

# Ball Screw Actuator Models

## Advantages:

- Move loads and apply force more efficiently than other mechanical actuators.
- Permit faster operation and longer life under load.
- Require less power by providing positive mechanical action.
- Permit synchronization of multiple units.
- Capacity from 1/2 to 50 tons.
- Handles full load in tension or compression
- 40 models available.

**Lifting Screw** -Standard with threaded end,

**Shell Cap** -Adjustable to take end play out of bearings. Locked into place by set screws.

**Ball Nut** -Equipped with return tubes for continuous recirculation of steel balls. Threaded and secured to worm gear. Should be ordered as set.

**Worm Gear** -Aluminum bronze. Accurately hobbled for greater gear contact.

**Load Bearings** -Top and bottom to take loads in either direction.

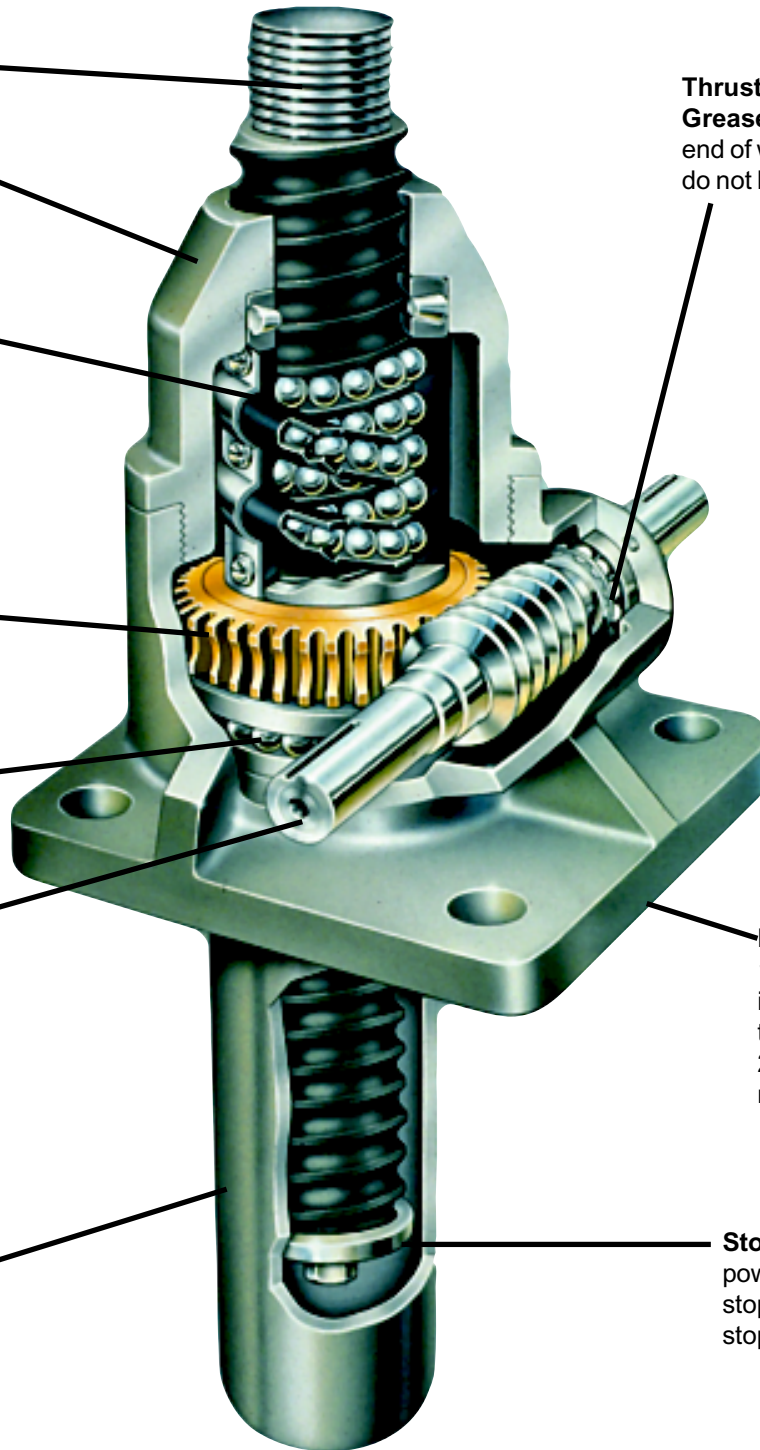
**Worm** -Available with double or single shaft extension. Clockwise rotation of this end raises load on all actuator models except 50-ton ball screw actuator units.

**Dust Guard** - Protects lifting screw threads.

**Thrust Bearing and Grease Seals** - At each end of worm. 1/2-ton models do not have seals.

**Housing** -Aluminum on 1/2-ton models, ductile iron on 2-ton through 10-ton models cast steel on 20-ton through 50-ton models.

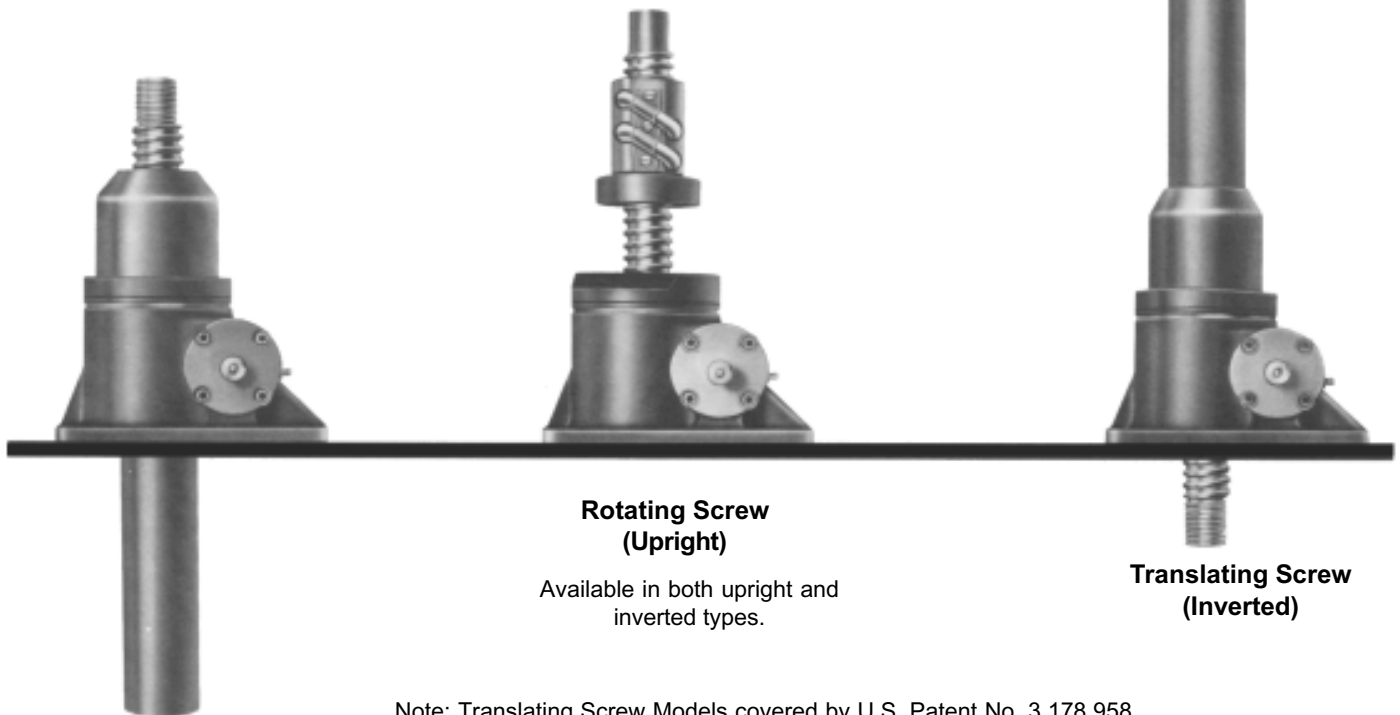
**Stop Disc** -This is not a power stop. For positive stop, we suggest external stops be used in structure.



# Ball Screw Actuator Models

- **High Speed** -Low friction permits linear motion in some models up to 300 inches per minute at 1800 rpm worm shaft speeds, providing maximum horsepower ratings are not exceeded.
- **Positive Action** -Operates with a high degree of reliability, without the need for costly pumps, hoses or valves.
- **Precise Positioning** -High efficiency means accurate control, even in multiple actuator arrangements.
- **Long Life** -Low friction means longer operating life.
- **Low Power Usage** -Highly efficient design means less power is needed to achieve a given thrust; power needs are as much as two-thirds that of machine screw actuators, with savings in motors, couplings, reducers, shafting and controls.

Translating Screw  
(Upright)



Rotating Screw  
(Upright)

Available in both upright and inverted types.

Translating Screw  
(Inverted)

Note: Translating Screw Models covered by U.S. Patent No. 3,178,958

## Move loads and apply force more efficiently

The Duff-Norton ball screw gives you a single- package, positive-action linear actuator which can be driven by an electric, air or hydraulic motor. A ball-bearing type heat-treated screw and mating nut with rolling contact reduces friction to a bare minimum in converting torque to thrust. Overall operating efficiency is as high as 70% in some models, depending on the ratio of the worm gear set.

Because our ball screw actuator unit has been carefully engineered and pretested, you no longer have to purchase components from different suppliers and design your own system to achieve high levels of efficiency. So you save design, set- up and testing time.

## Capacities from 1/2 to 50 tons

Duff-Norton ball screw actuators are available in two types: translating screw and rotating screw, each available with either upright or inverted

screw. In the translating screw type, the ball nut is fixed to a rotating gear within the housing, and the lifting screw moves up and down through the nut. In the rotating screw type, the screw is fixed to the rotating gear, and the ball nut travels up and down the screw.

Both types of ball screw actuators, and their variations, are available in capacities of 1/2, 2, 3, 5, 10, 20, 25 and 50 tons, with some models that raise up to 10 feet. Raises up to 20 feet are available on request. Ball screw actuators may be used individually, in tandem or in multiple arrangements, connected by shafting, couplings and Duff-Norton gear boxes. Special models are also available.

Single end worm shafts with left or right hand extensions are furnished at no extra charge.

# 2800, 7800 and 9800 Series Specifications

## Ball Screw Actuator Units

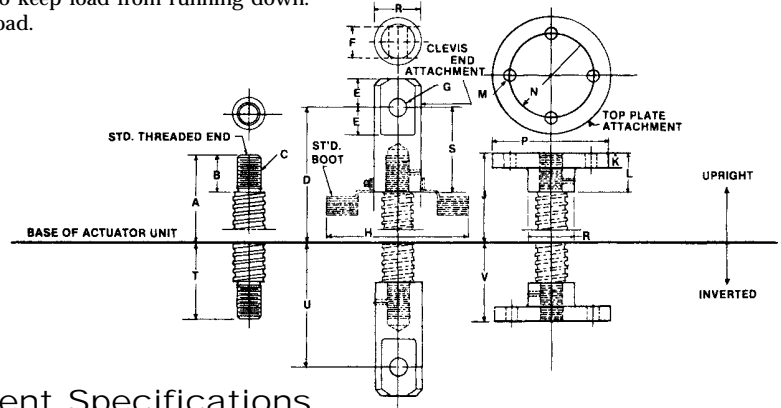
Model No.	Upright	28631	2802, 7802 & 9802	28021, 78021 & 98021	28003 & 98003	9805	98051	9810	98101	9820	9825	2860
	Inverted	28630	2801, 7801 & 9801	28011, 78011 & 98011	28002 & 98002	9804	98041	9809	98091	9819	9824	2859
Capacity, Tons		1/2	2	2	3	5	5	10	10	20	25	50
Lifting Screw Diameter (Inches)		5/8	1	1	1 11/64	1 1/2	1 1/2	1 1/2	1 1/2	2 1/4	3	4
		.200 Lead	.250 Lead	1.000 Lead	.413 Lead	.474 Lead	1.000 Lead	.474 Lead	1.000 Lead	.500 Lead	.660 Lead	1.000 Lead
Worm Gear Ratios	Std. Ratio	5:1	6:1	6:1	6:1	6:1	6:1	8:1	8:1	8:1	10 2/3:1	10 2/3:1
	Option #1	20:1	24:1	24:1	24:1	24:1	24:1	24:1	24:1	24:1	32:1	32:1
	Option #2	---	12:1	---	12:1	---	---	---	---	---	---	---
Turns of Worm for 1" Raise	Std. Ratio	25	24	6	14.526	12.667	6	16.888	8	16	16.16	10.66
	Option #1	100	96	24	58.104	50.667	24	50.667	24	48	48.48	32
	Option #2	---	48	---	29.052	---	---	---	---	---	---	---
Maximum H.P. Per Actuator	Std. Ratio	1/3	2	2	2	4	4	5	5	5	8	15
	Option #1	1/6	1/2	1/2	1/2	3/4	3/4	1 1/2	1 1/2	1 1/2	2 1/2	6
	Option #2	---	3/4	---	3/4	---	---	---	---	---	---	---
No Load Torque (In. - Lbs.)	Std. Ratio	0.5	3	10	5	10	20	15	20	40	40	90
	Option #2	---	3	10	5	---	---	---	---	---	---	---
	Option #1	0.5	3	10	5	10	20	15	20	40	40	90
Starting Torque at Full Load (In. - Lbs.)	Std. Ratio	10.5	50	180	110	220	500	350	800	700	925	2,700
	Option #1	5	25	80	50	90	206	175	400	325	475	1,500
	Option #2	---	30	---	68	---	---	---	---	---	---	---
Running Torque at Full Load (In.-Lbs.)	Std. Ratio	9.5	45	160	100	180	410	300	700	650	825	2,200
	Option #1	4.5	20	70	45	80	183	150	290	300	425	1,200
	Option #2	---	25	---	60	---	---	---	---	---	---	---
Efficiency Rating (%)	Std. Ratio	65	59	59	59	70	70	65	65	61	60	55
	Option #1	38	33	33	33	39	39	42	42	44	39	33
	Option #2	---	44	---	44	---	---	---	---	---	---	---
Weight with Base Raise of 6" (Lbs.)		2.75	20	20	21	40	40	50	50	115	235	520
Weight for Each Additional 1" Raise (Lbs.)		0.1	0.3	0.3	0.4	0.9	0.9	0.9	0.9	1.5	2.9	5.0
Hold Back Torque at Rated Load (Lb.-Ft.)	Std. Ratio	1	2	2	7	8	8	11	11	24	24	92
	Option #1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	2	33
	Option #2	---	1	1	2	---	---	---	---	---	---	---

Note: Hold Back Torque is restraining torque at the worm shaft to keep load from running down.  
Lifting torques are proportional to load, down to 25% of rated load.

## Attachments

Standard Duff-Norton ball screw actuators, both upright and inverted screw types, are furnished with threaded ends on screws. However, they are also available with top plates or clevis end attachments.

Bellows boots are recommended to protect screw and nut from dirt and corrosion.



### Attachment Specifications

Model no.	A*	B	C	D*	E	F	G	H	J*	K	L	M	N	P	R	S	T*	U*	V*	Top Plate	Clevis End
28631	5"	3/4"	3/8"-24-UNF-2A	6"	1/2"	1/2"	5/16 +0.07/-0.00	4 1/2"	5"	5/16"	13/16"	9/32"	1 1/2"	2 1/4"	3/4"	1 3/4"	1"	2"	1 1/16"	SK-2800-1-29A	SK-2800-4-29A
2802, 7802 & 9802	7 1/2"	1 1/8"	3/4"-16-UNF-2A	8 5/8"	3/4"	1"	1/2" +0.08/-0.00	6 5/8"	7 1/2"	7/16"	1 3/16"	13/32"	3"	4 1/4"	1 1/2"	2 1/4"	1 3/8"	2 1/2"	1 7/16"	SK-2800-1-2A	SK-2800-4-2A
28021, 78021 & 98021	7 1/2"	1 1/8"	3/4"-16-UNF-2A	8 5/8"	3/4"	1"	1/2" +0.08/-0.00	6 5/8"	7 1/2"	7/16"	1 3/16"	13/32"	3"	4 1/4"	1 1/2"	2 1/4"	1 3/8"	2 1/2"	1 7/16"	SK-2800-1-2A	SK-2800-4-2A
28003 & 98003	9 1/4"	1 1/8"	3/4"-16-UNF-2A	10 3/8"	3/4"	1"	1/2" +0.08/-0.00	6 5/8"	9 5/16"	7/16"	1 3/16"	13/32"	3"	4 1/4"	1 1/2"	2 1/4"	1 3/8"	2 1/2"	1 7/16"	SK-2800-1-2A	SK-2800-4-2A
9805 & 98051	10 3/4"	1 1/8"	1"-14-UNS-2A	12 1/2"	1 1/4"	1 1/4"	3/4" +0.10/-0.00	7 1/2"	10 3/4"	5/8"	1 1/4"	11/16"	3 1/2"	5"	1 3/4"	2 7/8"	1 3/8"	3 1/8"	1 7/16"	SK-2800-1-5A	SK-2800-4-5A
9810 & 98101	10 3/8"	1 1/8"	1"-14-UNS-2A	12 1/8"	1 1/4"	1 1/2"	1" +0.10/-0.00	7"	10 3/8"	3/4"	1 3/8"	13/16"	4 1/8"	5 3/4"	**	2 7/8"	1 1/2"	3 1/4"	1 9/16"	SK-2800-1-10A	SK-2800-4-10A
9820	16 1/2"	2 1/4"	1 3/4"-12-UN-2A	19"	1 1/2"	1 3/4"	1 1/4" +0.10/-0.00	9"	16 1/2"	1"	2 5/16"	13/16"	5"	7"	2 5/8"	4 3/4"	2 3/4"	5 1/4"	2 13/16"	SK-2800-1-20A	SK-2800-4-20A
9825	19 3/4"	2 1/4"	2 1/4"-12-UN-2A	23 1/4"	2 1/2"	2 3/4"	1 1/2" +0.10/-0.00	11"	19 3/4"	1"	2 5/16"	1 1/16"	6"	8 1/2"	3 1/2"	5 3/4"	3 1/8"	6 5/8"	3 3/16"	SK-2800-1-25A	SK-2800-4-25A
2860	25 3/8"	2 3/4"	3 1/4"-12-UN-2A	29 1/8"	2 5/8"	3 3/4"	2" +0.12/-0.00	12"	25 7/16"	1 3/8"	2 13/16"	1 1/2"	10"	13"	***	6 1/2"	3 5/8"	7 3/8"	3 11/16"	SK-2800-1-60A	SK-2800-4-60A

\*Closed dimensions may increase for actuator units supplied with bellows boots.

\*\*For model 9810, R dimension of clevis end attachment is 2"; top plate attachment is 1 3/4".

\*\*\*For model 2860, R dimension of clevis end attachment is 5"; top plate attachment is 4 1/2".

Note: Lifting screws listed above are not keyed. Must be held to prevent rotation. Top plate and clevis are shipped loose. Must be spot drilled before seating set screws in field installations.

# Predict the Life of the Ball Screw and Nut

Predicting screw and nut life lets you forecast necessary replacement, saving time and money. It also permits selection of the most economical screw size.

Use caution when installing the ball screw. The life expectancy listed above may be greatly reduced if ball screws are subjected to misalignment, shock loads, side

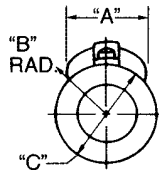
thrust, environmental contamination or lack of lubrication and maintenance.

It is possible to estimate the minimum life of the Duff-Norton ball screw and nut only. Because of the many variable operating conditions, we can not predict the life of the worm and gear set in the 2800 and 9800 Series actuators.

Life Expectancy of Ball Screw and Ball Nut  
In Total Inches of Travel

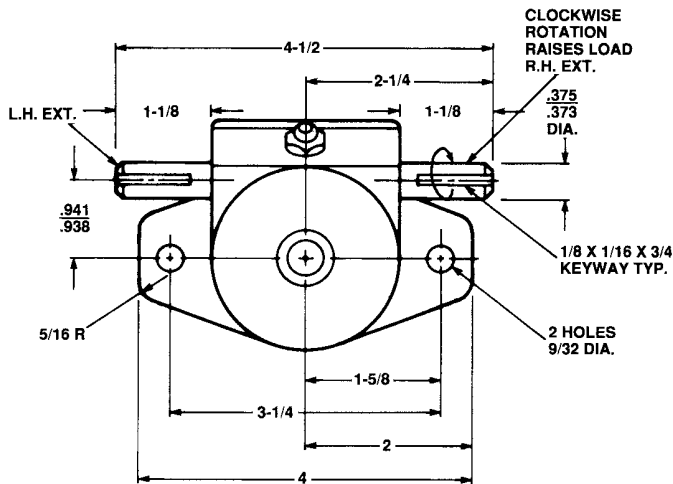
Model No. & Capacity	100% of Full Load	75% of Full Load	50% of Full Load or Less
28631 (1/2 ton)	470,000	1,100,000	3,700,000
2802, 7802 & 9802 (2 ton)	65,000	150,000	520,000
28021, 78021 & 98021 (2 ton)	150,000	360,000	1,200,000
28003 & 98003 (3 ton)	210,000	650,000	2,200,000
*9805 (5 ton)	1,000,000	2,400,000	8,100,000
*98051 (5 ton)	440,000	1,000,000	3,500,000
9810 (10 ton)	130,000	300,000	1,000,000
98101 (10 ton)	50,000	130,000	430,000
9820 (20 ton)	150,000	360,000	1,200,000
9825 (25 ton)	700,000	1,600,000	5,600,000
2860 (50 ton)	630,000	1,500,000	5,000,000

\* 5 ton and 10 ton models use the same screw and nut.

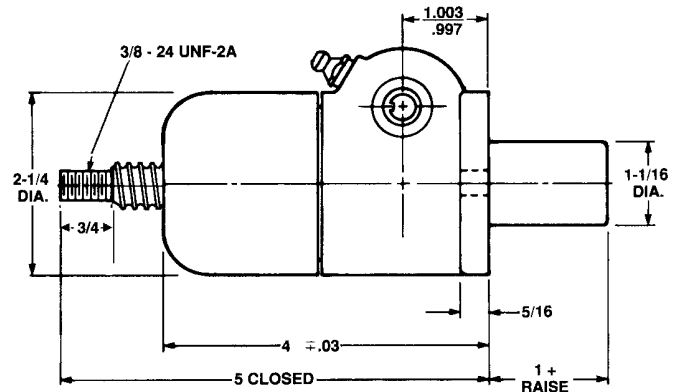


Actuator Capacity	"A"	"B" Radius	"C"
1/2 Ton	.822	.797	1 Sq.
2 Ton .250 Lead	1.104	1.194	1.5 Sq.
2 Ton 1.000 Lead	1.104	1.194	1.5 Sq.
3 Ton	1.587	1.386	2.125 Dia.
5 & 10 Ton .474 Lead	1.981	1.69	2.625 Dia.
5 & 10 Ton 1.000 Lead	1.718	1.72	2.625 Dia.
20 Ton	2.561	2.272	3.375 Dia.
25 Ton	3.349	3.076	4.751 Dia.
50 Ton	4.029	3.756	5.88 Dia.

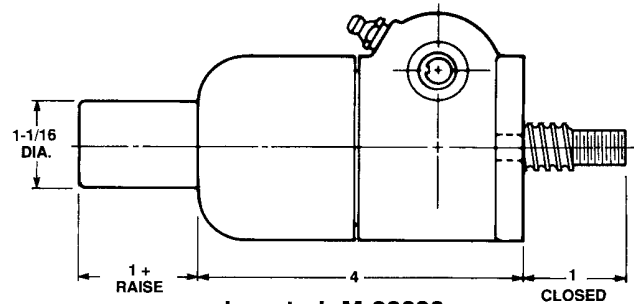
# Ball Screw Actuator, 1/2 Ton



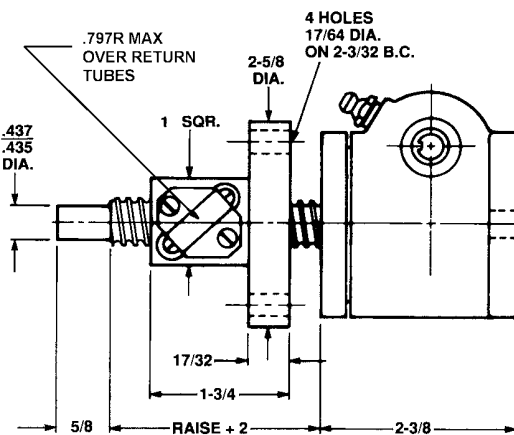
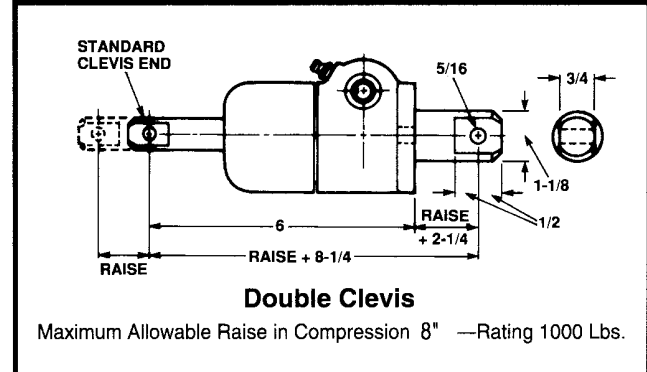
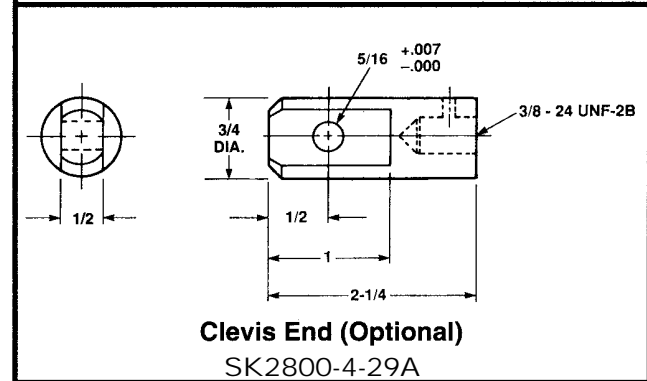
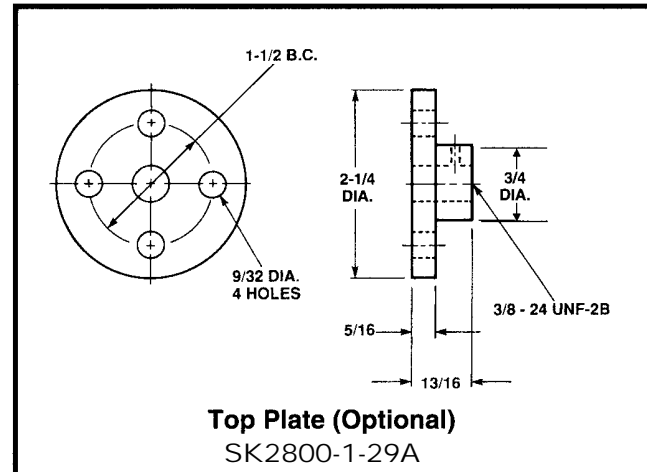
.631" Diameter x .200 Lead Lifting Screws



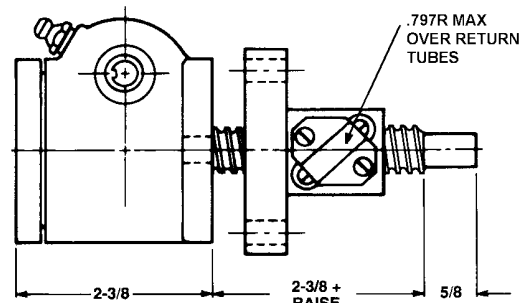
Upright: M-28631



Inverted: M-28630



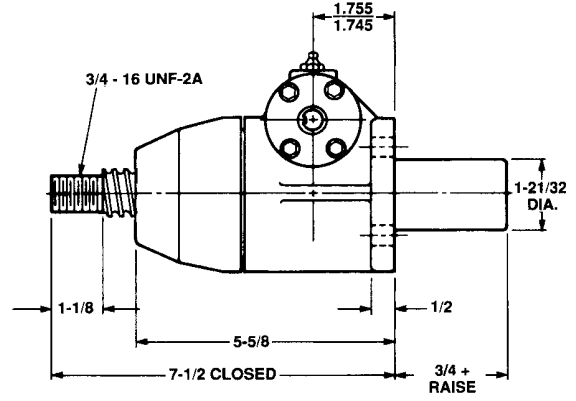
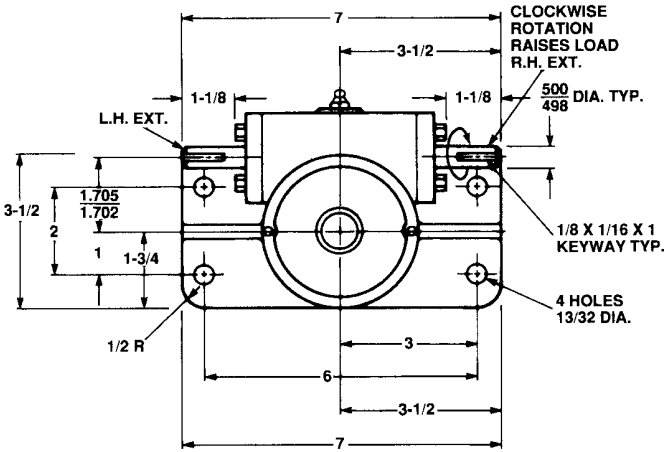
Upright Rotating: UM-28632



Inverted Rotating: DM-28632

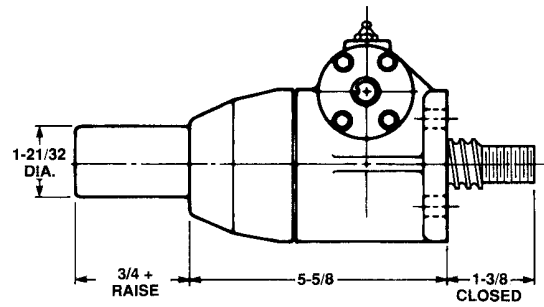
Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

# Ball Screw Actuator, 2 Ton, 2800 Series

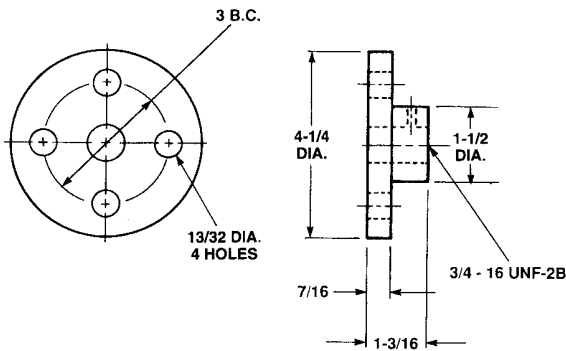


Upright: M-2802

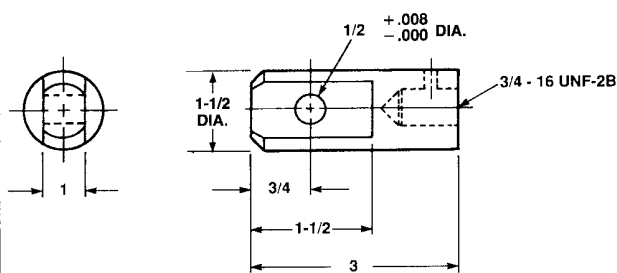
1" Diameter x .250 Lead Lifting Screws



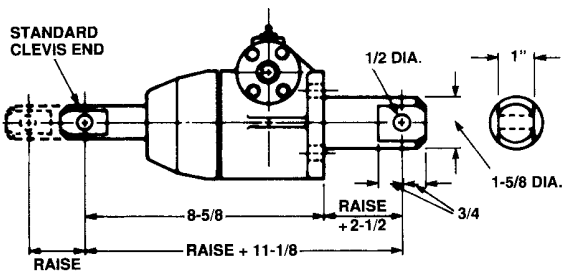
Inverted: M-2801



Top Plate (Optional)  
SK2800-1-2A

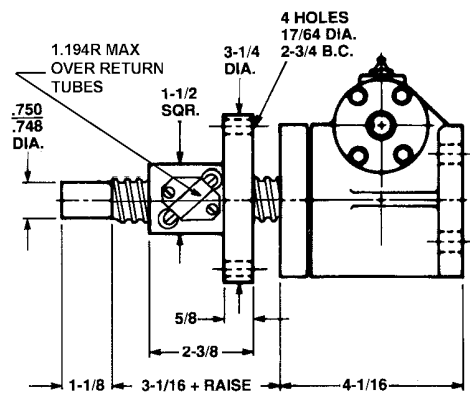


Clevis End (Optional)  
SK2800-4-2A

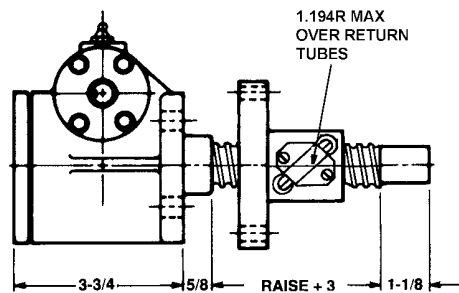


Double Clevis

Maximum Allowable Raise in Compression 15" — Rating 3800 Lbs.  
Maximum Raise at Rated Load in Compression 14"



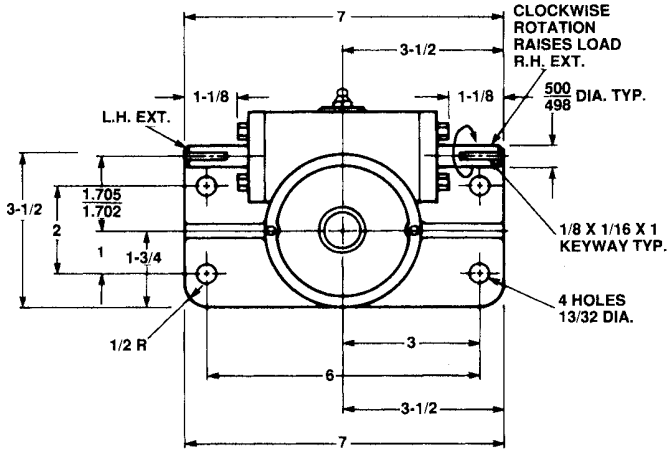
Upright Rotating: KUM-2803



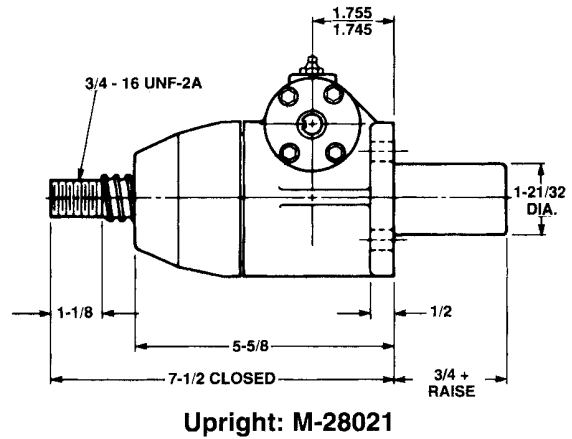
Inverted Rotating: KDM-2803

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

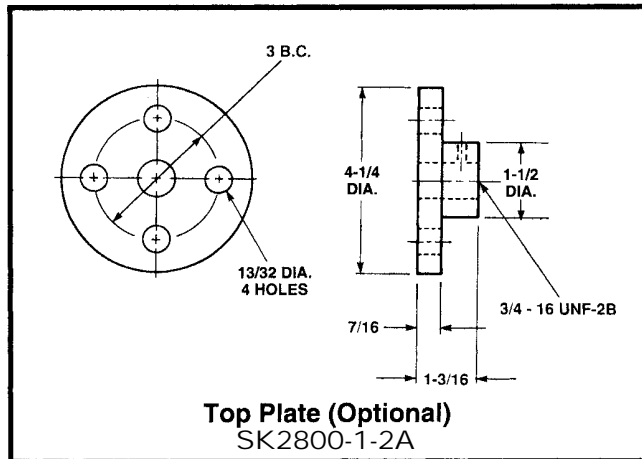
# Ball Screw Actuator, 2 Ton - 1" Lead, 2800 Series



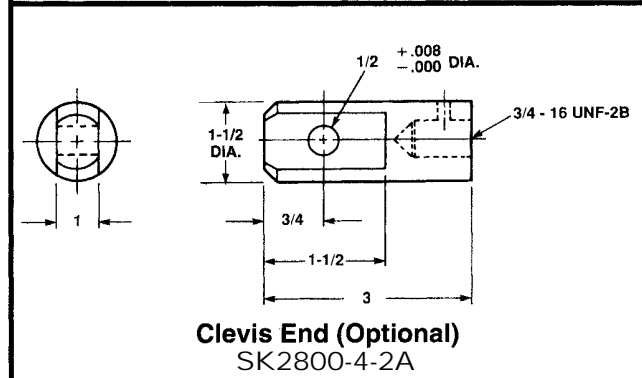
1" Diameter x 1.000 Lead Lifting Screws



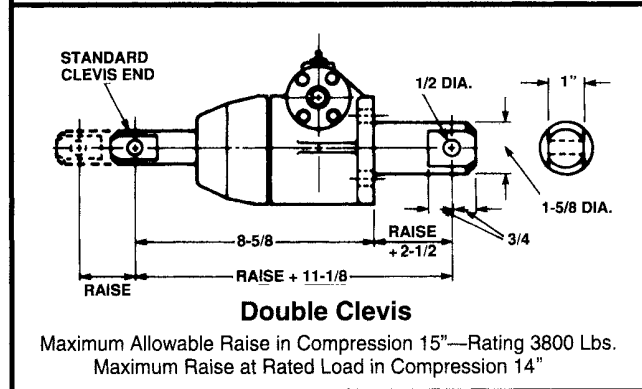
Upright: M-28021



Top Plate (Optional)  
SK2800-1-2A

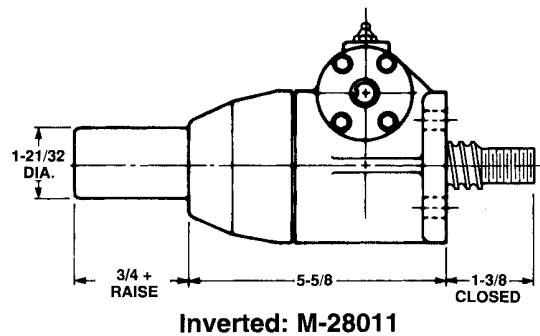


Clevis End (Optional)  
SK2800-4-2A

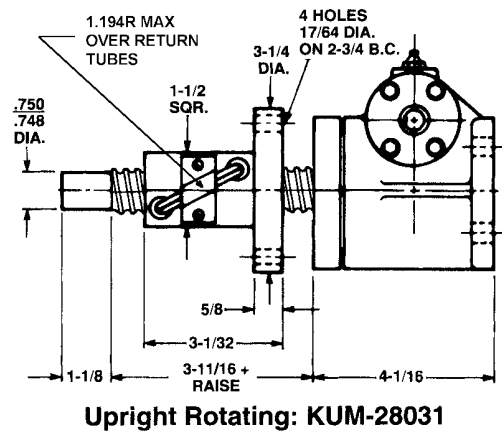


Double Clevis

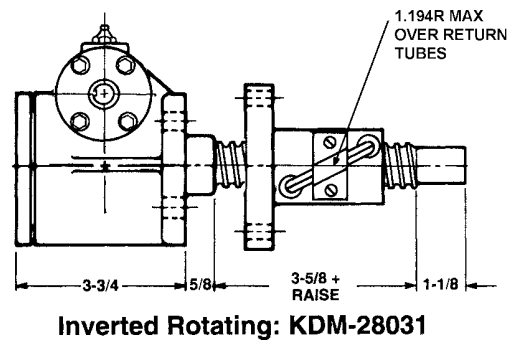
Maximum Allowable Raise in Compression 15"—Rating 3800 Lbs.  
Maximum Raise at Rated Load in Compression 14"



Inverted: M-28011



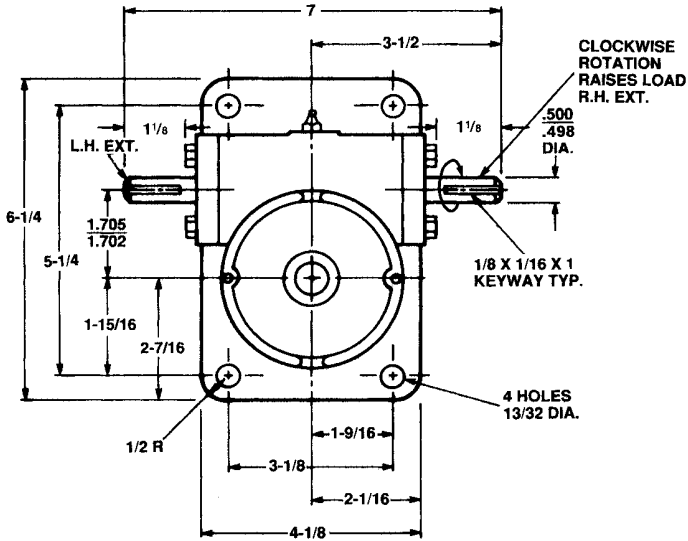
Upright Rotating: KUM-28031



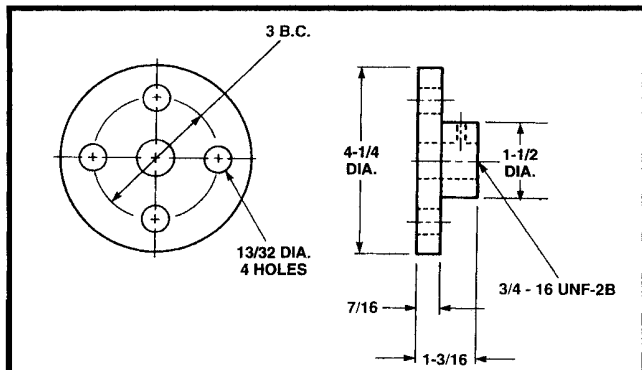
Inverted Rotating: KDM-28031

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

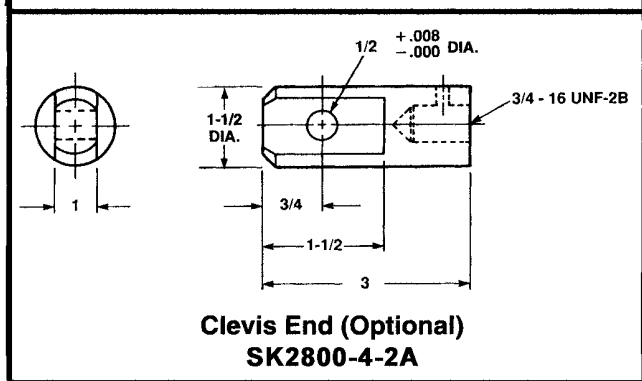
# Ball Screw Actuator, 2 Ton, 9800 Series



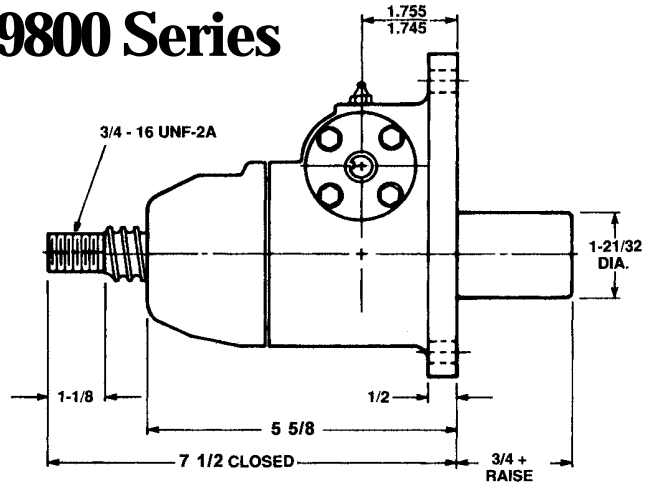
1" Diameter x .250 Lead Lifting Screws



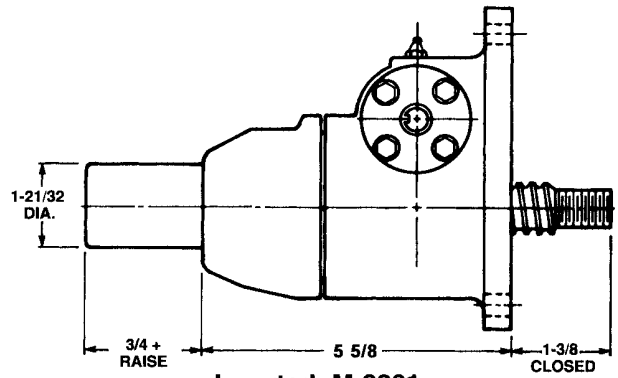
Top Plate (Optional)  
SK2800-1-2A



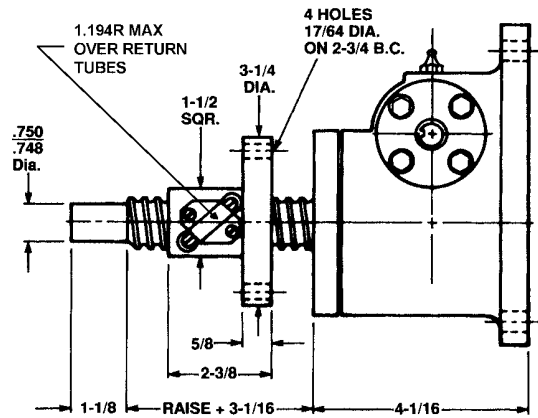
Clevis End (Optional)  
SK2800-4-2A



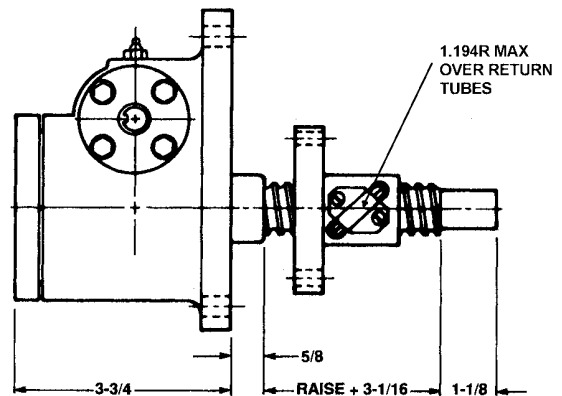
Upright: M-9802



Inverted: M-9801



Upright Rotating: UM-9803

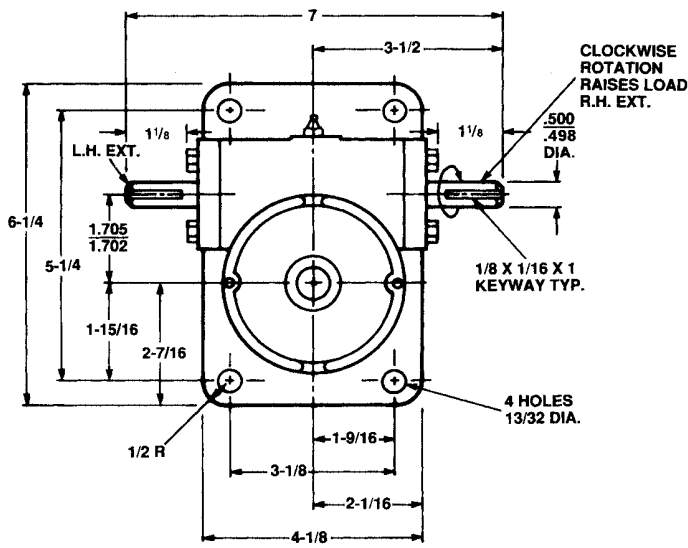


Inverted Rotating: DM-9803

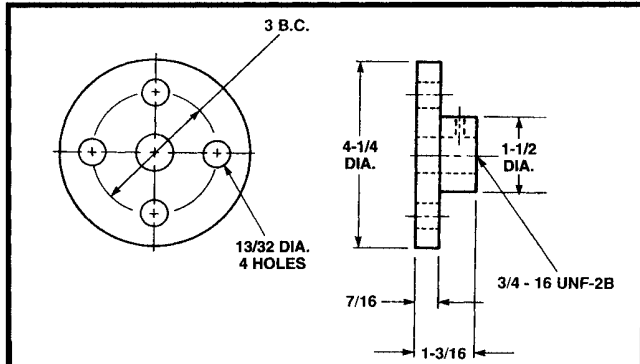
Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.



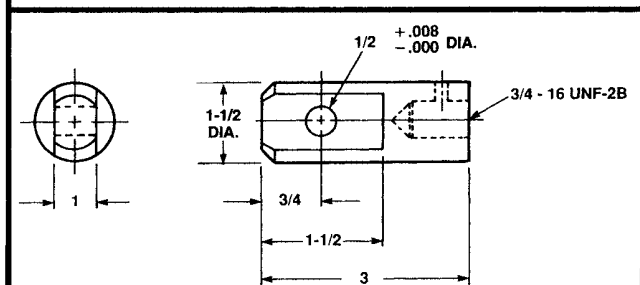
# Ball Screw Actuator, 2 Ton - 1" Lead, 9800 Series



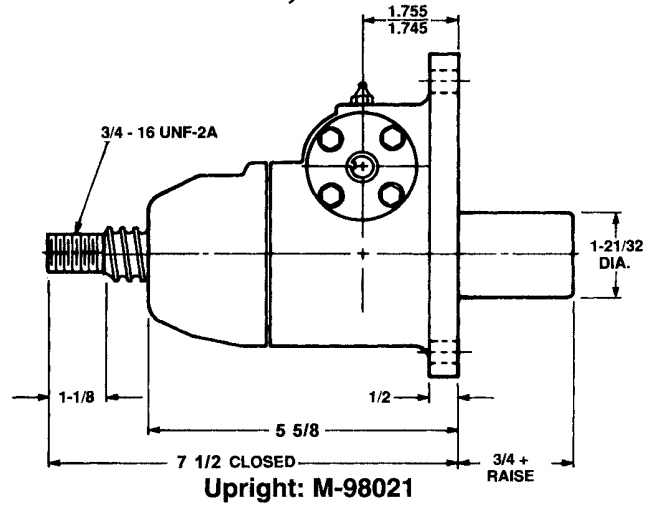
1" Diameter x 1.000 Lead Lifting Screws



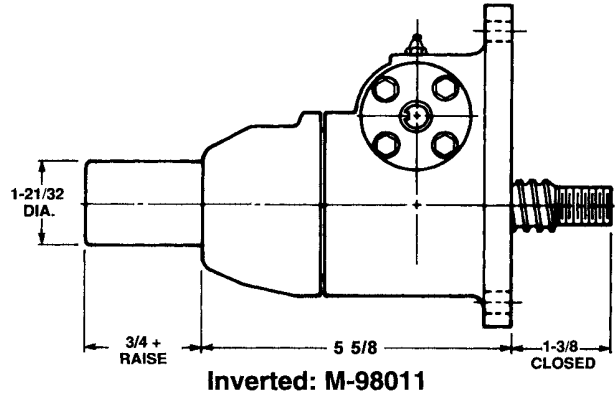
Top Plate (Optional)  
SK2800-1-2A



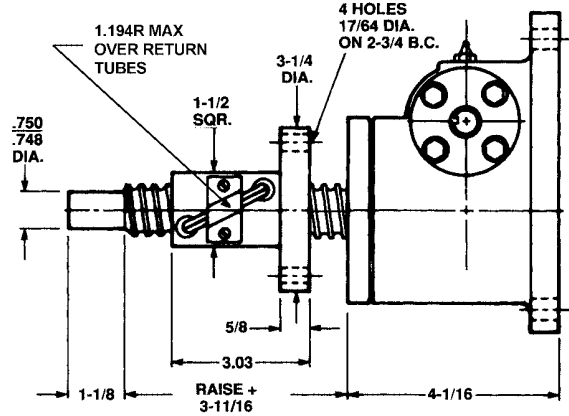
Clevis End (Optional)  
SK2800-4-2A



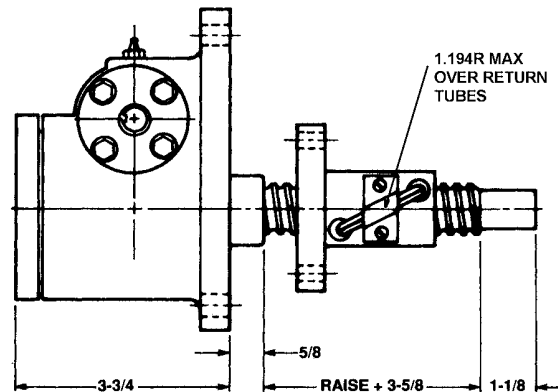
Upright: M-98021



Inverted: M-98011



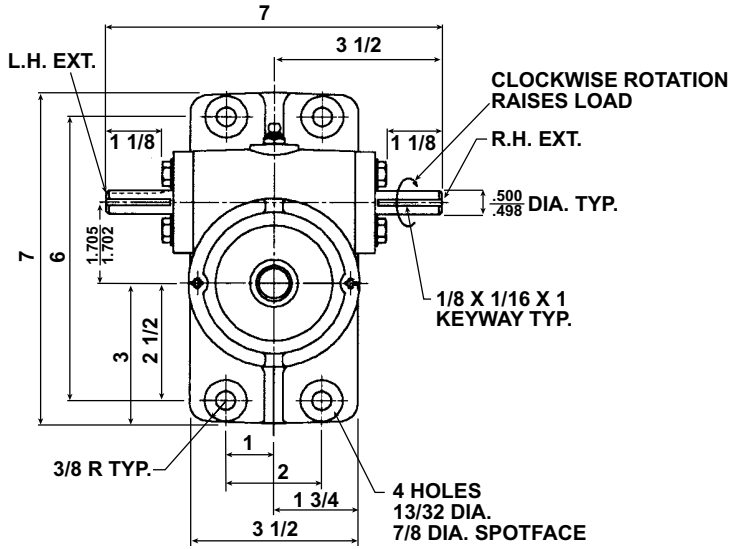
Upright Rotating: UM-98031



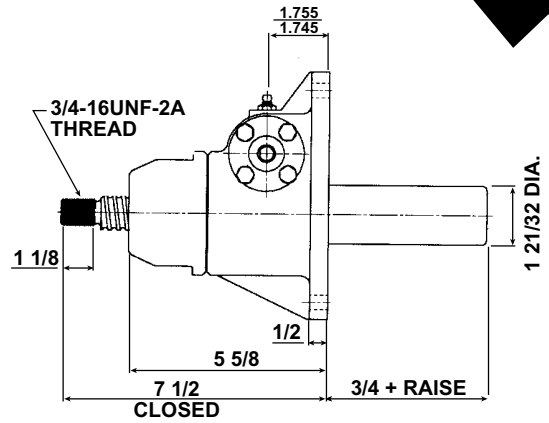
Inverted Rotating: DM-98031

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

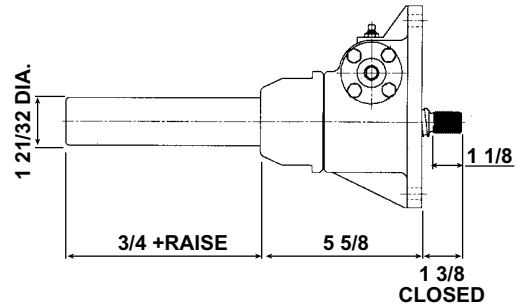
# Ball Screw Actuator, 2 Ton, 7800 Series



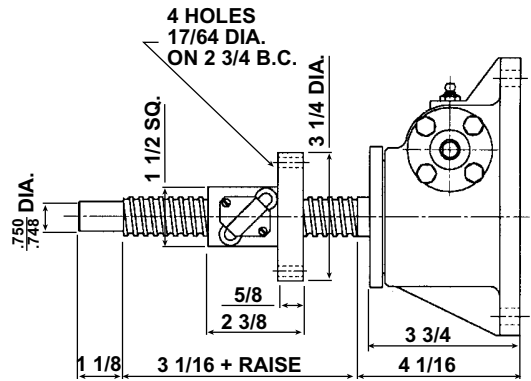
**Top View: M-7802**



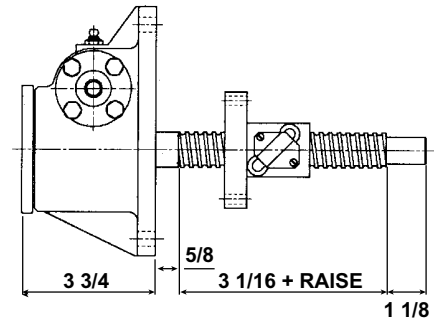
**Upright: M-7802**



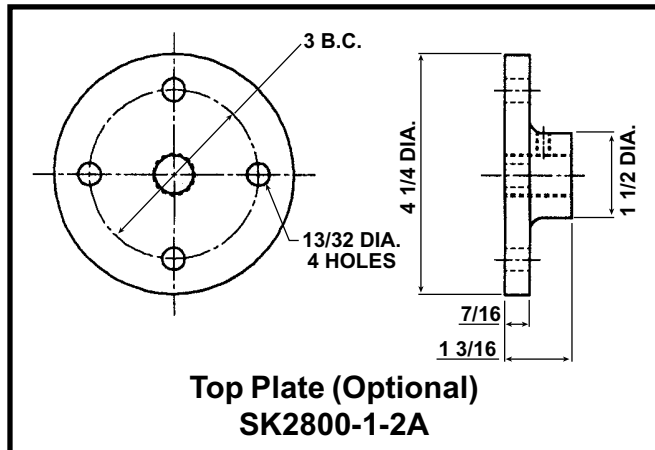
**Inverted: M-7801**



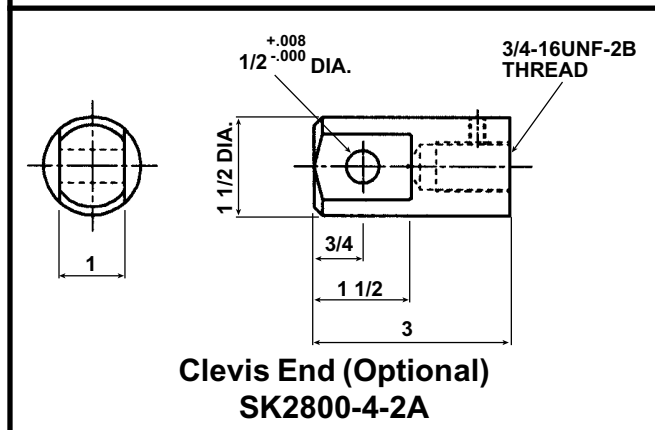
**Upright Rotating: UM-7803**



**Inverted Rotating: DM-7803**



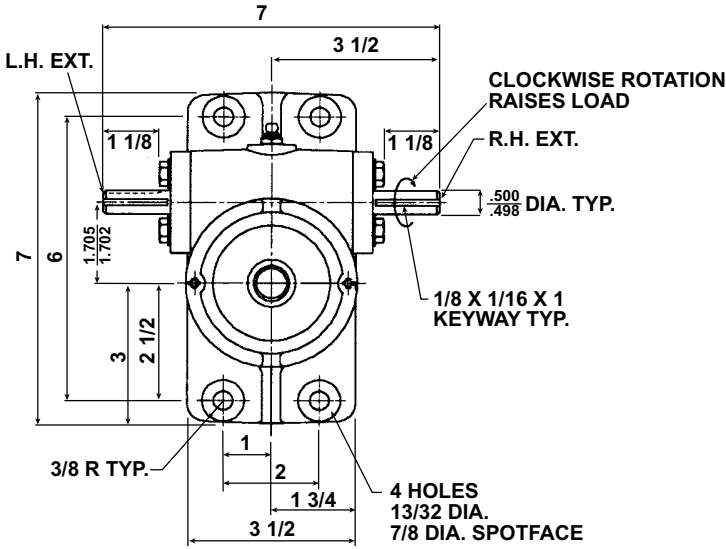
**Top Plate (Optional) SK2800-1-2A**



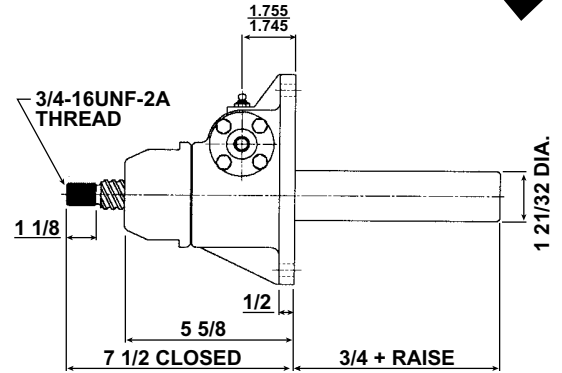
**Clevis End (Optional) SK2800-4-2A**

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

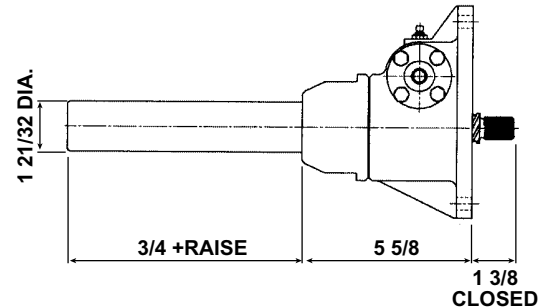
# Ball Screw Actuator, 2 Ton - 1" Lead, 7800 Series



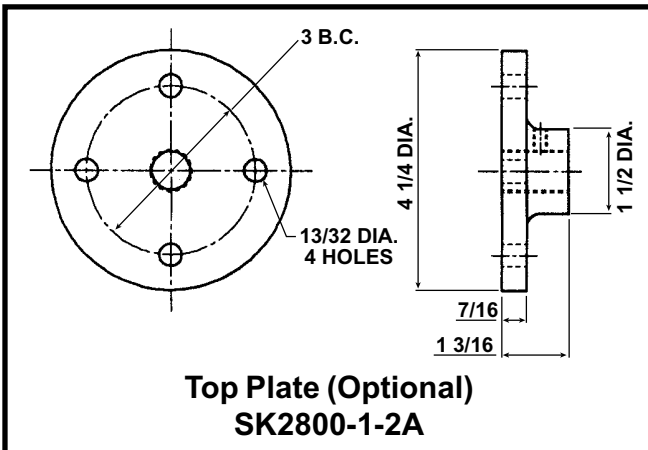
Top View: M-78021



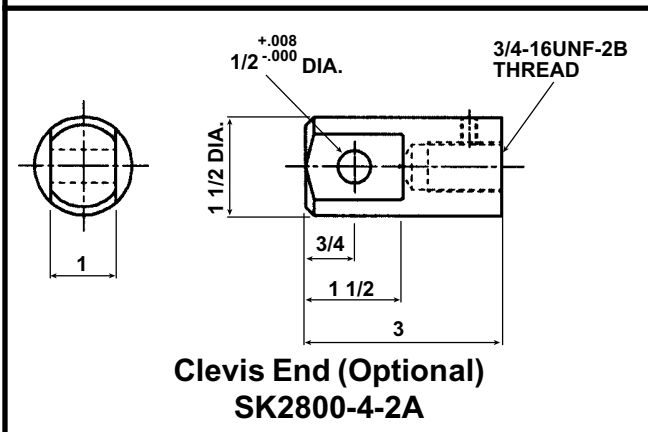
Upright: M-78021



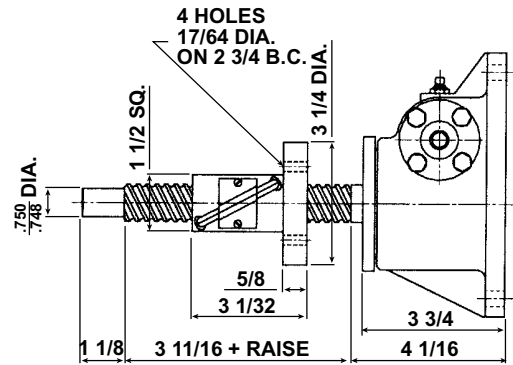
Inverted: M-78011



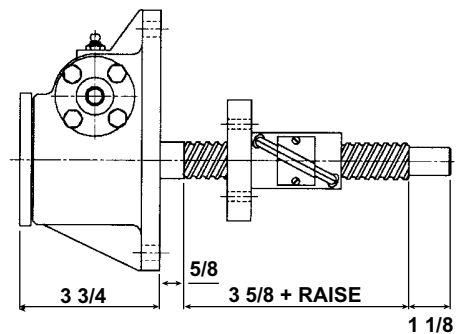
Top Plate (Optional)  
SK2800-1-2A



Clevis End (Optional)  
SK2800-4-2A



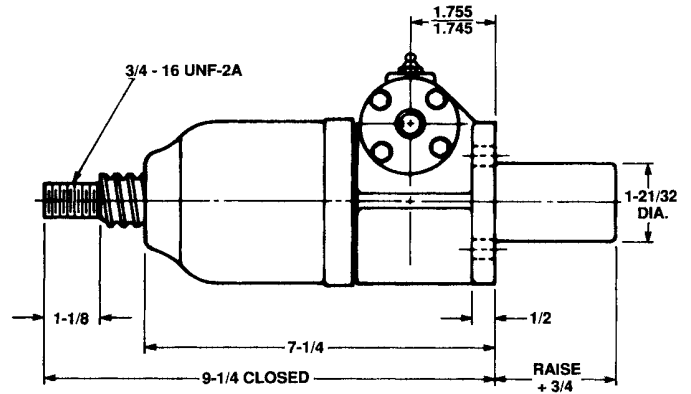
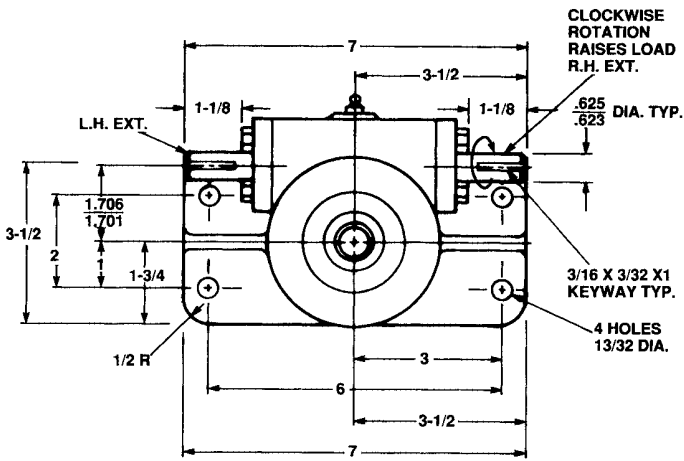
Upright Rotating: UM-78031



Inverted Rotating: DM-78031

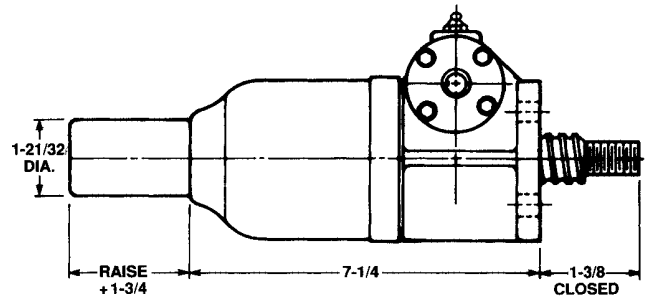
Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

# Ball Screw Actuator, 3 Ton

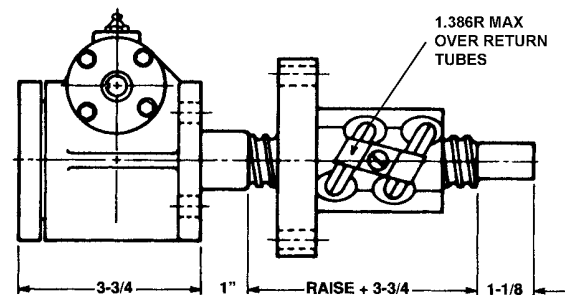
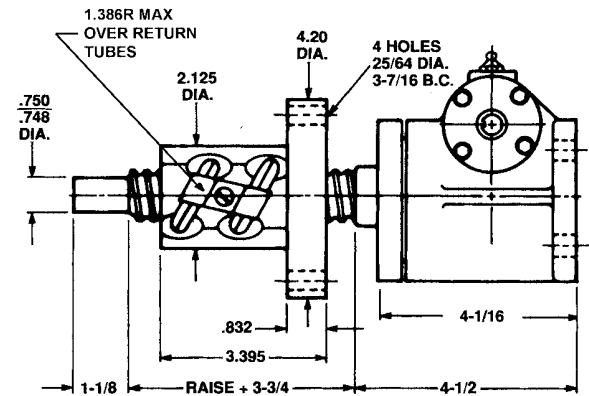
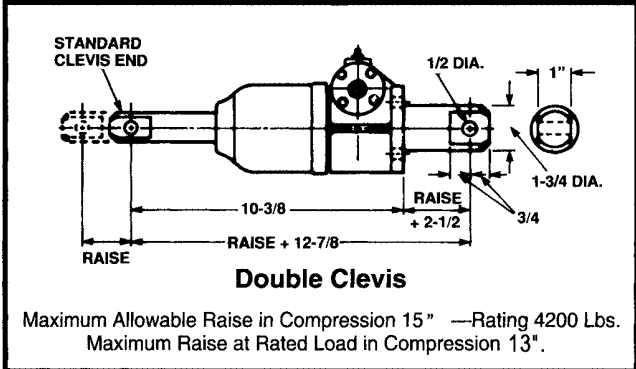
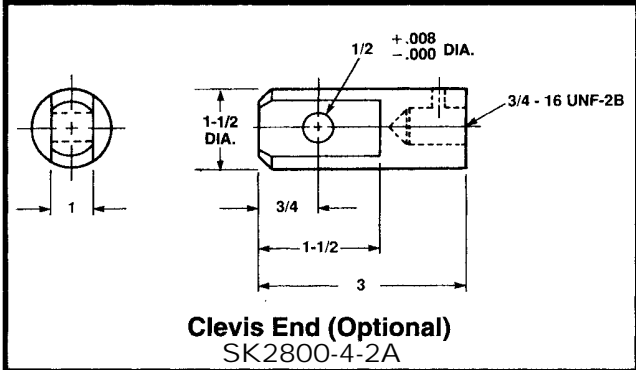
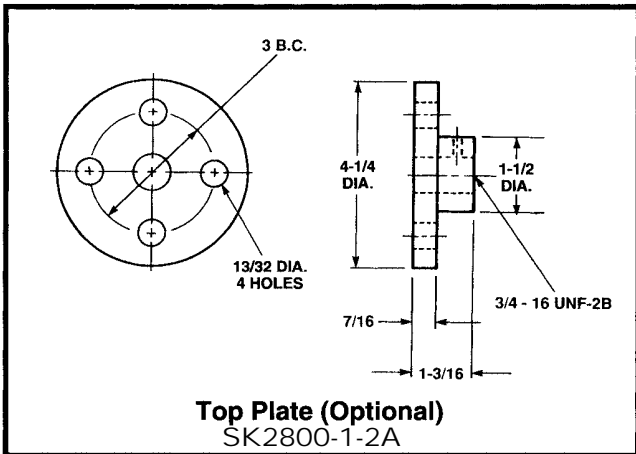


Upright: M-28003

1 1/64" Diameter x .413 Lead Lifting Screws

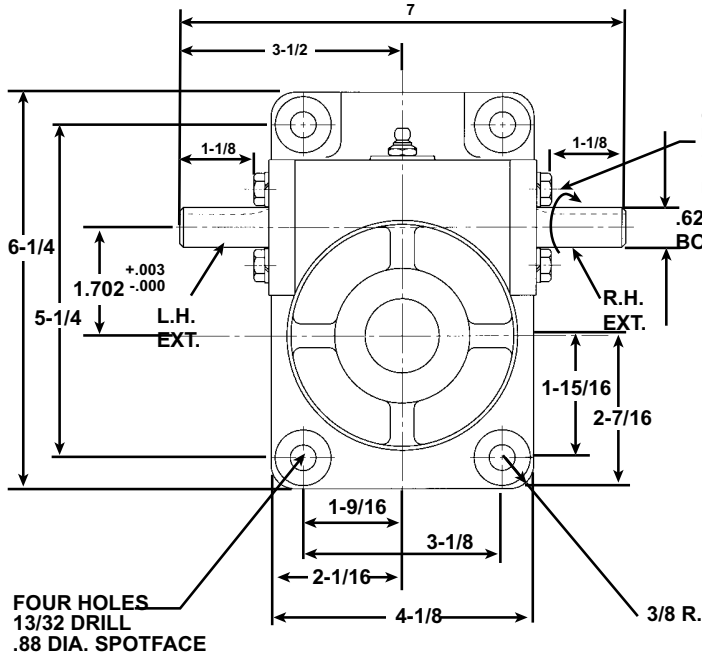


Inverted: M-28002



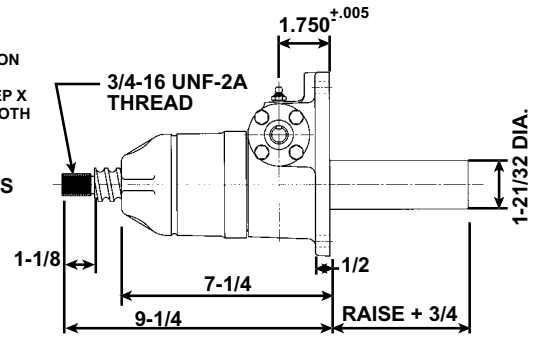
Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

# Ball Screw Actuator, 3 Ton

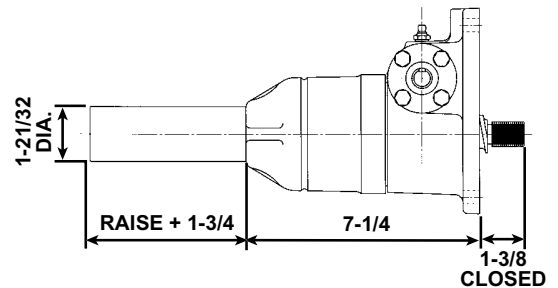


1<sup>11</sup>/<sub>64</sub>" Diameter x .413 Lead Lifting Screw

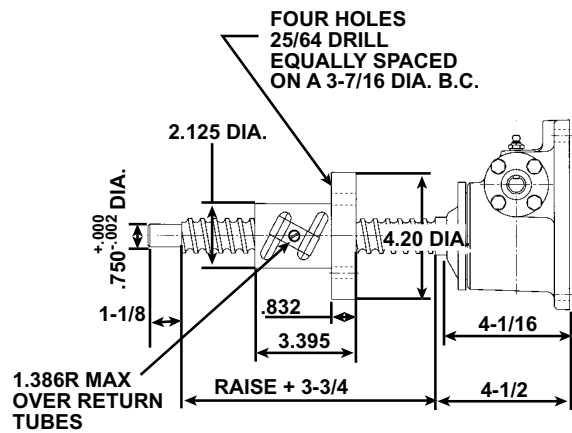
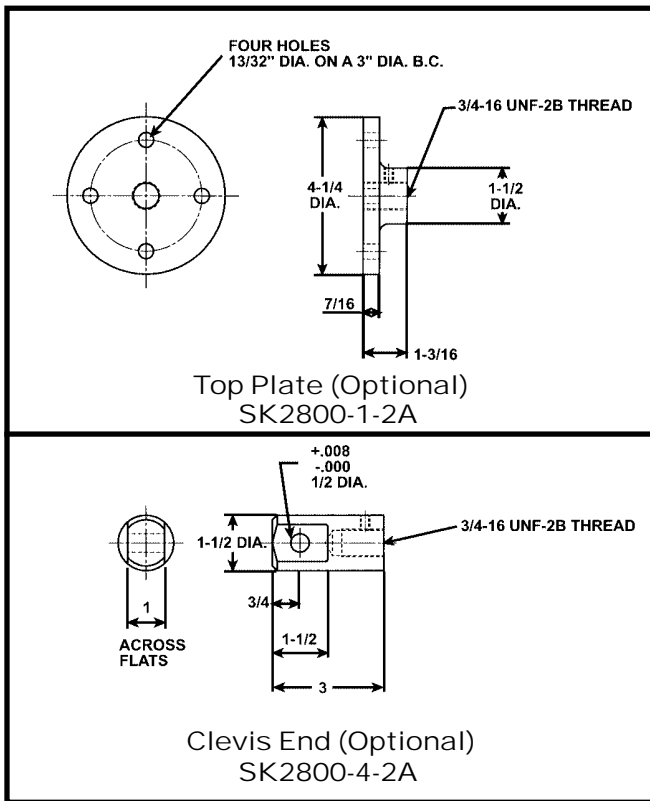
CLOCKWISE ROTATION  
 RAISES LOAD  
 .125 WIDE X .063 DEEP X  
 1.0 LONG KEYWAY BOTH  
 EXTENSIONS  
 .625<sup>+0.000</sup>/<sub>-0.002</sub> DIA.  
 BOTH EXTENSIONS



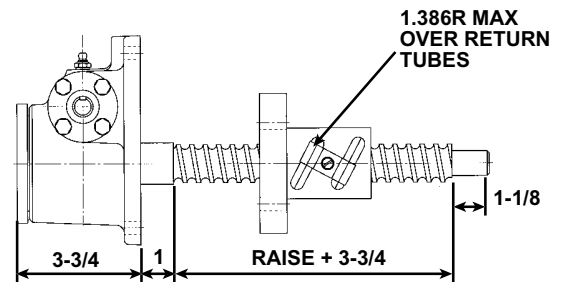
Upright: M-98003



Inverted: M-98002



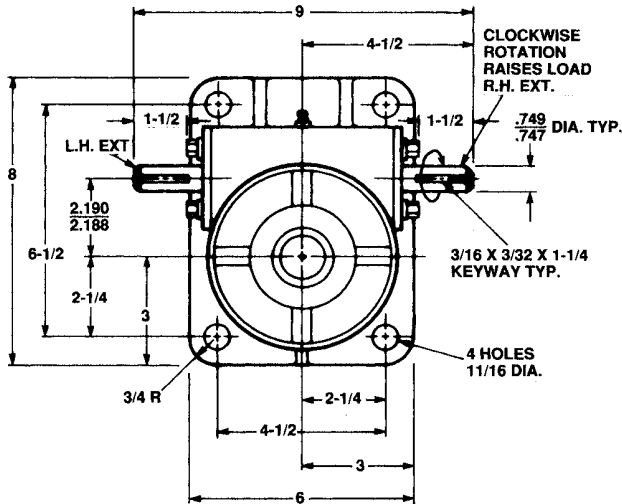
Upright Rotating: UM-98004



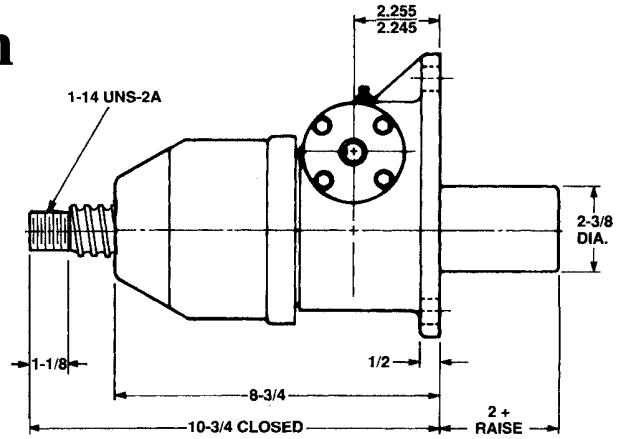
Inverted Rotating: DM-98004

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

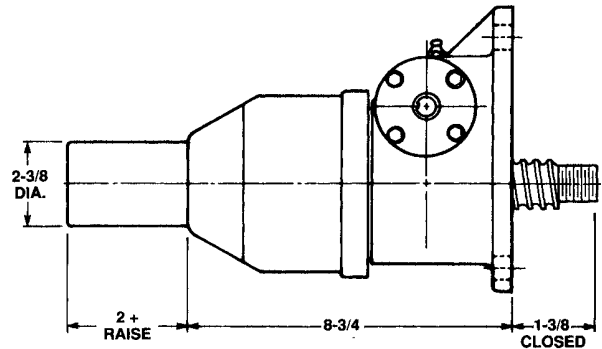
# Ball Screw Actuator, 5 Ton



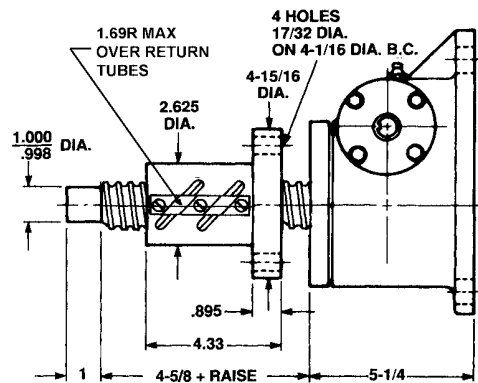
1 1/2" Diameter x .474 Lead Lifting Screws



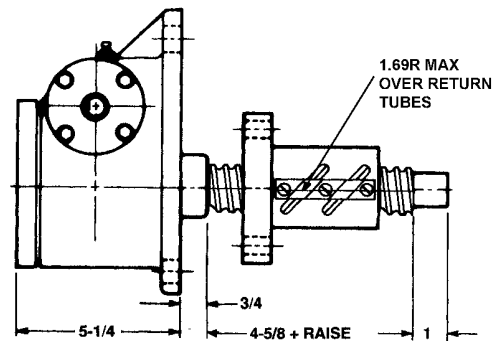
Upright: M-9805



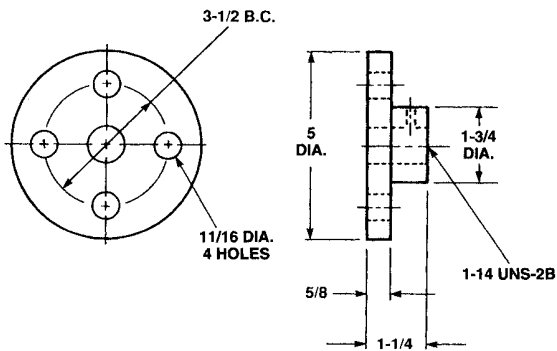
Inverted: M-9804



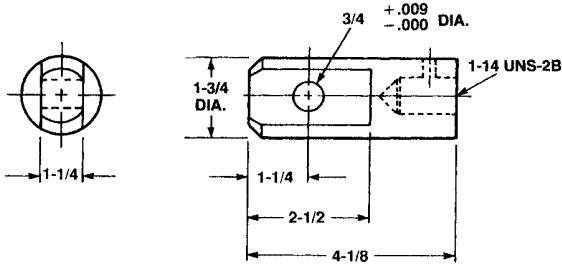
Upright Rotating: UM-9806



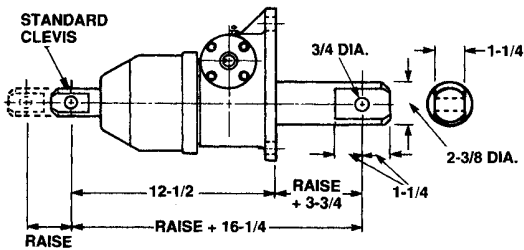
Inverted Rotating: DM-9806



Top Plate (Optional)  
SK2800-1-5A



Clevis End (Optional)  
SK2800-4-5A

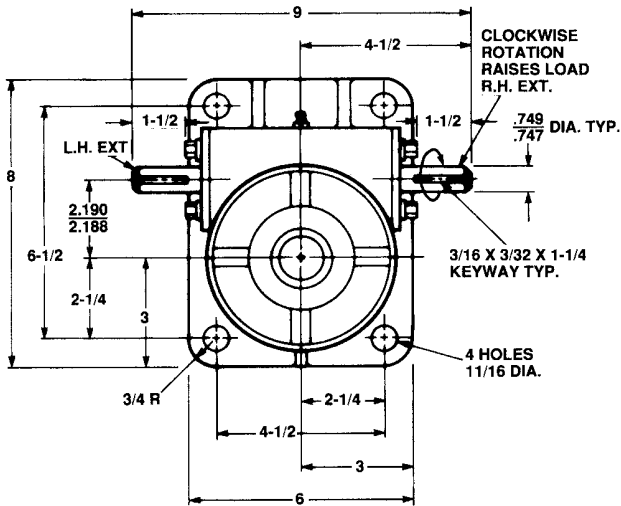


Double Clevis

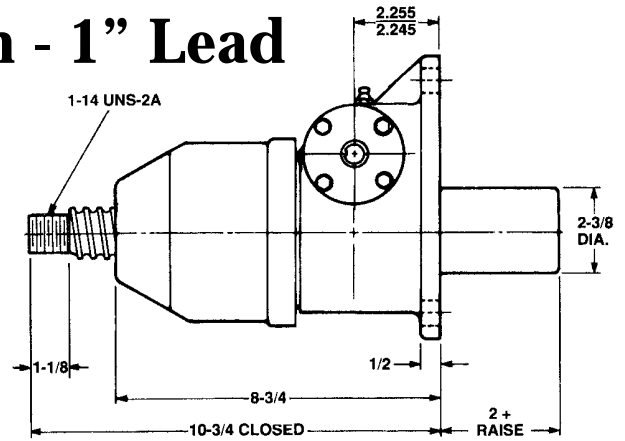
Maximum Allowable Raise in Compression 20" — Rating 7,300 Lbs.  
Maximum Raise at Rated Load in Compression 16".

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

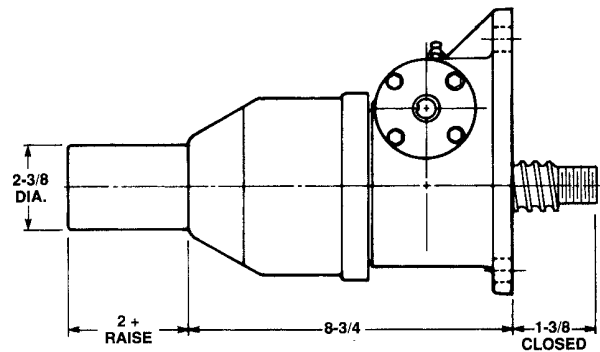
# Ball Screw Actuator, 5 Ton - 1" Lead



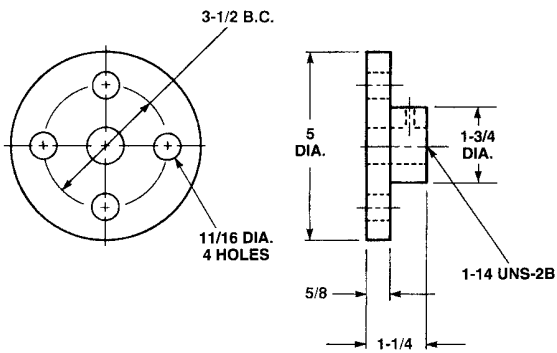
1 1/2" Diameter x 1.000 Lead Lifting Screws



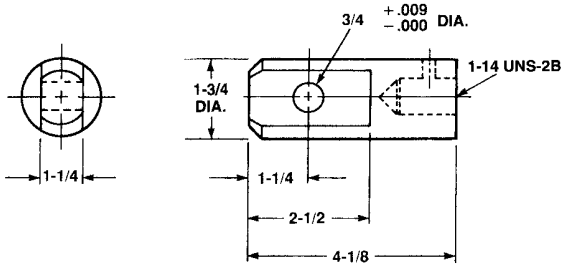
Upright: M-98051



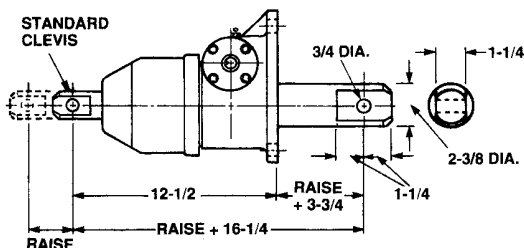
Inverted: M-98041



Top Plate (Optional)  
SK2800-1-5A

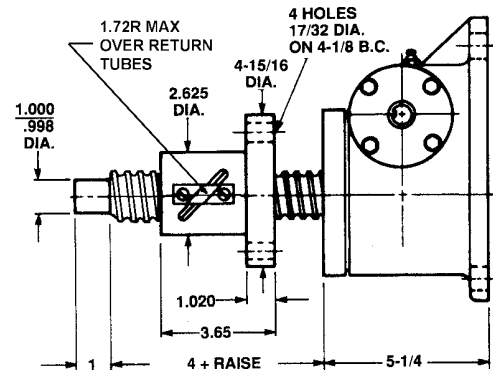


Clevis End (Optional)  
SK2800-4-5A

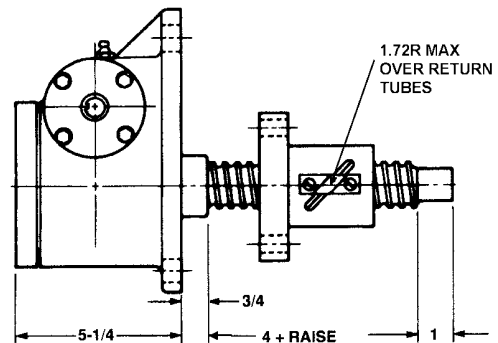


Double Clevis

Maximum Allowable Raise in Compression 20" —Rating 7,300 Lbs.  
Maximum Raise at Rated Load in Compression 16"



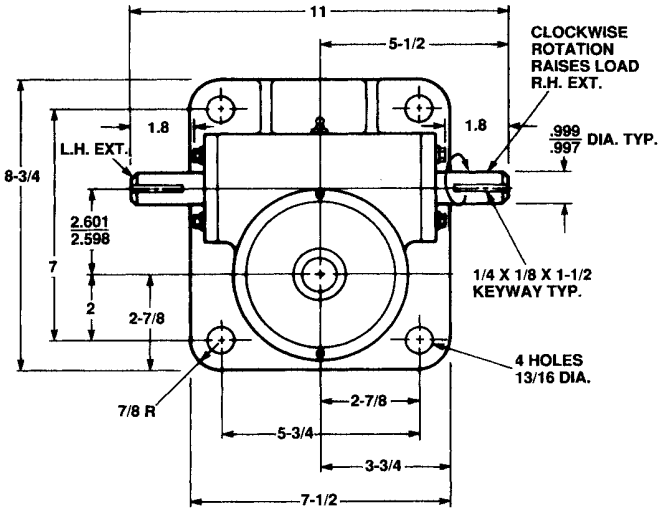
Upright Rotating: UM-98061



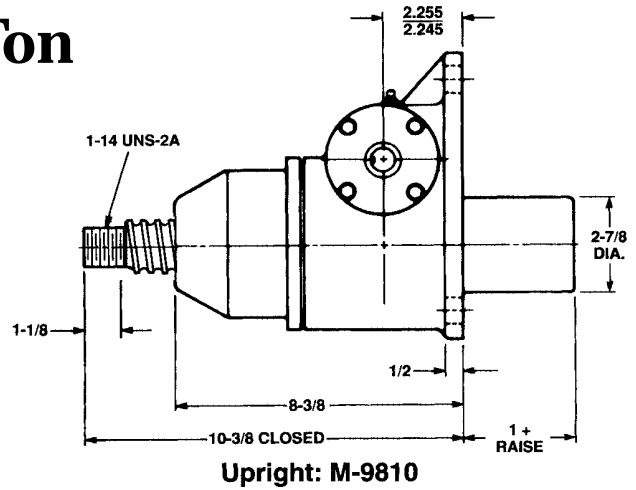
Inverted Rotating: DM-98061

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

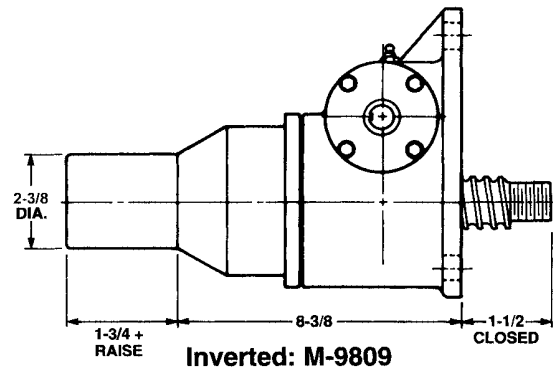
# Ball Screw Actuator, 10 Ton



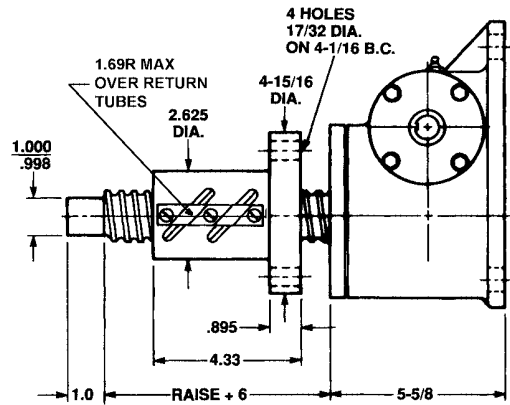
1 1/2" Diameter x .474 Lead Lifting Screws



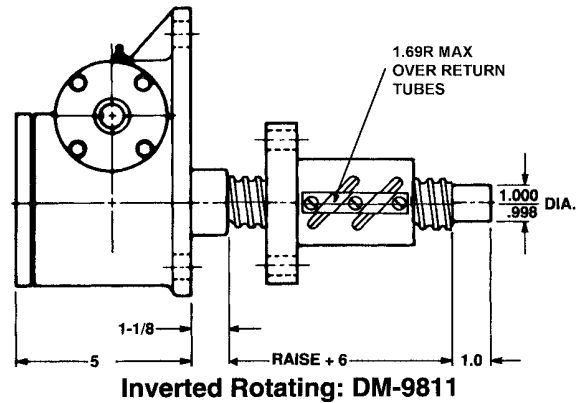
Upright: M-9810



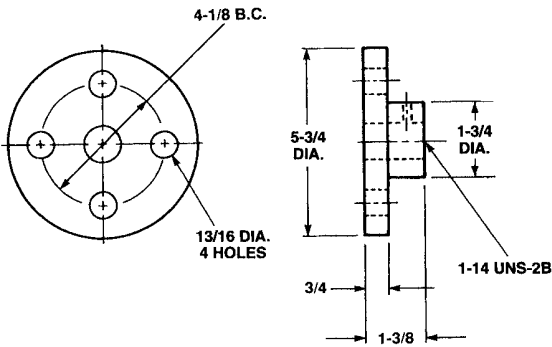
Inverted: M-9809



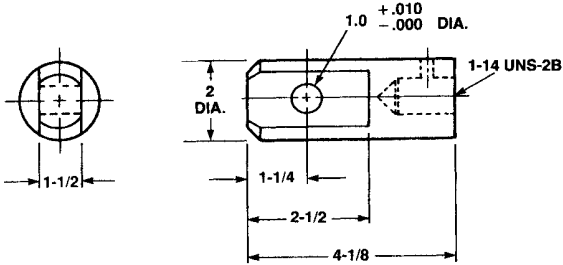
Upright Rotating: UM-9811



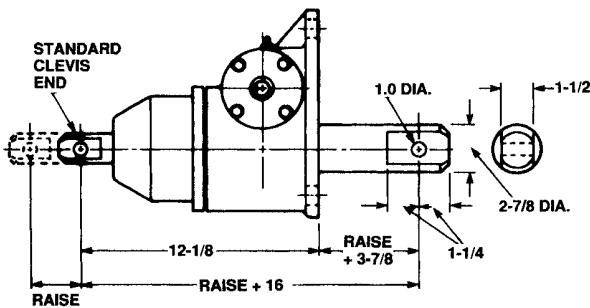
Inverted Rotating: DM-9811



Top Plate (Optional)  
SK2800-1-10A



Clevis End (Optional)  
SK2800-4-10A



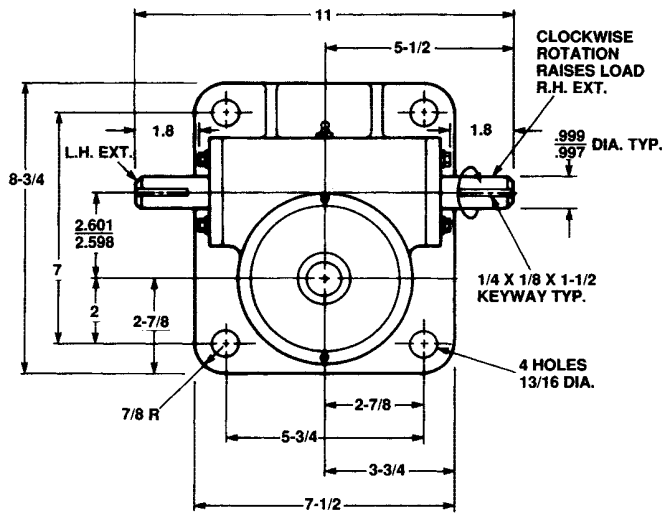
Double Clevis

Maximum Allowable Raise in Compression 20" —Rating 7,300 Lbs.  
Maximum Raise at Rated Load in Compression 9"

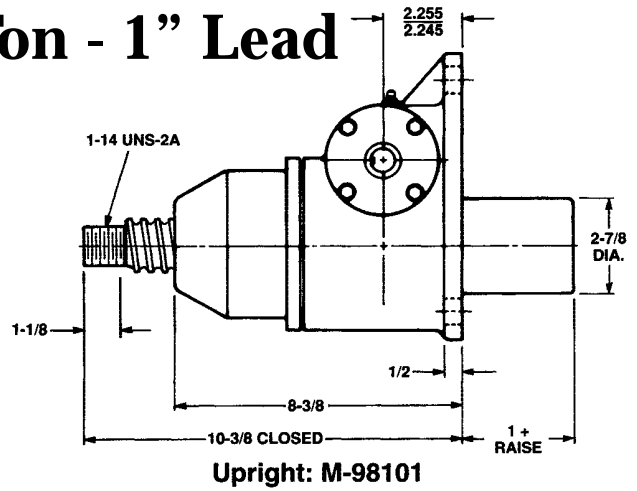
Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.



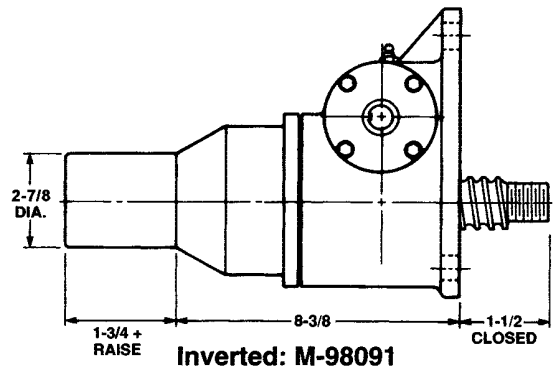
# Ball Screw Actuator, 10 Ton - 1" Lead



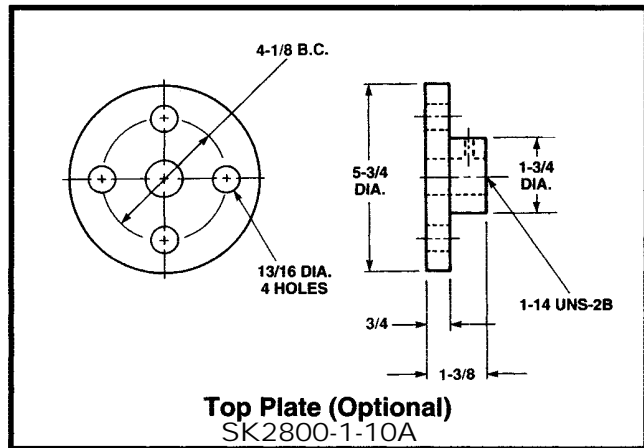
1 1/2" Diameter x 1.000 Lead Lifting Screws



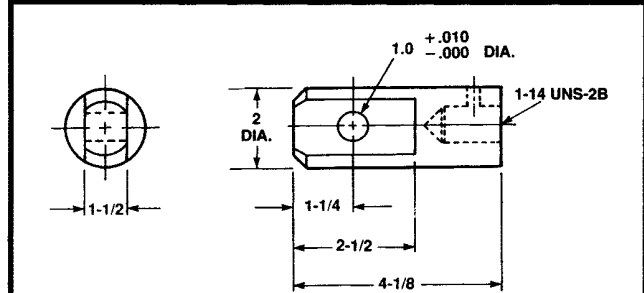
Upright: M-98101



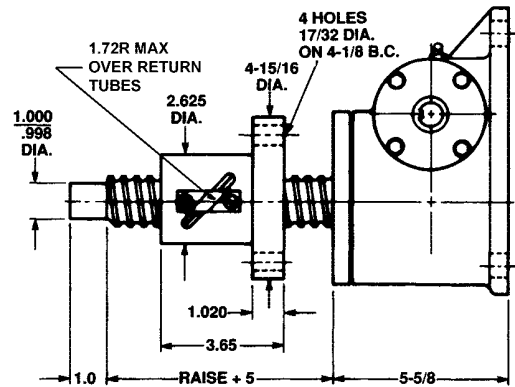
Inverted: M-98091



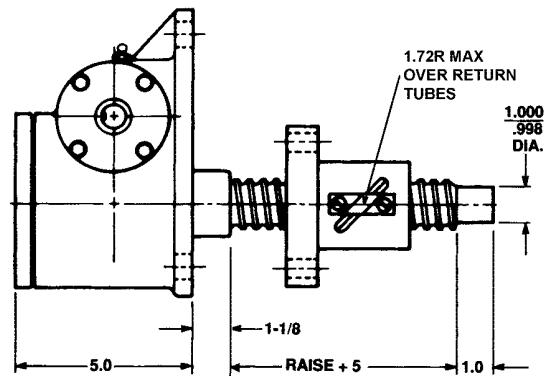
Top Plate (Optional)  
SK2800-1-10A



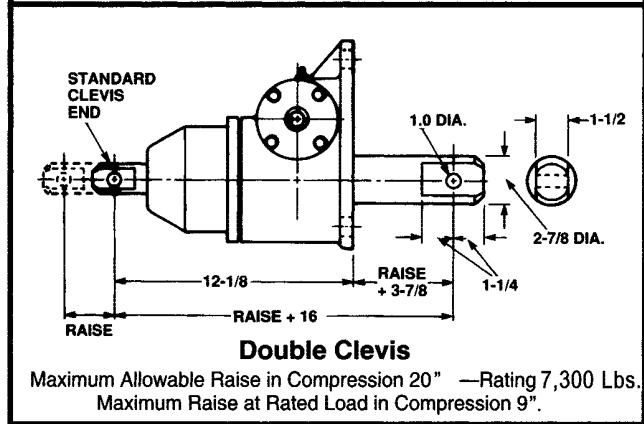
Clevis End (Optional)  
SK2800-4-10A



Upright Rotating: UM-98111



Inverted Rotating: DM-98111

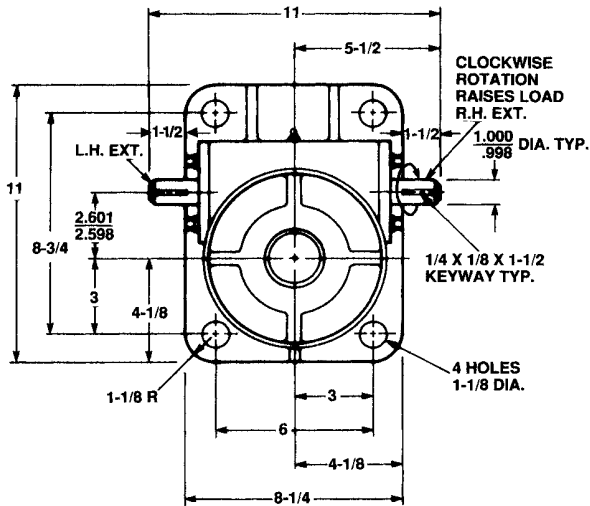


Double Clevis

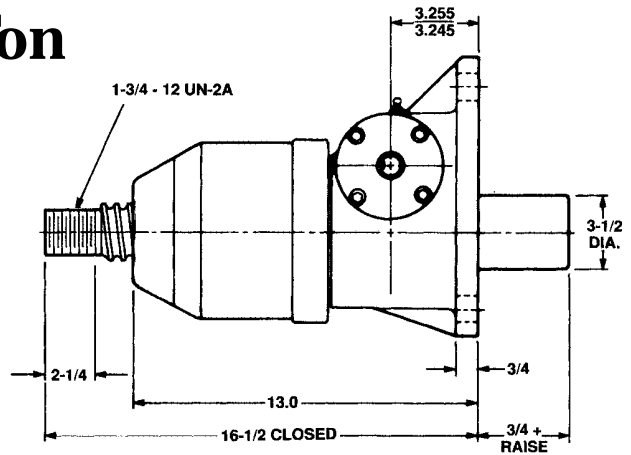
Maximum Allowable Raise in Compression 20" —Rating 7,300 Lbs.  
Maximum Raise at Rated Load in Compression 9".

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

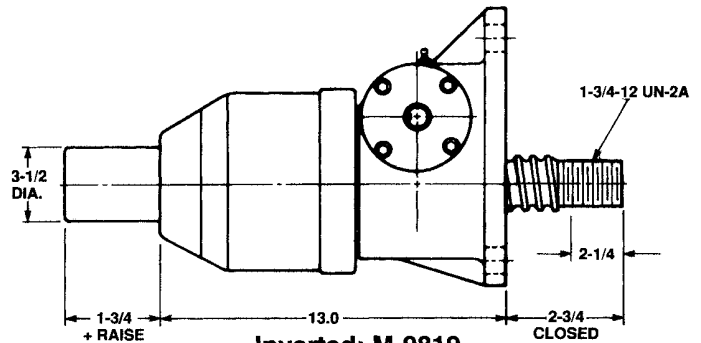
# Ball Screw Actuator, 20 Ton



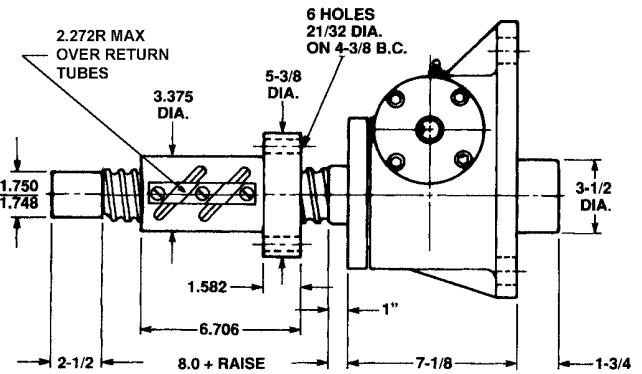
2 1/4" Diameter x .500 Lead Lifting Screws



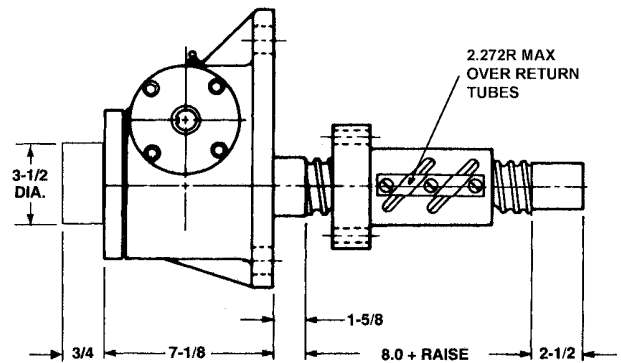
Upright: M-9820



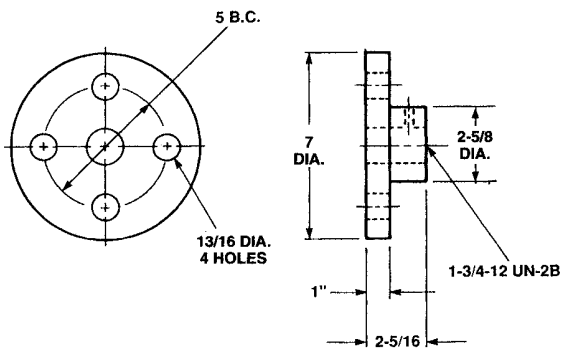
Inverted: M-9819



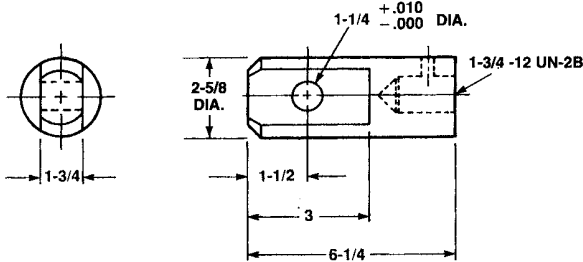
Upright Rotating: AUM-9821



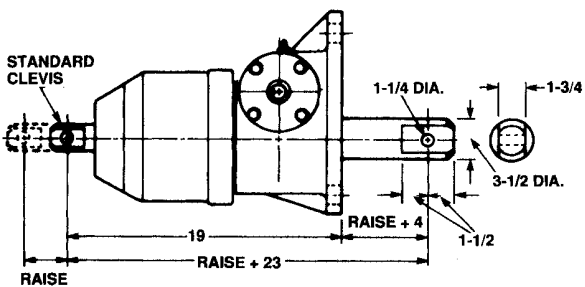
Inverted Rotating: ADM-9821



Top Plate (Optional)  
SK2800-1-20A



Clevis End (Optional)  
SK2800-4-20A

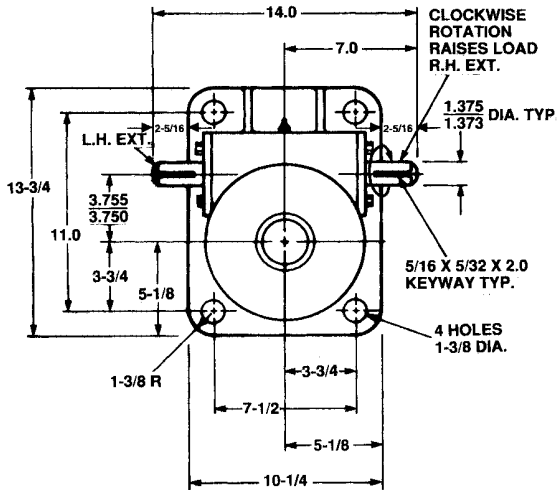


Double Clevis

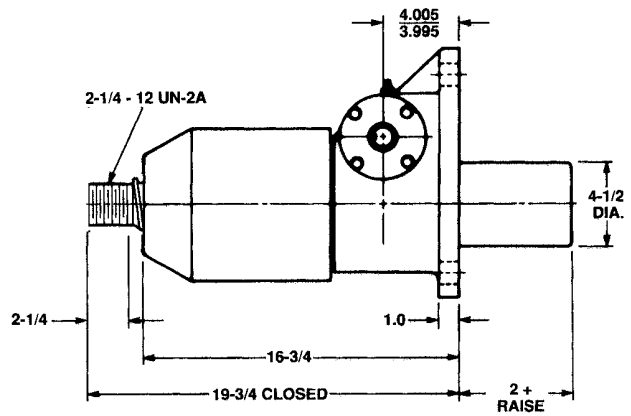
Maximum Allowable Raise in Compression 35" - Rating 19,000 Lbs.  
Maximum Raise at Rated Load in Compression 30".

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

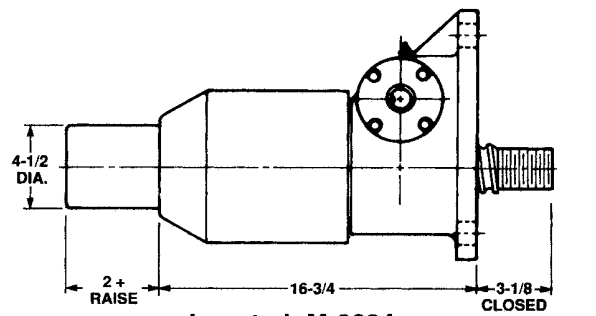
# Ball Screw Actuator, 25 Ton



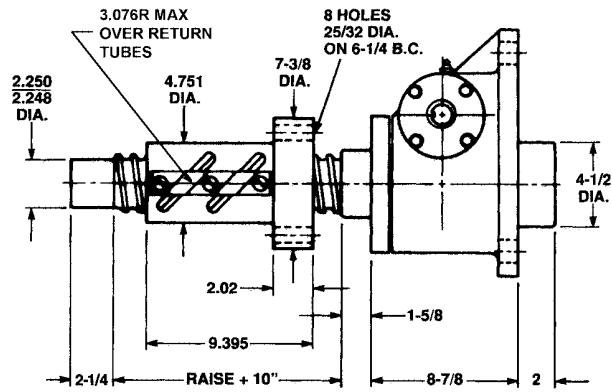
3" Diameter x .660 Lead Lifting Screws



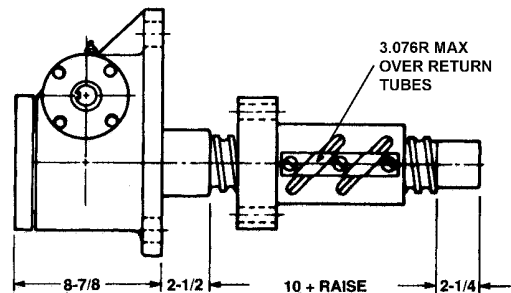
Upright: M-9825



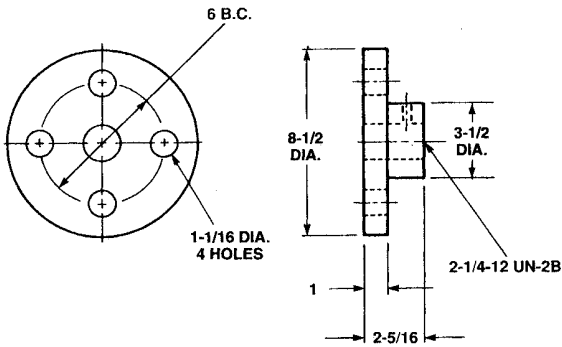
Inverted: M-9824



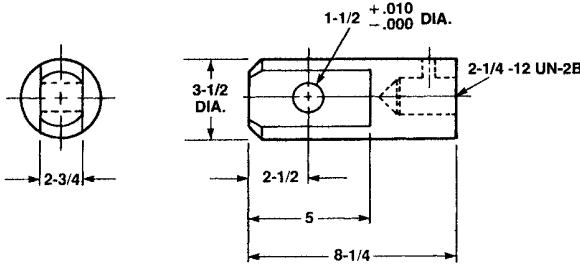
Upright Rotating: UM-9826



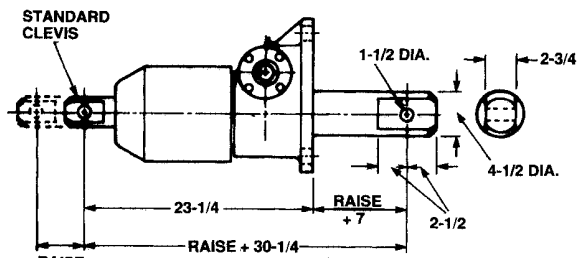
Inverted Rotating: DM-9826



Top Plate (Optional)  
SK2800-1-25A



Clevis End (Optional)  
SK2800-4-25A

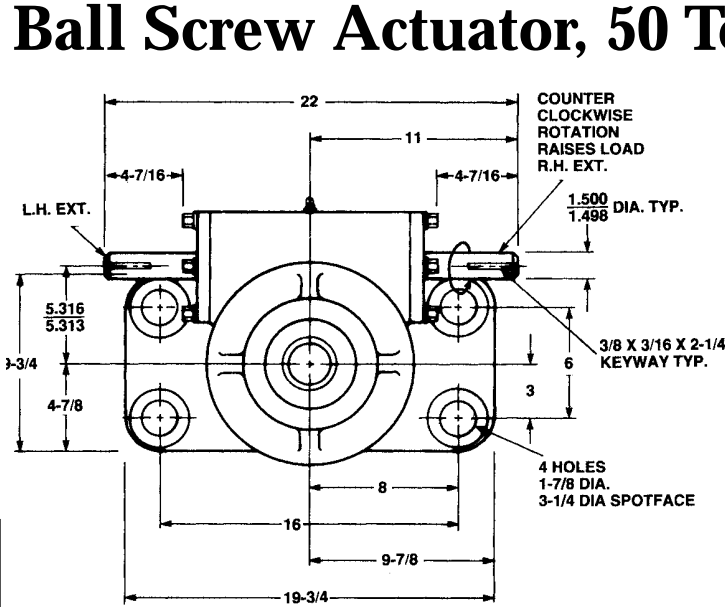


Double Clevis

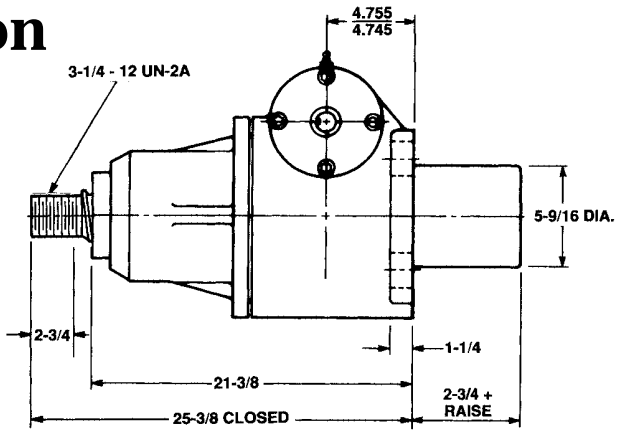
Maximum Allowable Raise in Compression 47"—Rating 35,000 Lbs.  
Maximum Raise at Rated Load in Compression 36"

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.

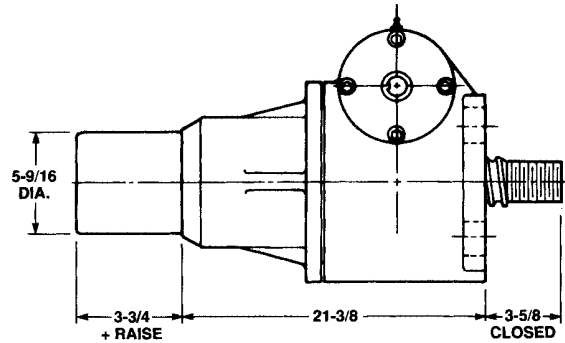
# Ball Screw Actuator, 50 Ton



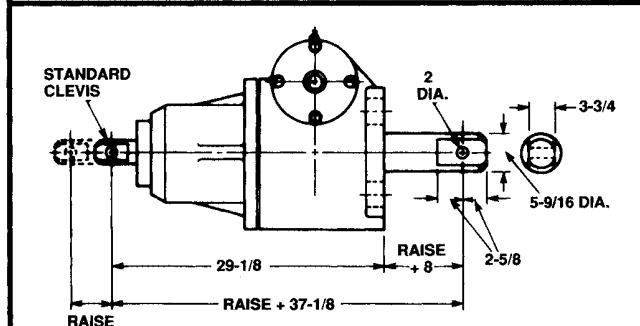
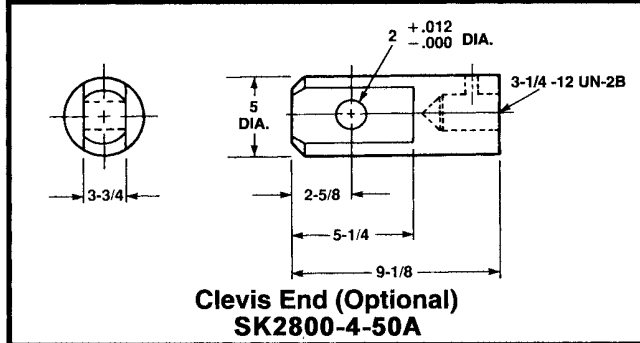
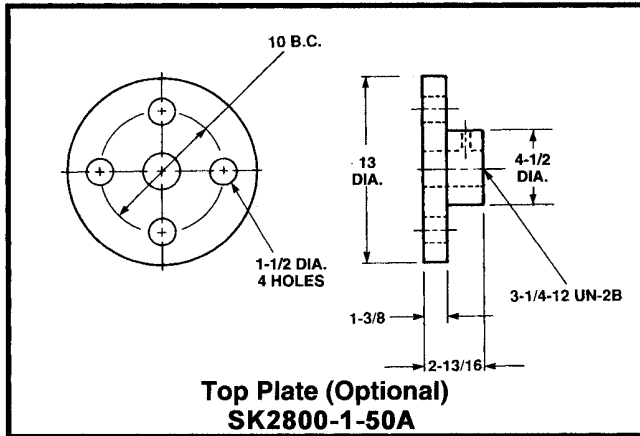
4" Diameter x 1.000 Lead Lifting Screws



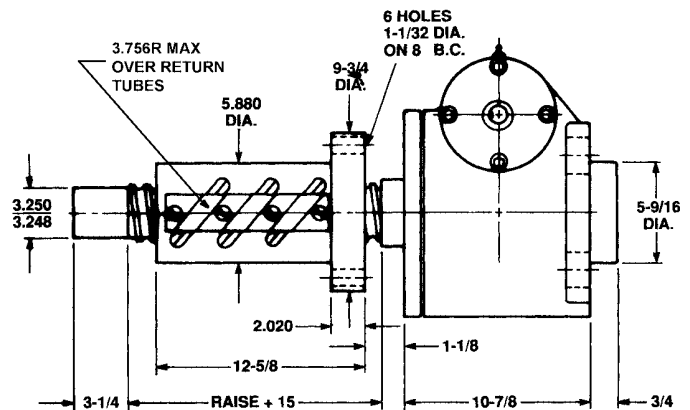
Upright: M-2860



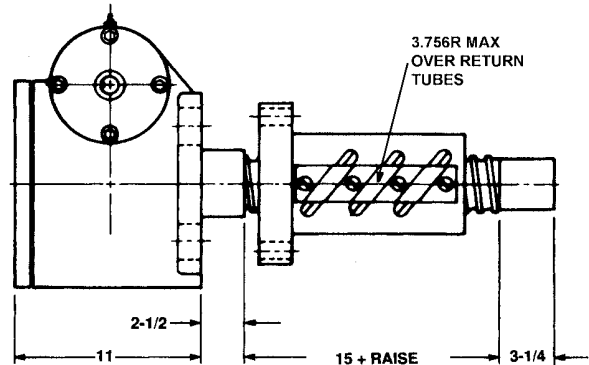
Inverted: M-2859



Maximum Allowable Raise in Compression 65" - Rating 62,000 Lbs.  
 Maximum Raise at Rated Load in Compression 47".



Upright Rotating: UM-2861



Inverted Rotating: DM-2861

Note: Lifting screw is not keyed. Top should be secured to a lifting member to prevent rotation. When a Bellows Boot is required, see pages 112 through 114. Dimensions are subject to change without notice.