifting screw is cold drawn steel (CDS), Input shaft (worm) is 416 S.S. Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.



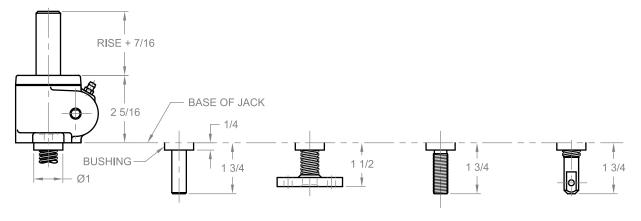




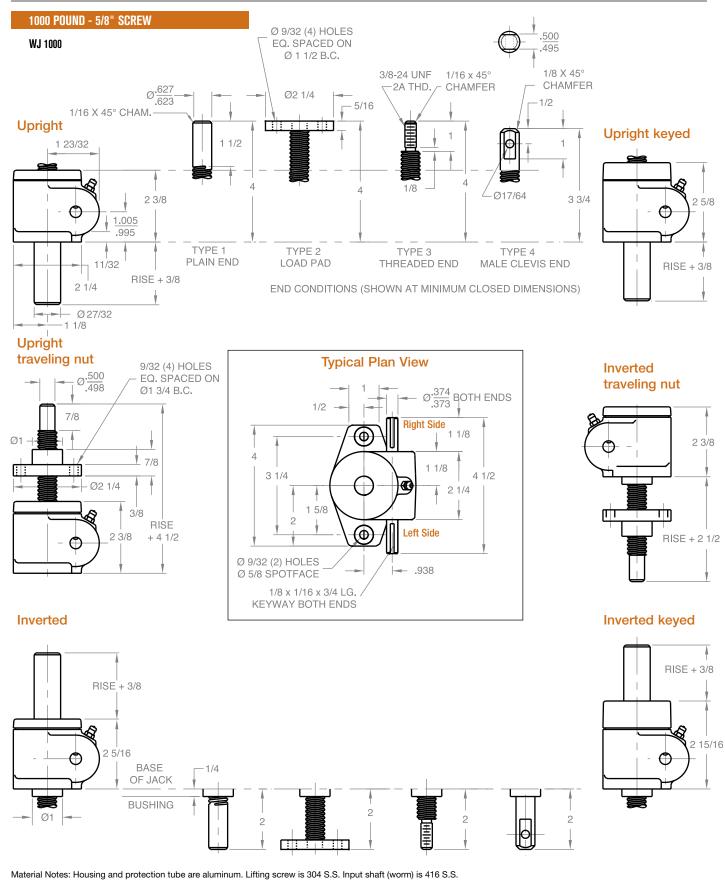
#### Inverted traveling nut



#### Inverted



Material Notes: Housing and protection tube are aluminum. lifting screw is 304 S.S. Input shaft (worm) is 416 S.S. Note: Drawings are artist's conception - not for certification; dimensions are subject to change without notice.



Material Notes: Housing and protection tube are aluminum. Lifting screw is 304 S.S. Input shaft (worm) is 416 S.S. Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

