

MACHINE SCREW JACKS

Joyce/Dayton offers
Machine Screw Jacks
in several designs including:

- Translating
- Keyed for non-rotation
- Keyed for traveling nut (KFTN)
- Double clevis
- Trunnion

A guide for ordering
is on pages 20 and 21.



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*	WJ201	WJT122	RWJT122	WJ123	WJT125	WJ2410	WJ2415	WJ2420
WJ1000		WJT242	RWJT242	WJ243	WJT245	WJ2510	WJ2515	WJ2520
		WJT252	RWJT252	WJ253	WJT255			
		DWJ62*	DRWJ62*	DWJ63*	DWJ65*	DWJ810*	DWJ815*	DWJ820*
		DWJ122*	DRWJ122*	DWJ123*	DWJ125*	DWJ2410*	DWJ2415*	DWJ2420*
		DWJ242*	DRWJ242*	DWJ243*	DWJ245*			
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*							

Important Note: *Not self-locking, may lower under load. Brake motors or external locking systems are recommended.

D: Double Lead Screw

R: Reverse Base Jack, (only available on 2-ton and 50-ton jacks).

Sample Part Number: WJT65U1N-18.50-STDX-STDX-B

The diagram illustrates the breakdown of the sample part number WJT65U1N-18.50-STDX-STDX-B across several configuration sections:

- Jack Configuration:** Shows options U=Upright and I=Inverted.
- End Conditions:** Shows options 1=T1 (plain end), 2=T2 (load pad), 3=T3 (threaded end), and 4=T4 (male clevis).
- Left Side Shaft Code (see below):** Shows a shaft assembly with code XXXX=Remove STDX=Standard.
- Right Side Shaft Code (see below):** Shows a shaft assembly with code XXXX=Remove STDX=Standard.
- Machine Screw Jack Rise:** A central section containing the rise value 18.50 and a note: "Rise is travel expressed in inches and not the actual screw length."
- Additional Options:** A list of options including X=Standard Jack, no additional options; S=Additional Specification Required (comment as necessary); Anti-Backlash p. 180; A=Split Nut; A90=A90 Design; A95=A95 Design; Protective Boots pp. 170-172; B=Protective Boot; D=Dual Protective Boot; Finishes p. 179; F1=Do Not Paint; F2=Epoxy Paint; F3=Outdoor Paint Process; Motor Options M1=Less Motor; M2=Brake Motor; M3=Single Phase Motor (120VAC); M4=50Hz Motor; Grease/Seals H1=High Temperature Operation; H2=Food Grade; Screw Stops ST0=Extending; ST1=Retracting; ST2=Both; and a note: "Specify as many options as needed".
- Jack Designs:** Shows five design options: S=Translating, K=Keyed for Non Rotation, N=Traveling Nut, D=Double Clevis, and A=KFTN Trunnion* T=Trunnion*.

*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 jacks only.

HW12=12" dia

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	A
1/2 HP	B
3/4 HP	C
1 HP	D
1-1/2 HP	E
2 HP	F
3 HP	L
5 HP	G
7-1/2 HP	H
10 HP	I
15 HP	J

Motor Mounts (p. 185)

Ordering Example:

MMA A



MMA=56C

Motor code from chart at left

MMB=140TC

MMC=180TC

MMD=210TC

Standard motor adapters are aluminum.

Mechanical Limit Switches (pp. 174-175)

Ordering Example: LA13

Models		Number of DPDT Switches (see p. 175) NOTE: Will always be 0 for LS7 models	Available Positions							
Model	Code		1	2*	3	4	5	6*	7	8
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									

- 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	1 ton	3/4	.200 pitch ACME 2C	5:1	25	3	.038W*	.026W* @ 500 RPM	25.0	.075W*	6	0.3
WJ201				20:1	100		.017W*	.009W* @ 500 RPM	15.9			
(R)WJT62	2 ton	1	.250 pitch ACME 2C	6:1	24	4	.041W*	.028W* @ 500 RPM	24.2	.098W*	15	0.3
(R)WJT122				12:1	48		.025W*	.015W* @ 500 RPM	22.0			
(R)WJT242				24:1	96		.018W*	.009W* @ 500 RPM	18.3			
(R)WJT252				25:1	100		.015W*	.0085W* @ 500 RPM	17.0			
D(R)WJ62			.250 pitch .500 lead ACME 2C	6:1	12	6	.057W*	.039W* @ 500 RPM	33.7	.139W*	17	0.4
D(R)WJ122				12:1	24		.035W*	.022W* @ 500 RPM	30.5			
D(R)WJ242				24:1	48		.025W*	.013W* @ 500 RPM	25.4			
WJ63	3 ton	1	.250 pitch ACME 2C	6:1	24	6	.040W*	.029W* @ 500 RPM	24.3	.098W*	17	0.4
WJ123				12:1	48		.025W*	.016W* @ 500 RPM	22.2			
WJ243				24:1	96		.017W*	.009W* @ 500 RPM	18.5			
WJ253				25:1	100		.0155W*	.009W* @ 500 RPM	17.8			
DWJ63			.250 pitch .500 lead ACME 2C	6:1	12	10	.055W*	.041W* @ 500 RPM	33.8	.139W*	32	0.7
DWJ123				12:1	24		.034W*	.022W* @ 500 RPM	30.7			
DWJ243				24:1	48		.024W*	.013W* @ 500 RPM	25.6			
WJT65	5 ton	1 1/2	.375 pitch STUB ACME	6:1	16	10	.065W*	.044W* @ 300 RPM	23.0	.151W*	43	1.3
WJT125				12:1	32		.041W*	.025W* @ 300 RPM	20.6			
WJT245				24:1	64		.029W*	.015W* @ 300 RPM	16.7			
WJT255			.250 pitch ACME 2C	25:1	100		.022W*	.011W* @ 300 RPM	13.4	.131W*		
DWJ65				6:1	12	20	.072W*	.050W* @ 300 RPM	26.8	.171W*	43	1.3
DWJ125			.250 pitch .500 lead ACME 2C	12:1	24		.045W*	.028W* @ 300 RPM	23.9			
DWJ245				24:1	48		.033W*	.017W* @ 300 RPM	19.6			
WJ810	10 ton	2	.500 pitch ACME 2C	8:1	16	20	.061W*	.043W* @ 200 RPM	23.1	.195W*	43	1.3
WJ2410				24:1	48		.030W*	.018W* @ 200 RPM	18.8			
WJ2510			.250 pitch ACME 2C	25:1	100		.024W*	.014W* @ 200 RPM	11.3	.161W*		
DWJ810			.333 pitch .666 lead ACME 2C	8:1	12		.070W*	.062W* @ 200 RPM	31.9	.228W*	43	1.3
DWJ2410				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.

*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 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	15 ton	2 1/4	.500 pitch ACME 2C	8:1	16	30	.069W*	.047W* @ 200 RPM	21.1	.210W*	59	1.4		
WJ2415				24:1	48		.036W*	.020W* @ 200 RPM	16.6					
WJ2515			.250 pitch ACME 2C	25:1	100		.026W*	.015W* @ 200 RPM	10.2	.178W*				
DWJ815		2 1/4	.333 pitch .666 lead ACME 2C	8:1	12		.079W*	.058W* @ 200 RPM	34.4	.244W*				
DWJ2415				24:1	36		.041W*	.025W* @ 200 RPM	27.0					
WJ820	20 ton	2 1/2	.500 pitch ACME 2C	8:1	16	40	.075W*	.051W* @ 200 RPM	19.6	.227W*	77	1.9		
WJ2420				24:1	48		.039W*	.022W* @ 200 RPM	15.4					
WJ2520			.250 pitch ACME 2C	25:1	100		.029W*	.016W* @ 200 RPM	9.4	.194W*				
DWJ820		2 1/2	.375 pitch .750 lead ACME 2C	8:1	10.67		.088W*	.061W* @ 200 RPM	24.5	.272W*				
DWJ2420				24:1	32		.046W*	.026W* @ 200 RPM	19.3					
WJ1125	25 ton	3 3/8	.666 pitch Stub ACME	11:1	16	50	.088W*	.055W* @ 200 RPM	18.3	.313W*	164	3.1		
WJ3225				32:1	48		.053W*	.025W* @ 200 RPM	13.5					
DWJ1125		3 3/8	.562 pitch 1.125 lead ACME 2C	11:1	9.5		.106W*	.067W* @ 200 RPM	25.1	.384W*				
DWJ3225				32:1	28.5		.063W*	.030W* @ 200 RPM	18.6					
WJ1130		3 1/2	.666 pitch ACME 2C	11:1	16		.088W*	.055W* @ 200 RPM	18.3	.313W*	164	3.0		
WJ3230				32:1	48		.052W*	.025W* @ 200 RPM	13.5					
DWJ1130	30 ton	3 1/2	.5625 pitch 1.125 lead ACME 2C	11:1	9.5		.107W*	.067W* @ 200 RPM	25.1	.384W*				
DWJ3230				32:1	28.5		.064W*	.030W* @ 200 RPM	18.6					
WJ1135	35 ton	3 3/4	.666 pitch ACME 2C	11:1	16	70	.093W*	.057W* @ 200 RPM	17.4	.328W*	240	3.4		
WJ3235				32:1	48		.055W*	.026W* @ 200 RPM	12.9					
(R)WJT1150	50 ton	4 1/2	.666 pitch ACME 2C	11:1	16	100	.095W*	.063W* @ 150 RPM	15.8	.378W*	387	6.1		
(R)WJT3250				32:1	48		.050W*	.027W* @ 150 RPM	12.4					
WJ1175	75 ton	5	.666 pitch ACME 2C	11:1	16	155	.107W*	.067W* @ 150 RPM	14.8	.418W*	610	6.5		
WJ3275				32:1	48		.056W*	.028W* @ 150 RPM	11.7					
WJ12100	100 ton	6	.750 pitch ACME 2C	12:1	16	205	.112W*	.072W* @ 90 RPM	13.9	.495W*	1010	10.0		
WJ36100				36:1	48		.059W*	.031W* @ 90 RPM	10.8					
WJ12150	150 ton	7	1.00 pitch ACME 2C	12:1	12	300	.134W*	.084W* @ 90 RPM	15.7	.595W*	1350	12.2		
WJ36150				36:1	36		.070W*	.037W* @ 90 RPM	12.1					
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.

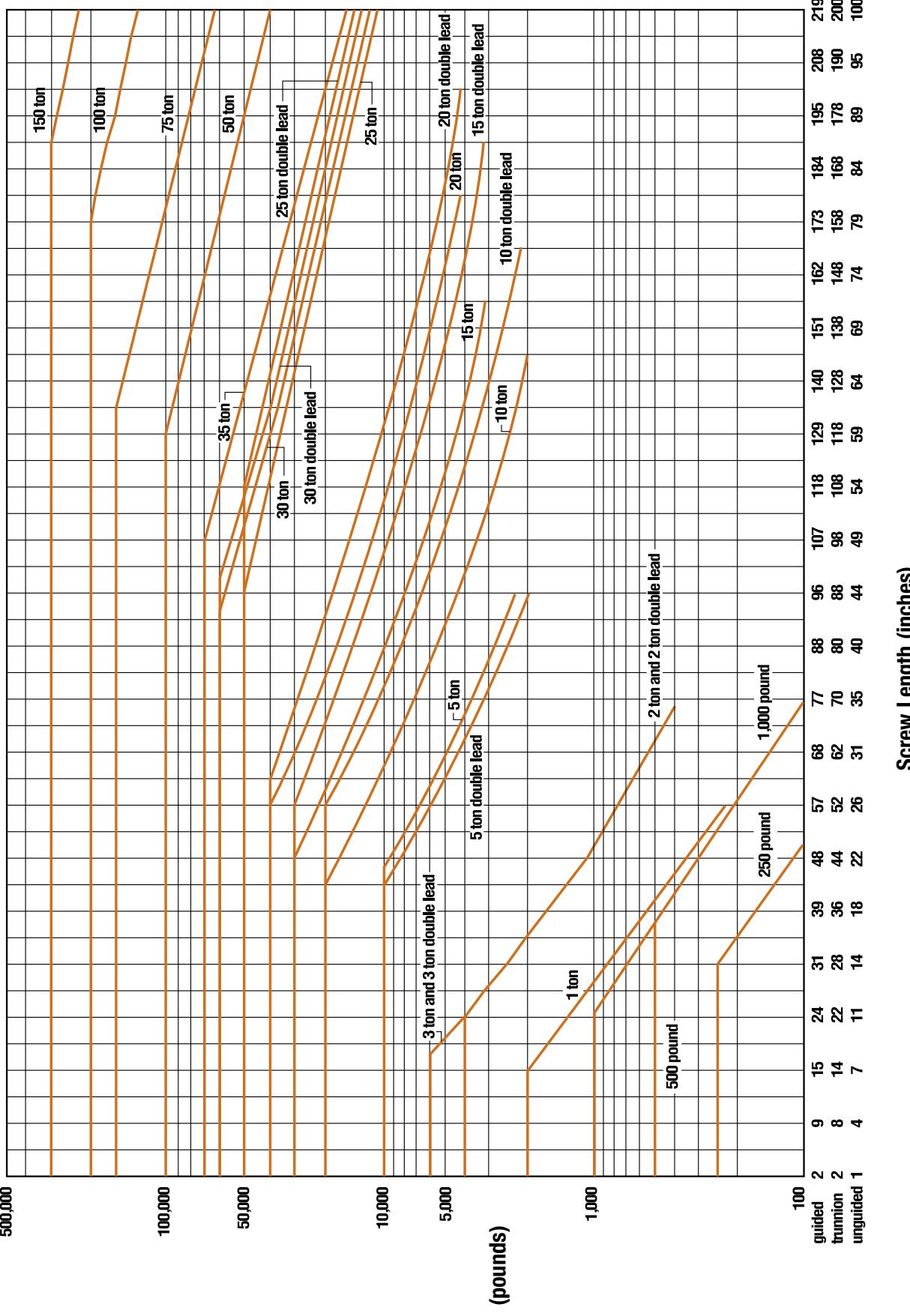
Screw Torque: Torque required to resist screw rotation (Translating Design Jacks) and traveling nut rotation (Keyed for Traveling Nut Design Jacks).

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

Machine Screw Jack Column Loading Chart



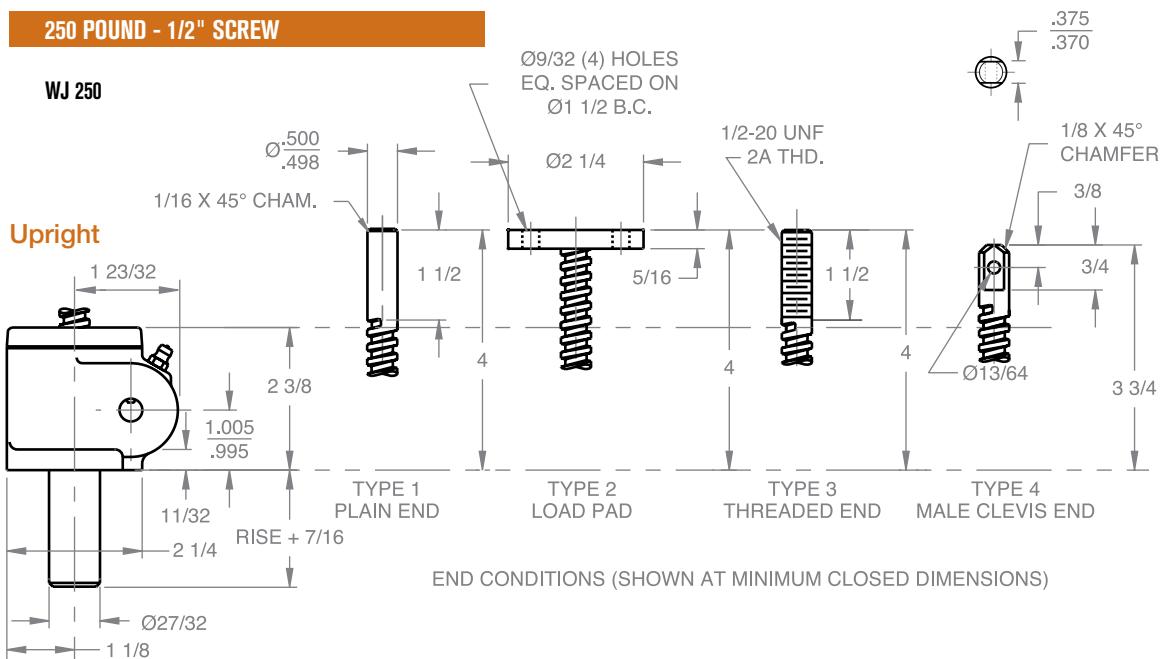
This chart includes a 2:1 Factor-of-Safety based on the Euler-Johnson equation for column loading (Oberg, Erik et al: Machinery's Handbook, 24th Edition. c. 1992 Industrial Press Inc.)
The horizontal portion of each line represents the jack's maximum dynamic capacity. Under static conditions, these lines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

MACHINE SCREW JACKS

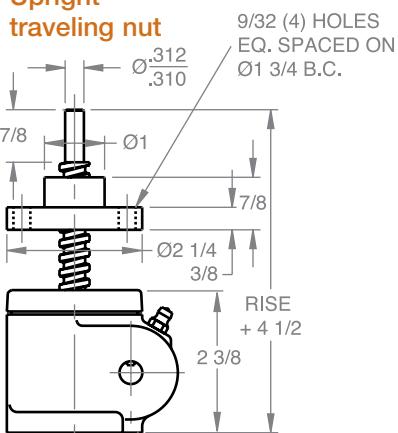
250 POUND - 1/2" SCREW

WJ 250

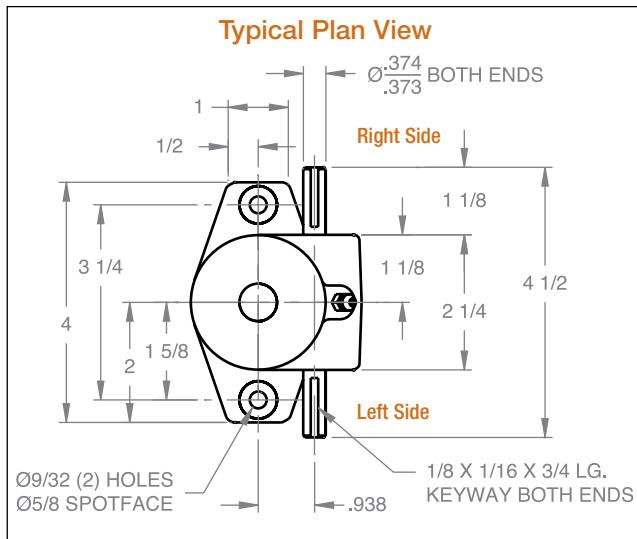
Upright



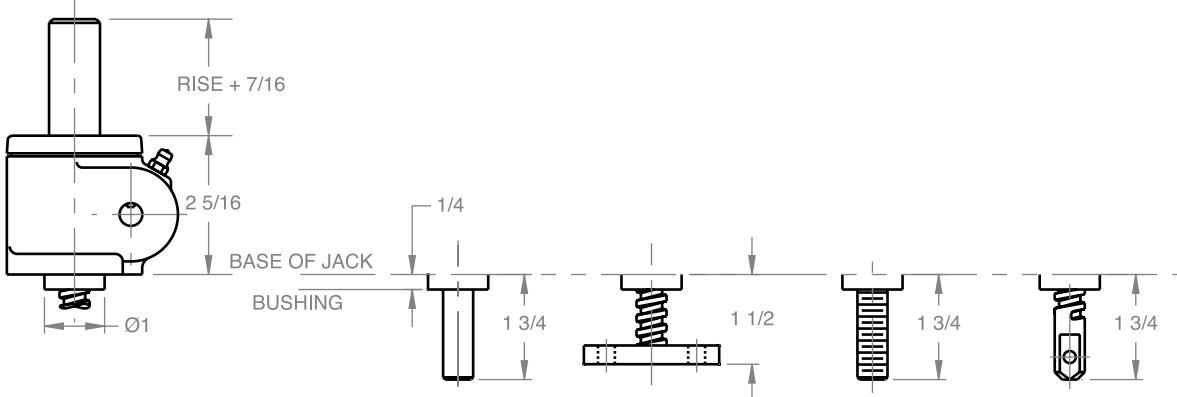
Upright traveling nut



Typical Plan View



Inverted



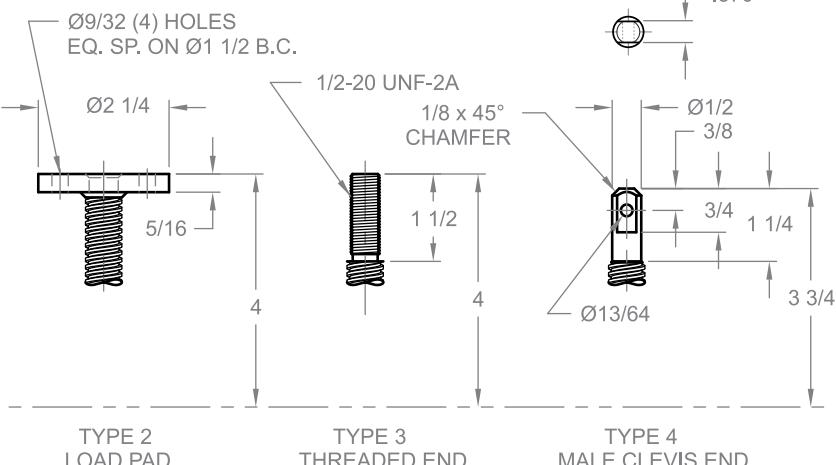
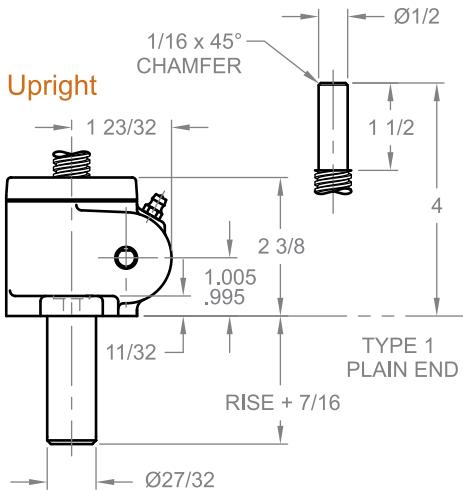
Material Notes: Housing and protection tube are aluminum. Lifting screw is cold drawn steel (CDS). Input shaft (worm) is 416 S.S.

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

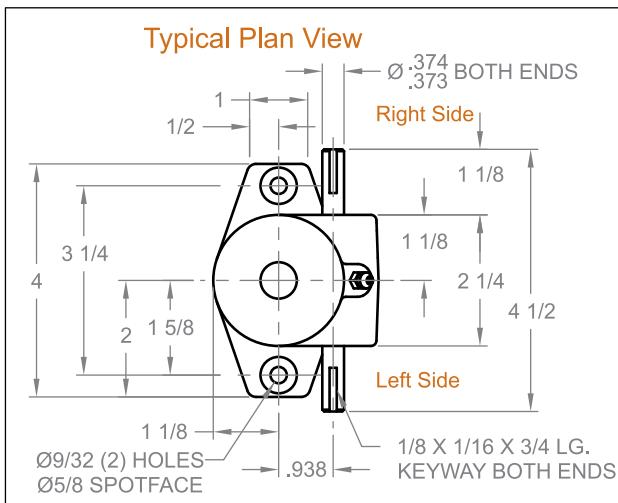
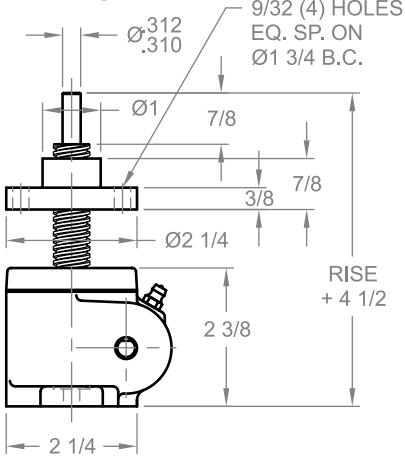
500 POUND - 5/8" SCREW

WJ 500

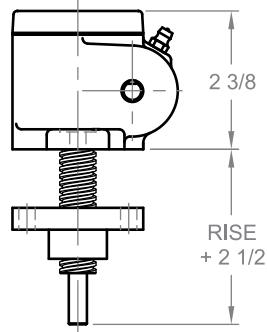


END CONDITIONS (SHOWN AT MINIMUM CLOSED DIMENSIONS)

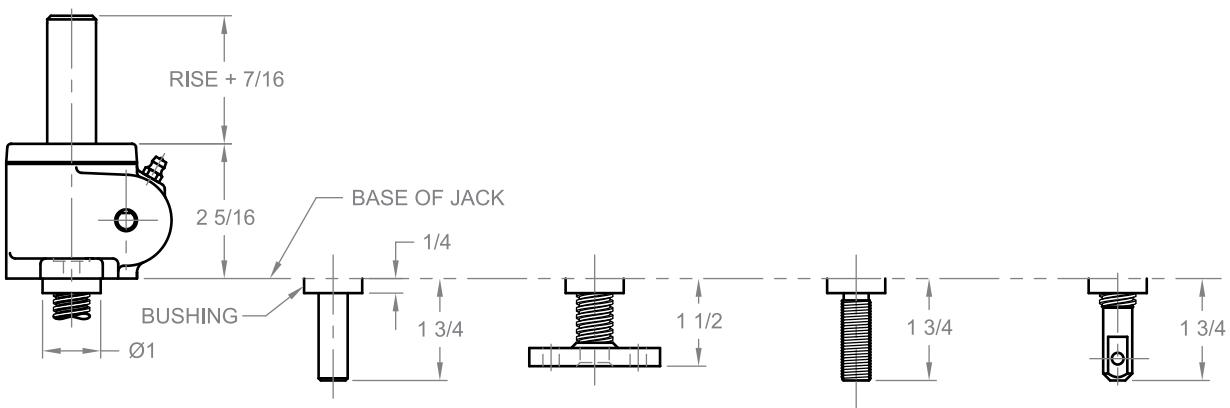
Upright traveling nut



Inverted traveling nut



Inverted



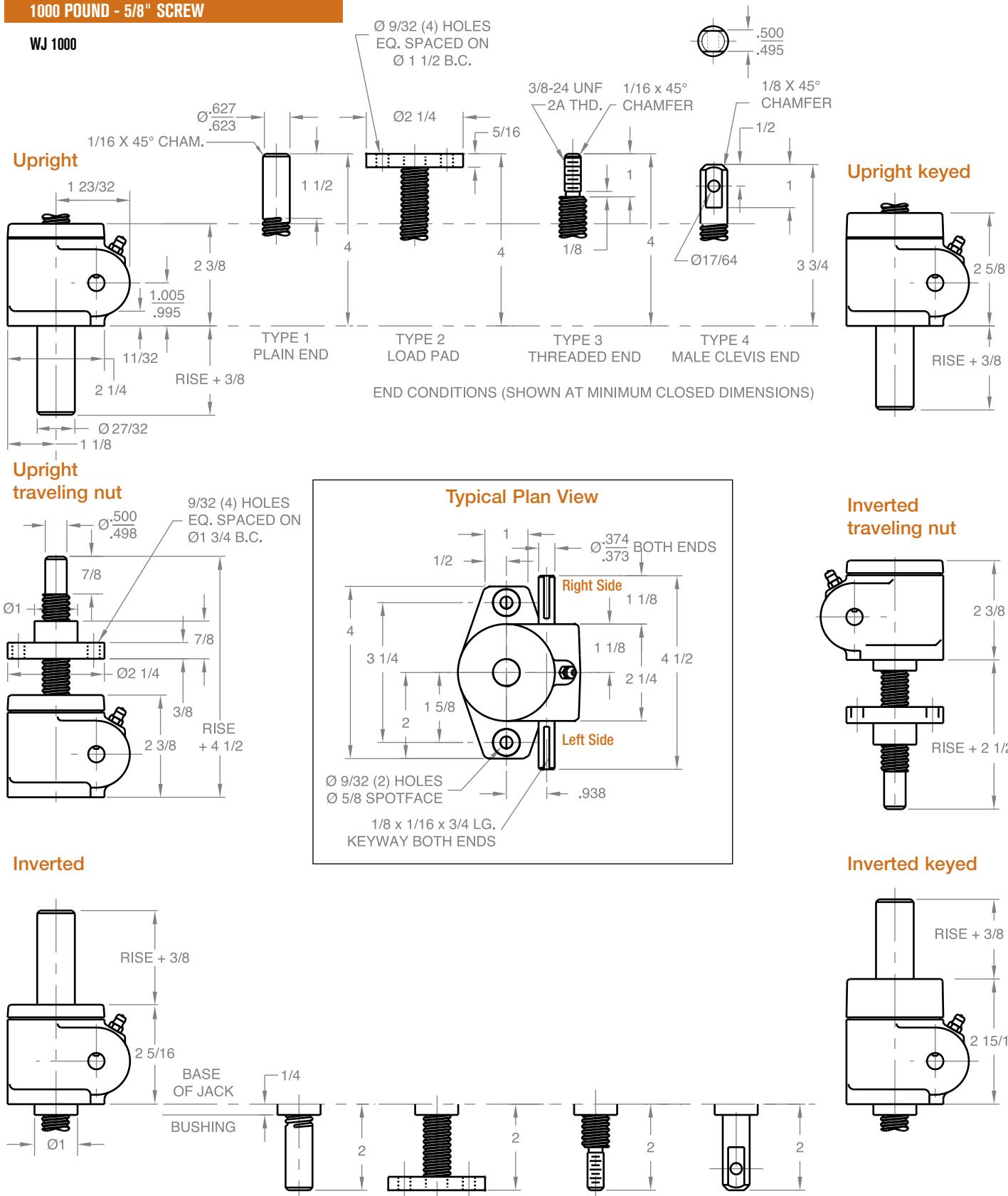
Material Notes: Housing and protection tube are aluminum. lifting screw is 304 S.S. Input shaft (worm) is 416 S.S.

Note: Drawings are artist's conception - not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

1000 POUND - 5/8" SCREW

WJ 1000



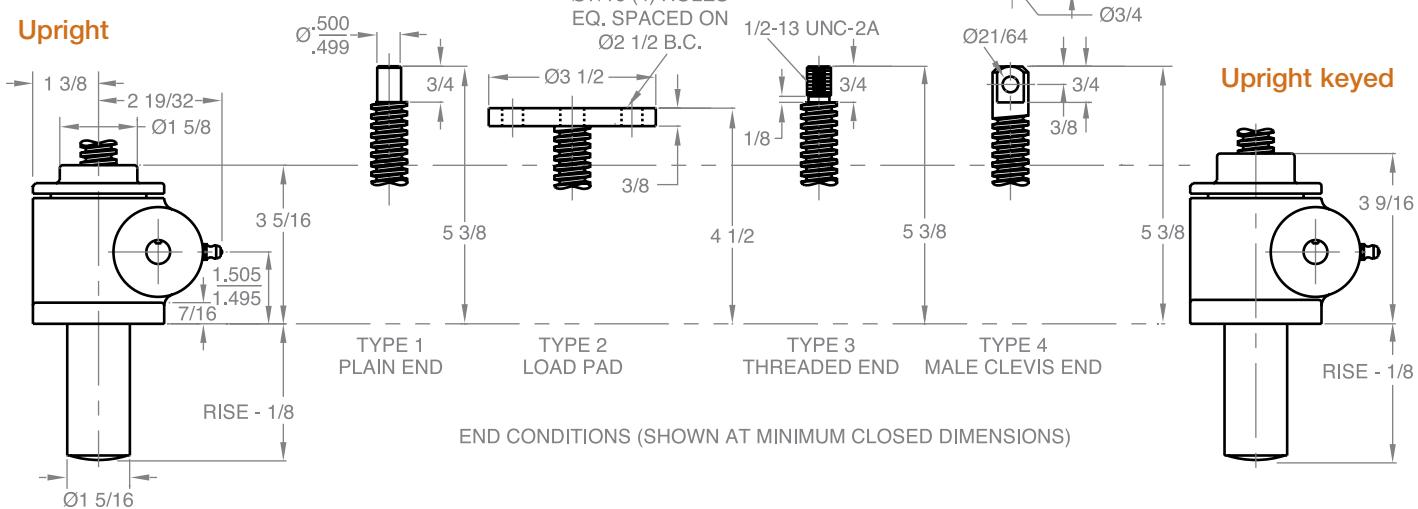
Material Notes: Housing and protection tube are aluminum. Lifting screw is 304 S.S. Input shaft (worm) is 416 S.S.
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

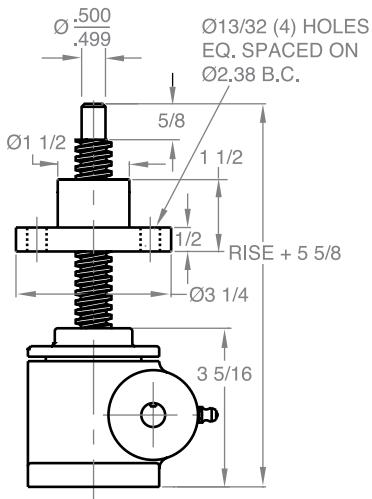
1 TON - 3/4" SCREW

WJ 51 / WJ 201

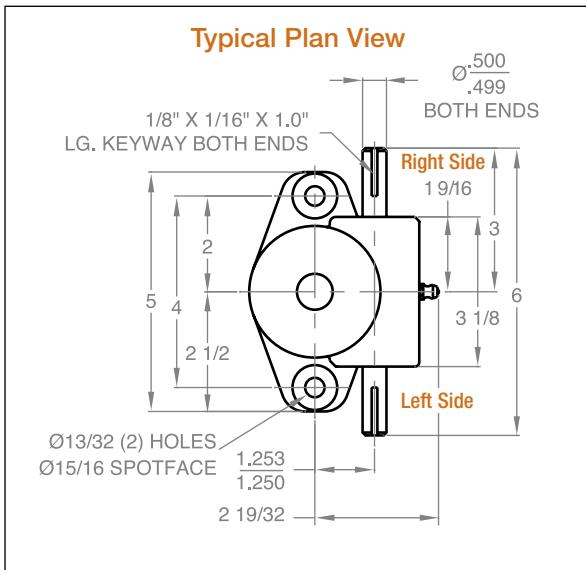
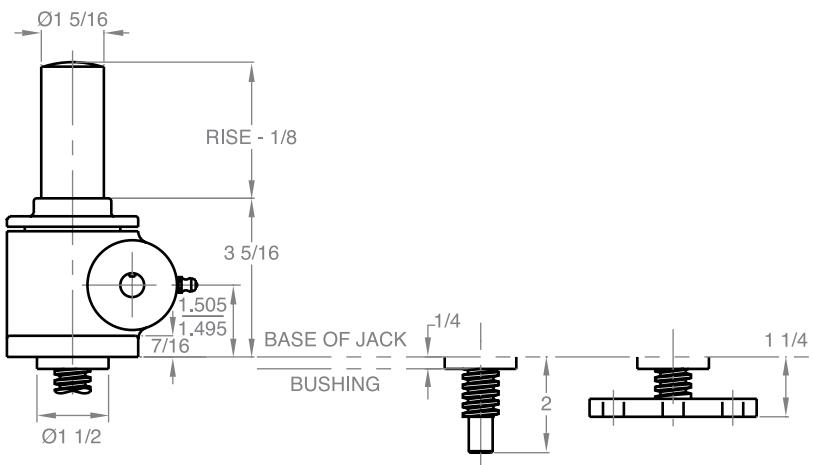
Upright



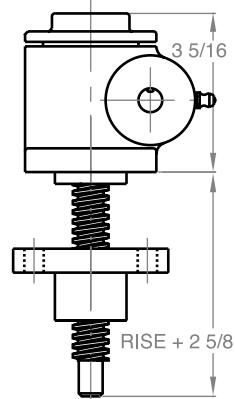
Upright traveling nut



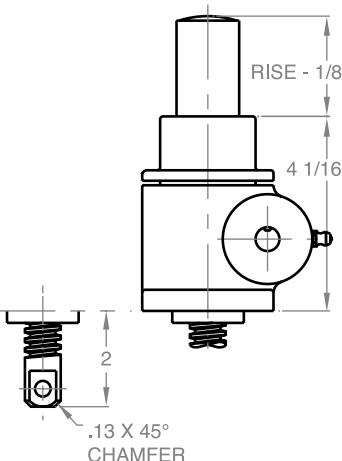
Inverted



Inverted traveling nut



Inverted keyed



Material Notes: Housing and protection tube are aluminum. Lifting screw is cold drawn steel (CDS). Input shaft (worm) is CDS.

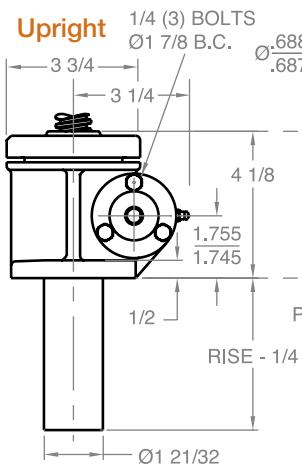
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

2 TON - 1" SCREW

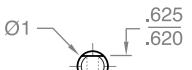
WJT 62 / DWJ 62
WJT 122 / DWJ 122
WJT 242 / DWJ 242
WJT 252

Upright



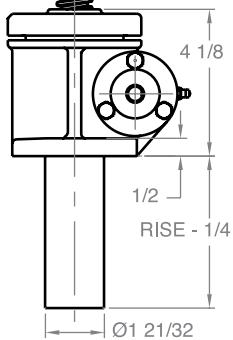
Ø13/32 (4) HOLES
ON Ø3 B.C.

5/8-18 UNF 2A

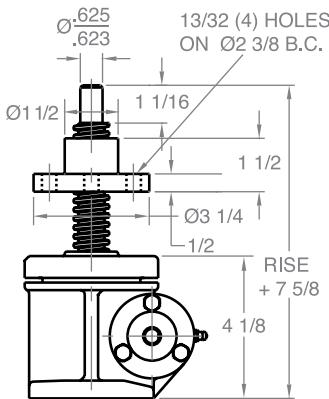


END CONDITIONS
(SHOWN AT MINIMUM
CLOSED DIMENSIONS)

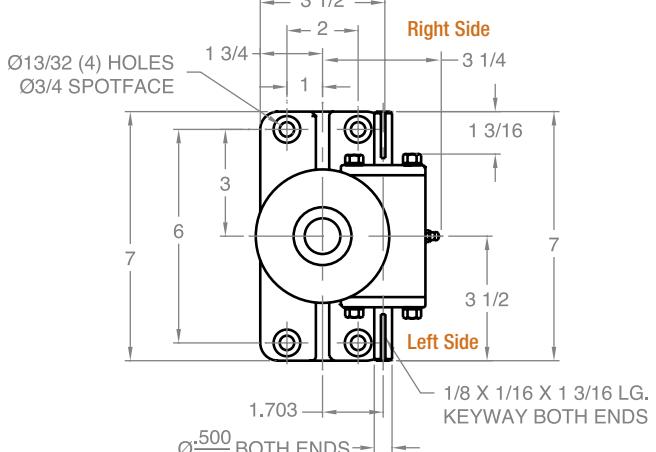
Upright keyed



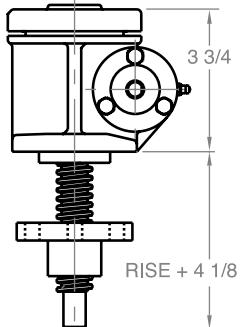
Upright traveling nut



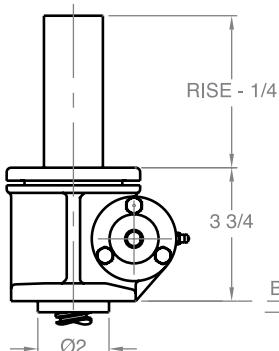
Typical Plan View



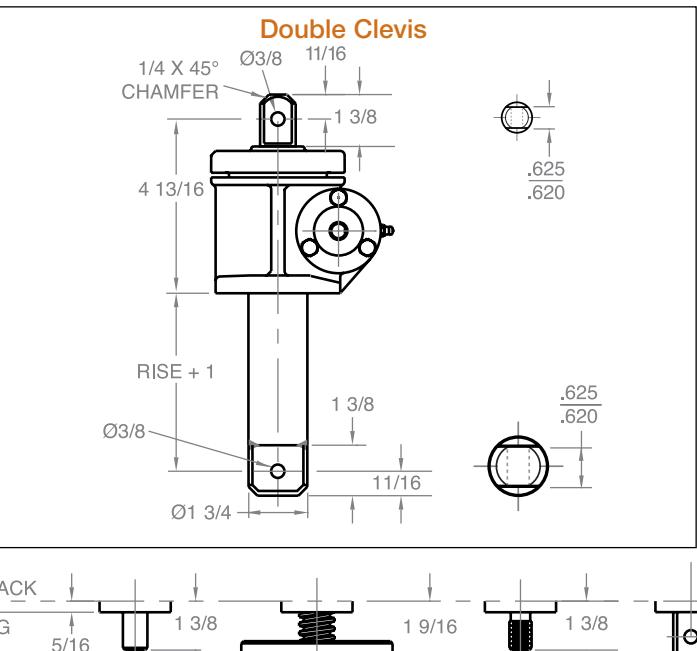
Inverted traveling nut



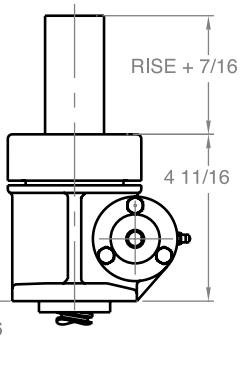
Inverted



Double Clevis



Inverted keyed



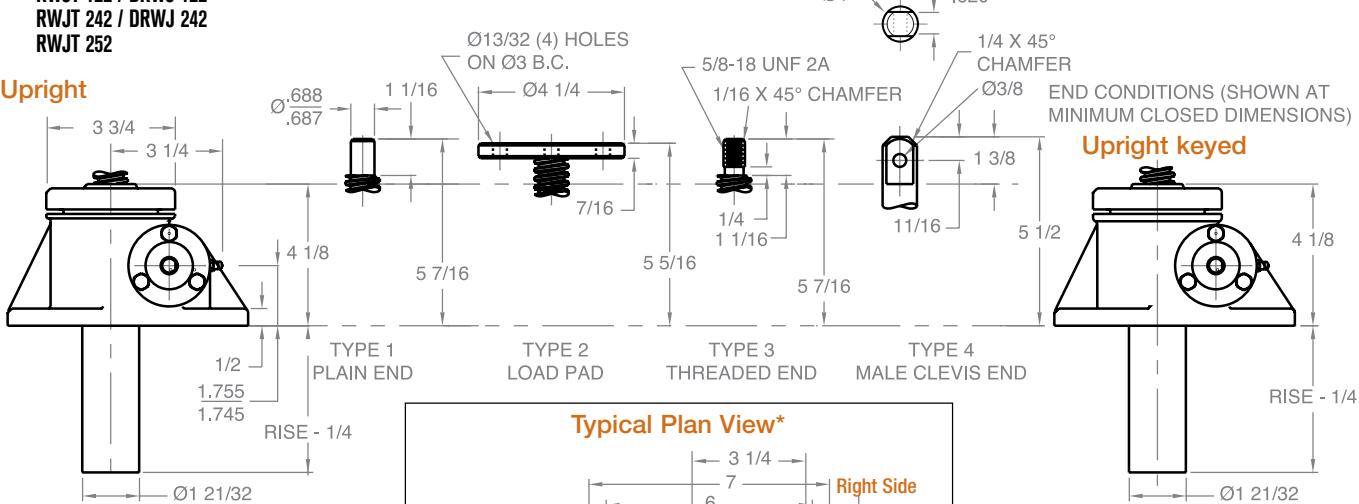
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

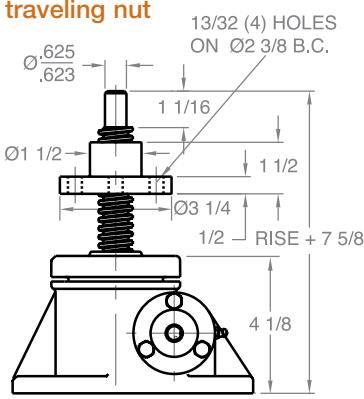
2 TON REVERSE BASE - 1" SCREW

RWJT 62 / DRWJ 62
 RWJT 122 / DRWJ 122
 RWJT 242 / DRWJ 242
 RWJT 252

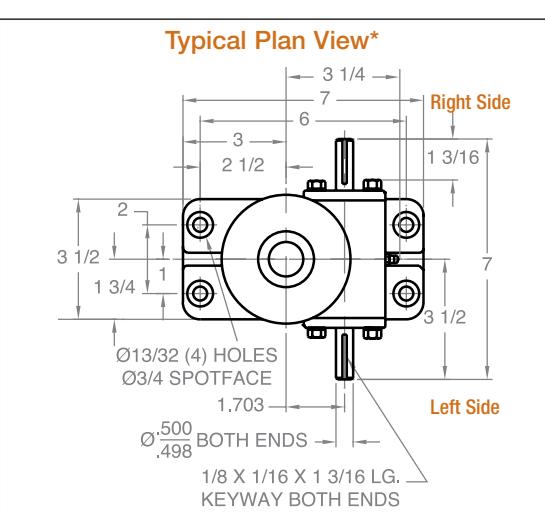
Upright



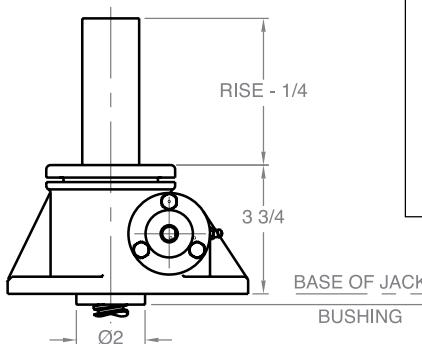
Upright traveling nut



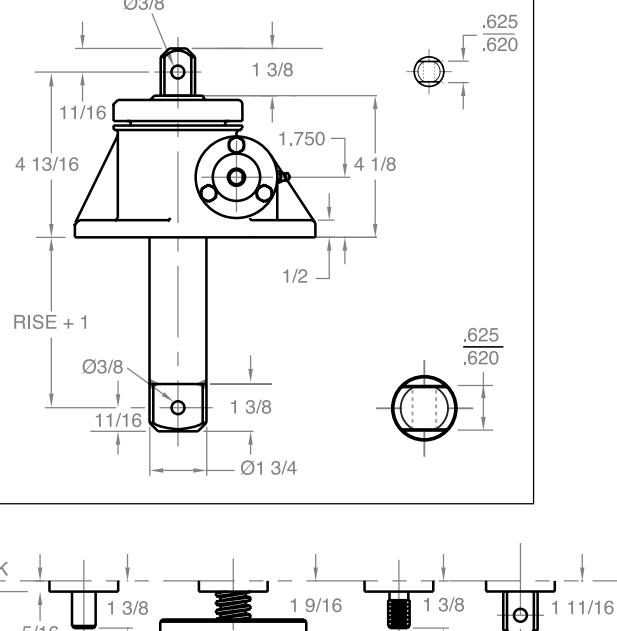
Typical Plan View*



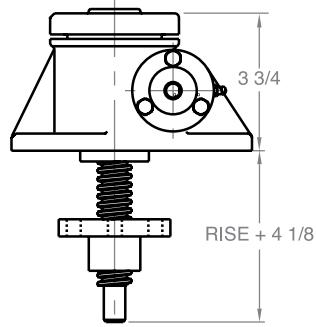
Inverted



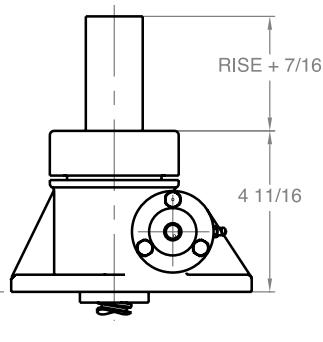
Double Clevis



Inverted traveling nut



Inverted keyed



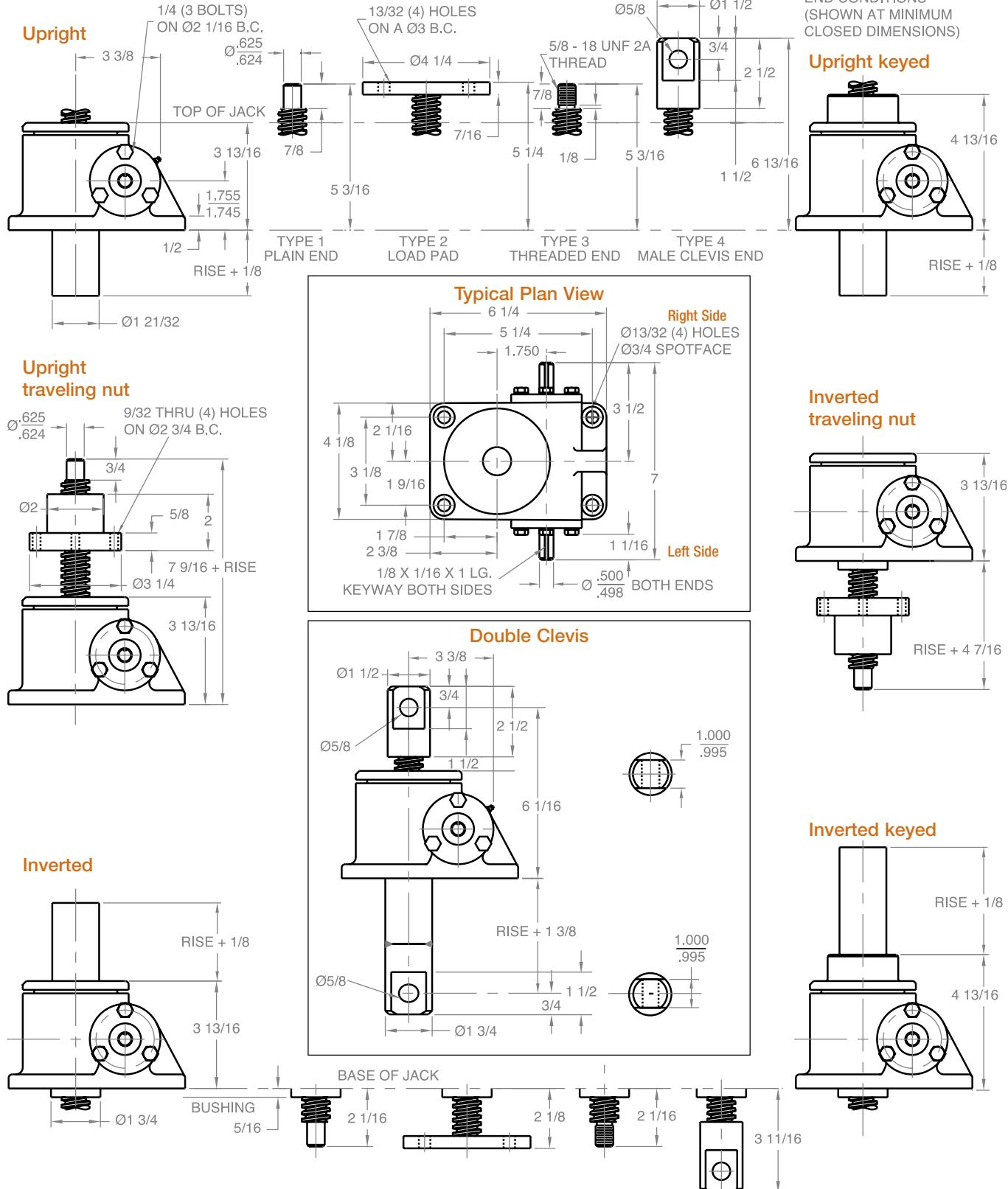
*Ideal for DD motor mounts or for large diameter couplings.

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

3 TON - 1" SCREW

WJ 63 / WJ 123 / WJ 243 / WJ 253
DWJ 63 / DWJ 123 / DWJ 243



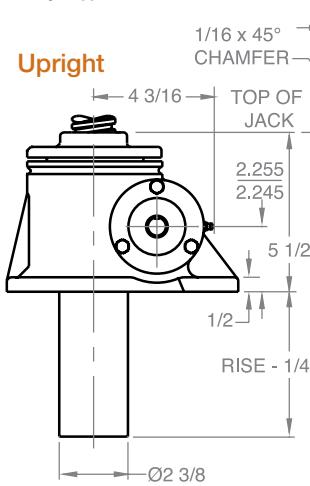
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice. Minimum closed dimensions do not apply to upright keyed jacks.

MACHINE SCREW JACKS

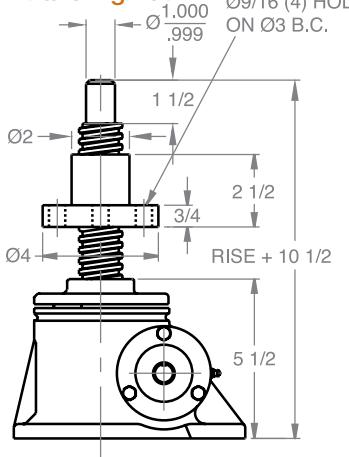
5 TON - 1 1/2" SCREW

WJT 65 / DWJ 65
WJT 125 / DWJ 125
WJT 245 / DWJ 245
WJT 255

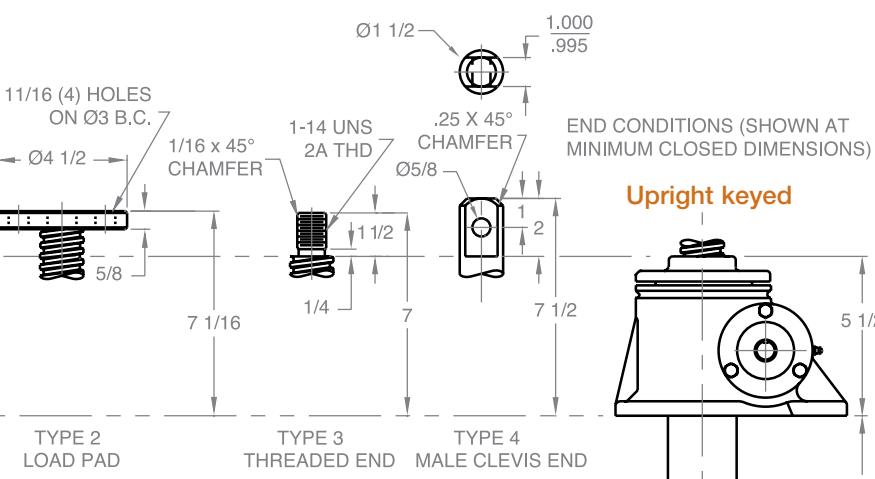
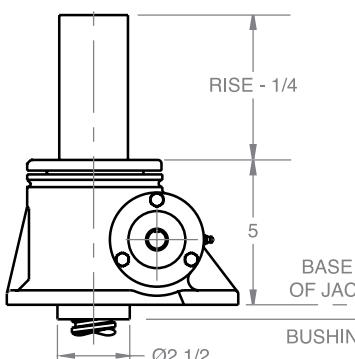
Upright



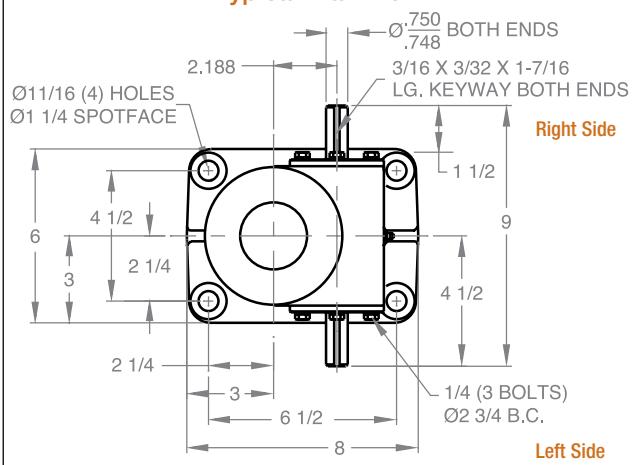
Upright traveling nut



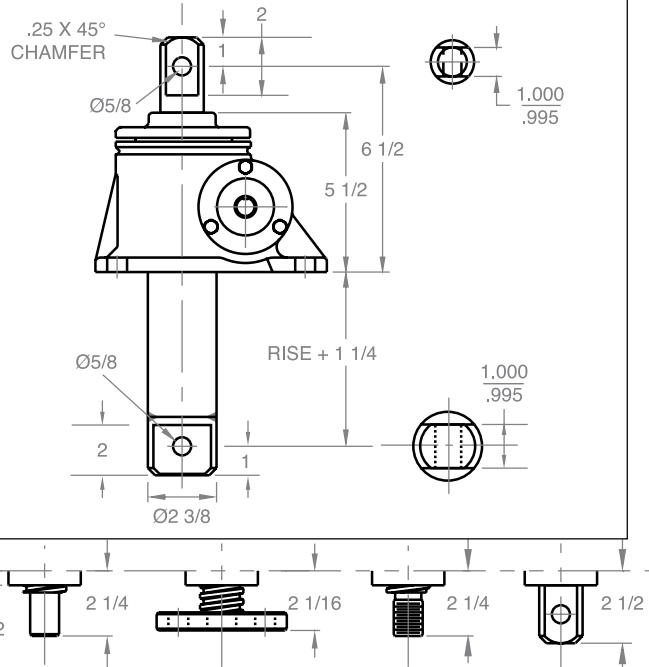
Inverted



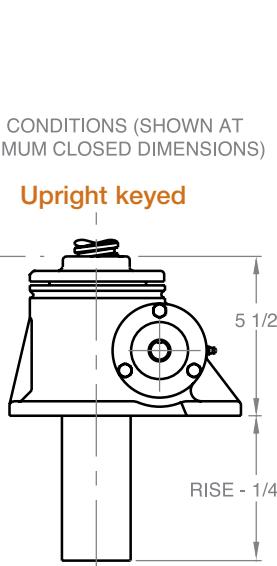
Typical Plan View



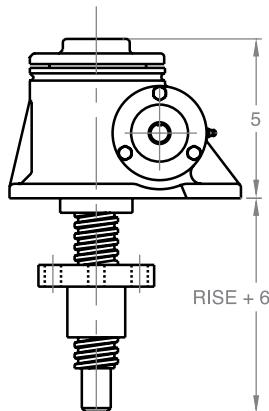
Double Clevis



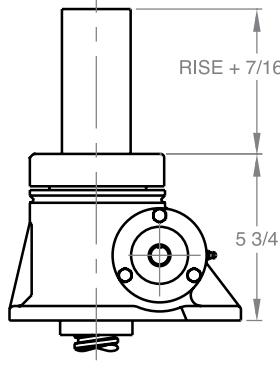
Upright keyed



Inverted traveling nut



Inverted keyed

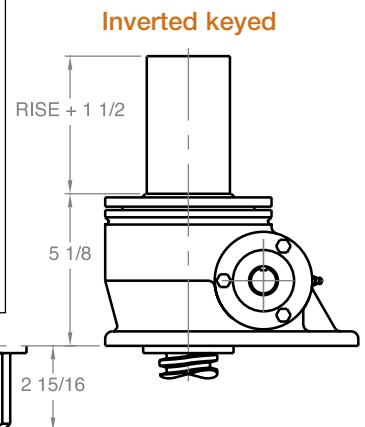
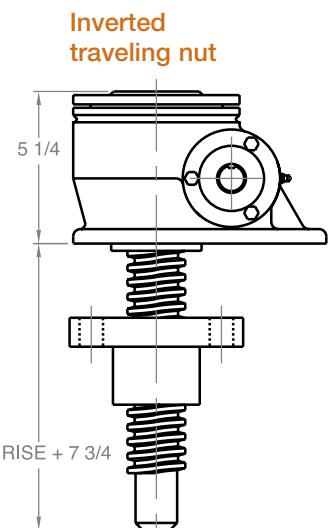
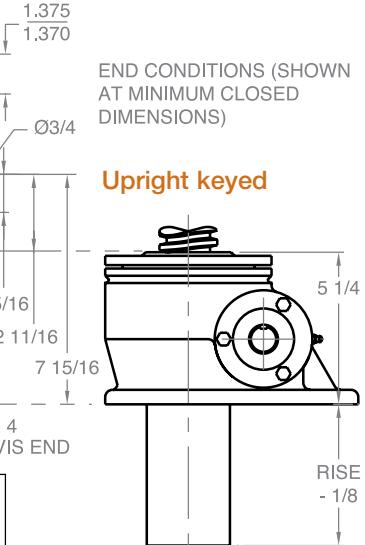
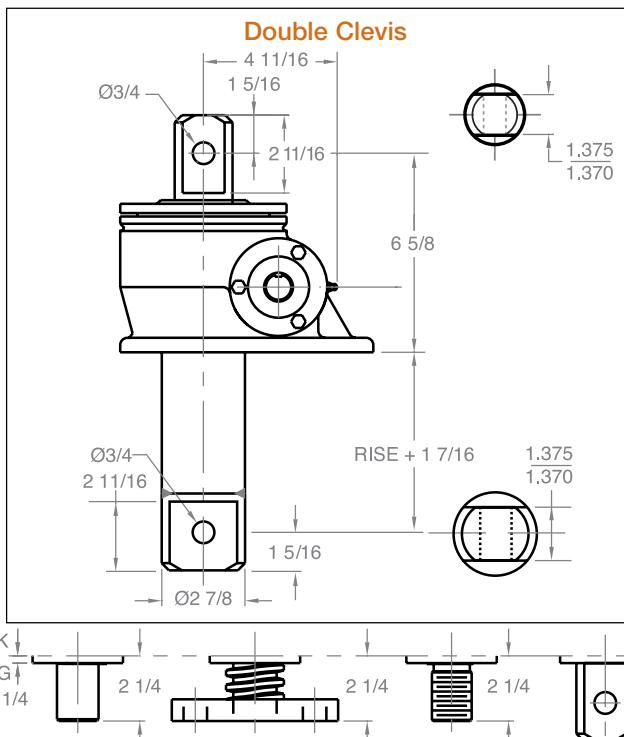
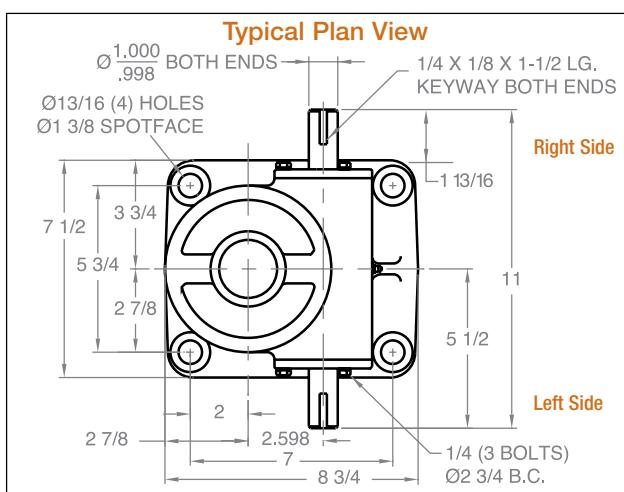
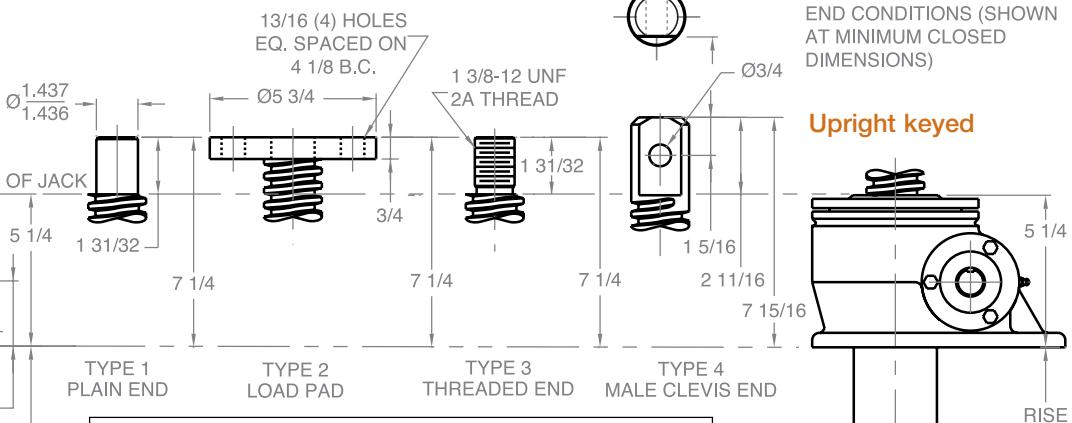
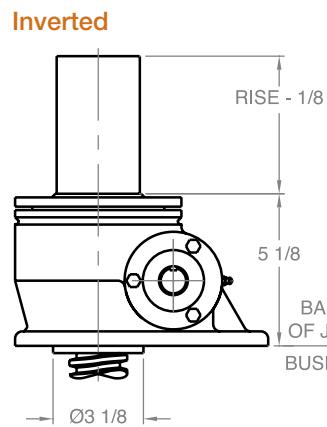
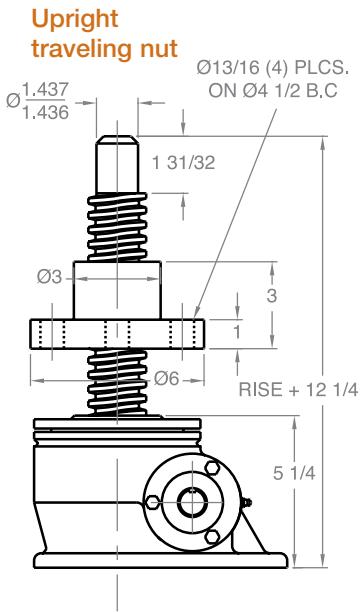
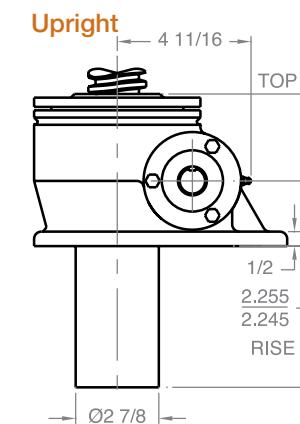


Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

10 TON - 2" SCREW

WJ 810 / DWJ 810
WJ 2410 / DWJ 2410
WJ 2510



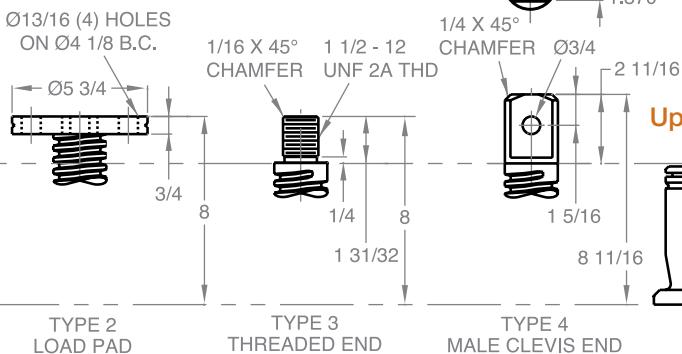
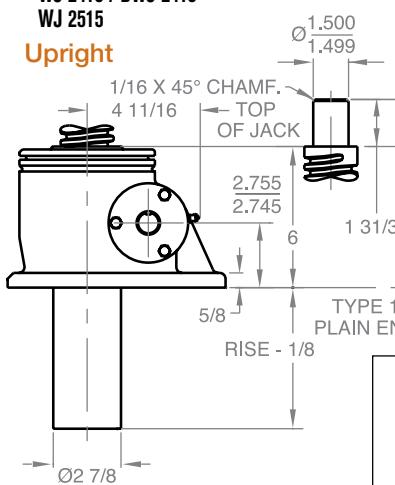
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

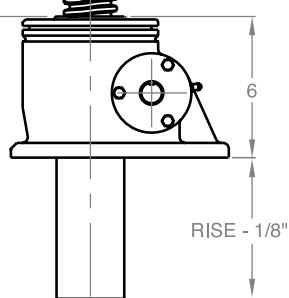
15 TON - 2 1/4" SCREW

WJ 815 / DWJ 815
WJ 2415 / DWJ 2415
WJ 2515

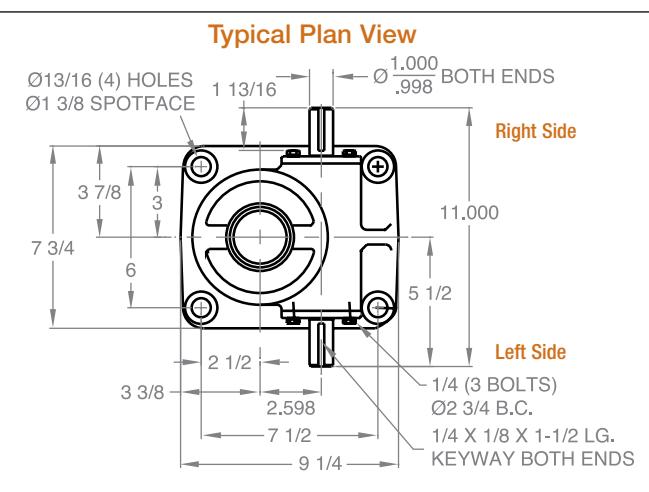
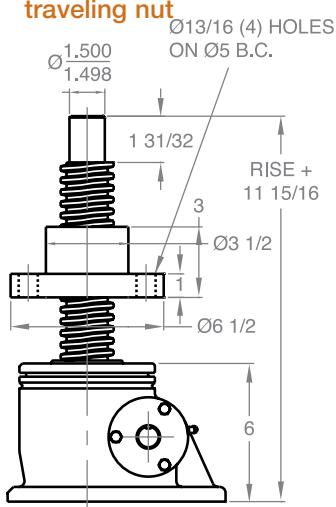
Upright



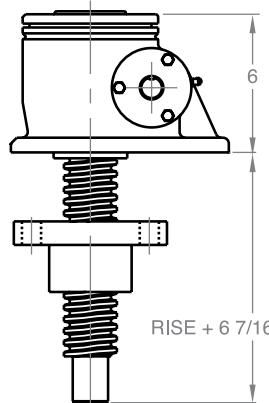
Upright keyed



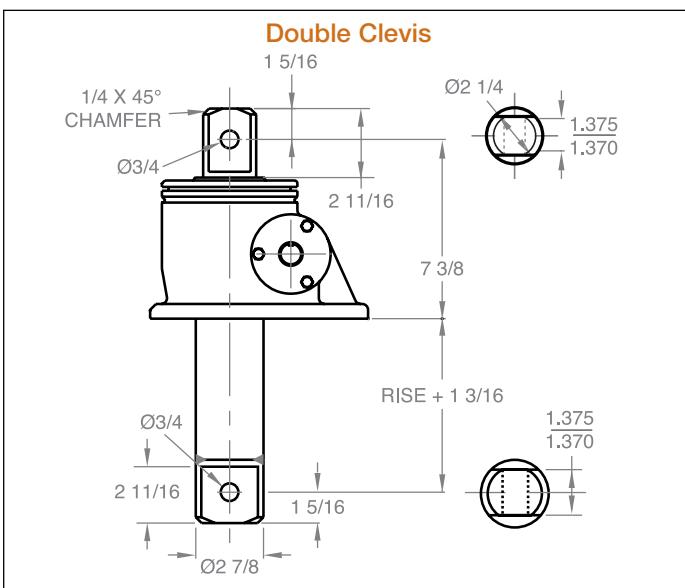
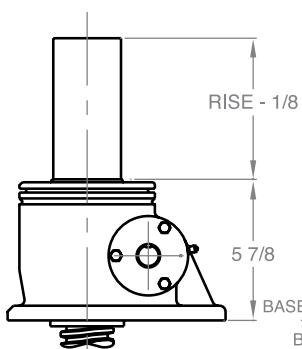
Upright traveling nut



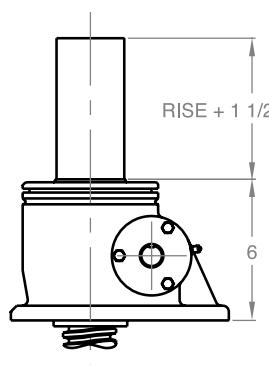
Inverted traveling nut



Inverted



Inverted keyed

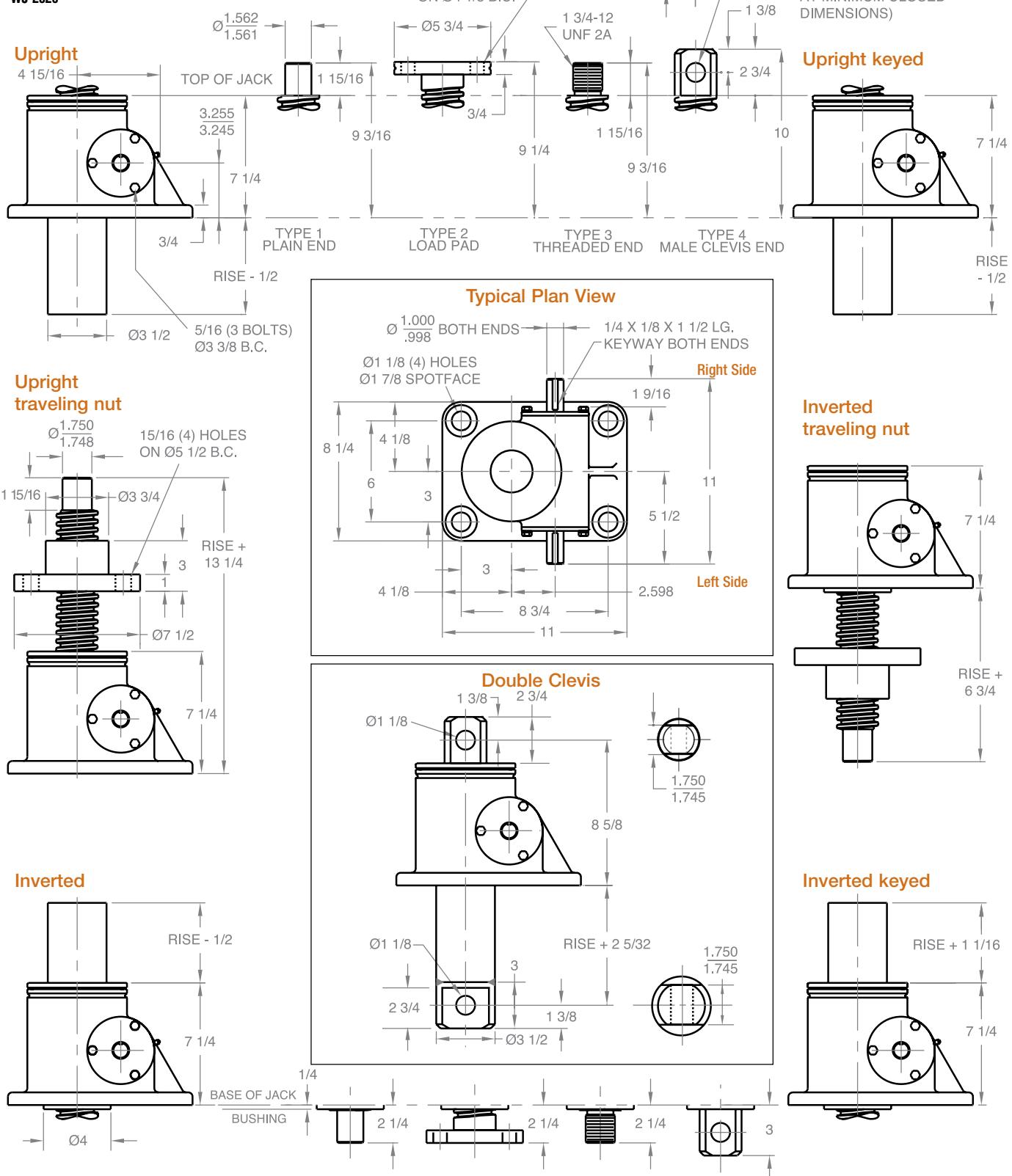


Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

20 TON - 2 1/2" SCREW

WJ 820 / DWJ 820
WJ 2420 / DWJ 2420
WJ 2520

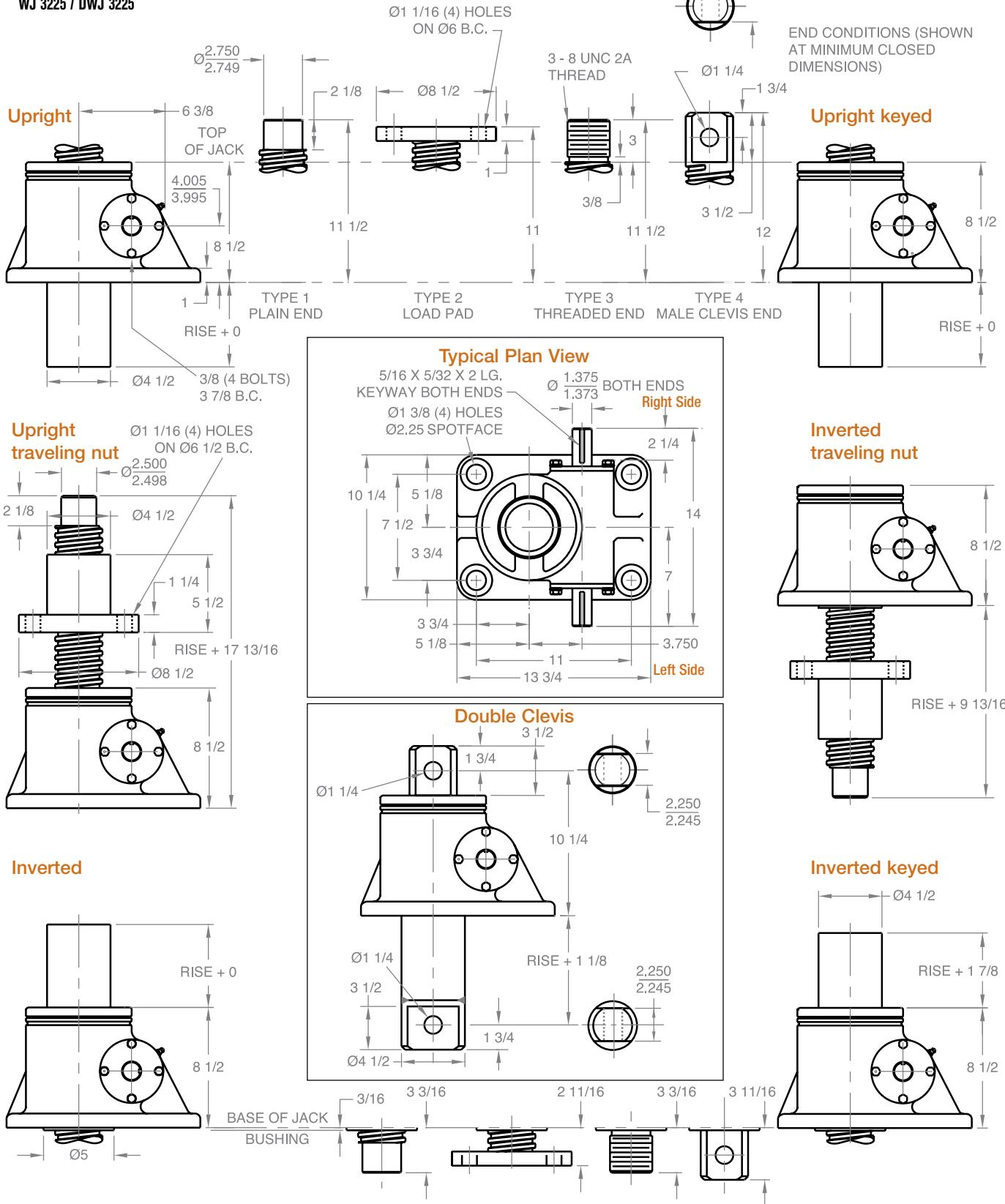


Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

25 TON - 3 3/8" SCREW

WJ 1125 / DWJ 1125
WJ 3225 / DWJ 3225

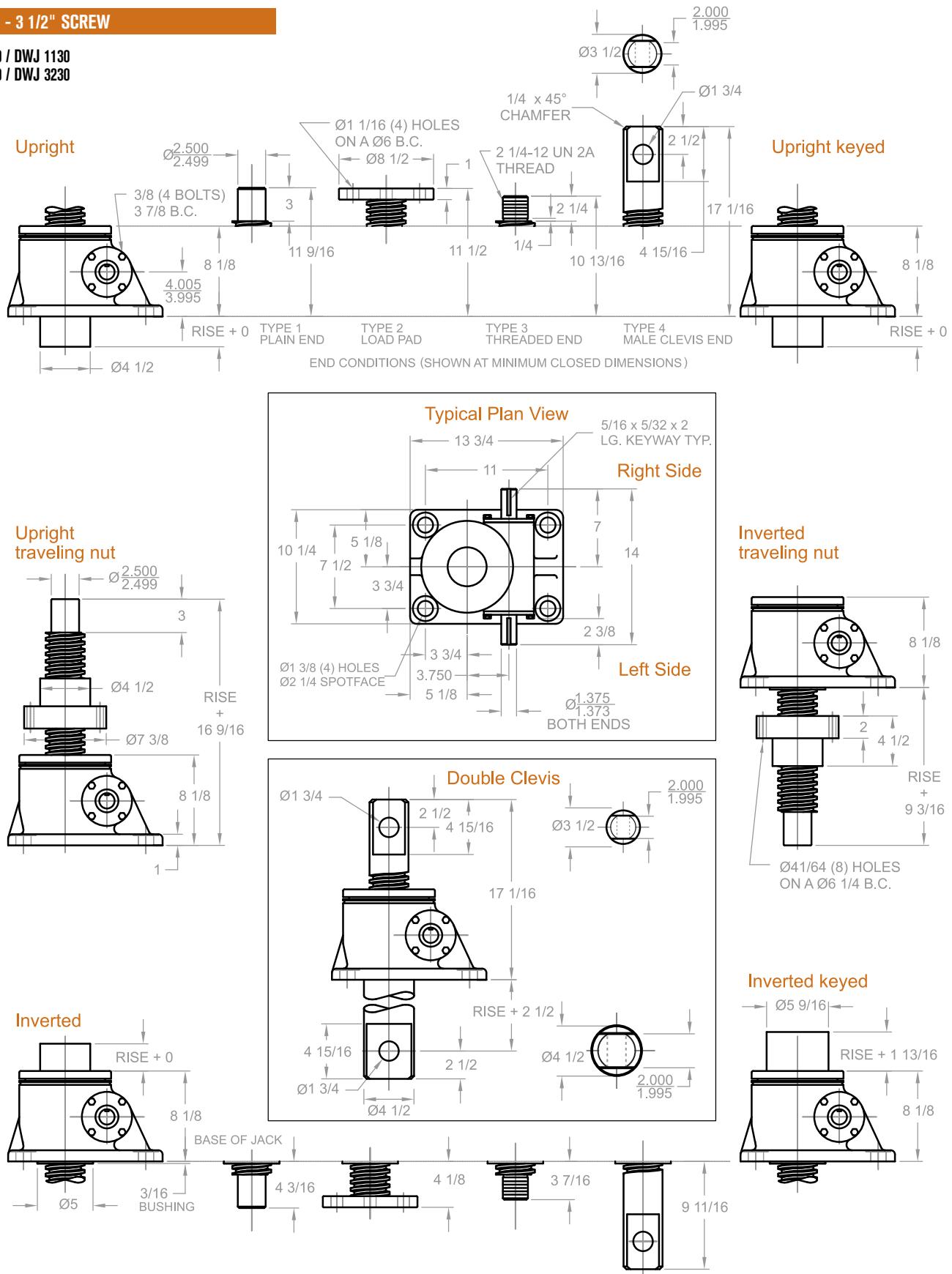


Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

30 TON - 3 1/2" SCREW

WJ 1130 / DWJ 1130
WJ 3230 / DWJ 3230

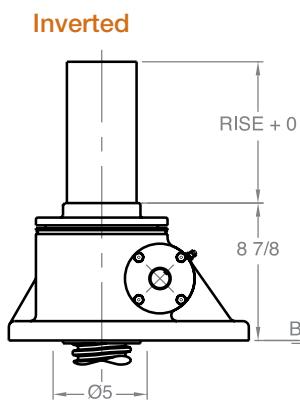
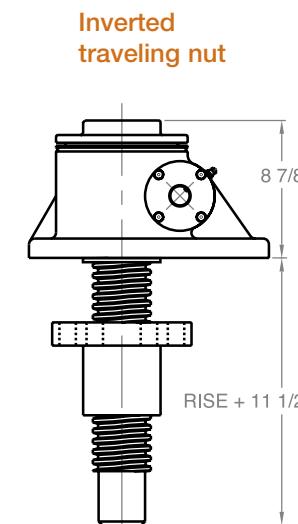
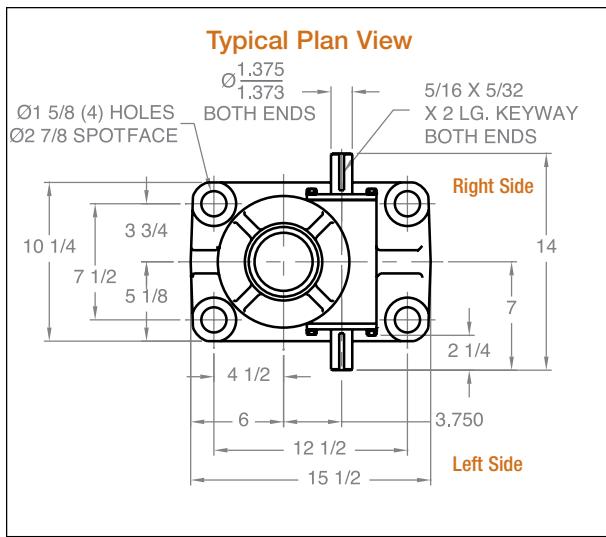
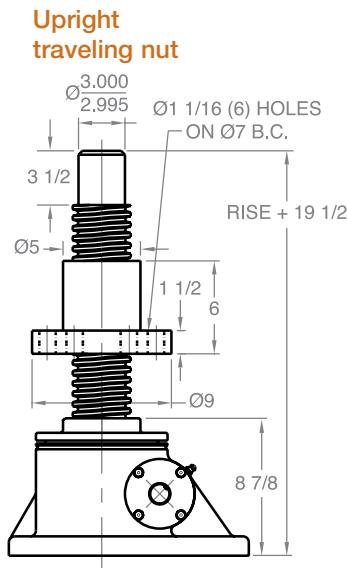
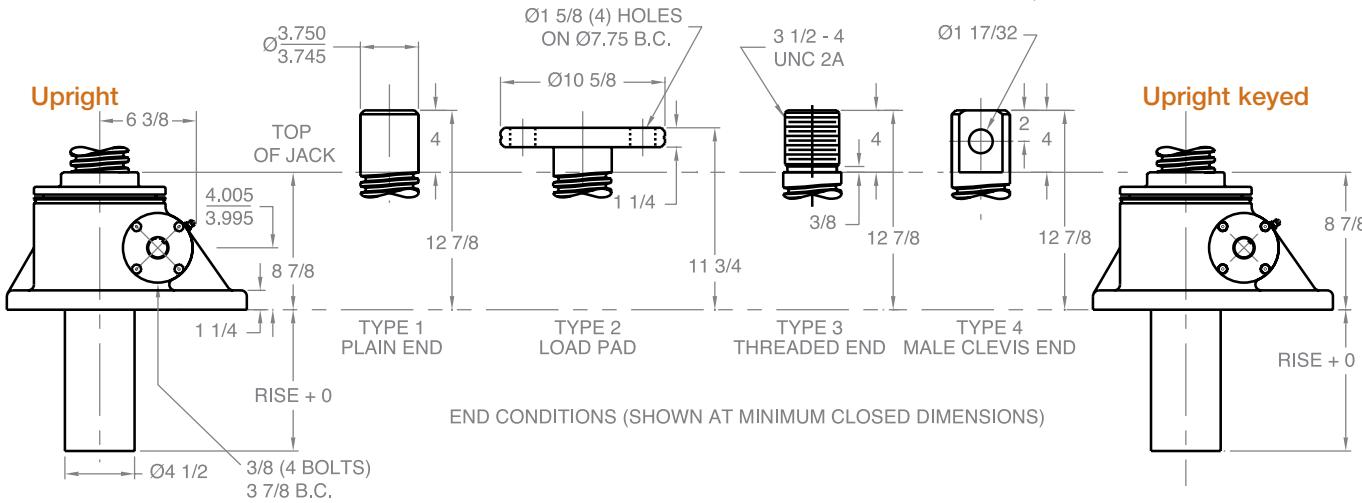


Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

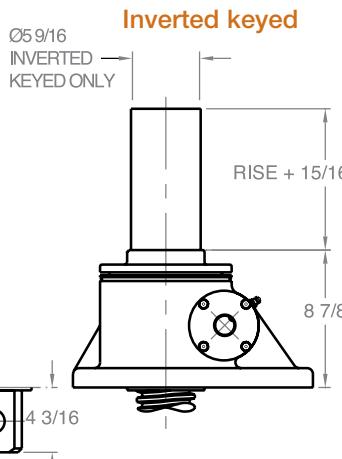
MACHINE SCREW JACKS

35 TON - 3 3/4" SCREW

WJ 1135
WJ 3235



FOR DOUBLE CLEVIS DESIGN
CONTACT JOYCE/DAYTON

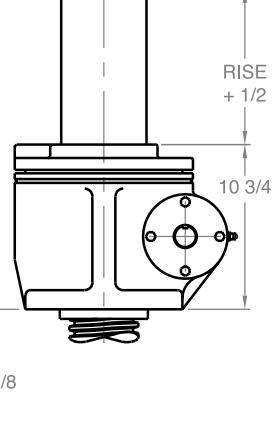
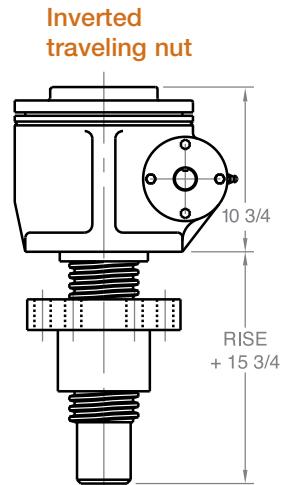
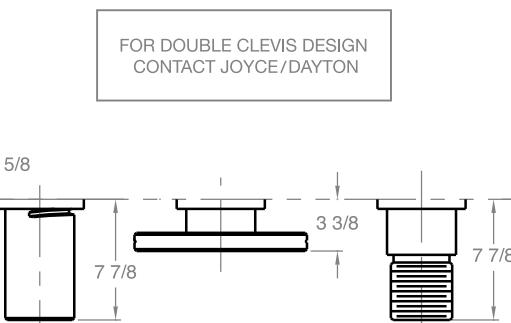
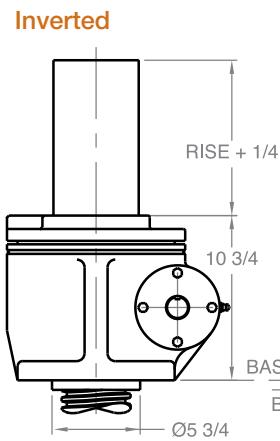
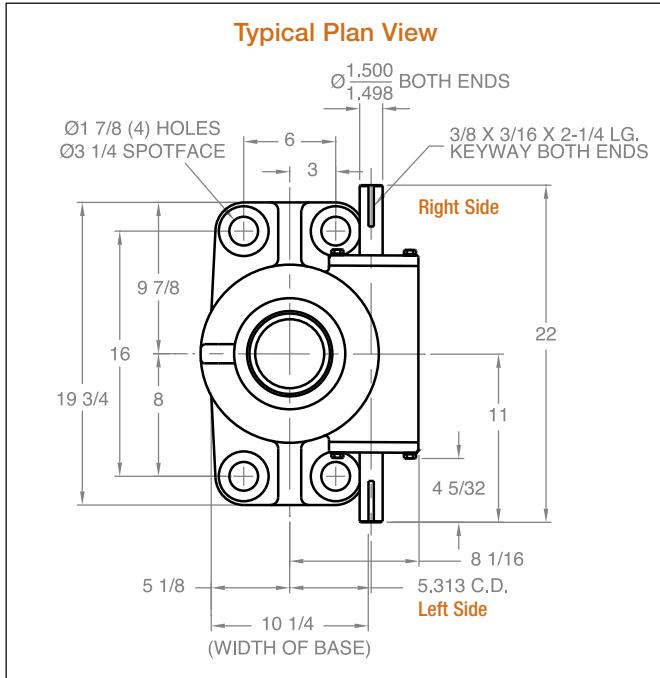
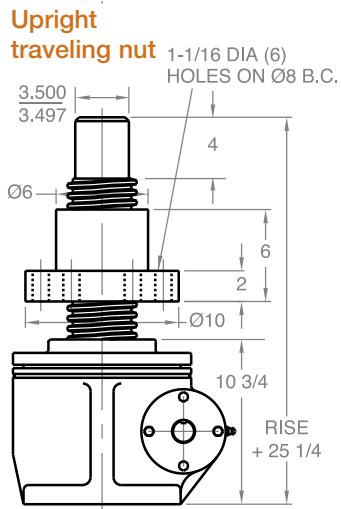
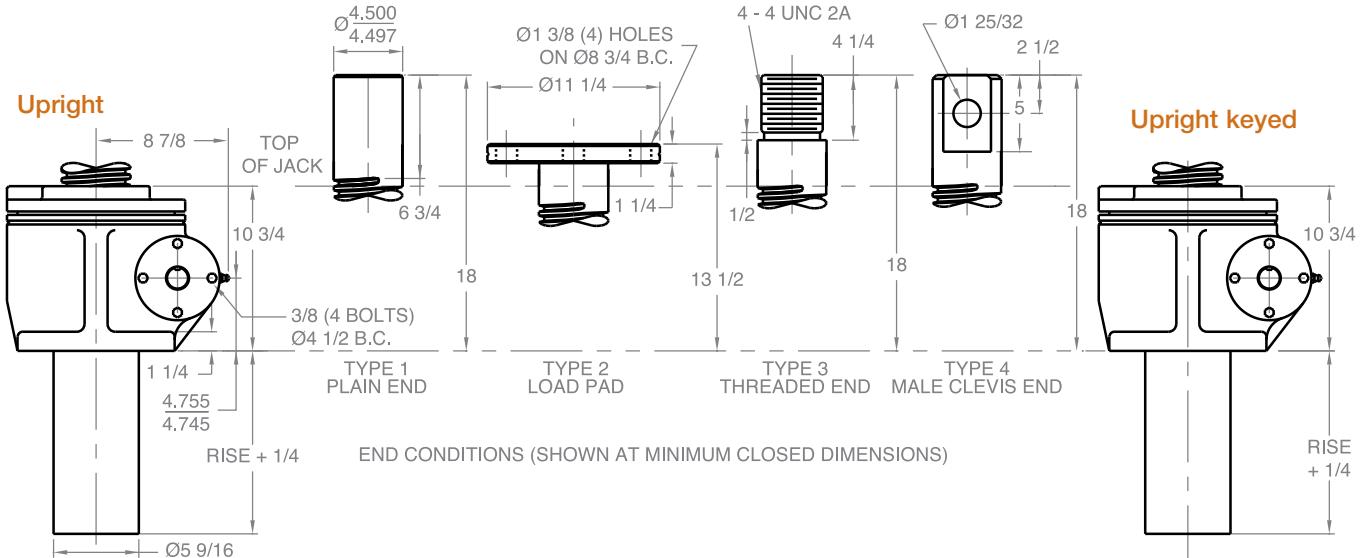


Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

50 TON - 4 1/2" SCREW

WJT 1150
WJT 3250



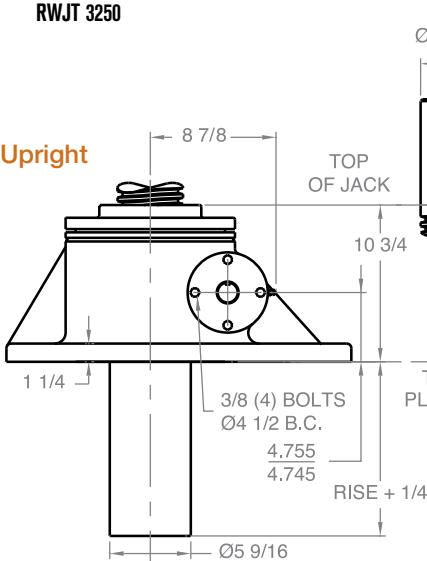
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

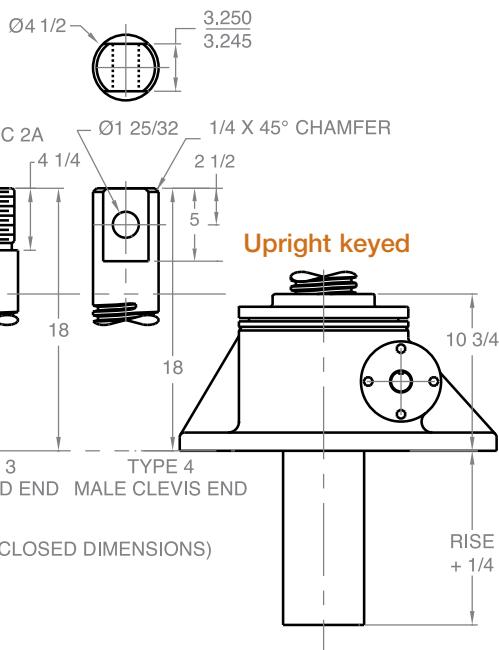
50 TON REVERSE BASE - 4 1/2" SCREW

RWJT 1150
RWJT 3250

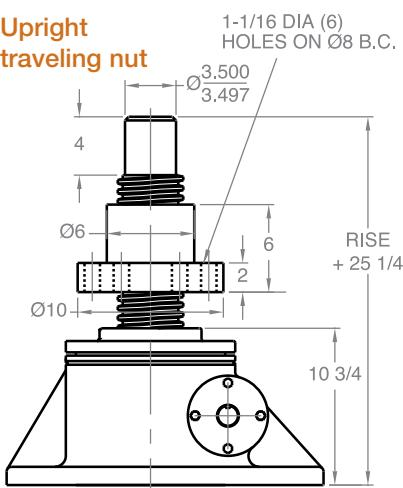
Upright



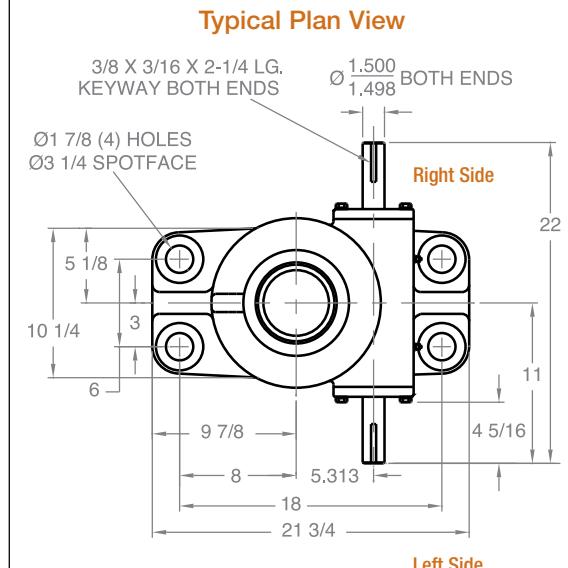
Upright keyed



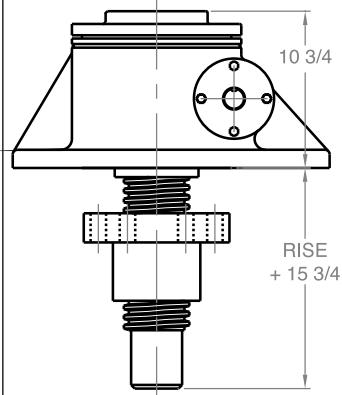
Upright traveling nut



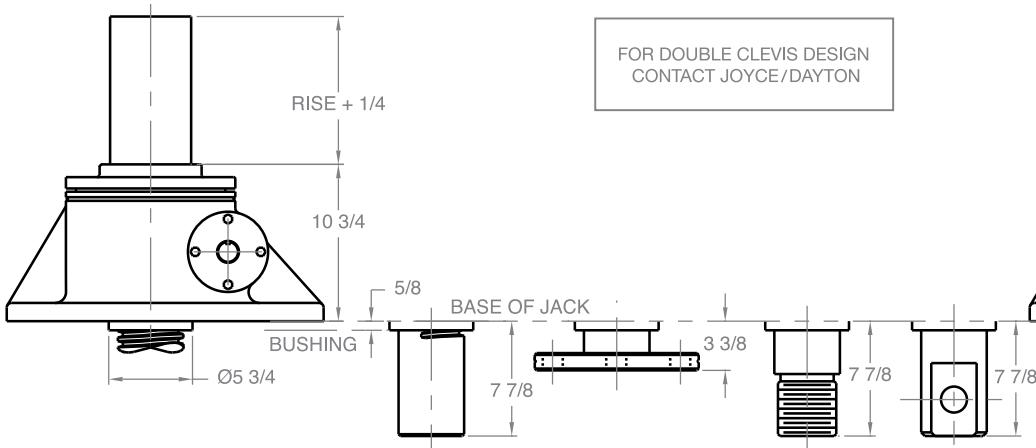
Typical Plan View



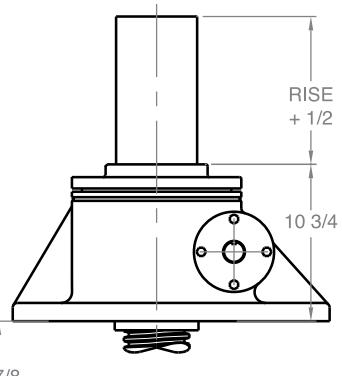
Inverted traveling nut



Inverted



Inverted keyed

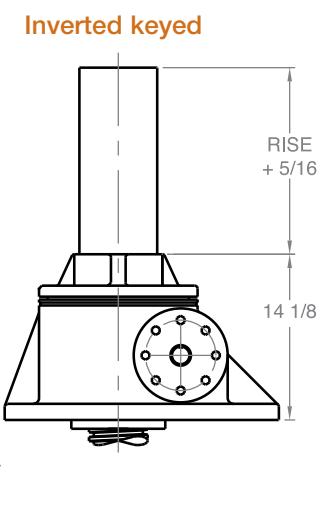
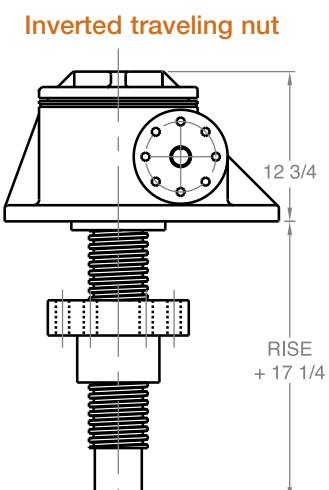
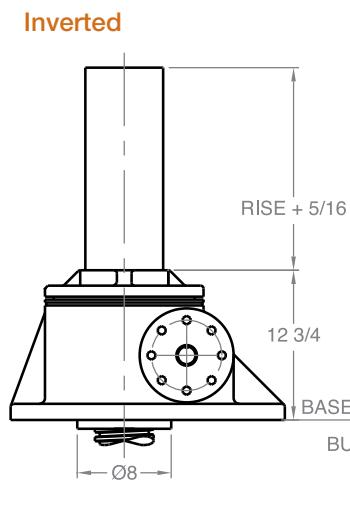
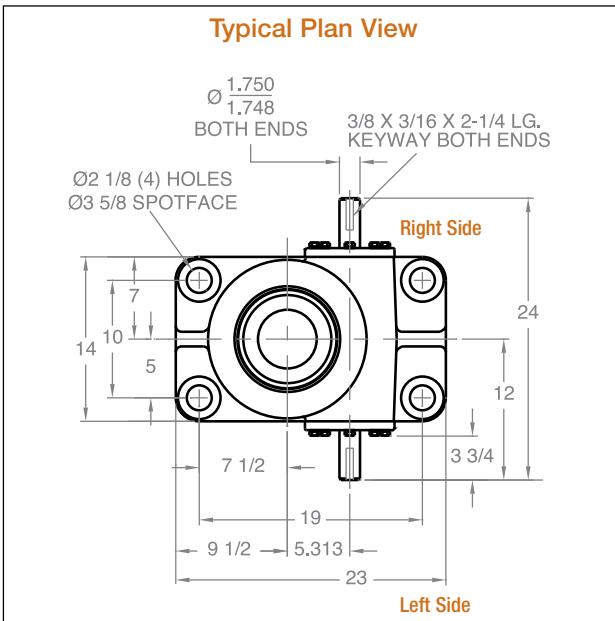
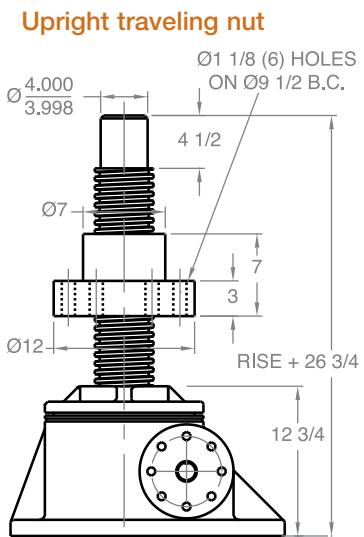
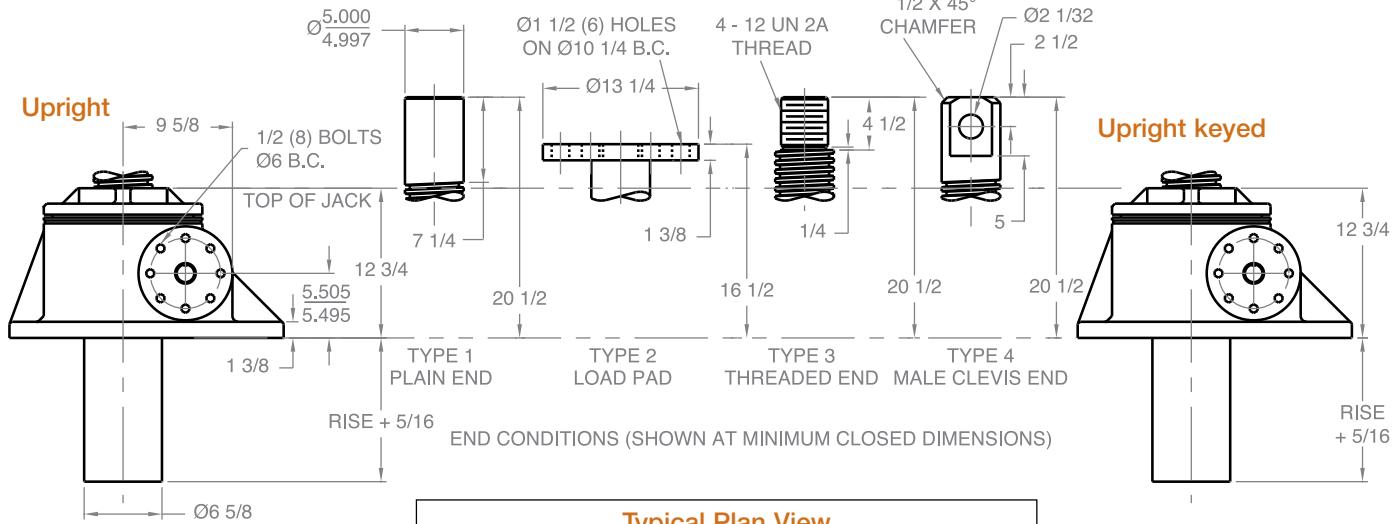


Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

75 TON - 5" SCREW

WJ 1175
WJ 3275

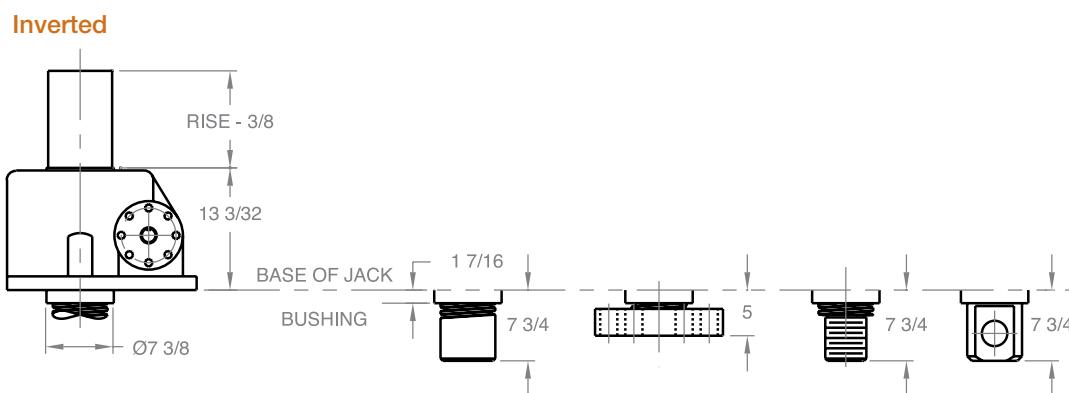
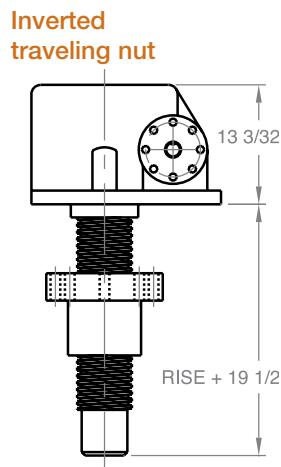
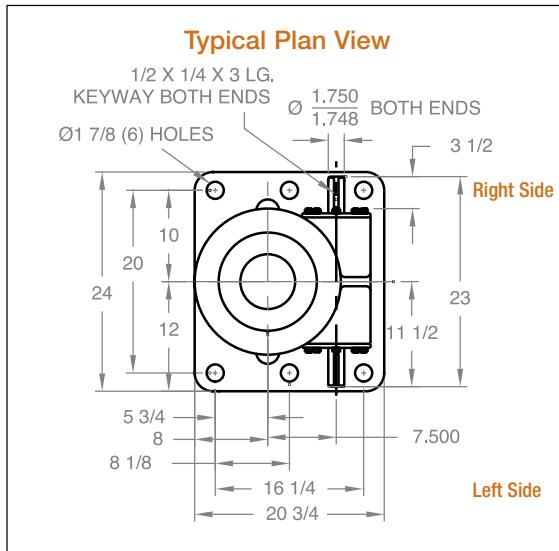
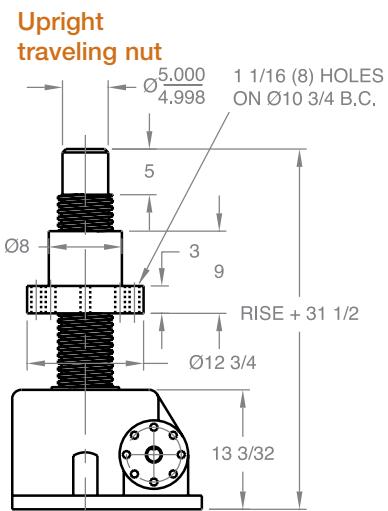
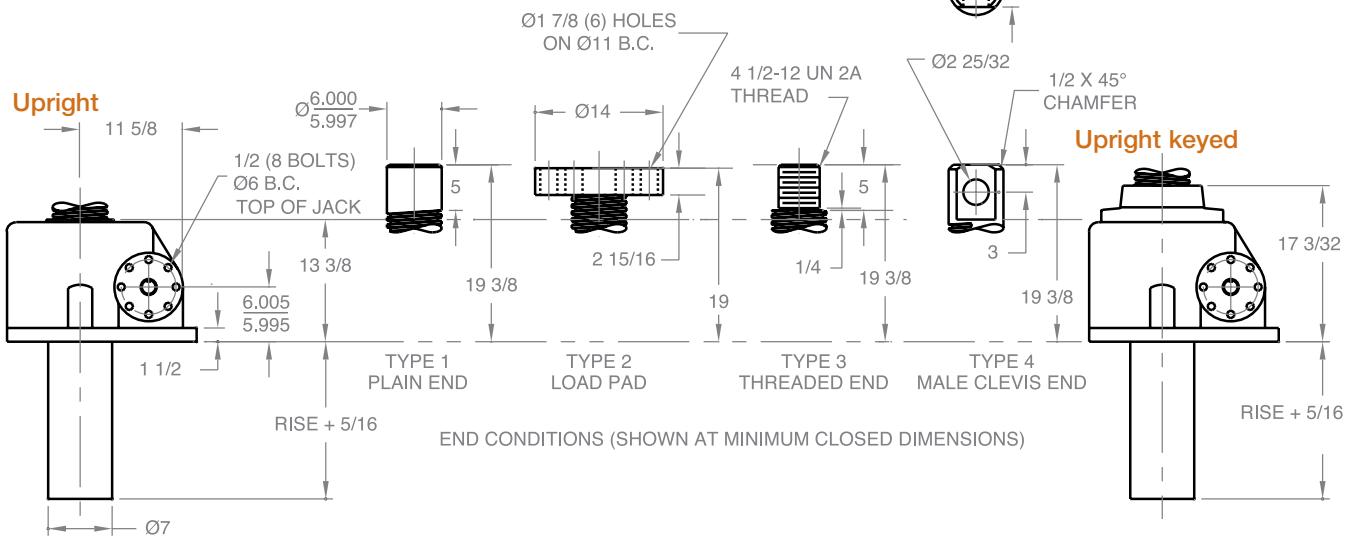


Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW JACKS

100 TON - 6" SCREW

**WJ 12100
WJ 36100**

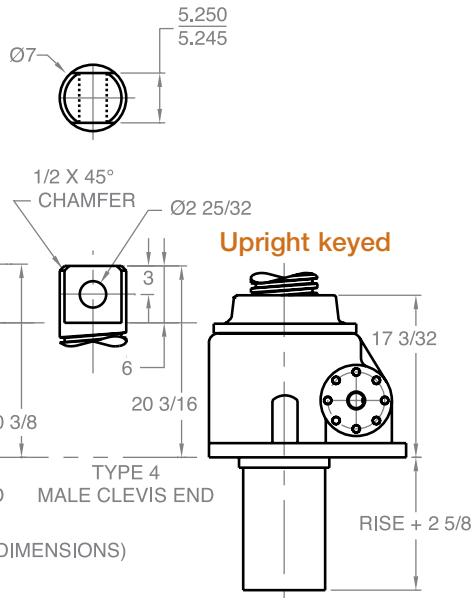


Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice. Minimum closed dimensions do not apply to upright keyed jacks.

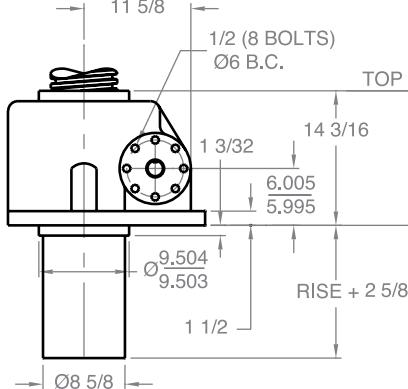
MACHINE SCREW JACKS

150 TON - 7" SCREW

**WJ 12150
WJ 36150**



Upright



Ø1 7/8 (6) HOLES

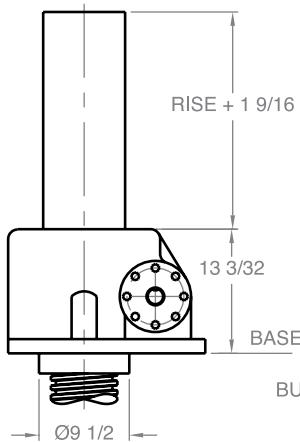
5-12 UN 2A

Ø7 5.245

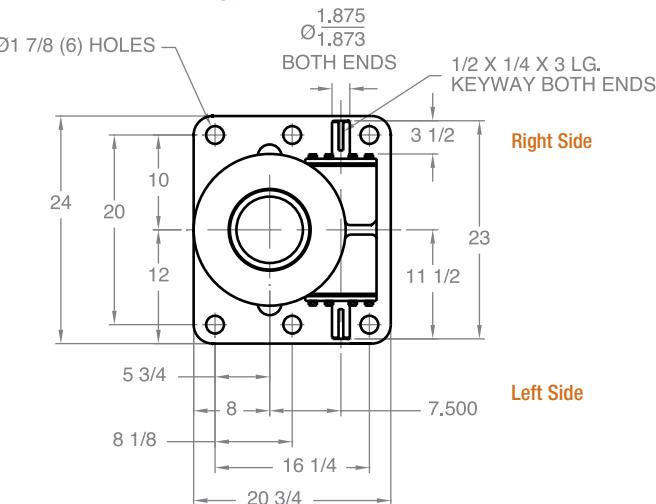
5/52

END CONDITIONS (SHOWN AT MINIMUM CLOSED DIMENSIONS)

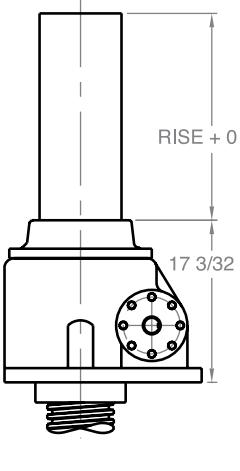
Inverted



Typical Plan View



Inverted keyed



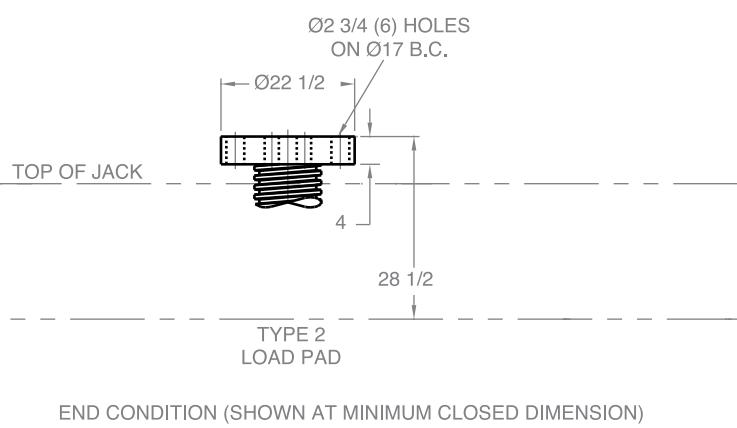
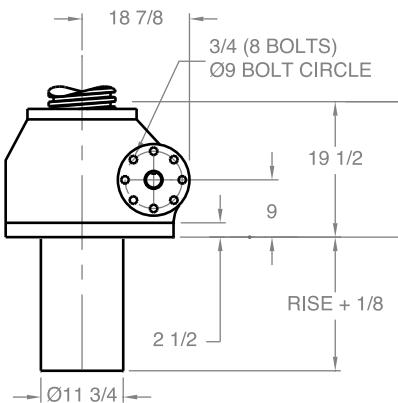
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice. Minimum closed dimensions do not apply to upright keyed jacks.

MACHINE SCREW JACKS

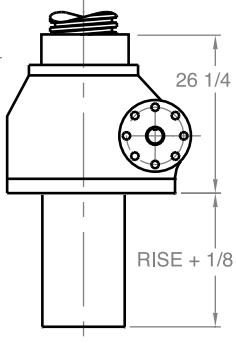
250 TON - 9" SCREW

WJ 50250

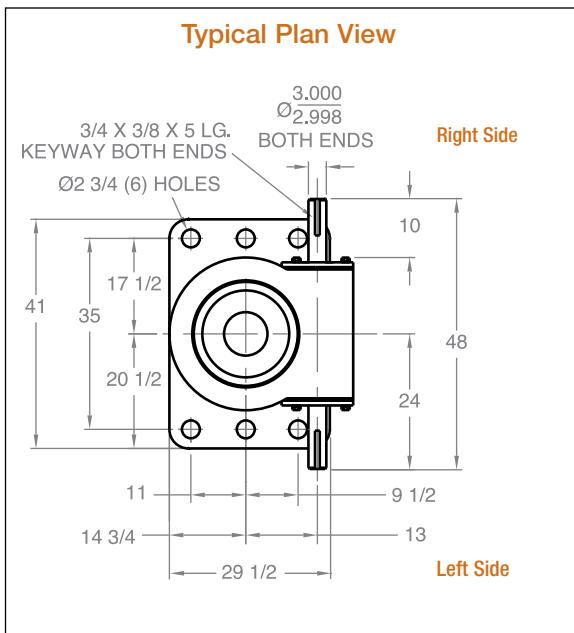
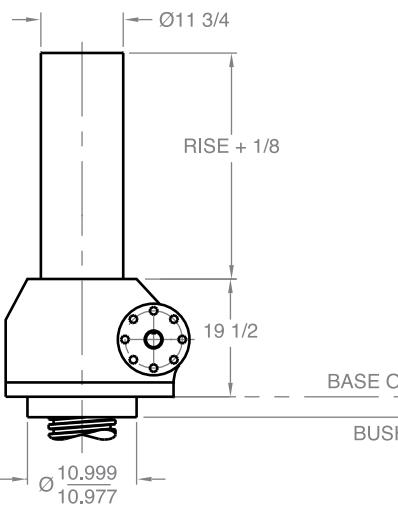
Upright



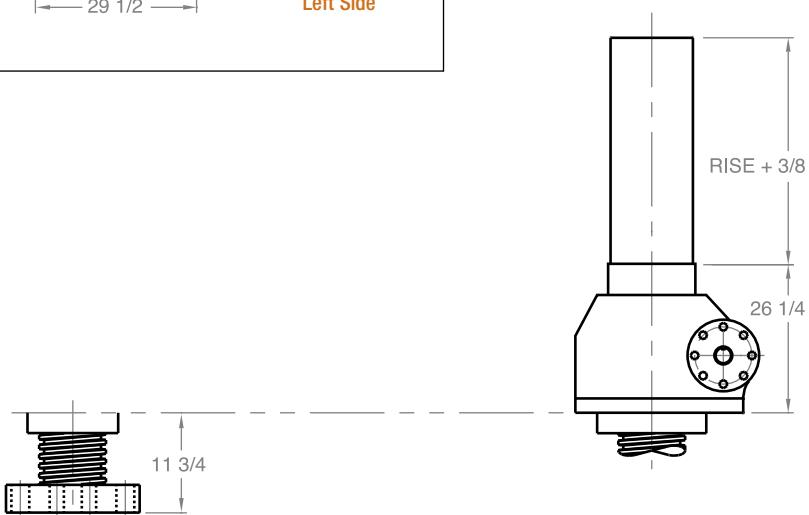
Upright keyed



Inverted



Inverted keyed



Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice. Minimum closed dimensions do not apply to upright keyed jacks.

MACHINE SCREW ComDRIVEs®



Joyce machine screw ComDRIVEs® combine a machine screw jack, motor and gear reducer into a single compact unit. ComDRIVEs are available in 2-ton through 30-ton capacities. They provide travel speeds up to 35.1 inches per minute. ComDRIVEs with single lead screws (CD) are self-locking; those with double lead screws (DCD) may require a brake motor or external locking device to hold position.

Four standard end conditions are available and ComDRIVEs can be fitted with protective boots. Limit switches, anti-backlash devices, and other options are also available.

ComDRIVE Benefits:

- Can power an entire jacking system.
- Reduces the number of components that must be specified.
- Simplifies design.
- Reduces installation costs with only a single plate needed to mount the jack body.
- Reduces the number of couplings and shafts required in multi-jack systems.
- Standard 230/460 volt, 3-phase, 60 hertz motor included.

ComDRIVEs can be specified without the motor. The reducer flange accepts standard NEMA motor frame sizes.

Joyce/Dayton can customize ComDRIVEs to meet your specifications. Ask about larger size ComDRIVEs.

Joyce/Dayton offers Machine Screw ComDRIVEs in several designs including:

- Translating
- Keyed for non-rotation
- Keyed for traveling nut (KFTN)
- Double clevis
- Trunnion mount

A guide for ordering is on pages 46 and 47.

MACHINE SCREW ComDRIVE[®] ORDERING INFORMATION

Instructions: Select a model number from this chart.

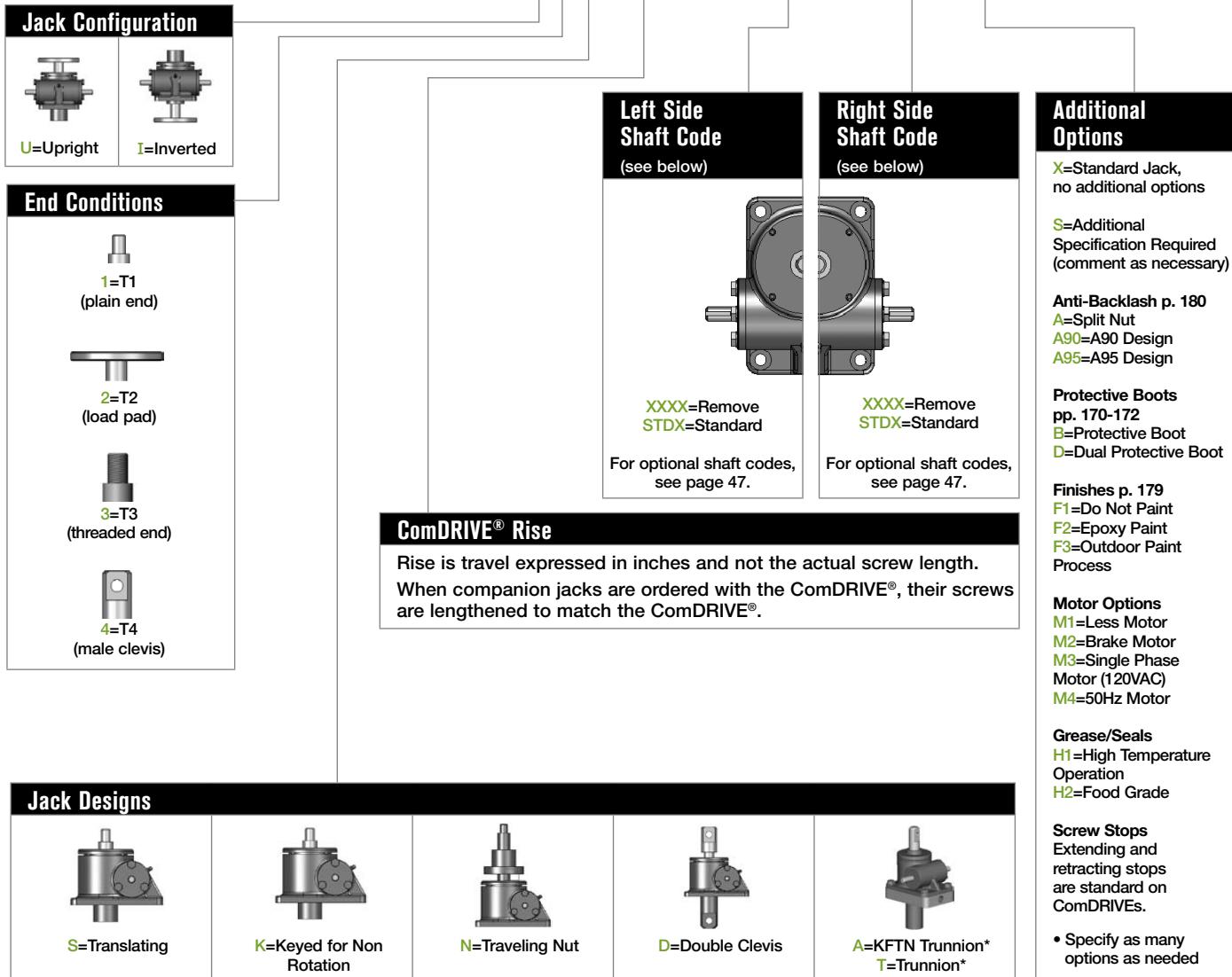
2-Ton	3-Ton	5-Ton	10-Ton	15-Ton	20-Ton	25-Ton	30-Ton
CD62 CD122 CD242	CD63 CD123 CD243	CD65 CD125 CD245	CD810 CD2410	CD815 CD2415	CD820 CD2420	CD1125 CD3225	CD1130 CD3230
DCD62* DCD122* DCD242*	DCD63* DCD123* DCD243*	DCD65* DCD125* DCD245*	DCD810* DCD2410*	DCD815* DCD2415*	DCD820* DCD2420*	DCD1125* DCD3225*	DCD1130* DCD3230*

Important Note: *Not self-locking, may lower under load. Brake motors or external locking systems are recommended.

DCD: Double lead screw.

(For 25:1 ratio, contact Joyce/Dayton.)

Sample Part Number: CD65U2S-18.50-P1AB-STDX-B



*Standard trunnion mounts available on 2-ton through 20-ton jacks. (See page 173)

MACHINE SCREW ComDRIVE[®] 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 ComDRIVE[®].

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

Extending and retracting screw stops are standard on ComDRIVEs. When boots are added to ComDRIVEs, the closed height of the unit may be increased.

Mechanical Counters (p. 177)

CNT0=0.001" Increments

Note: Contact Joyce/Dayton for availability and options.



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



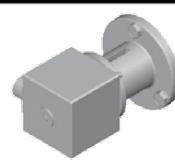
Encoders and Electronic Limit Switches

ENCX=Encoder (p. 178)

ELS2=2 Position Electronic Switch

ELS4=4 Position Electronic Switch

ELS6=6 Position Electronic Switch



ComDRIVE Reducers (pp. 49-57)

Ordering Example: P2AC

Motor code from chart at right

Mounting Positions

Code	P1	P2	P3	P4	Ratio
Left Side Shaft Options					5:1 Code A
Right Side Shaft Options					7.5:1 Code B
					10:1 Code C

Motors

Size	Code
1/4 HP	K
1/3 HP	A
1/2 HP	B
3/4 HP	C
1 HP	D
1-1/2 HP	E
2 HP	F
3 HP	L
5 HP	G
7-1/2 HP	H
10 HP	I
15 HP	J

All standard motors are 3-phase, 208-230/460 VAC or 230/460 VAC. Other motor options are available including international voltages, and single phase AC. Specify the appropriate motor size from the chart above. Refer to the "Additional Options" chart on the preceding page as needed. Brake motors are required for ball screw ComDRIVEs[®]. Contact Joyce/Dayton for other options.

Mechanical Limit Switches (pp. 174-175)

Ordering Example: LA13

Models	
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)

NOTE:
Will always be 0 for LS7 models

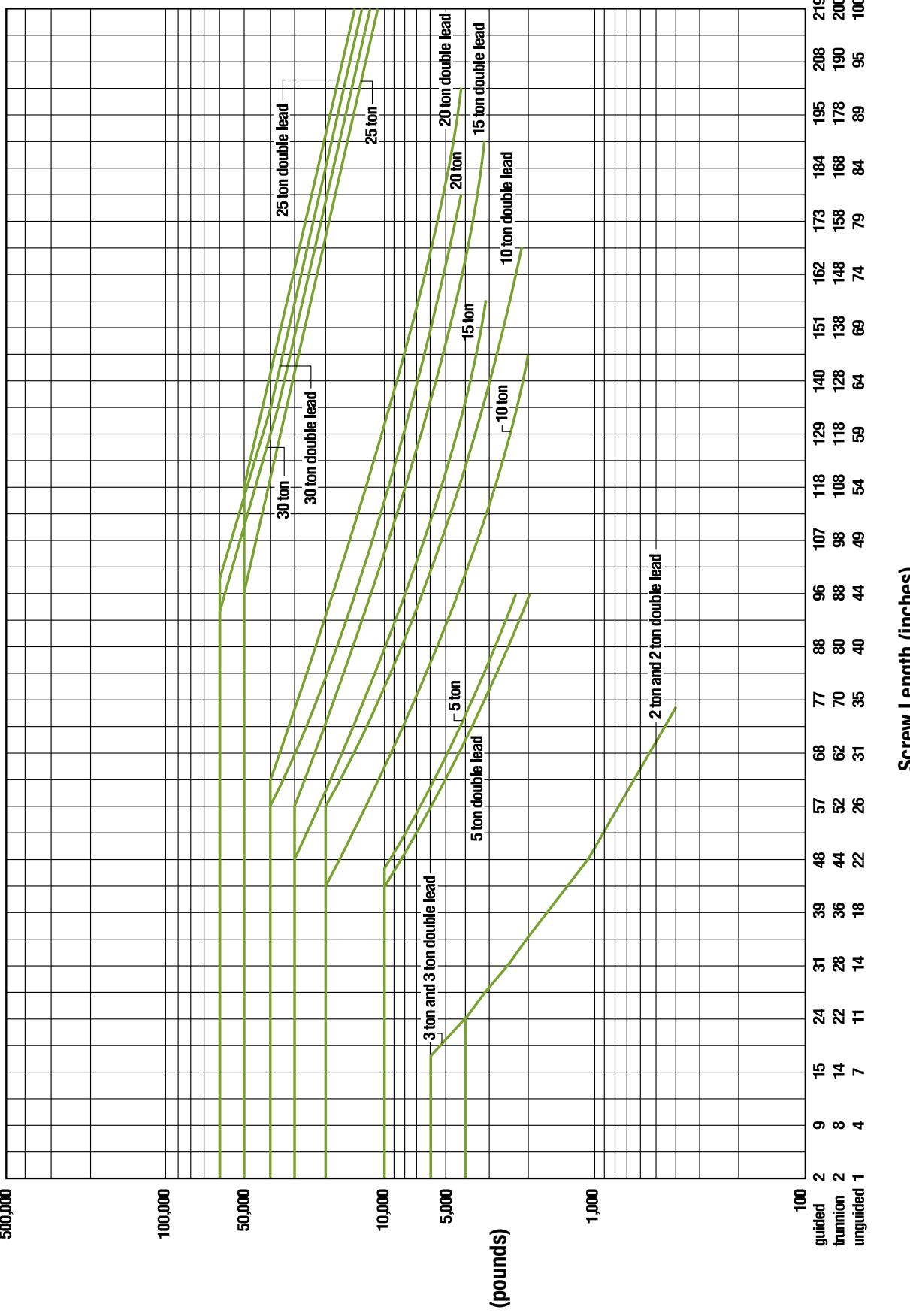
	1	2*	3	4	5	6*	7	8
Left Side Shaft Options								
Right Side Shaft Options								

- 2, 3, 5, 10, 15, and 20 ton ComDRIVEs are available with positions #1, #3, and #5.
- 25 and 30 ton ComDRIVEs are available with positions #1, #4, #7 and #8.

* These positions are not standard. Contact Joyce/Dayton with your requirements.

MACHINE SCREW ComDRIVE[®] COLUMN LOADING

Machine Screw ComDRIVE[®] Column Loading Chart



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.

MACHINE SCREW ComDRIVE[®] SPECIFICATIONS

2 Ton Model Number	CD62			CD122			CD242			DCD62			DCD122			DCD242		
Reducer Ratio	5	7 1/2	10	5	7 1/2	5	7 1/2	10	5	7 1/2	10	7 1/2	5	7 1/2	10	7 1/2	10	
Travel Speed IPM	13.88	9.50	7.04	6.94	4.75	3.47	2.38	1.76	27.75	19.00	14.08	9.50	6.94	4.75	3.52			
Lifting Capacity, Lbs.	1/3 HP	1,865	2,650	3,500	3,350	4,000	4,000	4,000	1,300	1,850	2,450	3,300	3,830	4,000	4,000			
	1/2 HP	2,875	4,000	4,000	4,000				2,000	2,825	3,720	4,000	4,000					
	3/4 HP	4,000							3,060	4,000								
3 Ton Model Number	CD63			CD123			CD243			DCD63			DCD123			DCD243		
Reducer Ratio	5	7 1/2	10	5	7 1/2	5	7 1/2	10	5	7 1/2	10	7 1/2	5	7 1/2	10	7 1/2	10	
Travel Speed IPM	13.88	9.50	7.04	6.94	4.75	3.47	2.38	1.76	27.75	19.00	14.08	9.50	6.94	4.75	3.52			
Lifting Capacity, Lbs.	1/3 HP	1,910	2,700	3,555	3,425	4,790	5,610	6,000	1,335	1,890	2,485	3,350	3,925	5,415	6,000			
	1/2 HP	2,920	4,095	5,380	5,235	6,000	6,000		2,045	2,865	3,765	5,085	6,000	6,000				
	3/4 HP	4,430	6,000		6,000				3,100	4,340		6,000						
5 Ton Model Number	CD65			CD125			CD245			DCD65			DCD125			DCD245		
Reducer Ratio	5		10			10		10	5		10		10		10	5		10
Travel Speed IPM	20.81		10.56			5.28		2.64	27.75		14.08		7.04		3.52			
Lifting Capacity, Lbs.	1 HP	3,760		6,980		10,000		10,000	3,320		6,170		10,000		10,000			
	1 1/2 HP	5,755							5,085									
	2 HP	7,750							6,845									
10 Ton Model Number	CD810			CD2410			DCD810			DCD2410								
Reducer Ratio	5		10			5		10	5		10		5		10	5		10
Travel Speed IPM	20.81		10.56			6.94		3.52	27.76		14.09		9.25		4.69			
Lifting Capacity, Lbs.	1 HP	3,680		7,070		9,000		16,760	3,150		6,045		7,700		14,330			
	1 1/2 HP	5,760				14,090			4,925				12,050					
	2 HP	7,840				19,165			6,700				16,390					
	3 HP	12,150		20,000		20,000		20,000	10,385		19,450		20,000		20,000			
	5 HP	20,000							17,580									
15 Ton Model Number	CD815			CD2415			DCD815			DCD2415								
Reducer Ratio	5		10			5		10	5		10		5		10	5		10
Travel Speed IPM	20.81		10.56			6.94		3.52	27.76		14.09		9.25		4.69			
Lifting Capacity, Lbs.	1 HP	3,140		6,200		7,535		14,385	2,715		5,365		6,515		12,440			
	1 1/2 HP	5,035				12,085			4,350				10,450					
	2 HP	6,925				16,620			5,990				14,375					
	3 HP	10,850		20,425		26,040		30,000	9,380		17,665		22,520		30,000			
	5 HP	18,515				30,000			16,010				30,000					
20 Ton Model Number	CD820			CD2420			DCD820			DCD2420								
Reducer Ratio	5		10			5		10	5		10		5		10	5		10
Travel Speed IPM	20.81		10.56			6.94		3.52	27.76		14.09		9.25		4.69			
Lifting Capacity, Lbs.	1 HP	2,715		5,570		6,520		12,920	2,265		4,645		5,435		10,765			
	1 1/2 HP	4,475				10,745			3,730				8,960					
	2 HP	6,235				14,965			5,195				12,475					
	3 HP	9,880		18,785		23,715		40,000	8,235		15,660		19,770		36,300			
	5 HP	17,000				40,000			14,175				34,020					
25 Ton Model Number	CD1125			CD3225			DCD1125			DCD3225								
Reducer Ratio	5		10			5		10	5		10		5		10	5		10
Travel Speed IPM	20.79		10.55			6.93		3.52	35.12		17.82		11.71		5.94			
Lifting Capacity, Lbs.	3 HP	9,050		17,165		20,390		36,800	7,385		14,000		16,640		30,040			
	5 HP	15,700		29,420		35,390		50,000	12,815		24,010		28,885		50,000			
	7 1/2 HP	23,930		45,755		50,000			19,530		37,340		44,010					
	10 HP	32,625		50,000					26,625		50,000		50,000					
	15 HP	49,410							40,325									
30 Ton Model Number	CD1130			CD3230			DCD1130			DCD3230								
Reducer Ratio	5		10			5		10	5		10		5		10	5		10
Travel Speed IPM	20.82		10.57			6.94		3.52	35.12		17.82		11.71		5.94			
Lifting Capacity, Lbs.	3 HP	9,435		17,540		21,260		37,620	7,535		14,000		16,975		30,040			
	5 HP	16,100		29,815		36,280		60,000	12,885		23,810		28,970		51,060			
	7 1/2 HP	24,335		46,170		54,840			19,430		36,870		43,790		60,000			
	10 HP	33,040		60,000		60,000			26,385		49,300		59,460					
	15 HP	49,845							39,800				60,000					

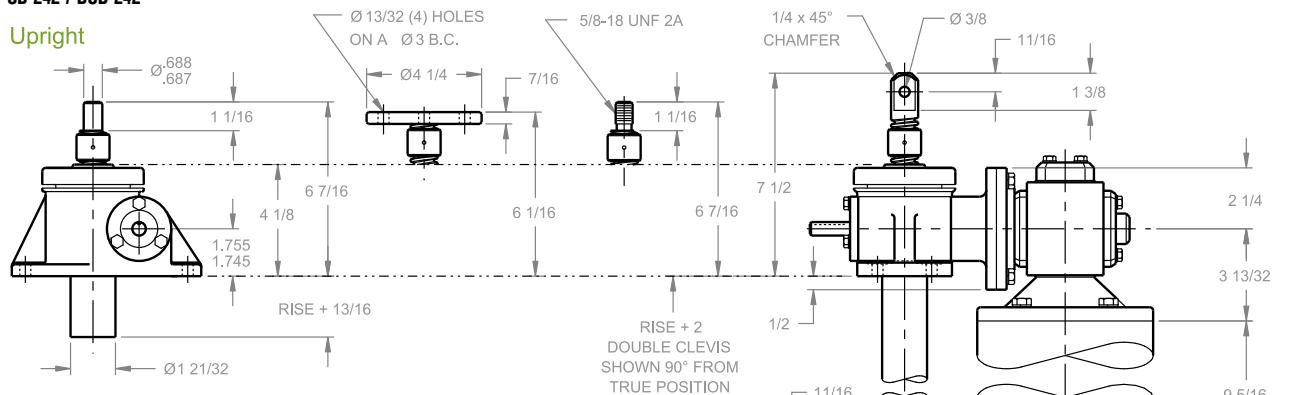
Important Note: DCD models may lower under load. Brake motors or external locking systems are recommended.

MACHINE SCREW ComDRIVEs®

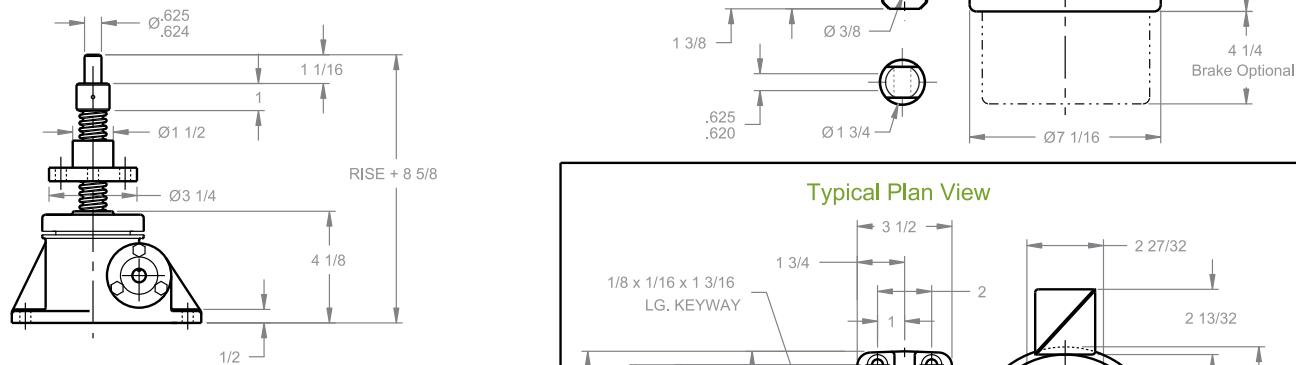
2 TON - 1" SCREW

**CD 62 / DCD 62
CD 122 / DCD 122
CD 242 / DCD 242**

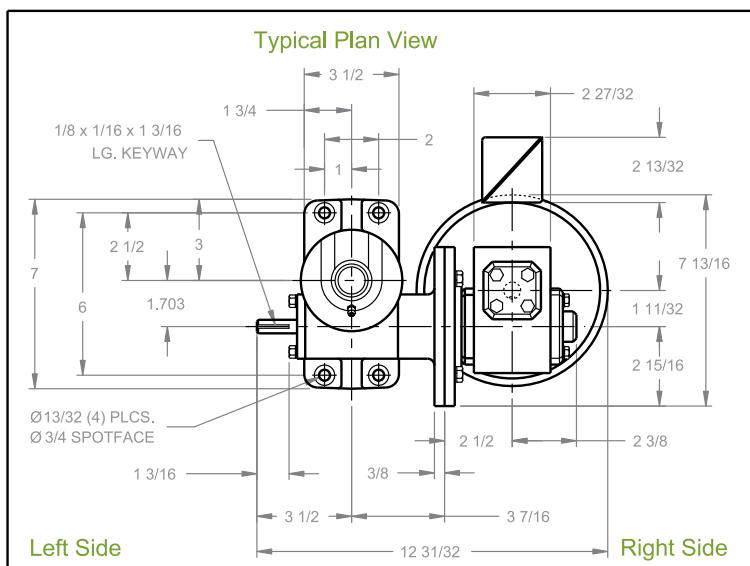
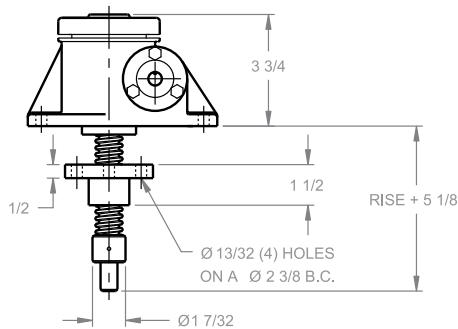
Upright



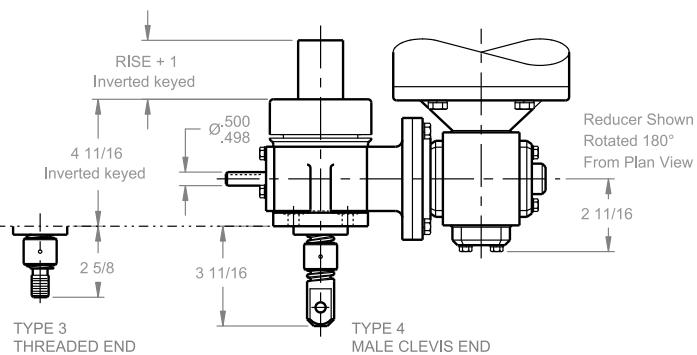
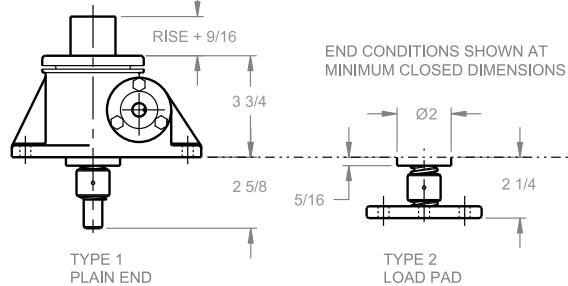
Upright traveling nut



Inverted traveling nut



Inverted



NOTE: FOR LIFTING CAPACITIES SEE PAGE 49

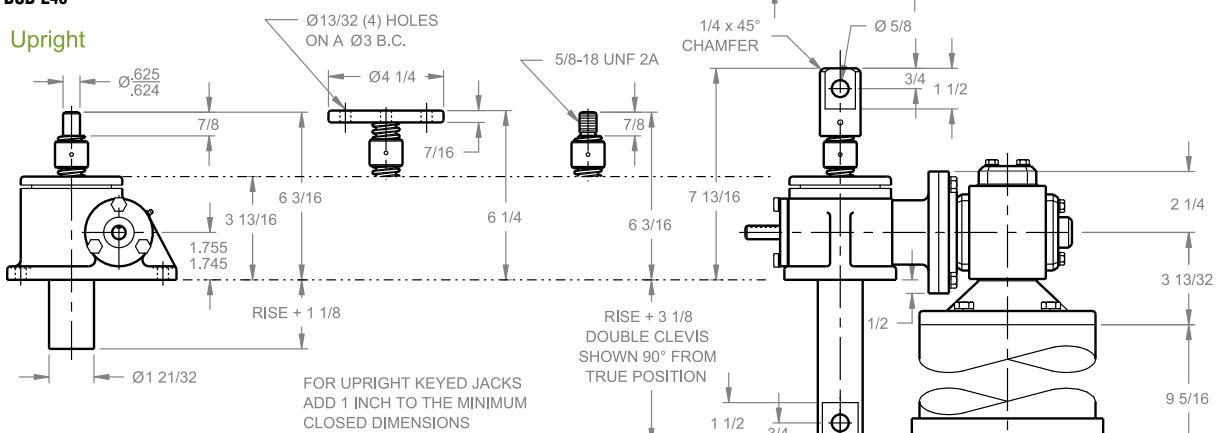
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW ComDRIVEs®

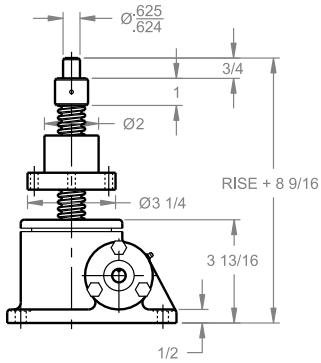
3 TON - 1" SCREW

CD 63 / DCD 63
CD 123 / DCD 123
CD 243 / DCD 243

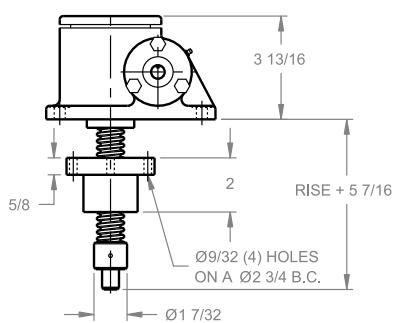
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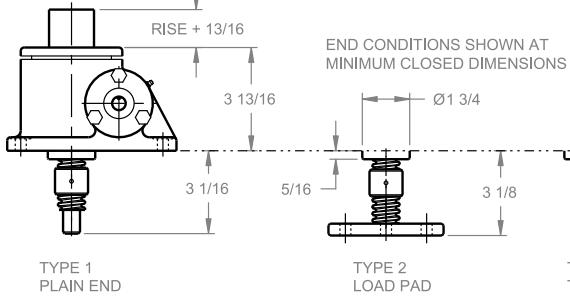
Upright traveling nut



Inverted traveling nut

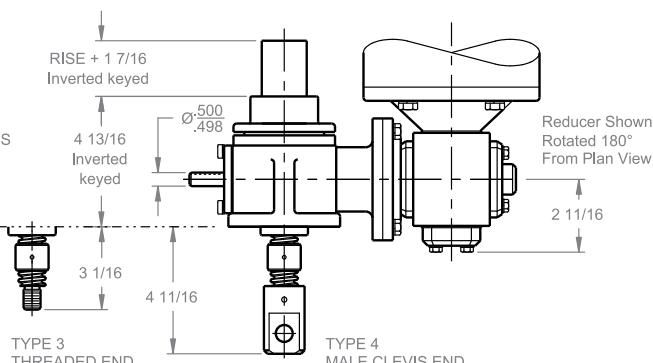
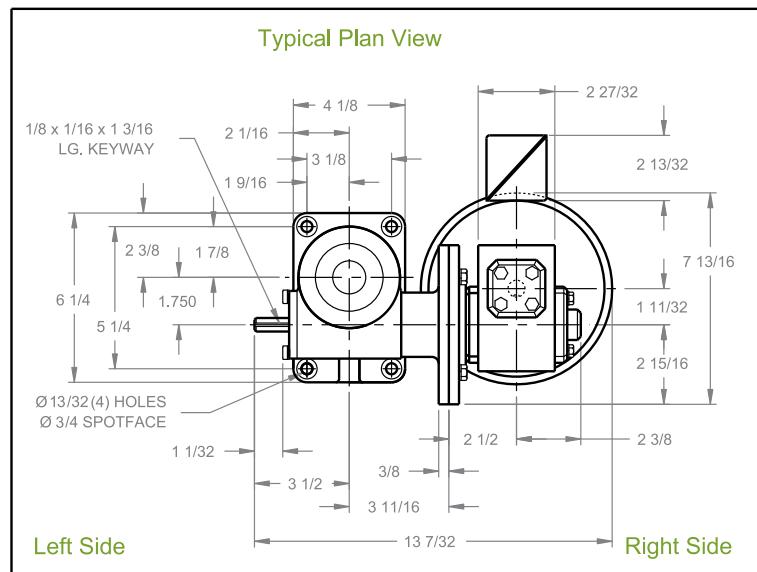


Inverted



NOTE: FOR LIFTING CAPACITIES SEE PAGE 49

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

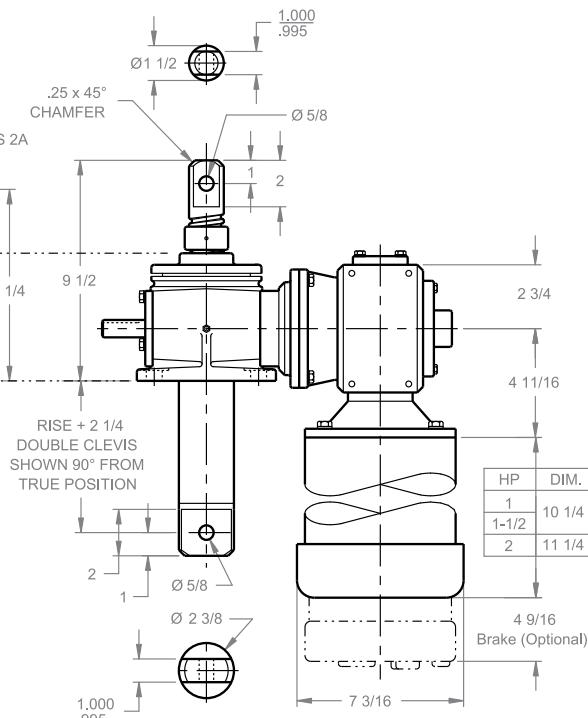
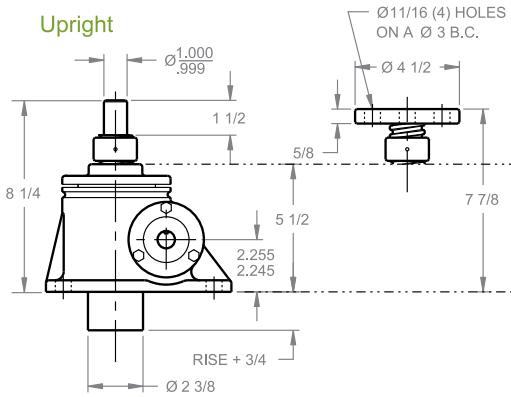


MACHINE SCREW ComDRIVEs®

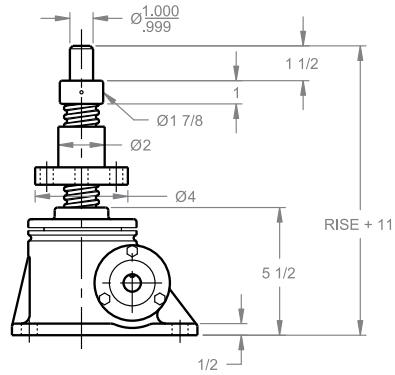
5 TON - 1 1/2" SCREW

CD 65 / DCD 65
CD 125 / DCD 125
CD 245 / DCD 245

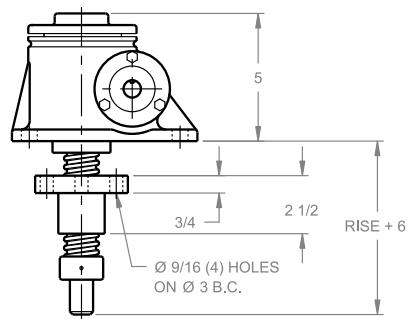
Upright



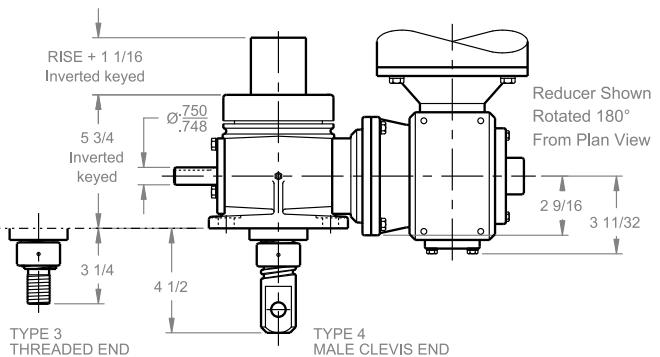
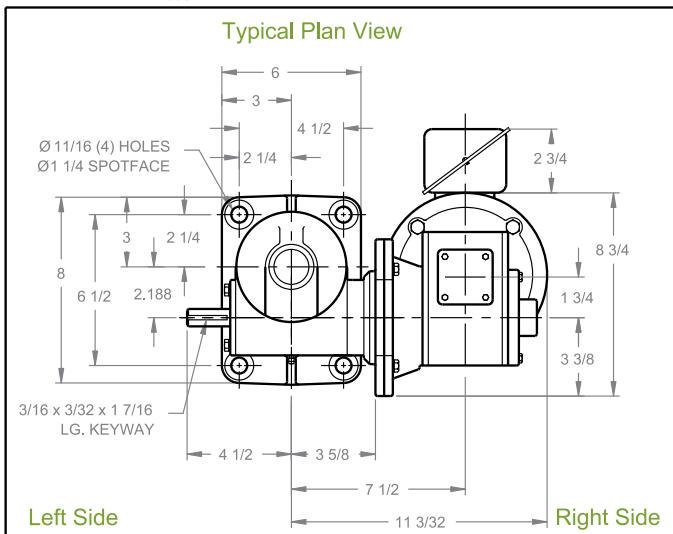
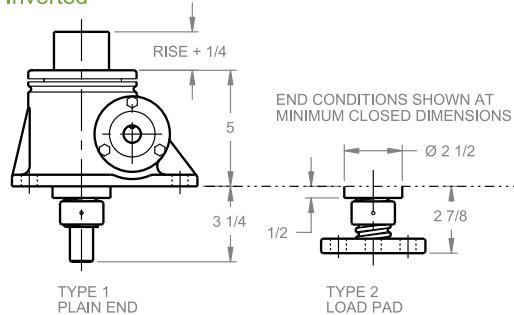
Upright traveling nut



Inverted traveling nut



Inverted



NOTE: FOR LIFTING CAPACITIES SEE PAGE 49

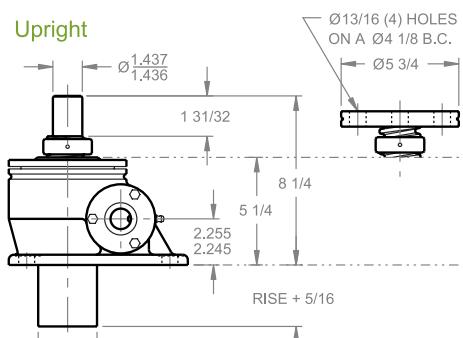
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW ComDRIVEs®

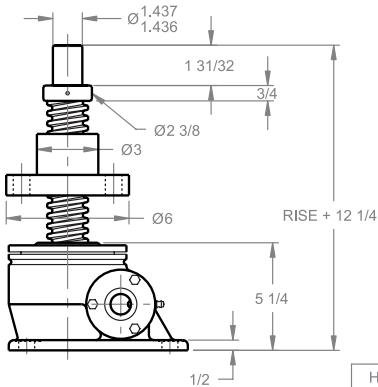
10 TON - 2" SCREW

CD 810 / DCD 810
CD 2410 / DCD 2410

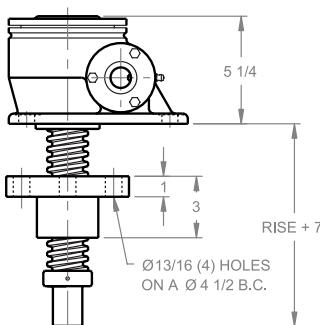
Upright



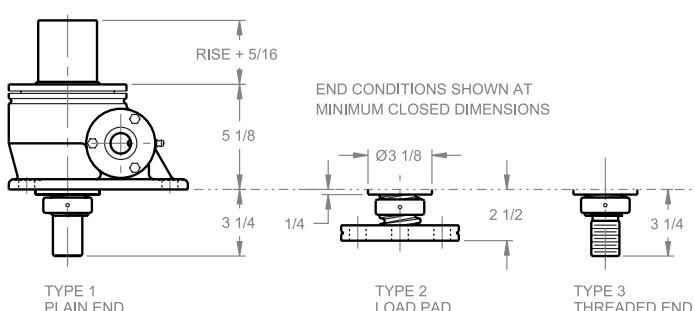
Upright traveling nut



Inverted traveling nut

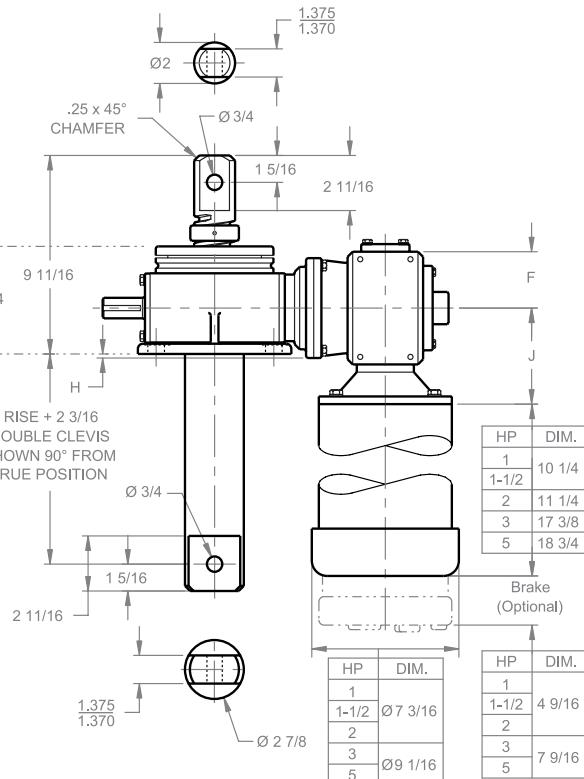


Inverted

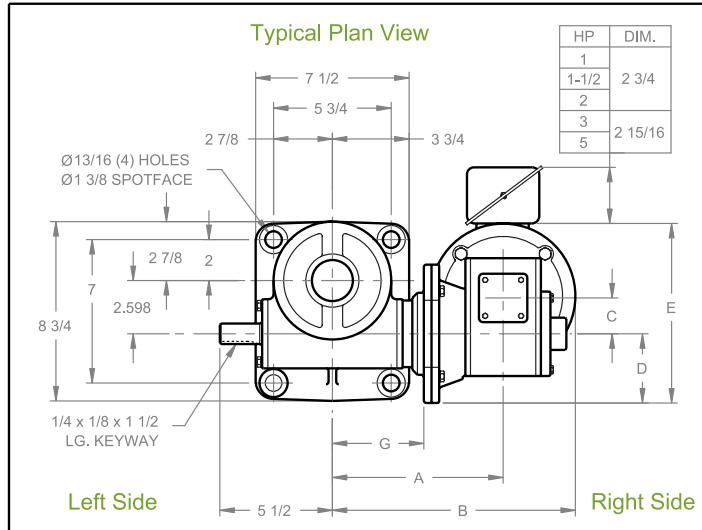


NOTE: FOR LIFTING CAPACITIES SEE PAGE 49

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

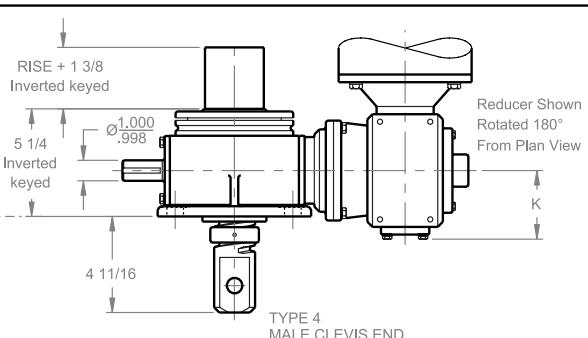


Typical Plan View



Left Side

Right Side

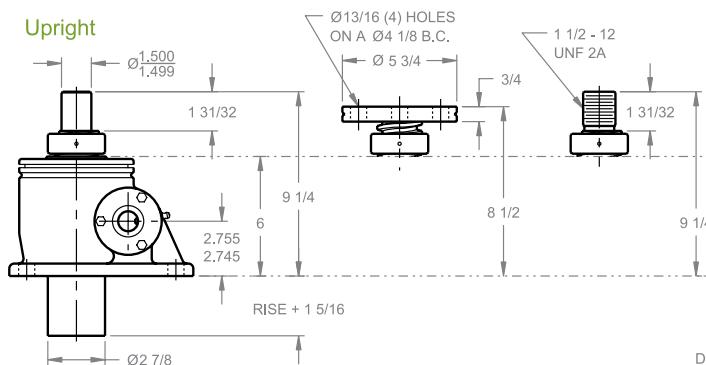


MACHINE SCREW ComDRIVEs®

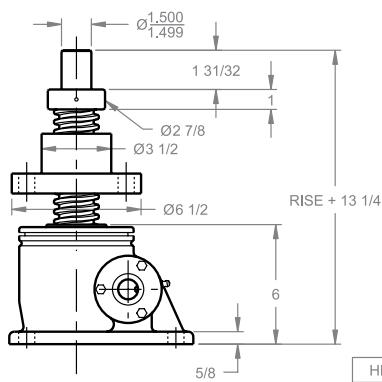
15 TON - 2 1/4" SCREW

CD 815 / DCD 815
CD 2415 / DCD 2415

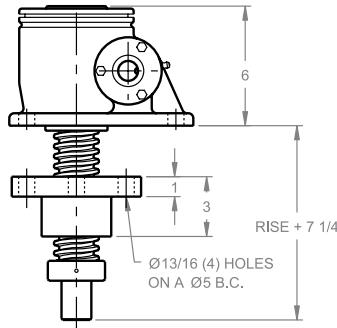
Upright



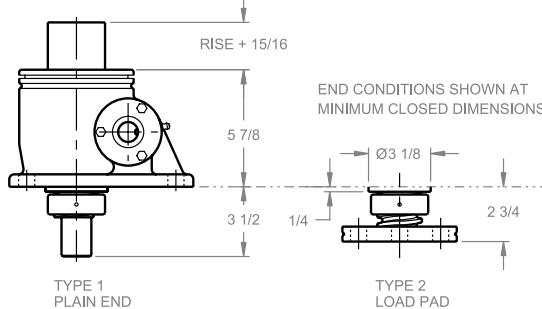
Upright traveling nut



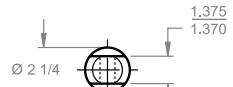
Inverted traveling nut



Inverted



NOTE: FOR LIFTING CAPACITIES SEE PAGE 49



.25 x 45° CHAMFER

$\varnothing 1 1/2$

1 1/2 - 12 UNF 2A

$\varnothing 3/4$

1 5/16

2 11/16

F

J

H

RISE + 3 3/16

DOUBLE CLEVIS
SHOWN 90° FROM
TRUE POSITION

$\varnothing 3/4$

1 5/16

2 11/16

1.375

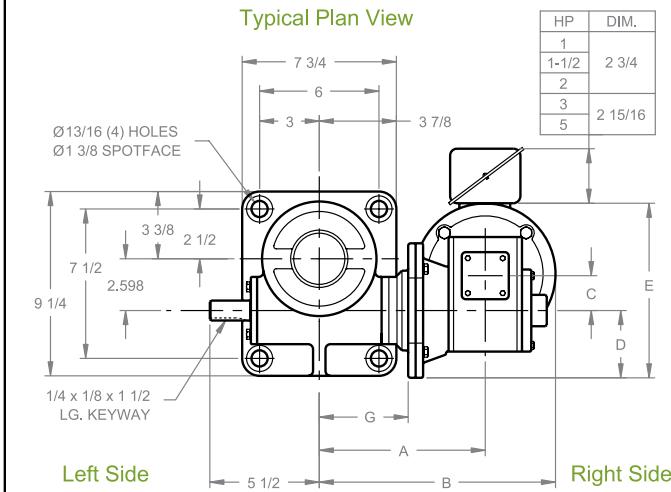
1.370

$\varnothing 2 7/8$

HP	DIM.
1	10 1/4
1-1/2	
2	11 1/4
3	17 3/8
5	18 3/4

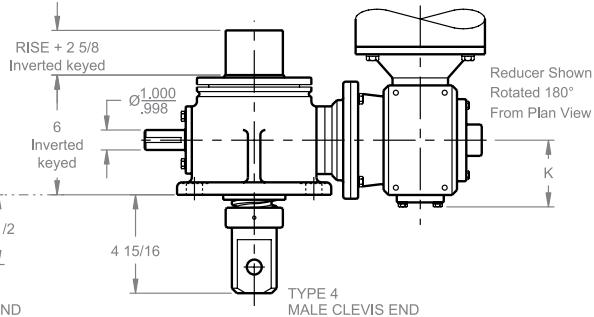
HP	DIM.
1	$\varnothing 7 3/16$
1-1/2	
2	
3	$\varnothing 9 1/16$
5	

Typical Plan View



Left Side

Right Side



RISE + 2 5/8
Inverted keyed

$\varnothing 1,000$

.998

6
Inverted keyed

3 1/2

4 15/16

K

Reducer Shown
Rotated 180°
From Plan View

TYPE 4
MALE CLEVIS END

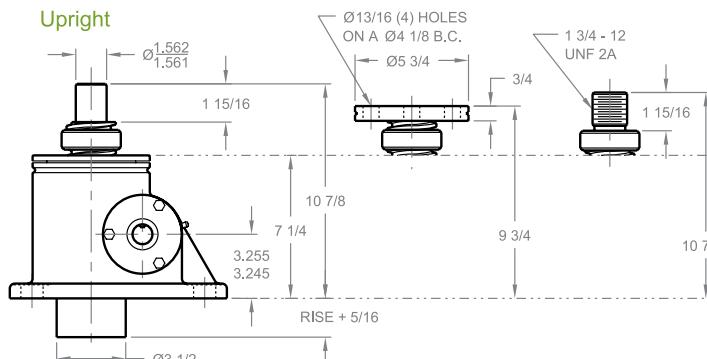
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

MACHINE SCREW ComDRIVEs®

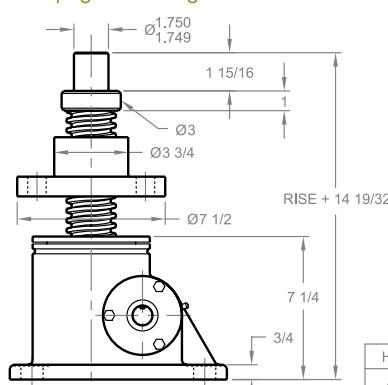
20 TON - 2 1/2" SCREW

**CD 820 / DCD 820
CD 2420 / DCD 2420**

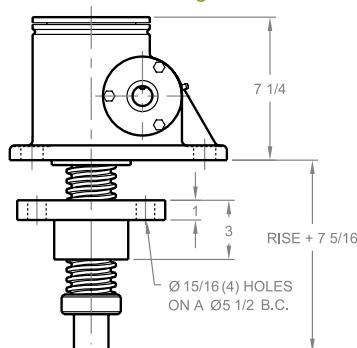
Upright



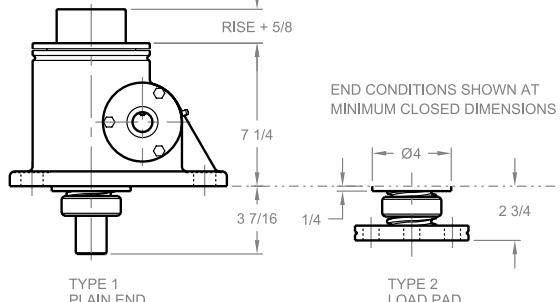
Upright traveling nut



Inverted traveling nut

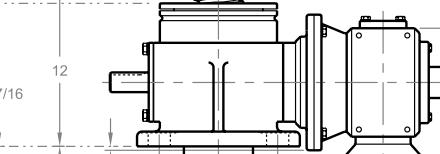
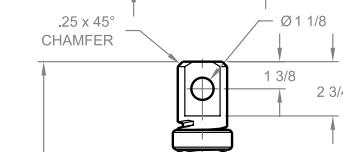
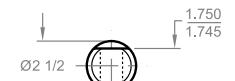


Inverted



NOTE: FOR LIFTING CAPACITIES SEE PAGE 49

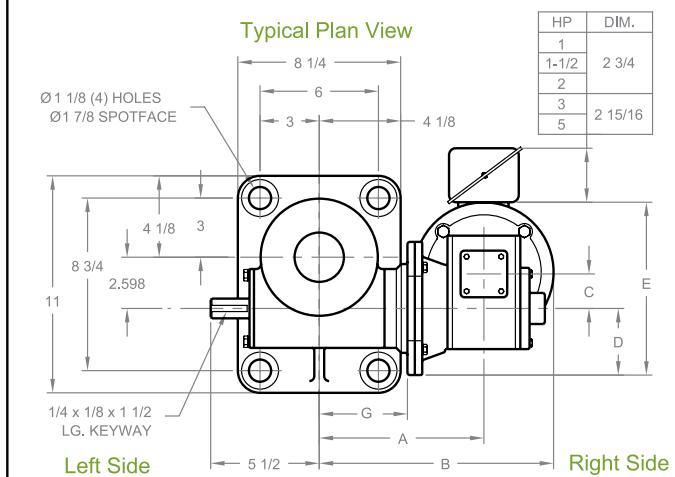
Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.



HP	DIM.
1	10 1/4
2	11 1/4
3	17 3/8
5	18 3/4

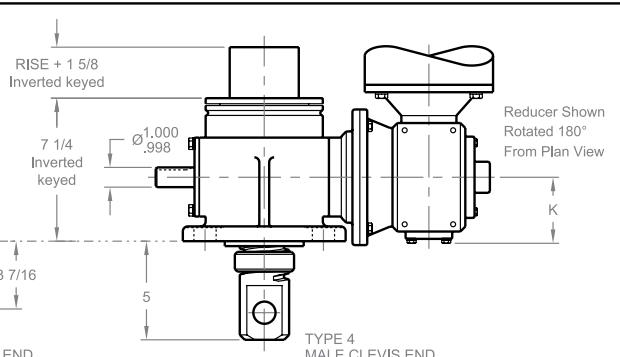
HP	DIM.
1	Ø7 3/16
1-1/2	4 9/16
2	
3	Ø9 1/16
5	7 9/16

Typical Plan View



Left Side

Right Side



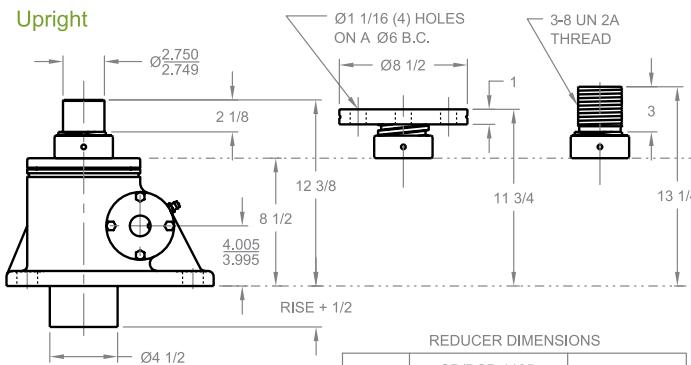
TYPE 4
MALE CLEVIS END

MACHINE SCREW ComDRIVEs®

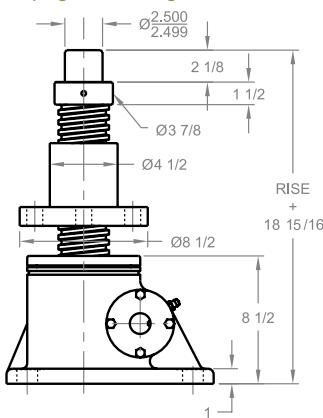
25 TON - 3 3/8" SCREW

CD 1125 / DCD 1125
CD 3225 / DCD 3225

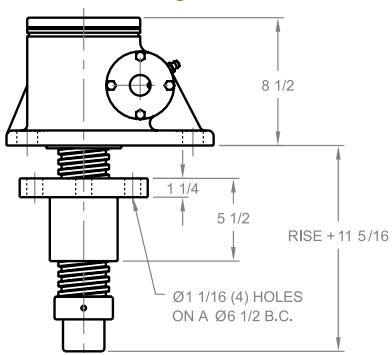
Upright



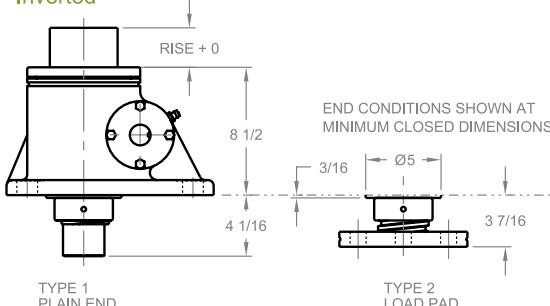
Upright traveling nut



Inverted traveling nut

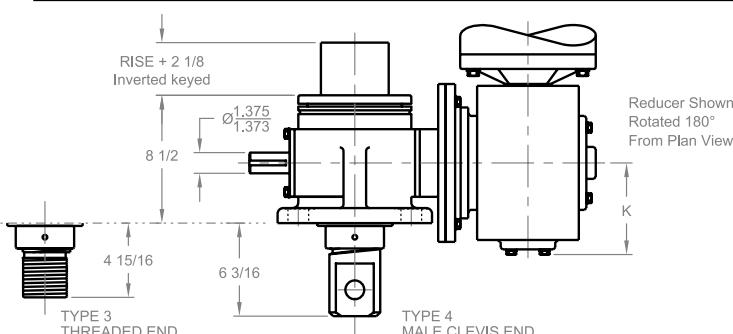
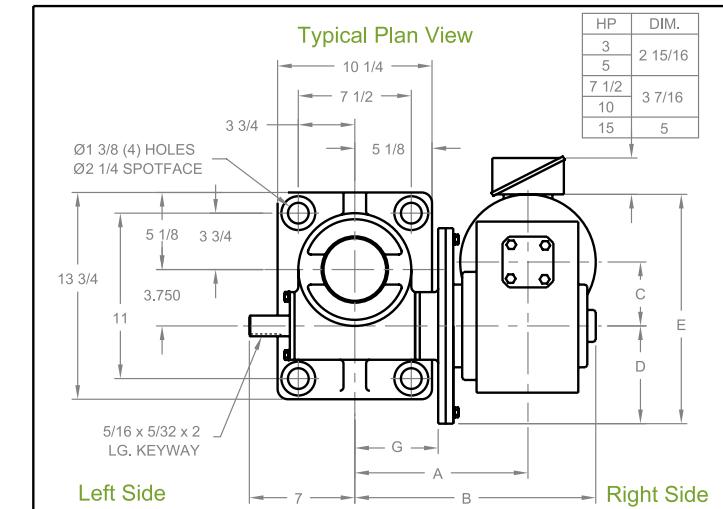
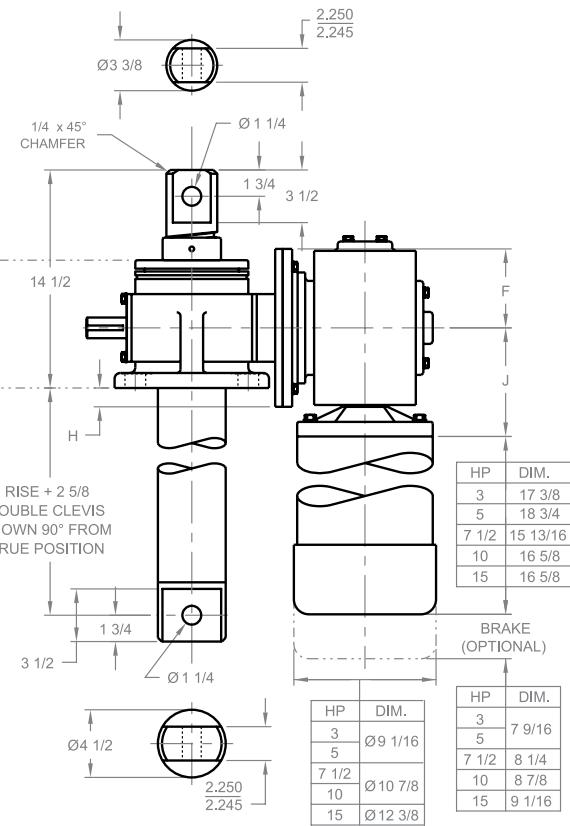


Inverted



NOTE: FOR LIFTING CAPACITIES SEE PAGE 49

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

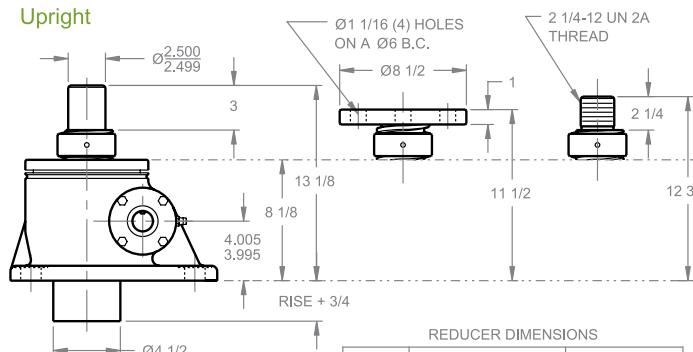


MACHINE SCREW ComDRIVEs®

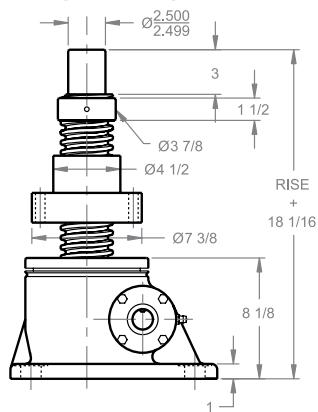
30 TON - 3 1/2" SCREW

**CD 1130 / DCD 1130
CD 3230 / DCD 3230**

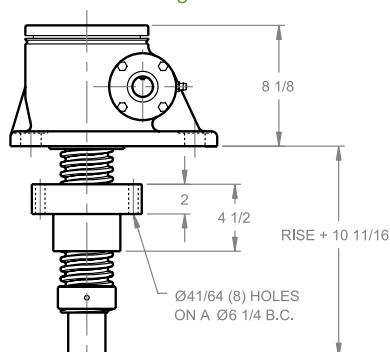
Upright



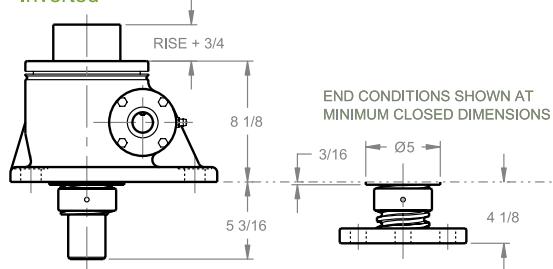
Upright traveling nut



Inverted traveling nut



Inverted



NOTE: FOR LIFTING CAPACITIES SEE PAGE 41

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

REDUCER DIMENSIONS							
MODEL	CD/DCD 1130				CD/DCD 1130		
	CD/DCD 3230						
RATIO	5:1					5:1	
	10:1	5:1	10:1	5:1	10:1	10:1	5:1
HP	3	5	5	7 1/2	7 1/2	10	15
A	9	17/32	9	31/32	11 19/32		
B	13	1/32	13	29/32	16 3/32		
C	2	5/8	3	1/4	4 1/4		
D	4	7/16	5	1/2	6 1/2		
E	11	9/16	12	3/4	15 1/4		
F	3	9/16	4	1/2	5 1/4		
G	5	1/2	5	1/2	5 1/2		
H	0		1/2		1 1/4		
J	4	11/16	6	3/4	7 1/4		
K	3	11/32	4	5/16	6 1/8		

HP	DIM.
3	17 3/8
5	18 3/4
7 1/2	15 13/16
10	16 5/8
15	16 5/8

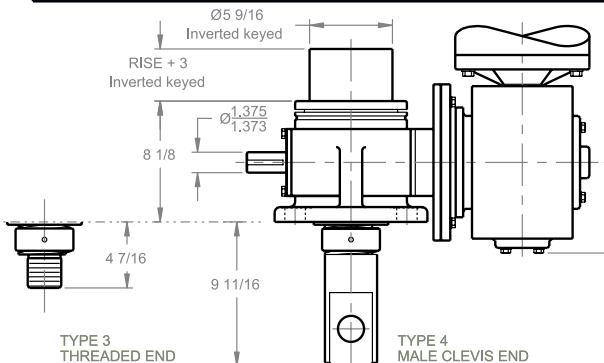
HP	DIM.
3	7 9/16
5	
7 1/2	8 1/4
10	8 7/8
15	9 1/16

Typical Plan View

HP	DIM.
3	2 15/16
5	
7 1/2	3 7/16
10	
15	5

Left Side

Right Side



Reducer Shown
Rotated 180°
From Plan View

TYPE 4

2D and 3D models available on website • Ordering information on pages 46 and 47

sales@joycedayton.com

joycedayton.com