

# MODULAR ACTUATORS

100 to 2,000 lbs

444 to 8,896 N



Duff-Norton Modular Actuators allow use in a wide range of applications by matching standard actuator models with AC or DC electric, air, hydraulic or explosion-proof drive units.

The rotating screw models, featuring a traveling lift nut, permit reliable load positioning in locations which are relatively free of dust, dirt and moisture.

Translating tube units, with an enclosed lifting screw and translating tube, are specified when environmental contamination is anticipated.

Optional limit switches and transducers are also available for both actuator types.

## Features & Benefits

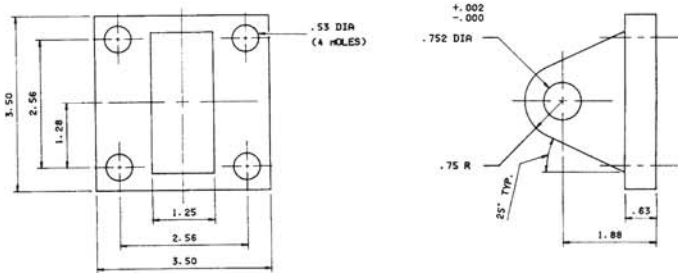
- Integral housing flange engineered for NEMA 56 frame motor. C-face mounting. (NEMA 42 and 48 and IEC71 frame motor C-face mounting options available).
- Rated loads to 2,000 lbs., depending on actuator gear ratio and motor horsepower.
- Lift speeds to 170 inches per minute (varied with load and hp/rpm of motor).
- Standard travel up to 24 inches. (consult Duff-Norton engineering for longer travel options).
- Can be tandem-coupled for synchronous operation.
- Optional motors, limit switches and position indicating transducer.
- Clevis attachment accessories available for mounting: eye bracket, clevis bracket and pivot pin.

**WARNING:** These actuators are intended for industrial use only and should not be used to lift, support or otherwise transport people unless you have a written statement from Duff-Norton company which authorizes the specific actuator unit, as used in your application, as suitable for moving people.

Clevis attachments are available for modular actuators. Attachments are suitable for either housing end or translating tube end. Mounting hardware is not included.

### Clevis Accessories

#### Eye Bracket SK2465-60EB

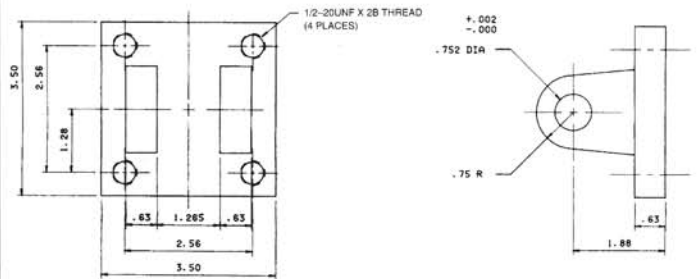


#### Pivot Pin SK2465-62PP



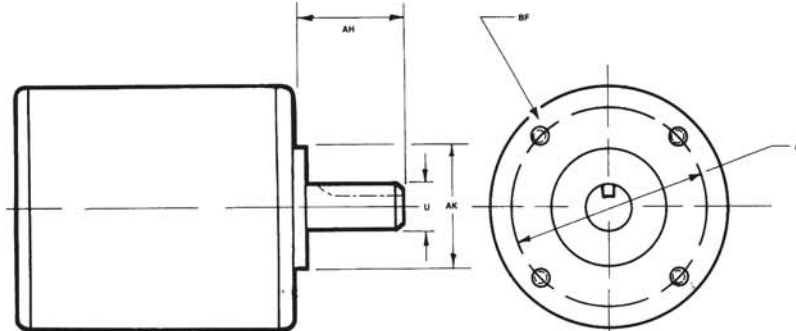
#### Pivot Pin Washer H4211C

#### Clevis Bracket SK2465-61CB



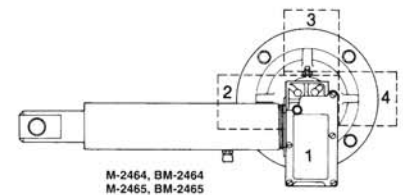
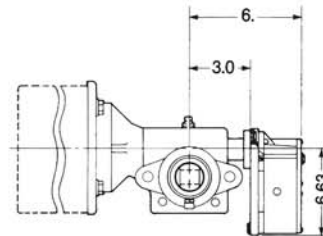
### Ordering Information

(For special motor flange)



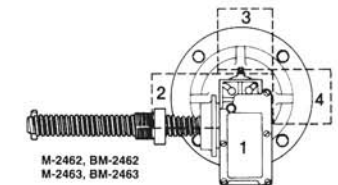
Required Motor Information							
Manufacturer	Type	AH	AK	AJ	U	Key Size	BF

### Limit Switch



POSITION	1	2	3	4
M-2462, M-2463, BM-2462, BM-2463	C	A	D	C
M-2464, M-2465, BM-2464, BM-2465	C	X	D	C

- (A) MINIMUM POSITION OF NUT MAY BE AFFECTED.
- (C) ROTARY LIMIT SWITCH EXTENDS BELOW BASE OF ACTUATOR UNIT.
- (D) SEALED ELECTRIC ELBOW WOULD EXTEND BELOW BASE OF ACTUATOR UNIT.
- (X) RECOMMENDED
- (-) NOT RECOMMENDED

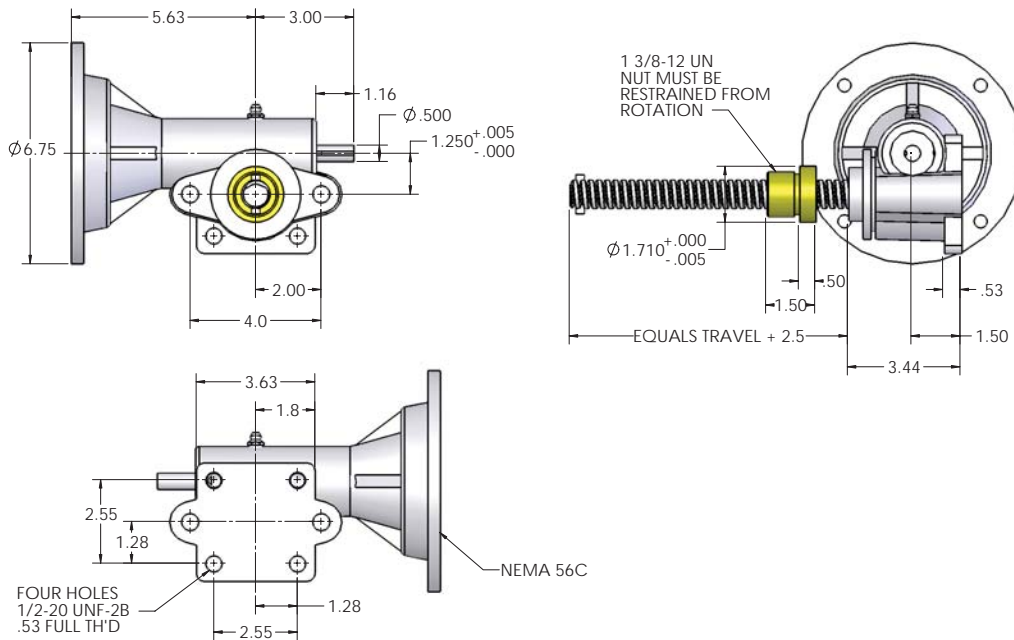


POSITION NO. OF SWITCH

# ROTATING MACHINE SCREW MODELS

## Features & Benefits

- Integral 56 frame, C-face mounting flange.
- Three-piece flexible coupling for easy motor assembly (included).
- Four threaded holes in base for standard hydraulic cylinder, clevis end accessory attachment. Tapped 1/2 20 UNF-2B.
- Rolled thread lifting screw, with work hardened finish, reduces coefficient of friction between screw and lifting nut. Provides smooth, efficient operation and long service.
- Steel worm and bronze gear set for quiet operation. Available in 5:1 and 20:1 ratios.
- Rugged, lightweight aluminum housing is corrosion resistant.
- Bronze lifting nut for longer life.
- Standard grease fitting on housing for easy lubrication of worm gear.
- Stop-pin at end of lifting screw prevents inadvertent run-off of lifting nut.



Rotating Machine Screw Models

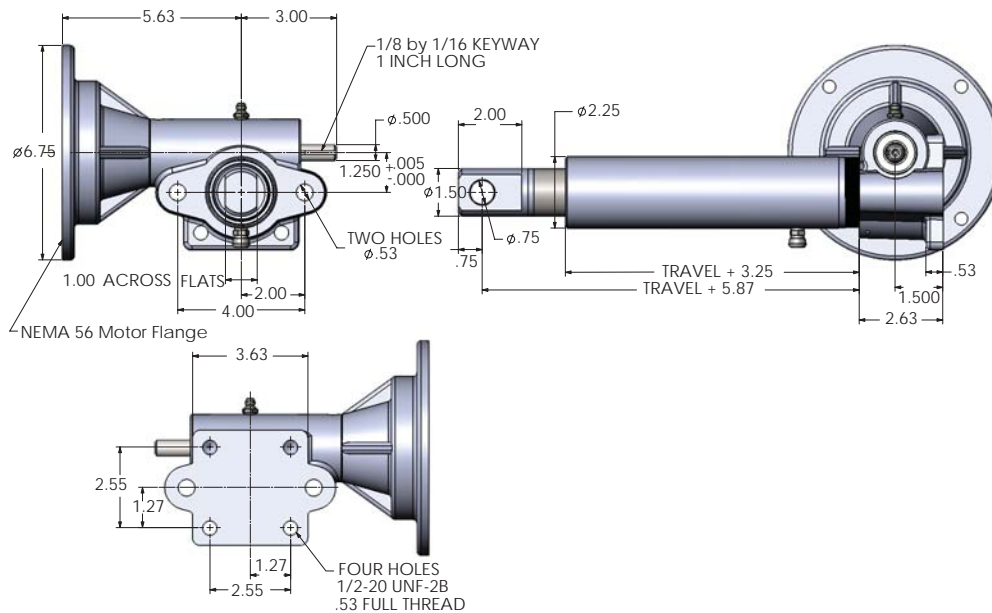
PRODUCT INFORMATION	Model Number	"T" Screw Dia.	Turns of Worm 1" Travel		Torque lb./in. @ 1000 lb. Loads		Motor RPM	Rated Loads						Lifting Speed in / min	
			Ratio		Ratio			Ratio		Ratio		Ratio		Ratio	
			5:1	20:1	5:1	20:1		5:1	20:1	5:1	20:1	5:1	20:1	5:1	20:1
			lbs	lbs	lbs	lbs		lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs
			1/3 HP Motor	1/2 HP Motor	3/4 HP Motor										
M-2462	.875 Dia. Acme .25 Pitch R.H. Double	10	40	39	18	1725	300	700	500	1000	700	1500	170	43	
							1140	450	1000	700	1500	1100	2000	114	28
M-2463	1.0 Dia. Acme .25 Pitch R.H. Single	20	80	29	14	1725	400	900	600	1400	900	2000	86	21	
							1140	600	1400	900	2000	1400	2000	57	14

- Note: 1. Model M-2462 is self lowering and a motor brake should be used.  
 2. Model M-2463 may drift .75 in. (20:1 ratio) to 2.0 in. (5:1 ratio) when motor is shut off. If this is undesirable, a motor brake should be employed.  
 3. When ordering other than 56C-face actuators contact applications engineering at 800-477-5002.

# TRANSLATING TUBE MACHINE SCREW MODELS

## Features & Benefits

- Outer aluminum tube is corrosion-resistant and protects translating tube, lifting screw and nut.
- Wiper-scraper seal in end of outer tube keeps dirt out and lubricants in.
- Bronze guide bushing inside of outer tube reduces lateral movement of translating screw.
- Translating tube zinc coated for weather-resistance.
- Single or double lead lifting screw and nut for high efficiency and long wear.
- Vent in outer tube prevents pressure build-up in the actuator.
- Furnished with standard clevis end on translating tube. Threaded end is available; and on special order, depending on application, any type of threaded connection may be substituted.



Translating Tube Machine Screw Models

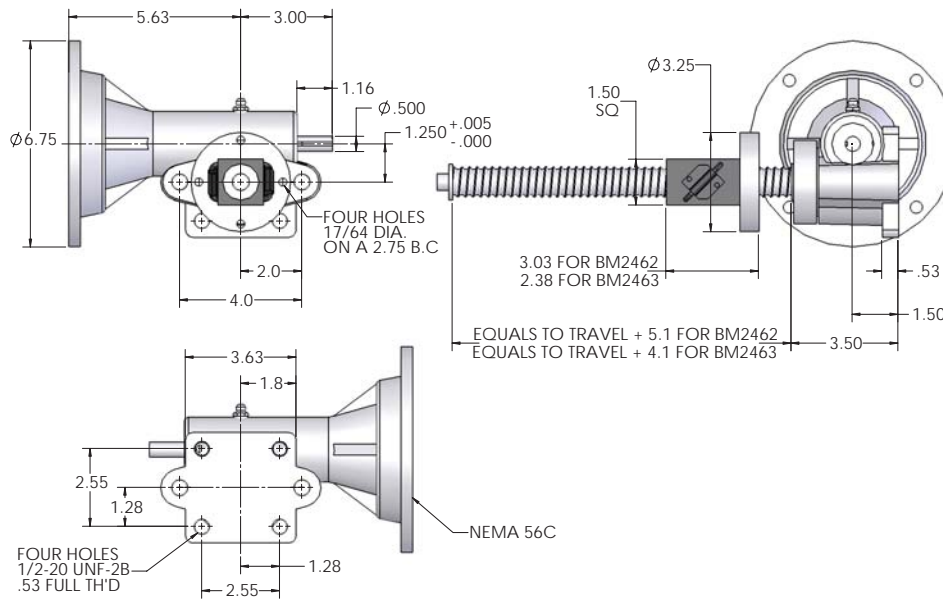
PRODUCT INFORMATION	Model Number	"T" Screw Dia.	Turns of Worm 1" Travel		Torque lb./in. @ 1000 lb. Loads		Motor RPM	Rated Loads						Lifting Speed in /min			
			Ratio		Ratio			1/3 HP Motor		1/2 HP Motor		3/4 HP Motor		Ratio			
			5:1	20:1	5:1	20:1		5:1	20:1	5:1	20:1	5:1	20:1	5:1	20:1		
			lbs		lbs			lbs		lbs		lbs		lbs		lbs	
M-2464	.875 Dia. Acme .25 Pitch R.H. Double		10	40	39	18	1725	300	700	500	1000	700	1500	170	43		
							1140	450	1000	700	1500	1100	2000	114	28		
M-2465	1.0 Dia. Acme .25 Pitch R.H. Single		20	80	29	14	1725	400	900	600	1400	900	2000	86	21		
							1140	600	1400	900	2000	1400	2000	57	14		

- Note: 1. Model M-2464 is self lowering and a motor brake should be used.  
 2. Model M-2465 may drift .75 in. (20:1 ratio) to 2.0 in. (5:1 ratio) when motor is shut off. If this is undesirable, a motor brake should be employed.  
 3. When ordering other than 56C-face actuators contact applications engineering at 800-477-5002.

# ROTATING BALL SCREW MODELS

## Features & Benefits

- Integral 56 frame, C-face mounting flange.
- Three-piece flexible coupling for easy motor assembly (included).
- Four threaded holes in base for standard clevis end accessory attachment. Tapped 1/2-20 UNF-2B.
- Ball-bearing type screw and mating nut with rolling contact reduces friction to a minimum providing capability for higher speed and longer life with less power requirement.
- Steel worm and bronze gear set for quiet operation. Available in 5:1 and 20:1 ratios.
- Rugged, lightweight aluminum housing is corrosion resistant.
- Standard grease fitting on housing for easy lubrication of worm gear.
- Stop-disc at end of lifting screw prevents inadvertent run-off of ball nut.



## Rotating Ball Screw Models

PRODUCT INFORMATION	Model Number	"T" Screw Dia.	Turns of Worm 1" Travel		Torque lb./in. @ 100 lb. Loads		Motor RPM	Rated Loads								Lifting Speed in / min	
			Ratio		Ratio			1/4 HP Motor		1/3 HP Motor		1/2 HP Motor		3/4 HP Motor		Ratio	
			5:1	20:1	5:1	20:1		5:1	20:1	5:1	20:1	5:1	20:1	5:1	20:1	5:1	20:1
			lbs		lbs			lbs		lbs		lbs		lbs		lbs	
BM-2462	1.00 Dia. x 1.000 Lead Ball Screw	5	-	5.3	-	1725	100	-	200	-	300	-	500	-	345	-	
							1140	200	-	300	-	500	-	700	-	228	-
BM-2463	1.0 Dia. x .250 Lead Ball Screw	20	80	1.3	0.6	1725	600	1500	900	2000	1300	-	2000	-	86	21	
							1140	1000	-	1300	-	2000	-	-	-	57	14

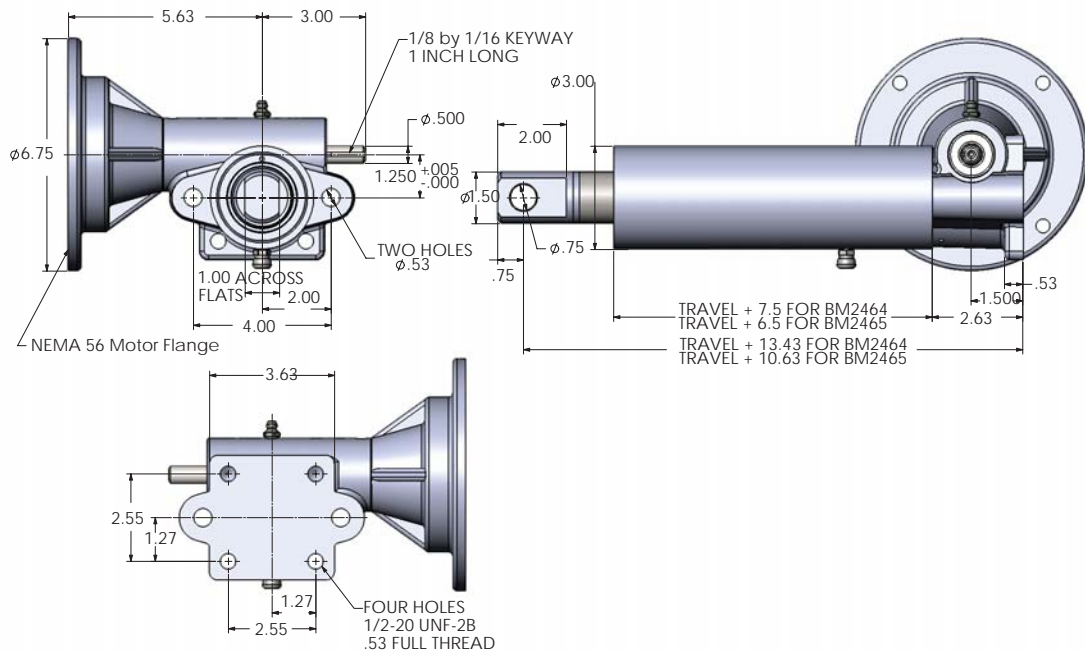
- Note: 1. Model BM-2462 and BM-2463 are self lowering and a motor brake must be used.
2. Due to high travel speed of BM-2462, it is important that a brake with a minimum response time be used. An independently controlled direct acting brake (6ft.-lb for 3/4 HP motors and 3ft.-lb. for smaller motors) is recommended.
3. When ordering other than 56C-face actuators contact applications engineering at 800-477-5002.



# TRANSLATING TUBE BALL SCREW MODELS

## Features & Benefits

- Outer aluminum tube is corrosion-resistant and protects translating tube, lifting screw and nut.
- Wiper-scraper seal in end of outer tube keeps dirt out and lubricants in.
- Bronze guide bushing inside of outer tube reduces lateral movement of translating screw.
- Translating tube zinc coated for weather-resistance.
- Single or quadruple lead ball-bearing type lifting screw and nut for higher efficiency and long life.
- Vent in outer tube prevents pressure build-up in the actuator.
- Furnished with standard clevis end on translating tube. Threaded end is available; and on special order, depending on application, any type of threaded connection may be substituted.



Translating Tube Ball Screw Models

PRODUCT INFORMATION	Model Number	"T" Screw Dia.	Turns of Worm 1" Travel		Torque lb./in. @ 100 lb. Loads		Motor RPM	Rated Loads								Lifting Speed in / min		
			Ratio		Ratio			1/4 HP Motor		1/3 HP Motor		1/2 HP Motor		3/4 HP Motor		Ratio		
			5:1	20:1	5:1	20:1		5:1	20:1	5:1	20:1	5:1	20:1	5:1	20:1	5:1	20:1	
			lbs	lbs	lbs	lbs		lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs
BM-2464	1.00 Dia. x 1.000 Lead Ball Screw	5	-	5.3	-	1725	100	-	200	-	300	-	500	-	345	-		
							1140	200	-	300	-	500	-	700	-	228	-	
BM-2465	1.0 Dia. x .250 Lead Ball Screw	20	80	1.3	0.6	1725	600	1500	900	2000	1300	-	2000	-	86	21		
							1140	1000	-	1300	-	2000	-	-	-	57	14	

- Note: 1. Model BM-2464 and BM-2465 are self lowering and a motor brake must be used.  
 2. Due to the high travel speed of BM-2464, it is important that a brake with a minimum response time be used. An independently controlled direct acting brake (6ft.-lb. for 3/4 HP motors and 3ft.-lb. for smaller motors) is recommended.  
 3. When ordering other than 56C-face actuators contact applications engineering at 800-477-5002.