Can-Stack
Linear Actuators

Haydon Kerk Motion Solutions, Inc. • www.HaydonKerk.com • Phone: 800.243.2715 • International: 203.756.7441

Haydon™ linear actuators provide both a broader range and, for a given size, significantly higher thrust

The basic motors incorporate a threaded rotor in conjunction with a (lead-screw) shaft to provide rapid linear movement in two directions (inward and outward). Available step increments vary with the motor frame sizes and are dependent on the step angle of the motor and the lead screw pitch. A captive or non-captive shaft (lead-screw) option can be supplied for every basic size. Most of the basic sizes also offer an external linear option. The captive shaft configuration features a built-in "anti-rotation" design whereas the non-captive shaft requires the customer to provide external anti-rotation. Both unipolar and bipolar coil configurations are available.

Unique features impart ruggedness and reliability that assure long life and consistent performance. Rare earth magnets are available for even higher thrust. All basic frame sizes are built with dual ball bearings for greater motion control, precise step accuracy and long life. Most of the Haydon™ brand motors can also be electronically microstepped for tighter controls.

Applications include medical instrumentation, office equipment, machinery automation, robotics, sophisticated pumping systems and other automated devices which require precise remote controlled linear movement in a broad range of temperature environments.

G4 Series

The G4 Can-Stack Series represents advanced motion control with the industry's most robust and most powerful linear actuators.
The series features:

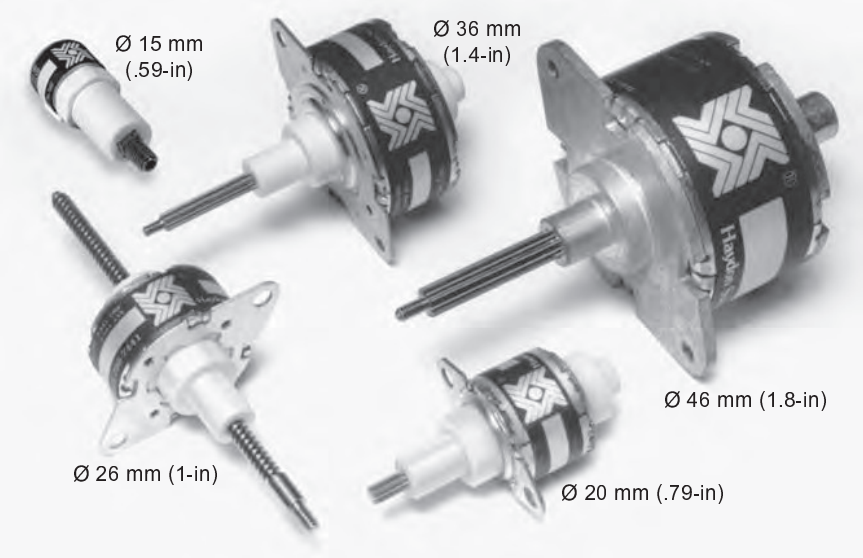
- Enhanced teeth geometry
- High energy neodymium magnets
- Optimized magnetic circuit design
- High-tech engineered polymers
- Oversized spline (captive)
- Larger ball bearings

Available body-width diameters include Ø 20 mm (.79-in), Ø 26 mm (1-in), Ø 36 mm (1.4-in).

Can-Stack Series

Four basic frame sizes are available – Ø 20 mm (.79-in), Ø 26 mm (1-in), Ø 36 mm (1.4-in) and Ø 46 mm (1.8-in) – as well as an extremely compact, Ø 15 mm (.59-in) motor (captive shaft only).

For finer steps, the High Resolution 26000 and 36000 Series features the smallest step capability in permanent magnet can-stack linear actuators.



Identifying the part number codes when ordering Can-Stack linear actuators

Immediate availability of a standard selection of parts.

E	26	4	4	2	–	05	–	900

Prefix
(only when using the following)

E = External
P = Proximity Sensor
S = Home Switch
T = High Temp.
N = Nema Flange (46000 Series only)
R = Rare Earth Magnet

Series number designation:

26 = 26000

Available Series:
19000
20000
25000
26000
36000
37000
46000

(Series numbers represent approximate diameters of motor body)

15000 Series: See page

Style

1 = 3.75° non-captive
2 = 3.75° captive
3 = 7.5° non-captive
4 = 7.5° captive
4 = 7.5° cap. Use "E" prefix for "External"
5 = 15° captive
5 = 15° cap. Use "E" prefix for "External"
8 = 15° non-captive

Coils

4 = Bipolar (4 wire)
6 = Unipolar (6 wire)

Code ID Resolution Travel/Step

(Example: 2 = travels .002-in per step)

(Refer to travel /step chart found on each Series product page.)

Voltage

(Example: 05 = 5 VDC; 12 = 12 VDC) Custom V available

Suffix:

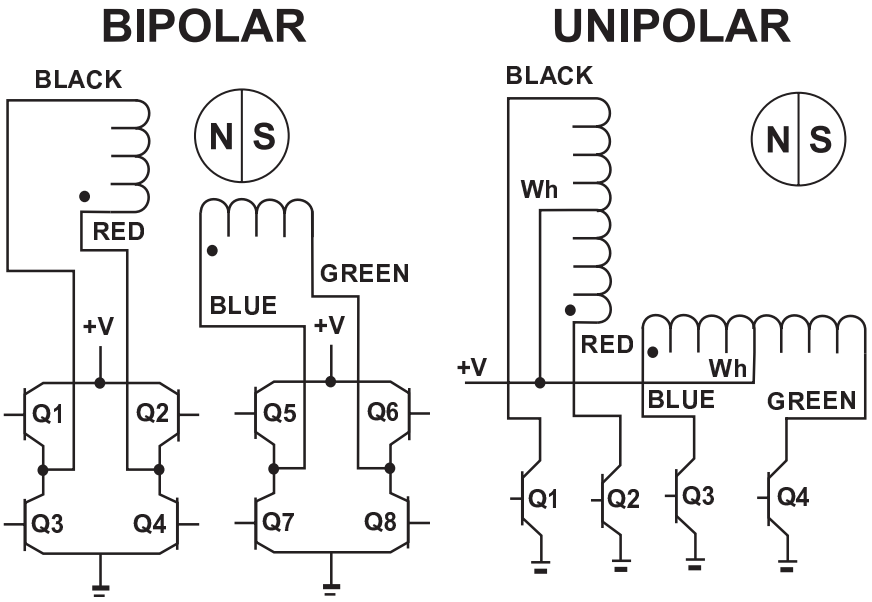
Stroke
Example: –900 = external linear with grease & flanged nut

Suffix also represents:

–XXX = Special or custom
(Special part numbers for custom screw lengths and design options will require an issued 3 digit suffix number. Please contact our sales or applications engineering department for assistance.)

EXAMPLE:
E26442-05-900 = External linear actuator, 26000 series (Ø26 mm, 1-in), 7.5°, bipolar coils, .002-in travel per step, 5 VDC, with grease and flanged nut.

Screw Length Options: For non-captive and external linear shaft motors various screw lengths are available to accommodate almost any travel requirement.



Can-Stack Linear Actuator: Stepping Sequence

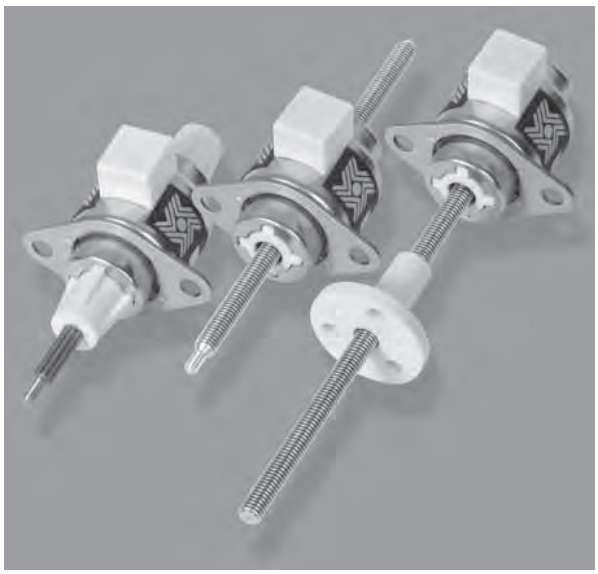
Bipolar	Q2-Q3	Q1-Q4	Q6-Q7	Q5-Q8
Unipolar	Q1	Q2	Q3	Q4
Step				
1	ON	OFF	ON	OFF
2	OFF	ON	ON	OFF
3	OFF	ON	OFF	ON
4	ON	OFF	OFF	ON
5	ON	OFF	ON	OFF

Extend ▼ ▲ Retract

Note: Half stepping is accomplished by inserting an off state between transitioning phases.

19000 G4 Series generates the highest force of any similar size linear actuator stepper motor.

Utilizing high energy rare earth (neodymium) magnets, the G4 Series linear actuators consistently deliver exceptional performance. All units are built with dual ball bearings.



Salient Characteristics

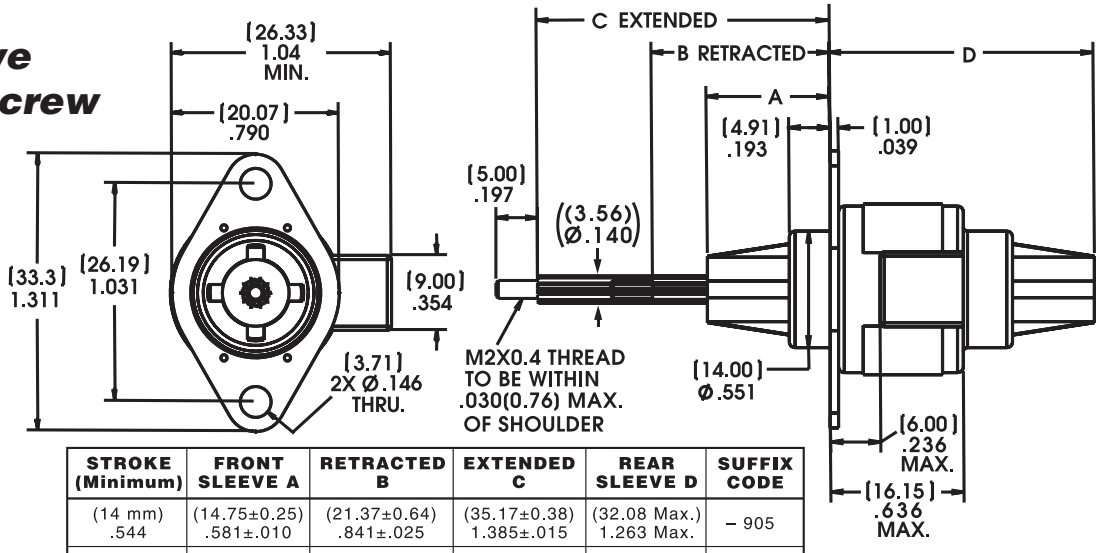
Ø 20 mm (.79-in) motor					
Wiring		Bipolar			
Part No.	Captive	1944X-V		1954X-V	
	Non-captive	1934X-V		1984X-V	
	External	E1944X-V		E1954X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		350 mA	160 mA	338 mA	140 mA
Resistance/phase		14.0 Ω	74.5 Ω	14.8 Ω	85.5 Ω
Inductance/phase		6.24 mH	31.2 mH	6.84 mH	37.8 mH
Rotor inertia		1.052 gcm²		.548 gcm²	
Power consumption		3.38 W			
Temperature rise		135°F Rise (75°C Rise)			
Weight		1.24 oz (35 g)			
Insulation resistance		20 MΩ			

Linear Travel/Step			Order Code I.D.
Step	inches	mm	
7.5° Angle	0.0005	0.013	3
15° Angle	0.001	0.0254	1
	0.002	0.051	2
	0.004	0.102	4

Special drive considerations may be necessary when leaving shaft fully extended or fully retracted.

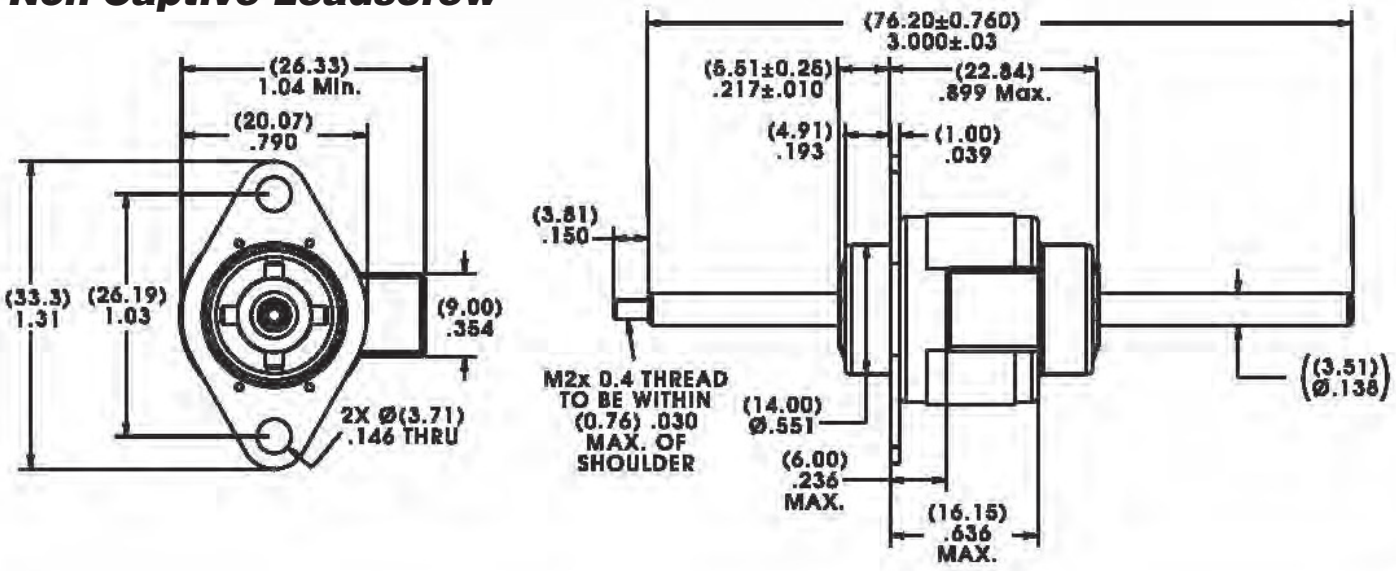
Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Captive Leadscrew

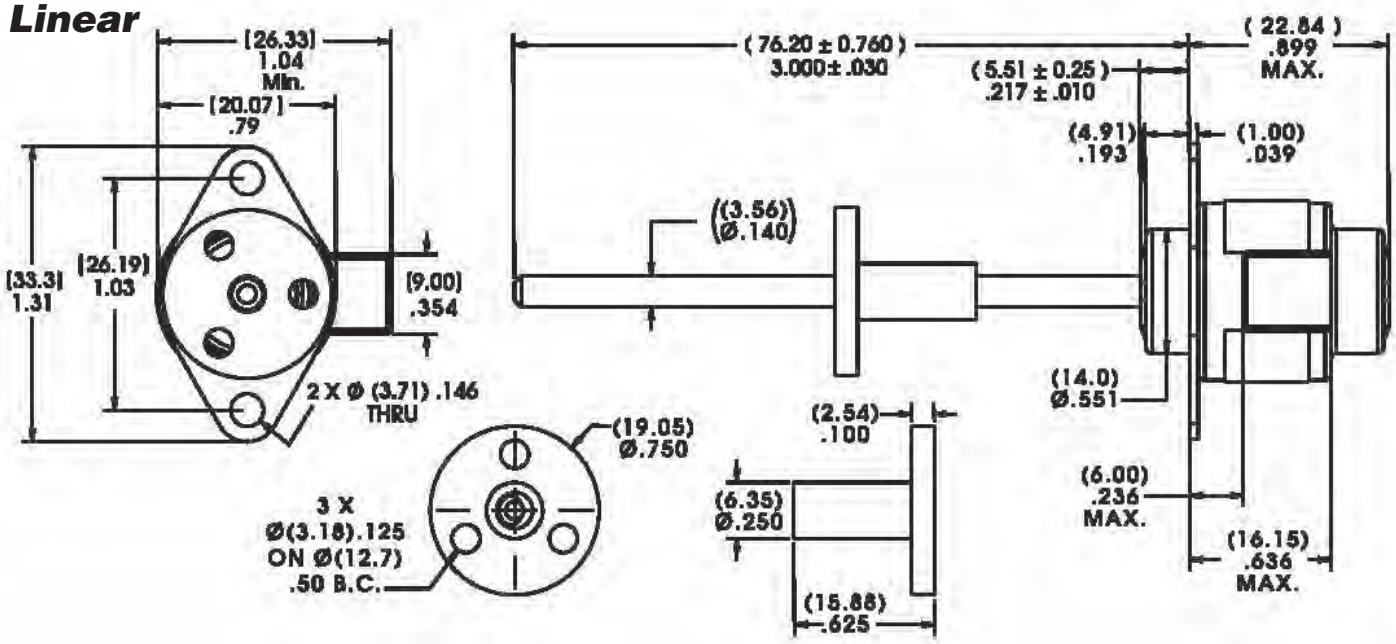


STROKE (Minimum)	FRONT SLEEVE A	RETRACTED B	EXTENDED C	REAR SLEEVE D	SUFFIX CODE
(14 mm) .544	(14.75±0.25) .581±.010	(21.37±0.64) .841±.025	(35.17±0.38) 1.385±.015	(32.08 Max.) 1.263 Max.	– 905
(18 mm) .708	(20.05±0.25) .789±.010	(26.67±0.64) 1.050±.025	(45.77±0.38) 1.802±.015	(37.38 Max.) 1.472 Max.	– 907
(25 mm) .984	(27.05±0.25) 1.065±.010	(33.67±0.64) 1.325±.025	(59.77±0.38) 2.353±.015	(44.38 Max.) 1.747 Max.	– 910
(31 mm) 1.22	(33.05±0.25) 1.301±.010	(39.67±0.64) 1.562±.025	(71.77±0.38) 2.826±.015	(63.08 Max.) 2.483 Max.	– 912

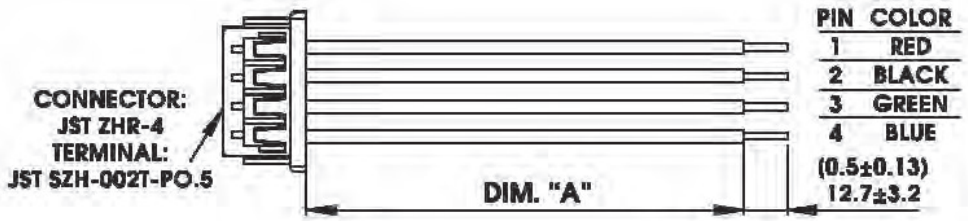
Non-Captive Leadscrew



External Linear



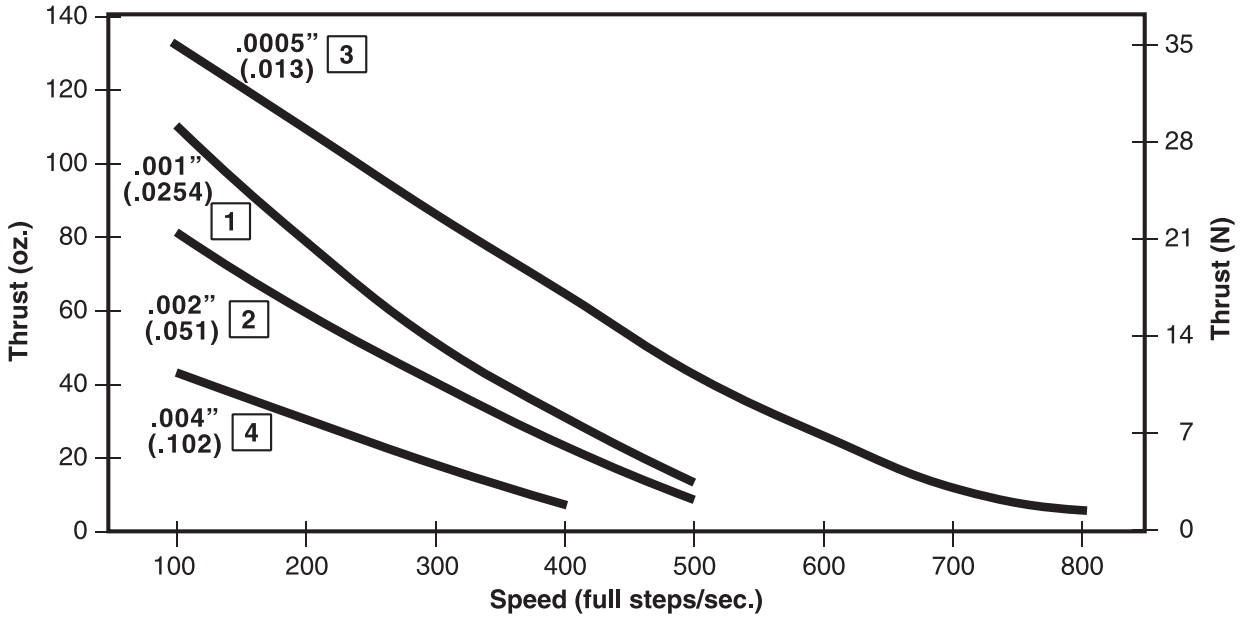
Connector



Part Number	Dimension "A"
56-1318-4	(24 ±0.39) 610 ±10 mm
56-1318-3	(18 ±0.39) 450 ±10 mm
56-1318-2	(12 ±0.39) 305 ±10 mm
56-1318-1	(6 ±0.39) 150 ±10 mm

THRUST vs. FULL STEPS/SECOND

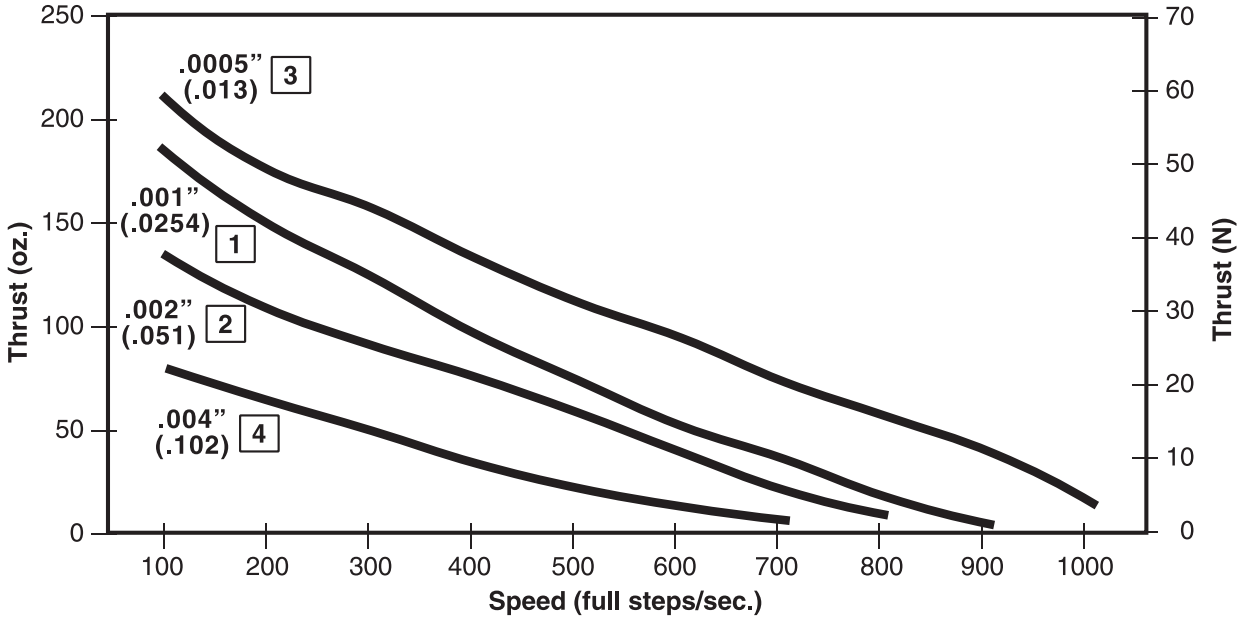
L/R Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 25% Duty Cycle

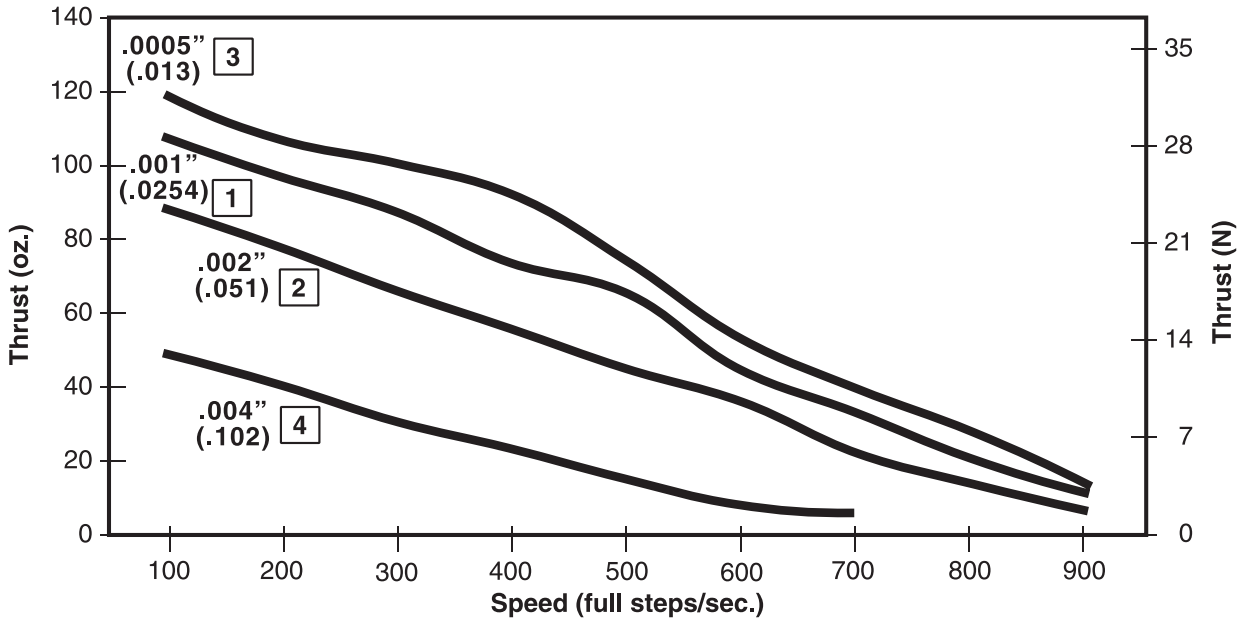
25% duty cycle is obtained by a special winding or by running a standard motor at double the rated voltage.



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

THRUST vs. FULL STEPS/SECOND

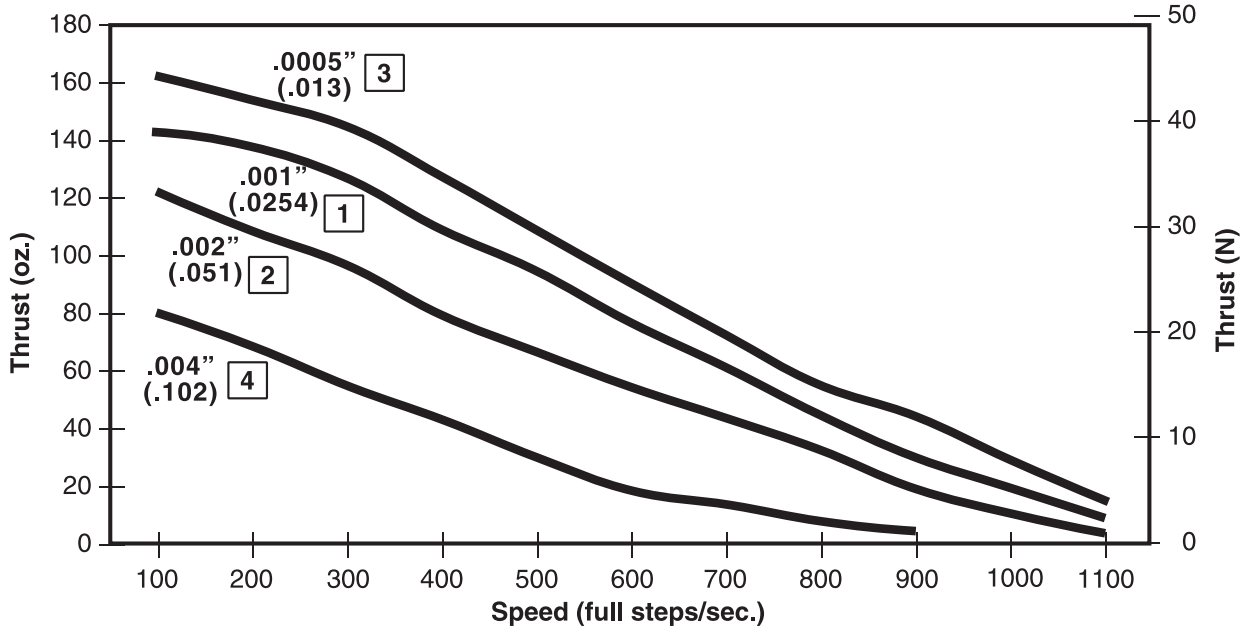
Chopper Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

Chopper Drive • Bipolar • 25% Duty Cycle

25% duty cycle is obtained by a special winding or by running a standard motor at double the rated current.

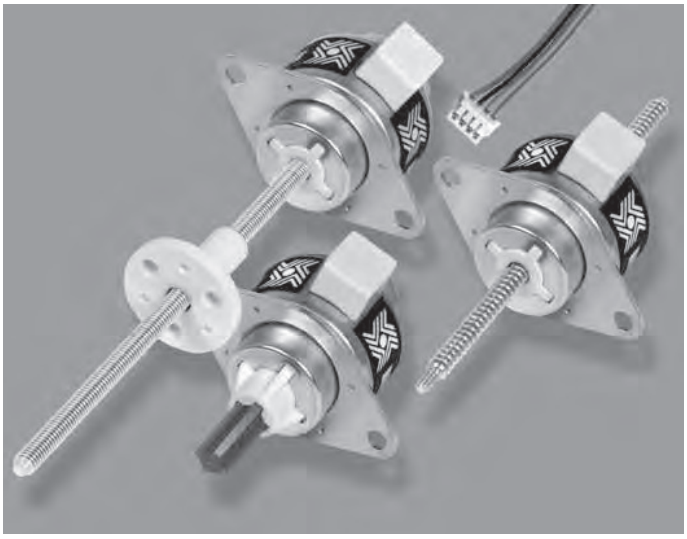


NOTE: All chopper drive curves were created with a 5 Volt motor and a 40 Volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

The robust and powerful 25000 G4 Series generates higher force than all other competitors.

The 25000 G4 Series linear actuators offer high durability and exceptional performance. All units are built with high energy neodymium magnets and dual ball bearings.



Salient Characteristics

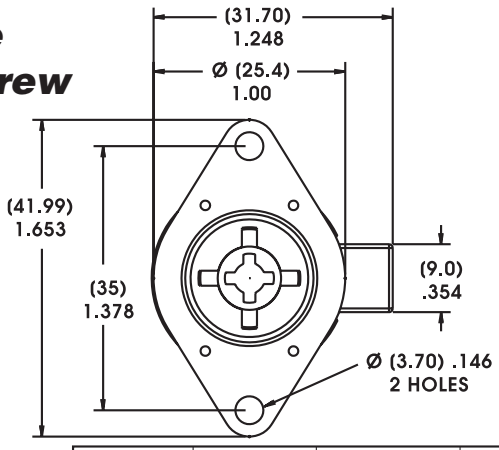
Ø 25 mm (1-in) motor					
Wiring		Bipolar			
Part No.	Captive	2544X-V		2554X-V	
	Non-captive	2534X-V		2584X-V	
	External	E2544X-V		E2554X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		385 mA	160 mA	385 mA	160 mA
Resistance/phase		13 Ω	72 Ω	13 Ω	72 Ω
Inductance/phase		10.8 mH	60 mH	8.08 mH	48 mH
Power consumption		3.85 W			
Rotor inertia		1.07 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		1.74 oz (49 g)			
Insulation resistance		20 MΩ			

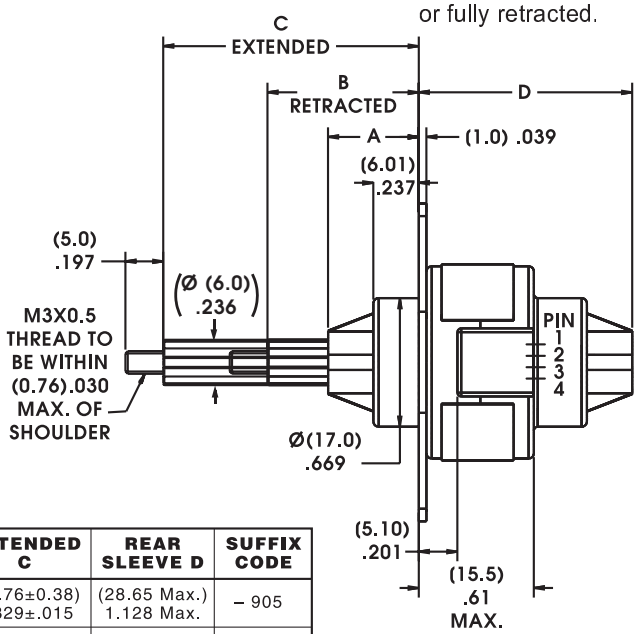
Linear Travel/Step			Order Code I.D.
Step	inches	mm	
7.5° Angle	0.0005	0.013	3
	0.001	0.0254	1
	0.002	0.051	2
15° Angle	0.001	0.0254	1
	0.002	0.051	2
	0.004	0.102	4

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Special drive considerations may be necessary when leaving shaft fully extended or fully retracted.

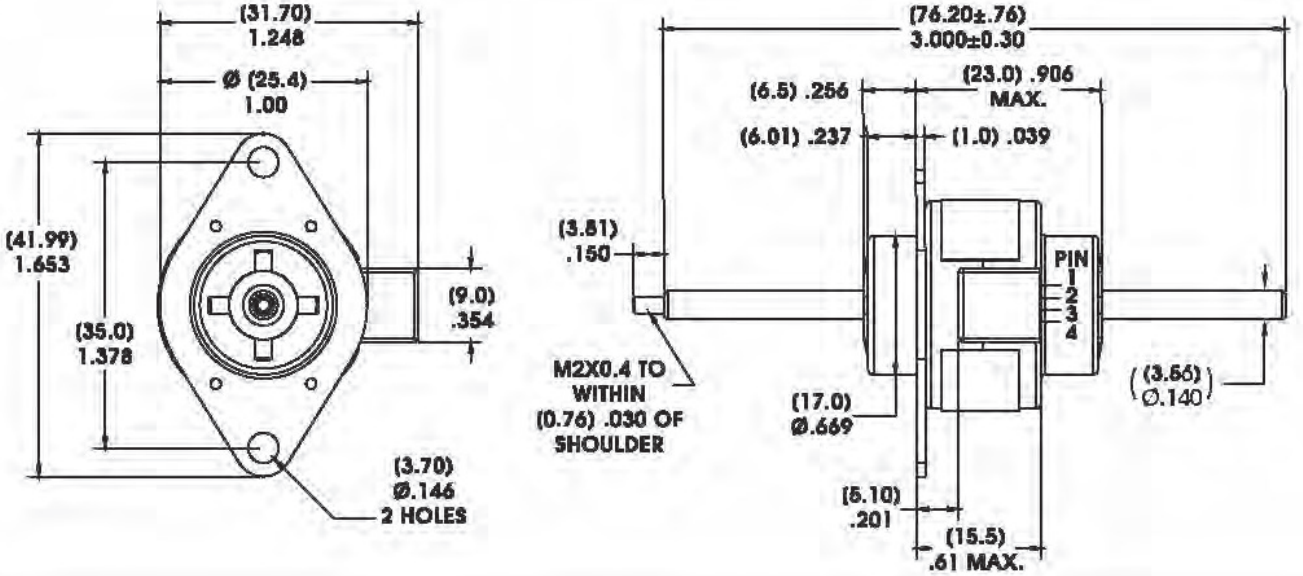
Captive Leadscrew



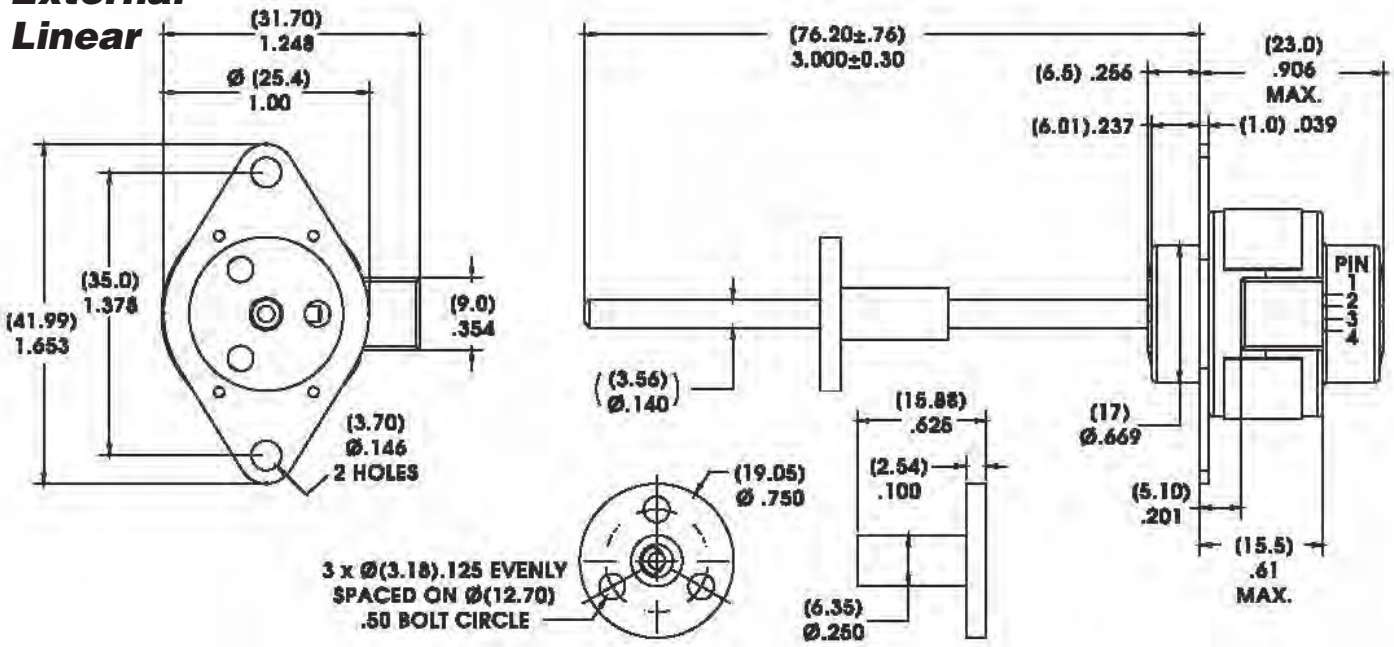


STROKE (Minimum)	FRONT SLEEVE A	RETRACTED B	EXTENDED C	REAR SLEEVE D	SUFFIX CODE
(13 mm) .517	(11.99±0.25) .472±.010	(19.99±0.64) .787±.025	(33.76±0.38) 1.329±.015	(28.65 Max.) 1.128 Max.	– 905
(18 mm) .708	(17.28±0.25) .680±.010	(25.25±0.64) .994±.025	(44.27±0.38) 1.743±.015	(33.94 Max.) 1.336 Max.	– 907
(25 mm) .984	(24.26±0.25) .955±.010	(32.23±0.64) 1.269±.025	(58.24±0.38) 2.293±.015	(40.92 Max.) 1.611 Max.	– 910
(31 mm) 1.22	(30.25±0.25) 1.191±.010	(38.23±0.64) 1.505±.025	(70.23±0.38) 2.765±.015	(46.91 Max.) 1.847 Max.	– 912

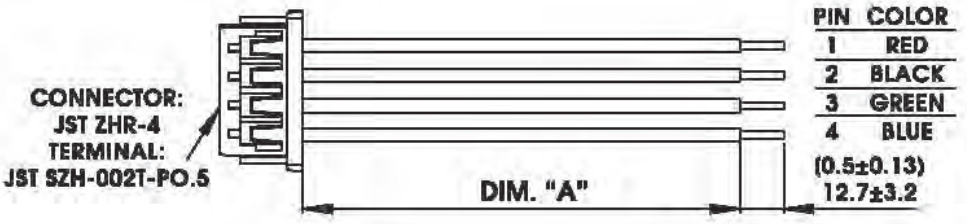
Non-Captive Leadscrew



External Linear



Connector

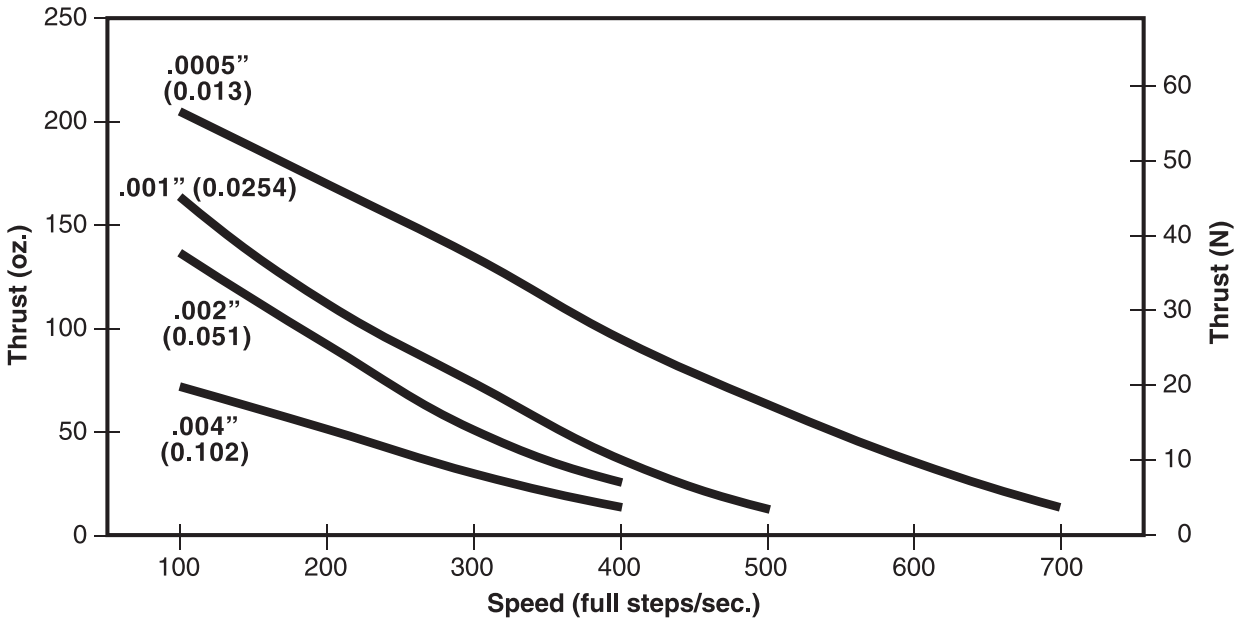


PIN	COLOR
1	RED
2	BLACK
3	GREEN
4	BLUE

Part Number	Dimension "A"
56-1318-4	(24 ±0.39) 610 ±10 mm
56-1318-3	(18 ±0.39) 450 ±10 mm
56-1318-2	(12 ±0.39) 305 ±10 mm
56-1318-1	(6 ±0.39) 150 ±10 mm

THRUST vs. FULL STEPS/SECOND

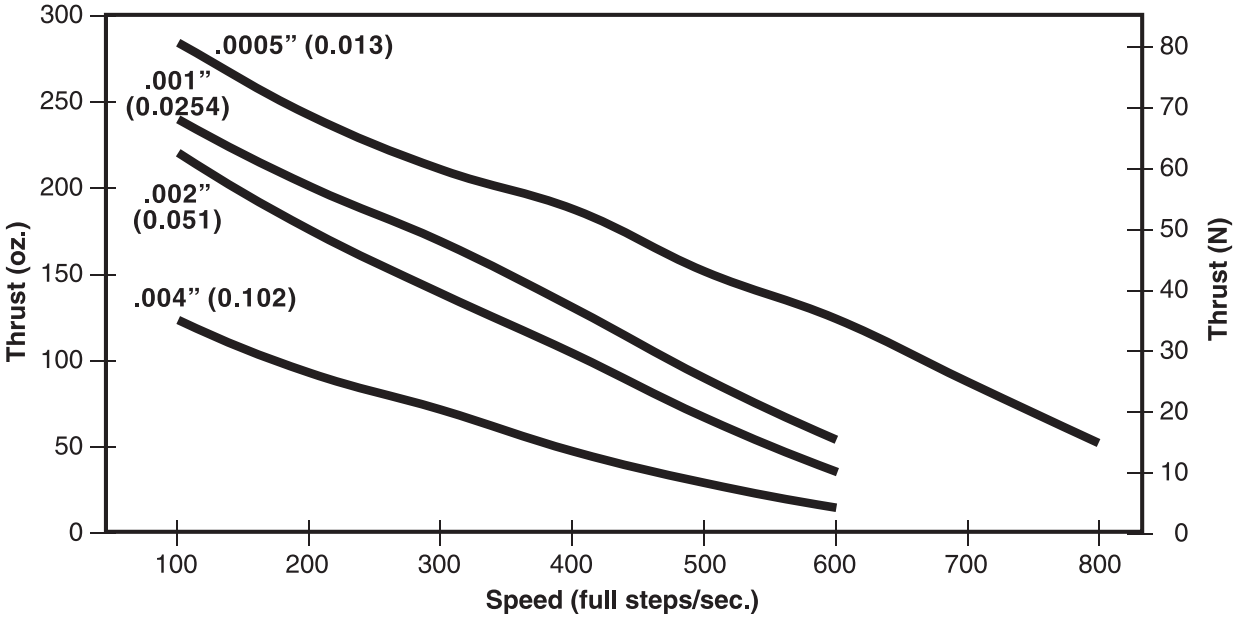
L/R Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 25% Duty Cycle

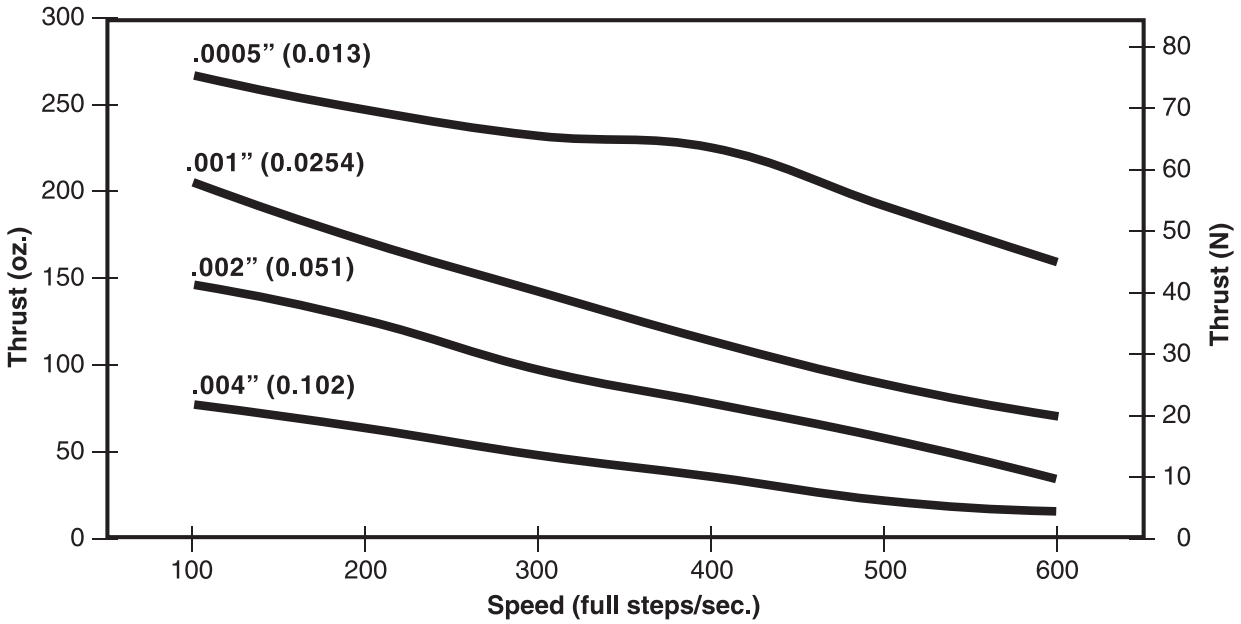
25% duty cycle is obtained by a special winding or by running a standard motor at double the rated voltage.



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

THRUST vs. FULL STEPS/SECOND

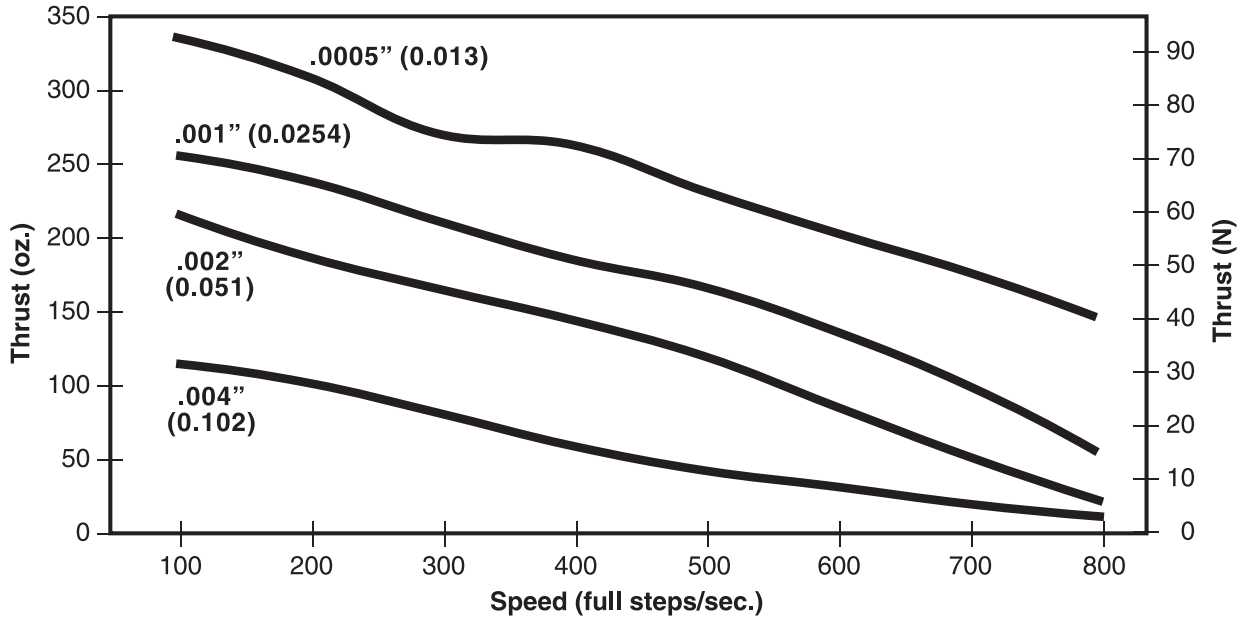
Chopper Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

Chopper Drive • Bipolar • 25% Duty Cycle

25% duty cycle is obtained by a special winding or by running a standard motor at double the rated current.



NOTE: All chopper drive curves were created with a 5 Volt motor and a 40 Volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

Exceptionally high linear force-to-size ratio ideal for precision motion.

The 37000 G4 Series linear actuators provide outstanding durability and high performance. The G4 Series features high energy neodymium magnets and dual ball bearings.

Salient Characteristics

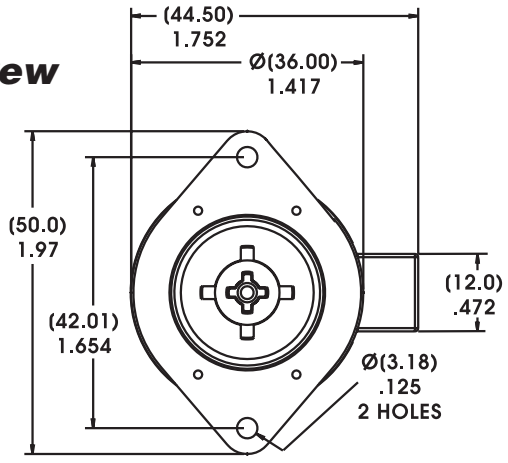
Ø 36 mm (1.4-in) motor					
Wiring		Bipolar			
Part No.	Captive	3744X-V		3754X-V	
	Non-captive	3734X-V		3784X-V	
	External	E3744X-V		E3754X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		561 mA	230 mA	561 mA	160 mA
Resistance/phase		8.9 Ω	52 Ω	8.9 Ω	52 Ω
Inductance/phase		11.6 mH	65 mH	8.5 mH	46 mH
Power consumption		5.6 W			
Rotor inertia		8.5 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		4.2 oz (49 g)			
Insulation resistance		20 MΩ			

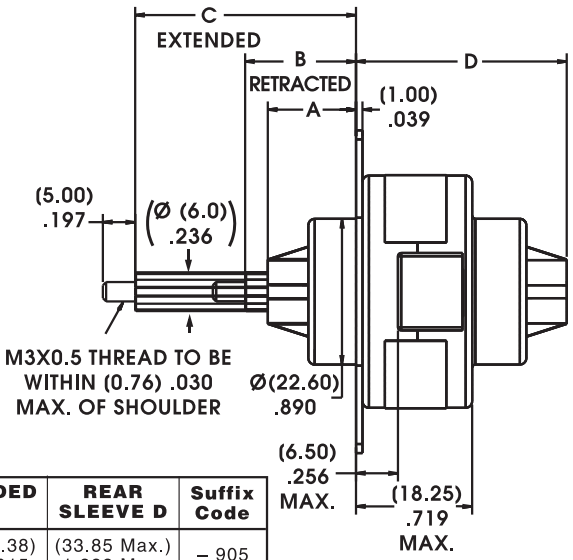
Linear Travel/Step			Order Code I.D.
Step	inches	mm	
7.5° Angle	0.0005	0.013	3
	0.001	0.0254	1
	0.002	0.051	2
15° Angle	0.001	0.0254	1
	0.002	0.051	2
	0.004	0.102	4

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Special drive considerations may be necessary when leaving shaft fully extended or fully retracted.

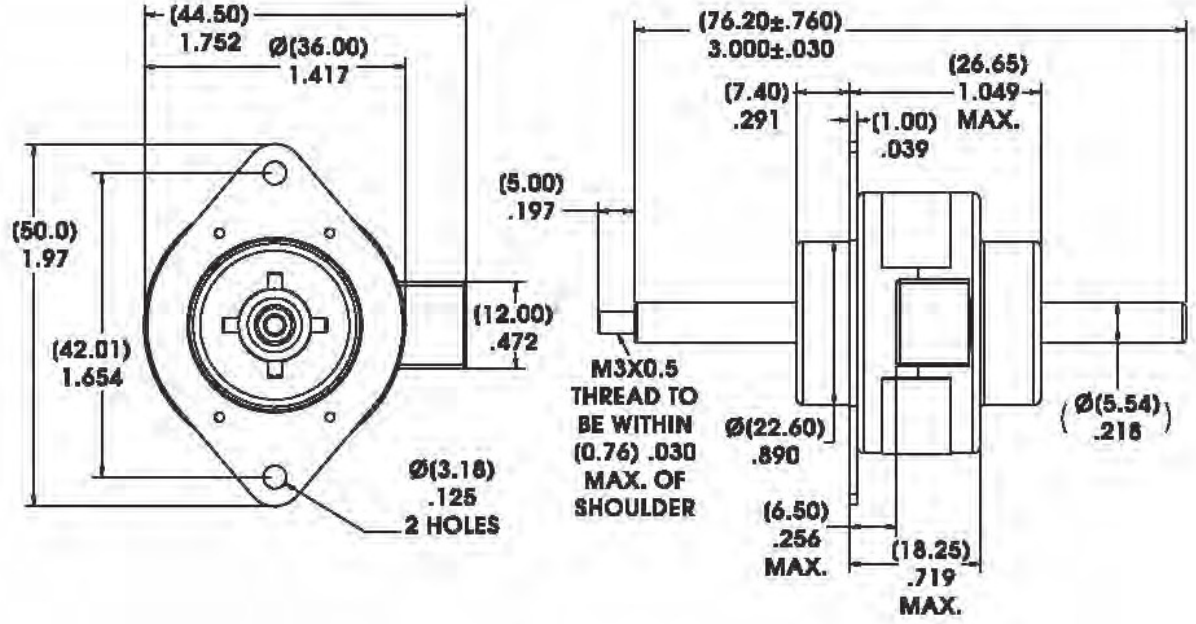
Captive Leadscrew



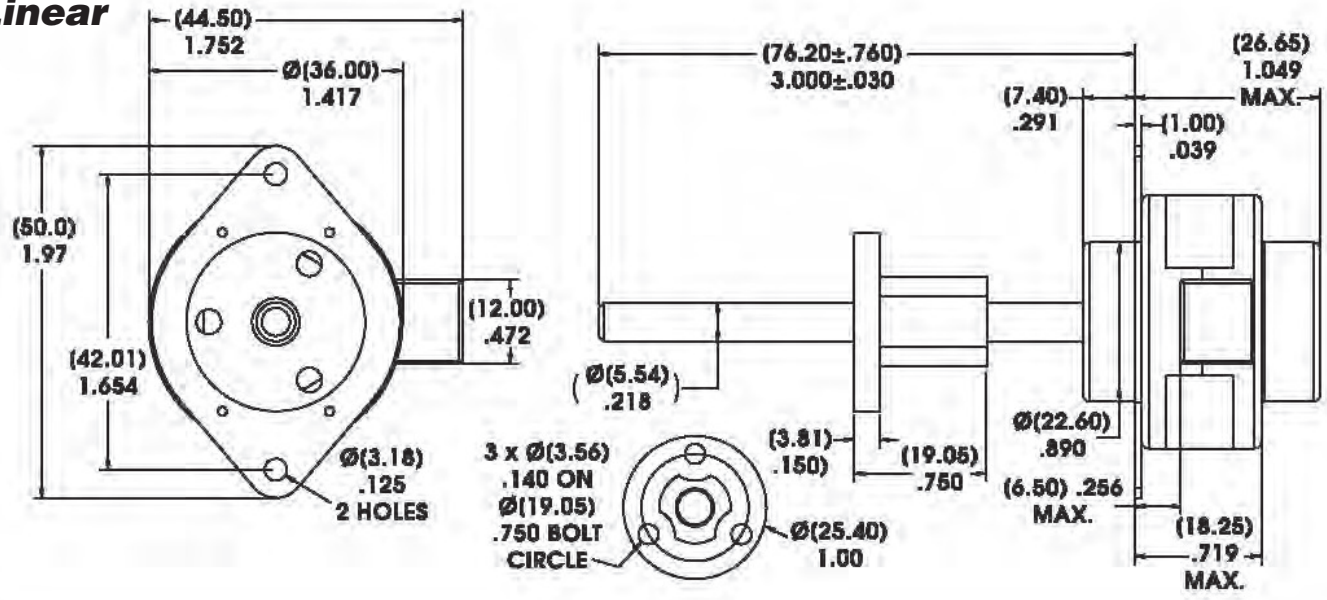


STROKE (Minimum)	FRONT SLEEVE A	RETRACTED B	EXTENDED C	REAR SLEEVE D	Suffix Code
(16.0 mm) 0.631	(13.67±0.25) .538±.010	(17.19±0.64) .677±.025	(34.24±0.38) 1.348±.015	(33.85 Max.) 1.333 Max.	– 905
(25.4 mm) 1.00	(26.37±0.25) 1.038±.010	(29.89±0.64) 1.177±.025	(56.94±0.38) 2.348±.015	(46.55 Max.) 1.833 Max.	– 910
(38.1 mm) 1.50	(39.07±0.25) 1.538±.010	(42.59±0.64) 1.677±.025	(85.04±0.38) 3.348±.015)	(59.25 Max.) 2.333 Max.	– 915

Non-Captive Leadscrew

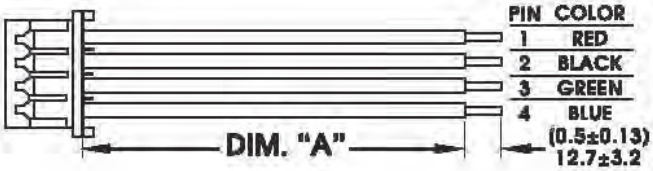


External Linear



Connector

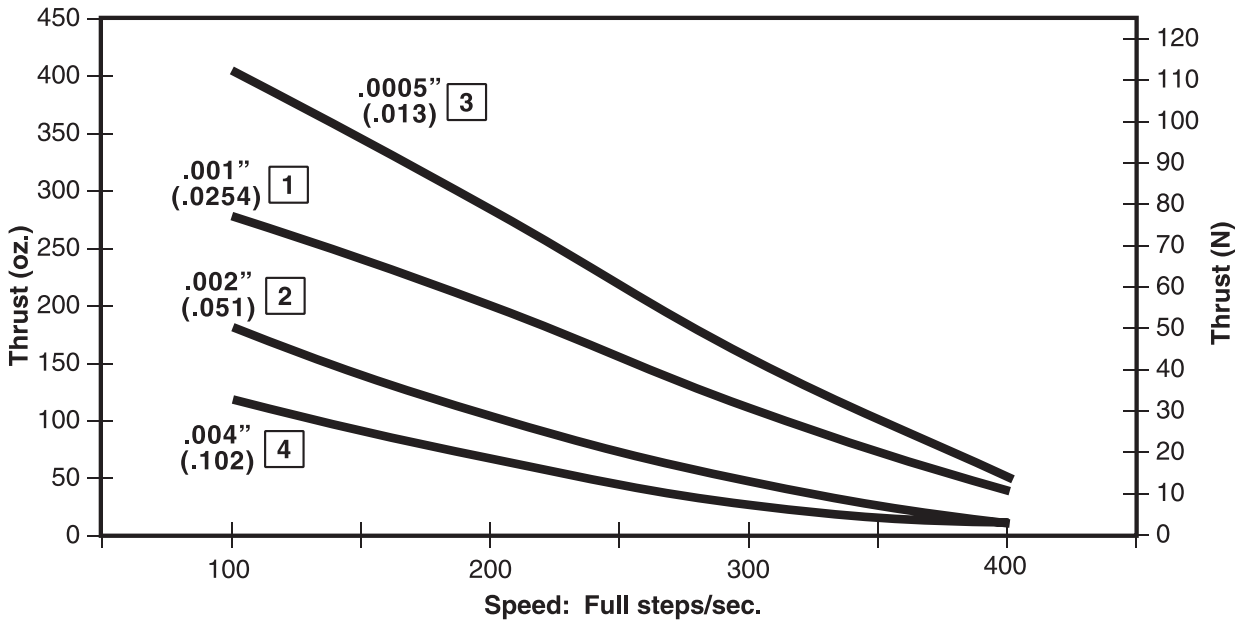
CONNECTOR:
JST PHR-4
TERMINAL: JST
SPH-002T-P0.5S



Part Number	Dimension "A"
56-1436-2	(24 ±0.39) 610 ±10 mm
56-1436-1	(12 ±0.39) 305 ±10 mm

THRUST vs. FULL STEPS/SECOND

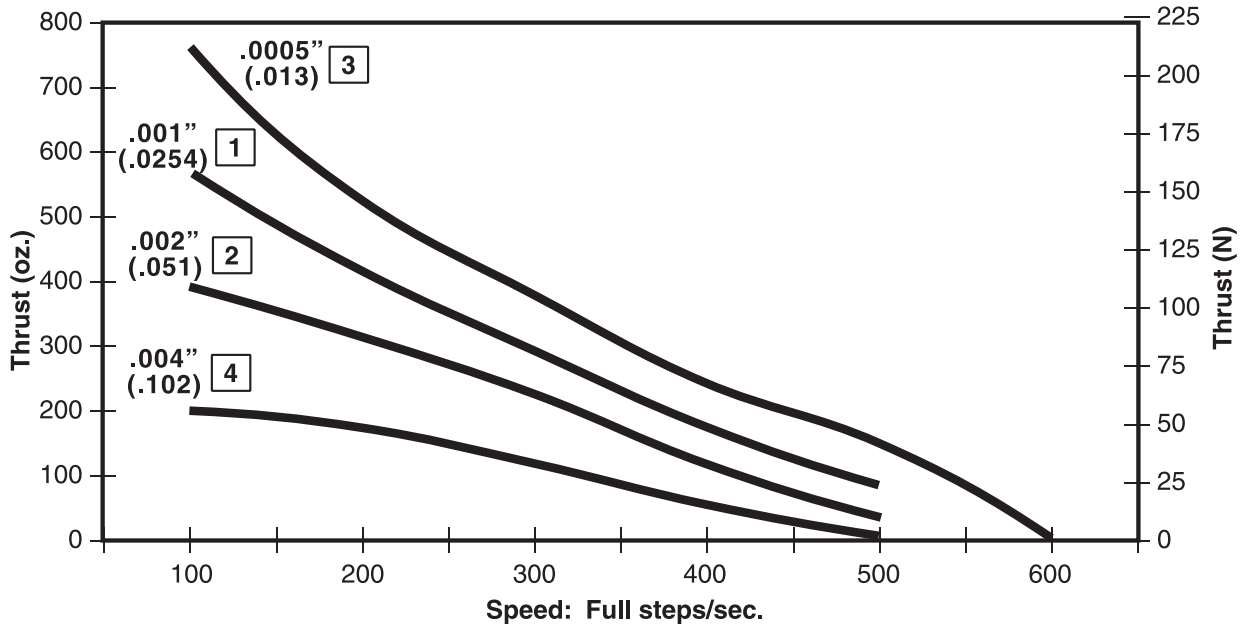
L/R Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 25% Duty Cycle

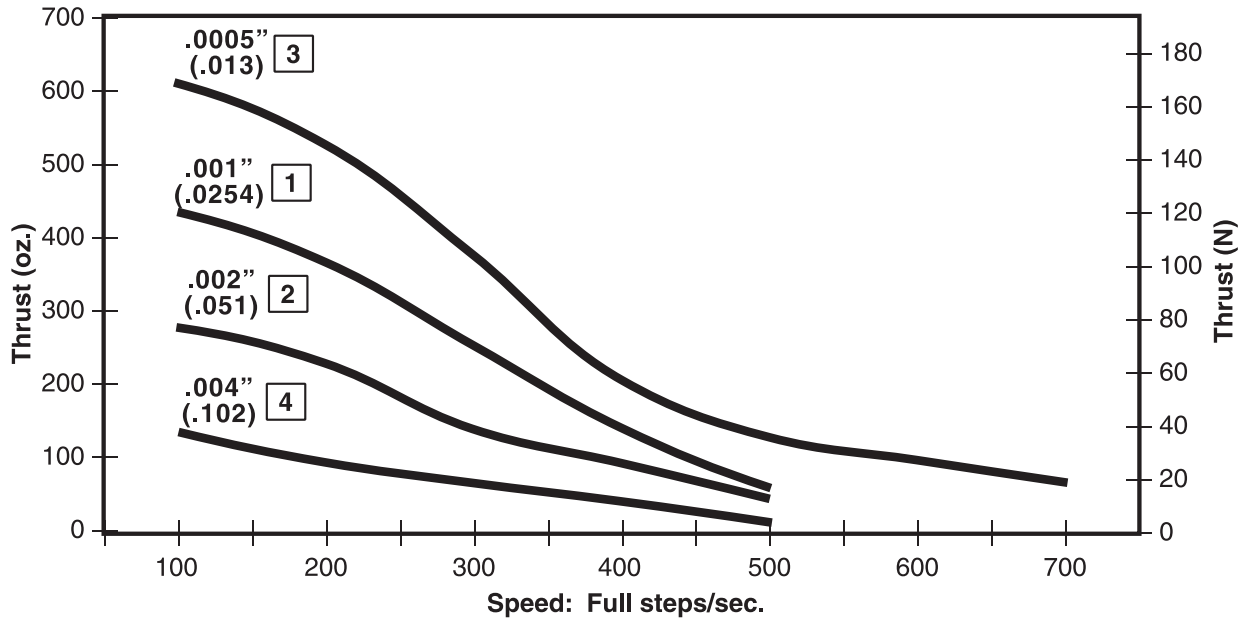
25% duty cycle is obtained by a special winding or by running a standard motor at double the rated voltage.



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

THRUST vs. FULL STEPS/SECOND

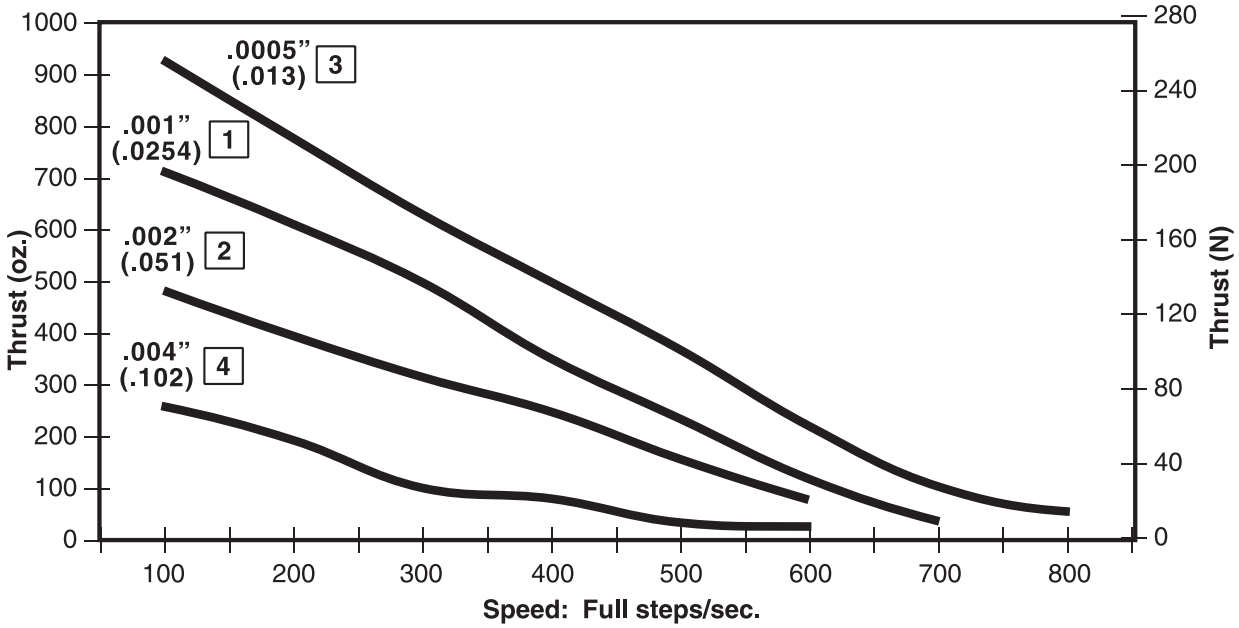
Chopper Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

Chopper Drive • Bipolar • 25% Duty Cycle

25% duty cycle is obtained by a special winding or by running a standard motor at double the rated current.



NOTE: All chopper drive curves were created with a 5 Volt motor and a 40 Volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

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Haydon 15000 Series is the world's smallest commercial linear stepper motor.

The motor features bi-directional travel, ball bearings and a light weight. Available with captive leadscrew only.

Contact Haydon Kerk Motion Solutions, Inc. if external linear version is required.

NOTE: The 15000 Series utilizes a unique PART NUMBER CODE. Please indicate the Winding Voltage "V" with 04, 05 or 12.

Salient Characteristics

Ø 15 mm (.59-in) motor				
Wiring		Bipolar		
Part No.	Captive	LC1574W-V		
Step angle		18°		
Winding voltage		4 VDC	5 VDC	12 VDC
Current/phase		0.2 A	0.16 A	0.07 A
Resistance/phase		20 Ω	31 Ω	180 Ω
Inductance/phase		5.6 mH	8.7 mH	48.8 mH
Power consumption		1.6 W		
Temperature rise		135°F Rise (75°C Rise)		
Weight		1 oz (28 g)		
Insulation resistance		100 MΩ		
Stroke		0.5-in. (12.7 mm)		

Linear Travel / Step Screw Ø.197"(5.0 mm) inches	mm	Order Code I.D.
.00079	.02	W

Connectors for Series 15000

Standard Connectors Available	JST PHR-4
	12" (304.8 mm) flying leads
	Molex 51021-0400
Other Compatible Connectors	Molex 50-57-9404
	Molex 50-57-9404

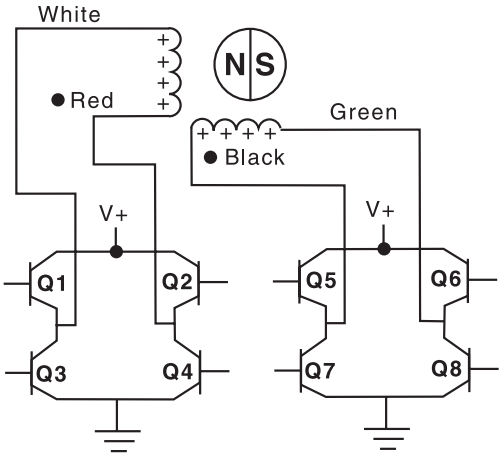
Flying Leads

Length inches	mm	Order Code I.D. (add to end on I.D.)
12.0	304.8	– 999

Special drive considerations may be necessary when leaving shaft fully extended or fully retracted.

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Wiring Diagram



Stepping Sequence

Bipolar	Q2-Q3	Q1-Q4	Q6-Q7	Q5-Q8
Step				
1	ON	OFF	ON	OFF
2	OFF	ON	ON	OFF
3	OFF	ON	OFF	ON
4	ON	OFF	OFF	ON

Extend ▼ ▲ Retract

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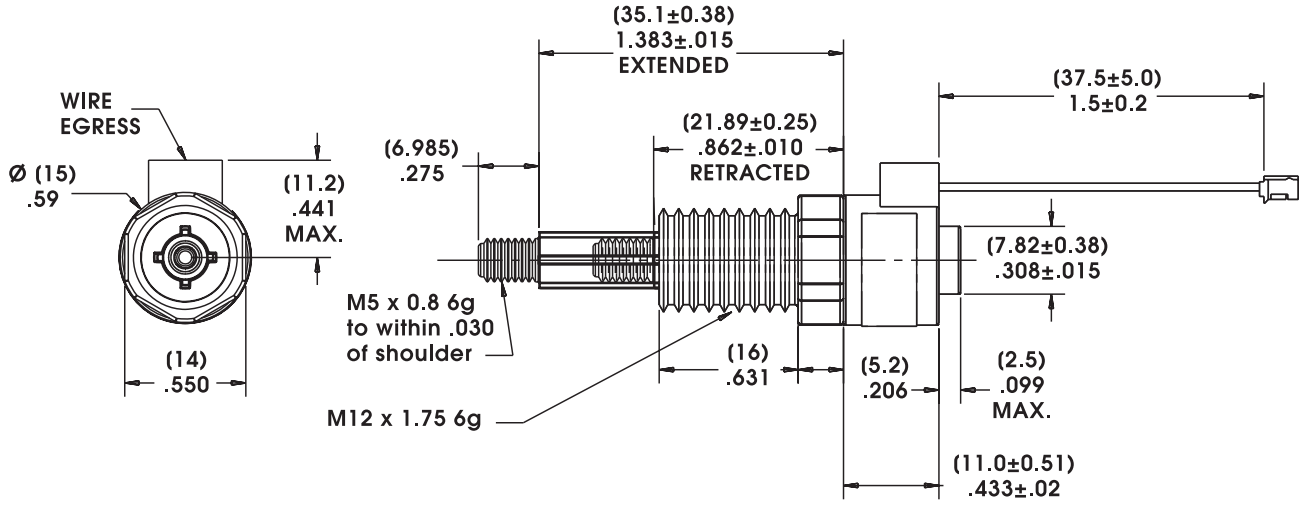
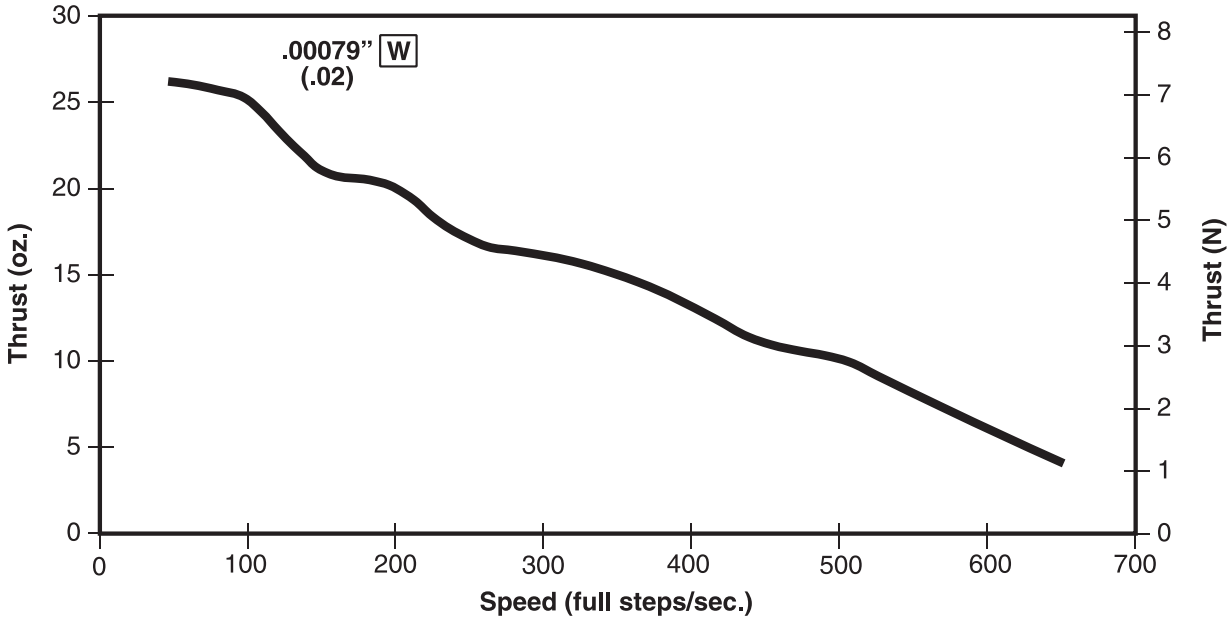
Captive Shaft (only)



15000 Series: Can-Stack Performance Curves

THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 100% Duty Cycle



Haydon Kerk Motion Solutions, Inc. • www.HaydonKerk.com • Phone: 800.243.2715 • International: 203.756.7441

20000 Series Ø 20 mm (.79-in)

Engineered with unique features reliable long life and performance.

Other basic styles available...
- Teflon® lead-screw
- High Temperature Option

Salient Characteristics

Ø 20 mm (.79") motor			
Wiring		Bipolar	
Part No.	Captive	2054X-V	
	Non-captive	2084X-V	
Step angle		15°	
Winding voltage		5 VDC	12 VDC
Current/phase		270 mA	113 mA
Resistance/phase		18.5 Ω	106 Ω
Inductance/phase		5.5 mH	32 mH
Power consumption		2.7 W	
Rotor inertia		0.5 gcm^2	
Temperature rise		135°F Rise (75°C Rise)	
Weight		1 oz (28 g)	
Insulation resistance		20 MΩ	

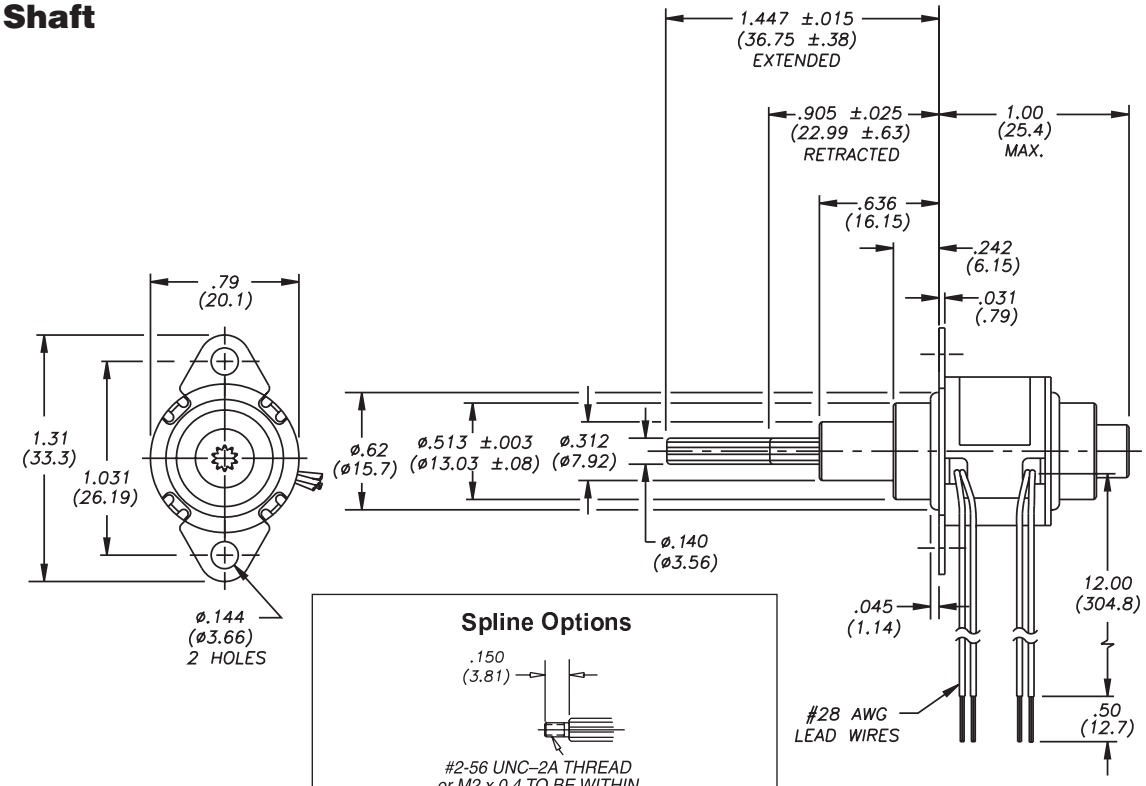
NOTE: External Linear not available

Linear Travel / Step 15° Step Angle inches	mm	Order Code I.D.
0.001	0.0254	1
0.002	0.051	2
0.004	0.102	4

Special drive considerations may be necessary when leaving shaft fully extended or fully retracted.

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Captive Shaft

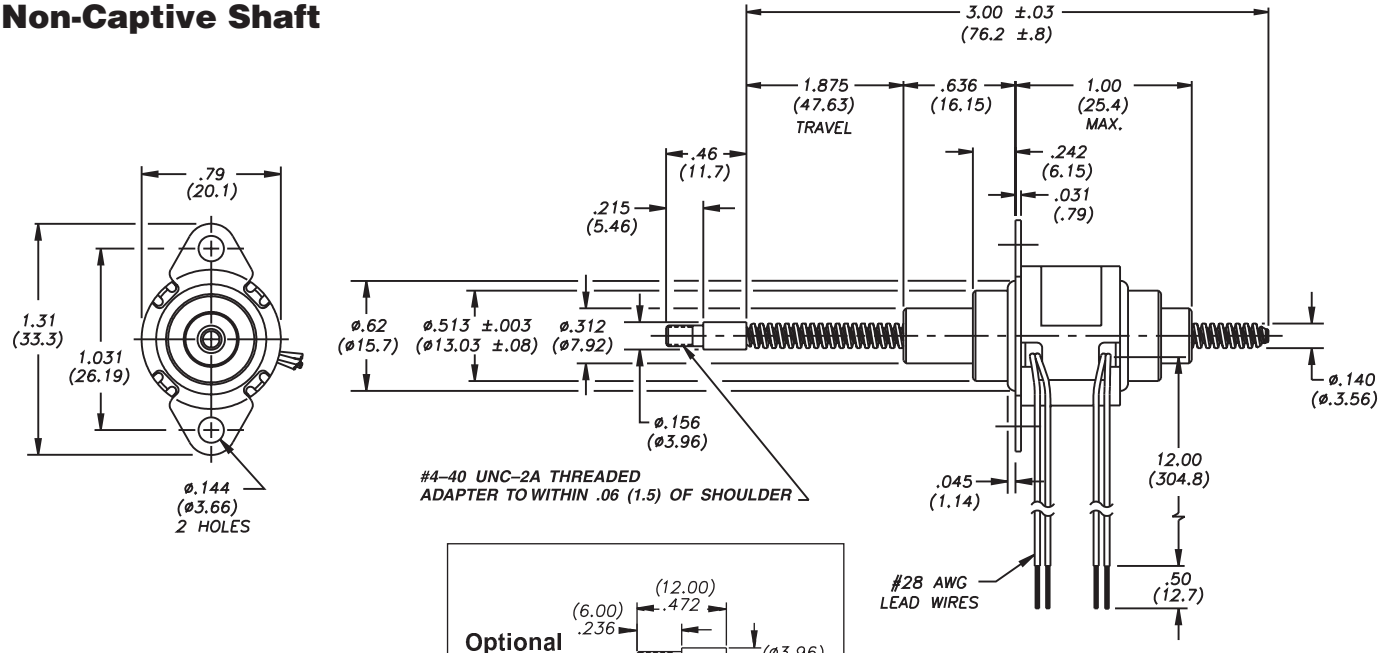


Spline Options

#2-56 UNC–2A THREAD
or M2 x 0.4 TO BE WITHIN
.030 (.76) MAX. OF SHOULDER

Spline is also available with optional #4-40 UNC-2A or M3 x 0.5 threaded adapter as shown in non-captive drawing.

Non-Captive Shaft

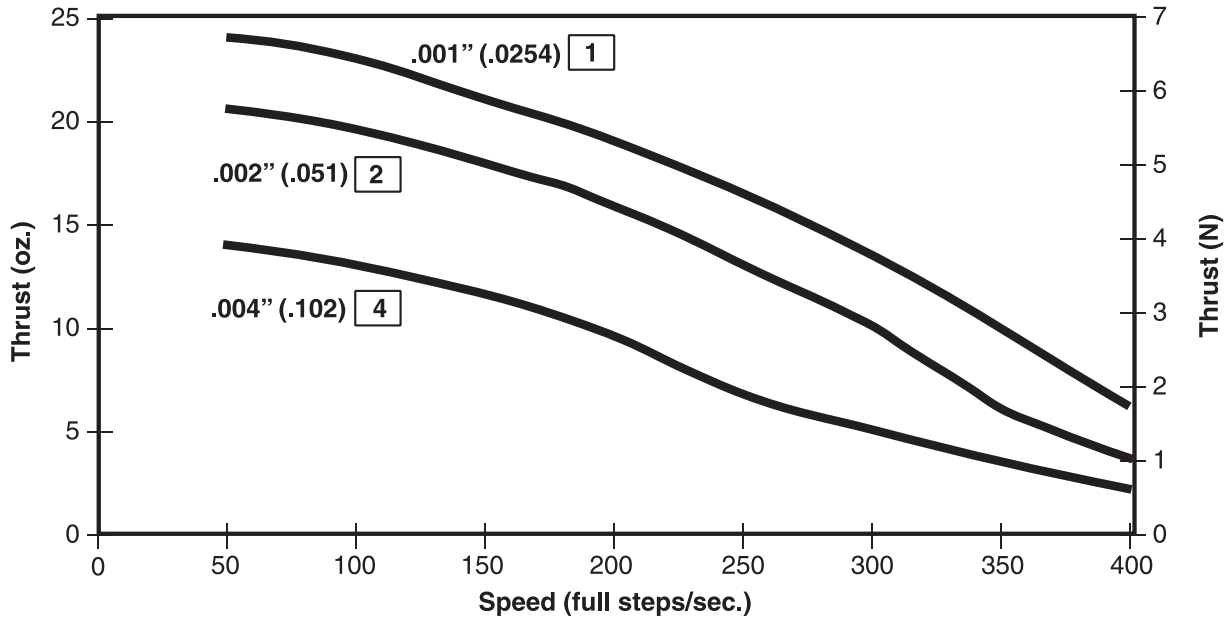


Optional Adapter

M3 x 0.5 THREAD
TO WITHIN .051 (1.3)
OF SHOULDER

THRUST vs. FULL STEPS/SECOND

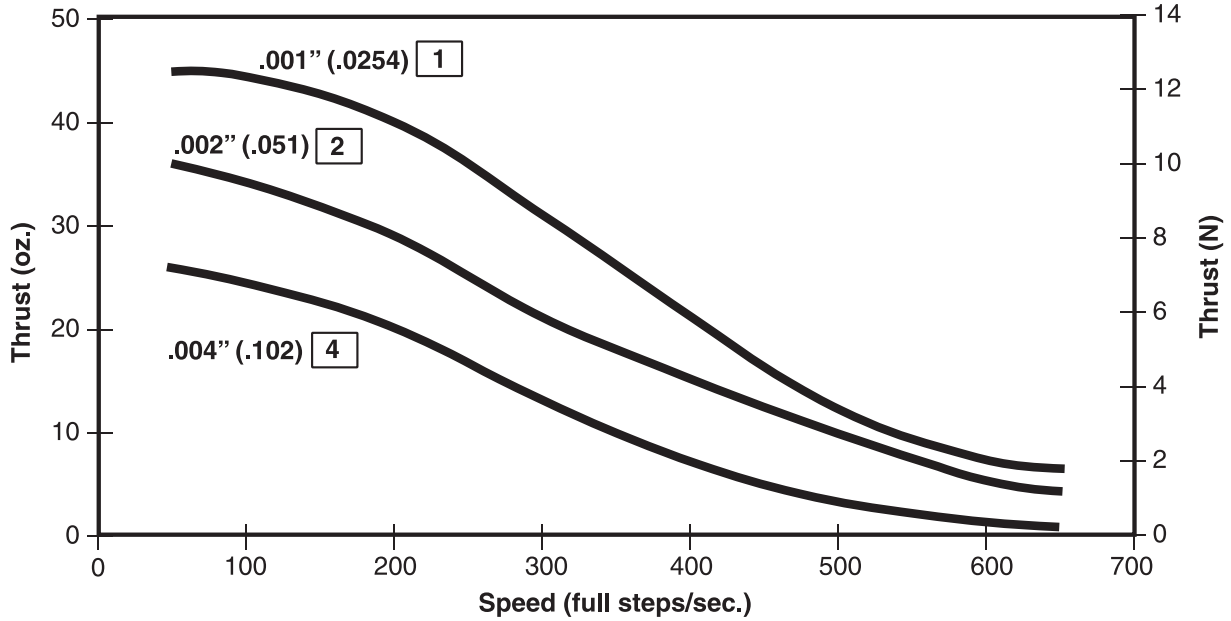
L/R Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 25% Duty Cycle

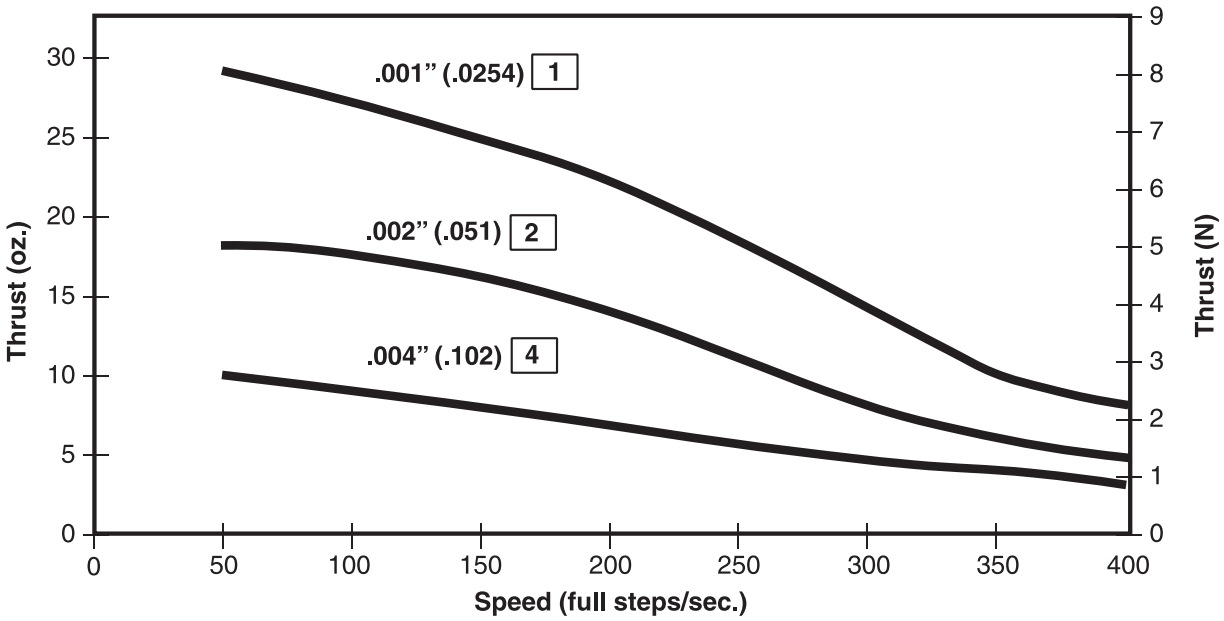
25% duty cycle is obtained by a special winding or by running a standard motor at double the rated voltage.



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

THRUST vs. FULL STEPS/SECOND

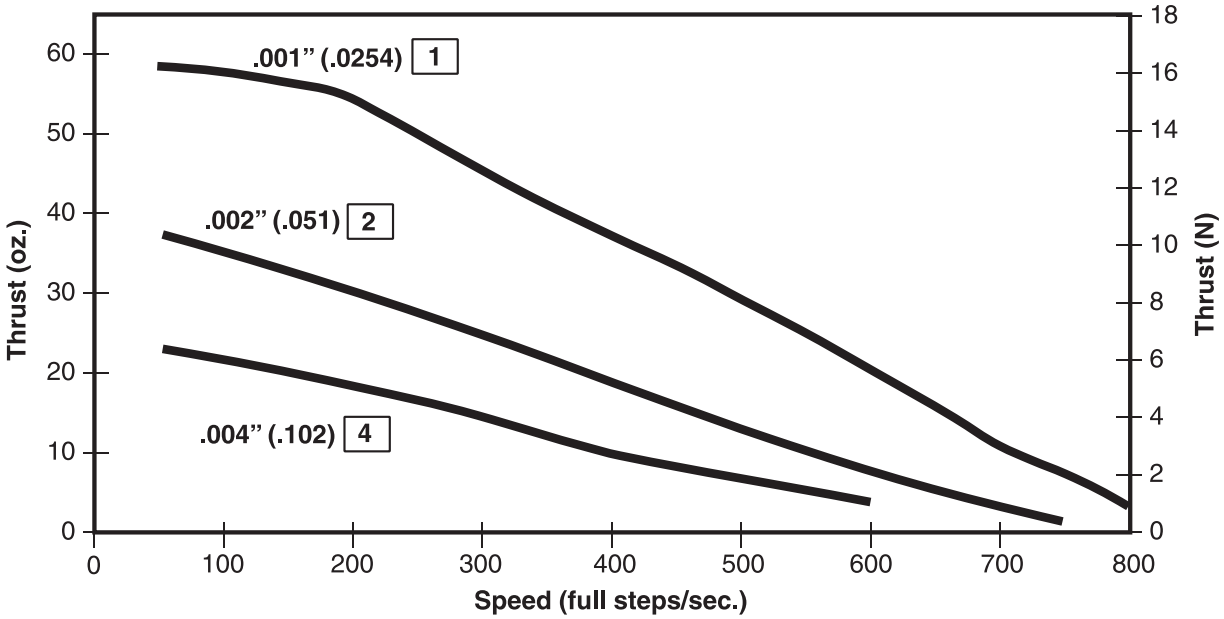
Chopper Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

Chopper Drive • Bipolar • 25% Duty Cycle

25% duty cycle is obtained by a special winding or by running a standard motor at double the rated current.



NOTE: All chopper drive curves were created with a 5 Volt motor and a 40 Volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

Z20000 Series economical stepper motors for high volume, applications.

Utilizing rare earth (neodymium) magnets, the Haydon™ Z-Series linear actuators consistently deliver exceptional performance at an economical price. Also available in a special "earless" configuration without a mounting flange, which is ideal for space constrained applications.

Three motors are available... captive, non-captive and external linear. All units are built with reliable dual ball bearings.

Earless Z20000 Series Actuator

Salient Characteristics

Ø 20 mm (.79-in) Z-Series motor			
Wiring		Bipolar	
Part No.	Captive	Z2054X-V	
	Non-captive	Z2084X-V	
	External*	Z2054X-V*	
Step angle		15°	
Winding voltage		5 VDC	12 VDC
Current/phase		250 mA	100 mA
Resistance/phase		20 Ω	118 Ω
Inductance/phase		5.4 mH	27 mH
Power consumption		2.5 W	
Rotor inertia		1.13 gcm^2	
Temperature rise		135°F Rise (75°C Rise)	
Weight		.85 oz. (24.1 g)	
Insulation resistance		20 M Ω	

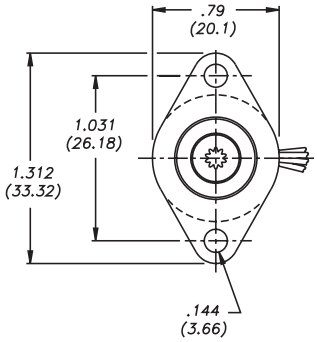
* When ordering Z-Series External Linear motors, add -900 to end of the Part Number.

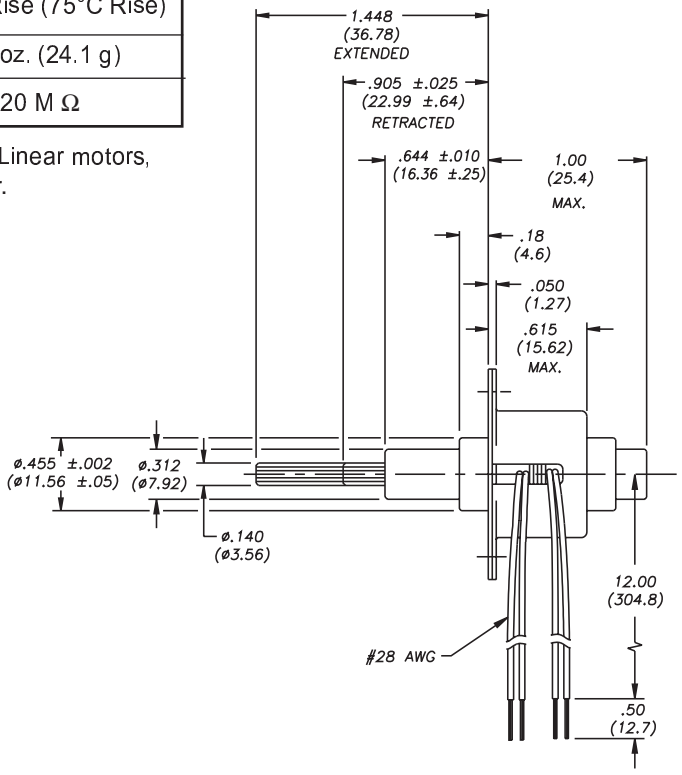
Linear Travel / Step 15° Step Angle		Order Code I.D.
inches	mm	
0.001	0.0254	1
0.002	0.051	2
0.004	0.102	4

Special drive considerations may be necessary when leaving shaft fully extended or fully retracted.

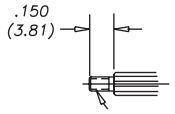
Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Captive Shaft





Spline Options



#2-56 UNC–2A THREAD
or M2 x 0.4 TO BE WITHIN
.030 (.76) MAX. OF SHOULDER

Spline is also available with optional #4-40 UNC-2A or M3 x 0.5 threaded adapter as shown in non-captive drawing.

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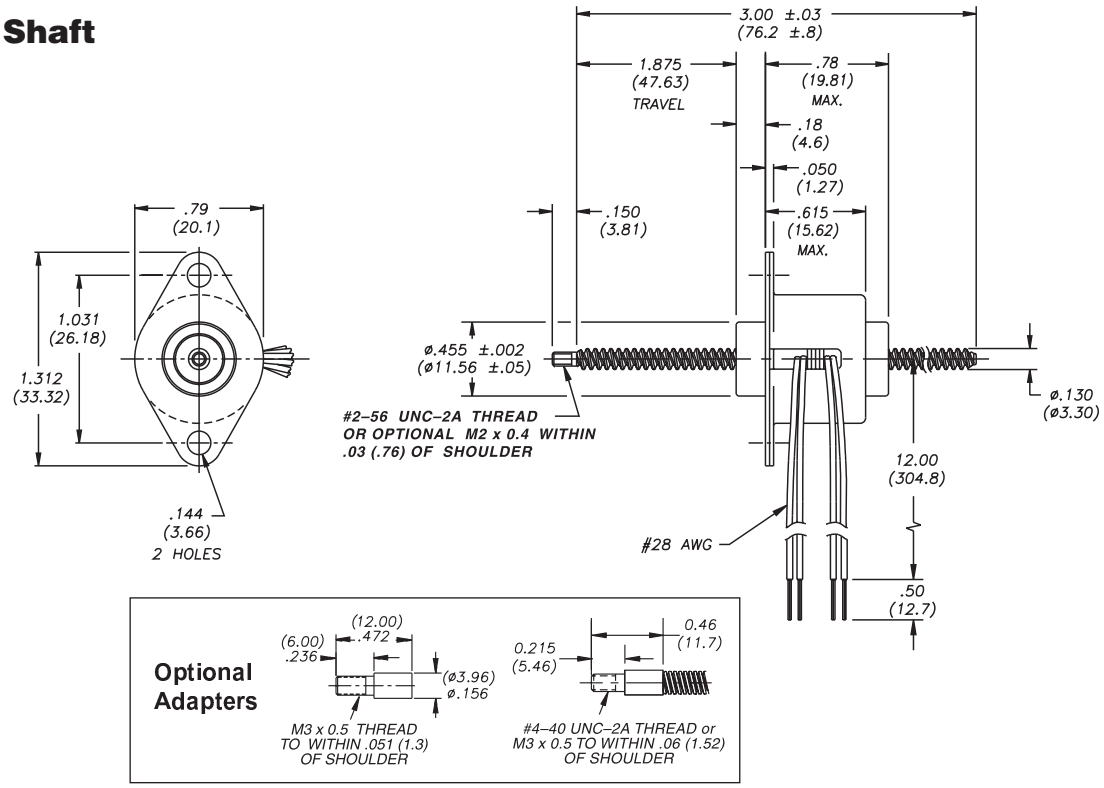
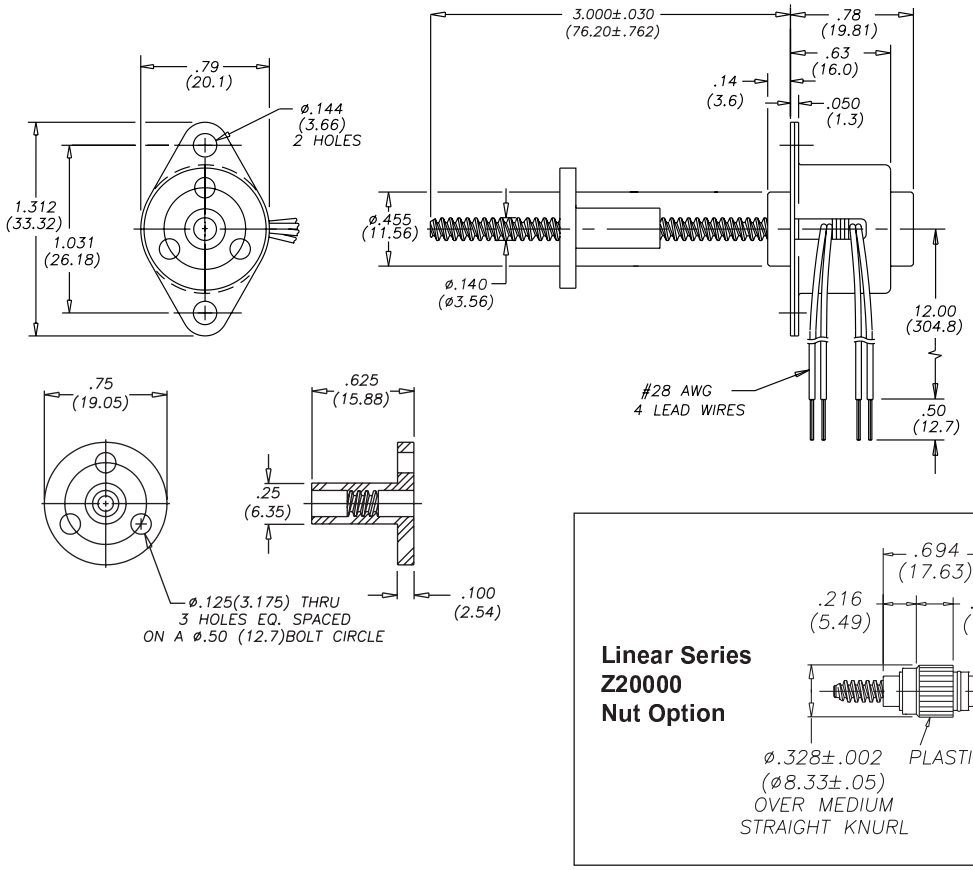
Non-Captive Shaft

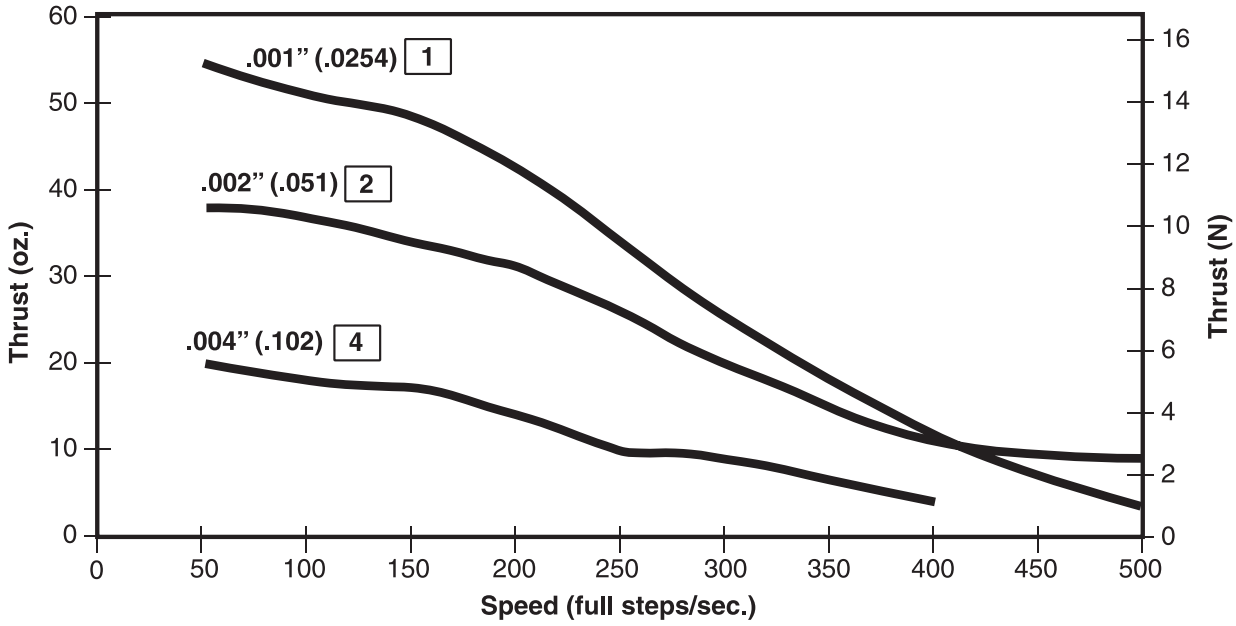


External Linear



THRUST vs. FULL STEPS/SECOND

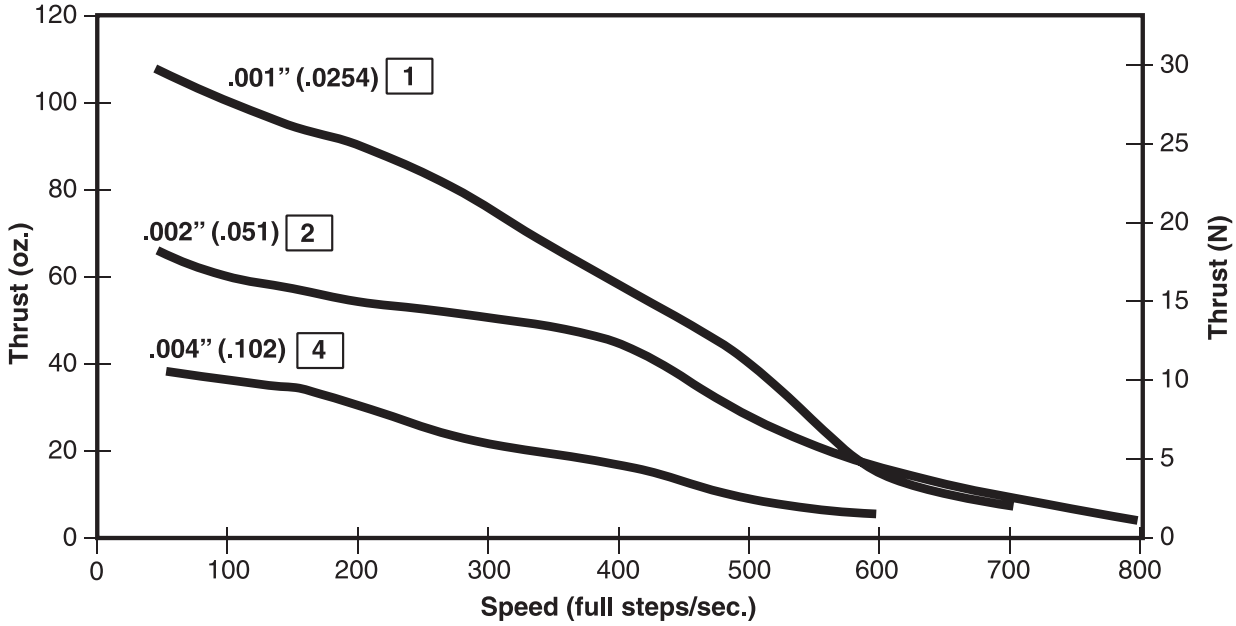
L/R Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 25% Duty Cycle

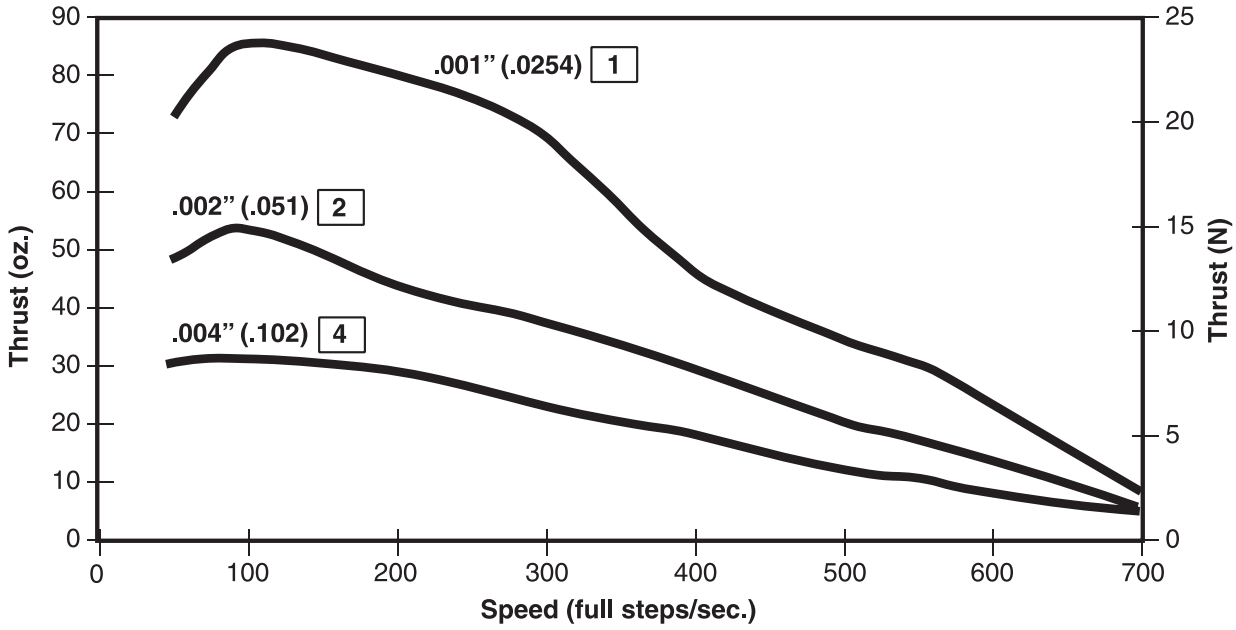
25% duty cycle is obtained by a special winding or by running a standard motor at double the rated voltage.



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

THRUST vs. FULL STEPS/SECOND

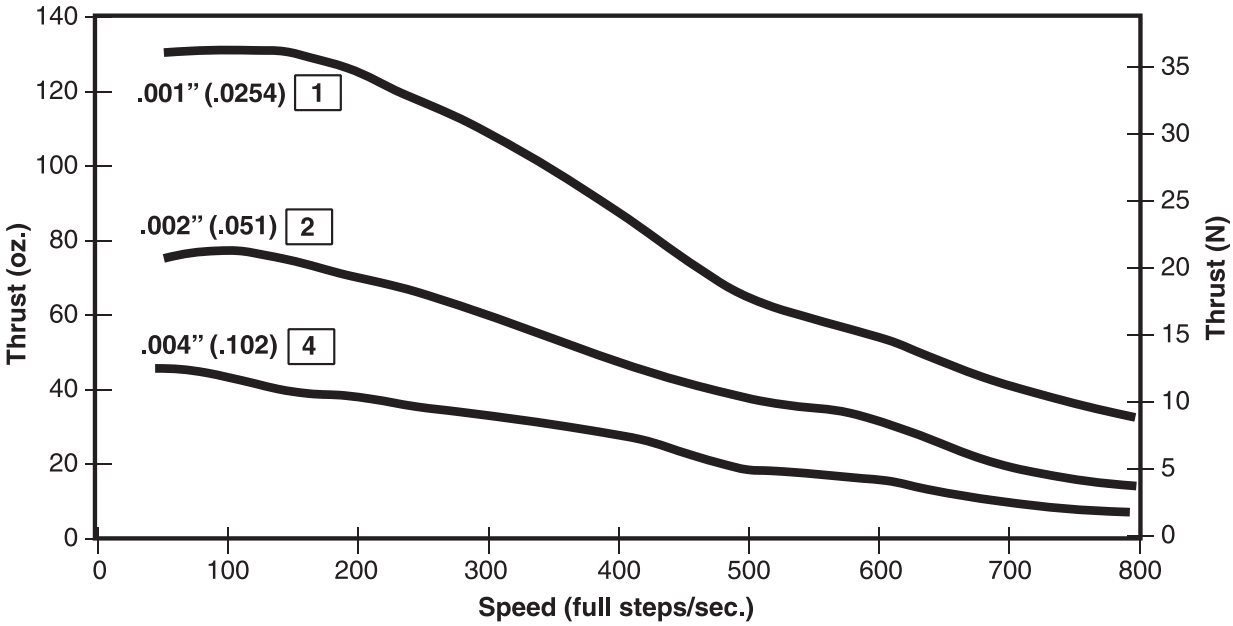
Chopper Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

Chopper Drive • Bipolar • 25% Duty Cycle

25% duty cycle is obtained by a special winding or by running a standard motor at double the rated current.



NOTE: All chopper drive curves were created with a 5 Volt motor and a 40 Volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

An industry standard... high versatility, robust performance.

Salient Characteristics

Ø 26 mm (1-in) motor					
Wiring		Bipolar			
Part No.	Captive	2644X-V		2654X-V	
	Non-captive	2634X-V		2684X-V	
	External	E2644X-V		E2654X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		340 mA	140 mA	340 mA	140 mA
Resistance/phase		14.7 Ω	84 Ω	14.7 Ω	84 Ω
Inductance/phase		8.5 mH	55 mH	6.7 mH	44 mH
Power consumption		3.4 W			
Rotor inertia		1.2 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		1.2 oz (35 g)			
Insulation resistance		20 MΩ			

Ø 26 mm (1-in) motor					
Wiring		Unipolar**			
Part No.	Captive	2646X-V		2656X-V	
	Non-captive	2636X-V		2686X-V	
	External	E2646X-V		E2656X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		340 mA	140 mA	340 mA	140 mA
Resistance/phase		14.7 Ω	84 Ω	14.7 Ω	84 Ω
Inductance/phase		4.3 mH	24 mH	3.4 mH	19 mH
Power consumption		3.4 W			
Rotor inertia		1.2 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		1.2 oz (35 g)			
Insulation resistance		20 MΩ			

* Unipolar drive gives approximately 30% less thrust than bipolar drive.

Other 260000 Series styles available...

- Z-Series
- High Resolution Series
- Long-Stroke Metric Series
- Teflon® lead-screw
- High Temperature Option

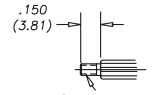
Linear Travel/Step			Order Code I.D.
Step	inches	mm	
7.5° Angle	0.0005	0.013	3
	0.001	0.0254	1
	0.002	0.051	2
15° Angle	0.001	0.0254	1
	0.002	0.051	2
	0.004	0.102	4

Special drive considerations may be necessary when leaving shaft fully extended or fully retracted.

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

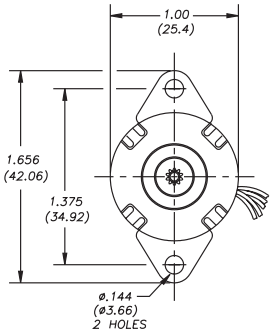
Captive Leadscrew

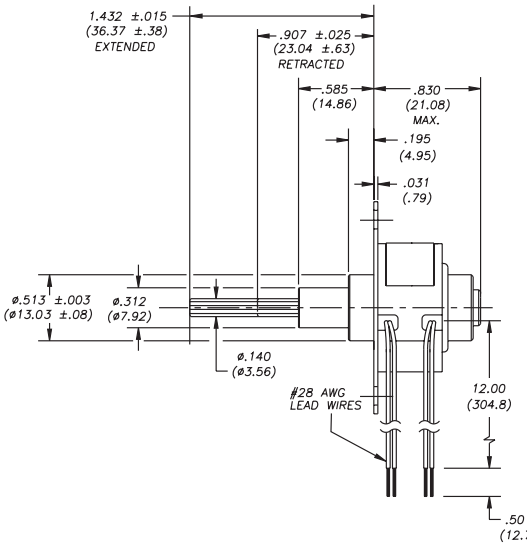
Spline Options



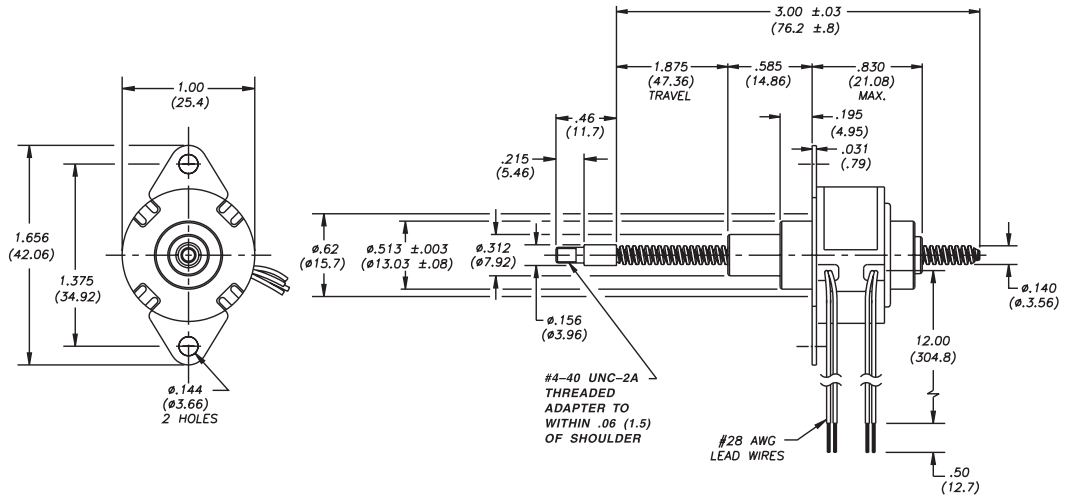
#2-56 UNC–2A THREAD
or M2 x 0.4 TO BE WITHIN
.030 (.76) MAX. OF SHOULDER

Spline is also available with optional #4-40 UNC-2A or M3 x 0.5 threaded adapter as shown in non-captive drawing.

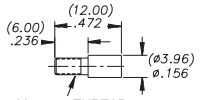




Non-Captive Leadscrew

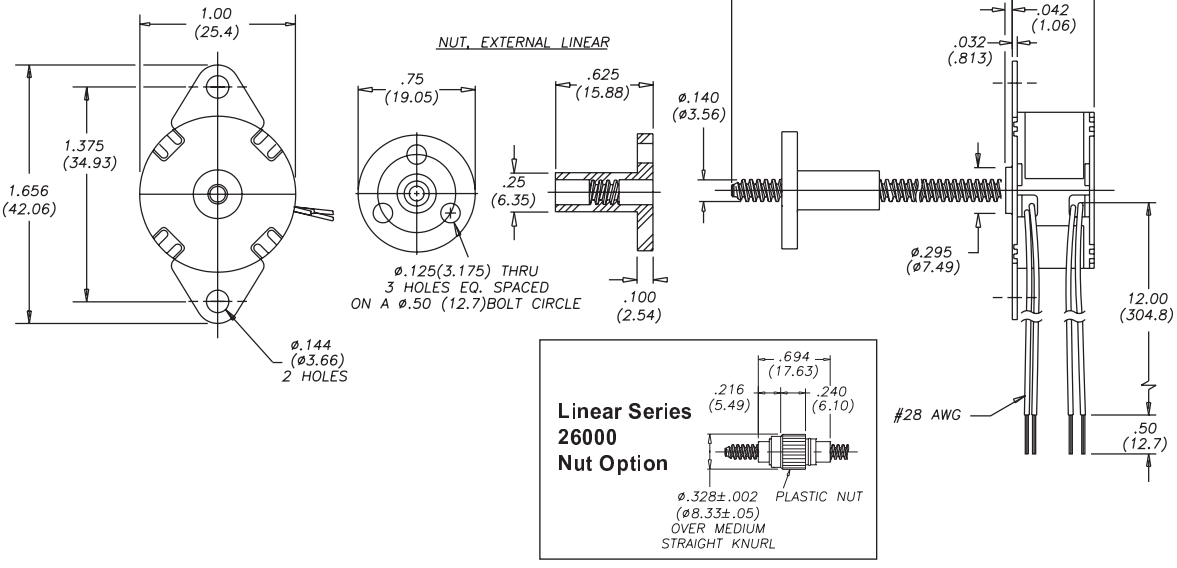


Optional Adapter



M3 x 0.5 THREAD
TO WITHIN .051 (1.3)
OF SHOULDER

External Linear

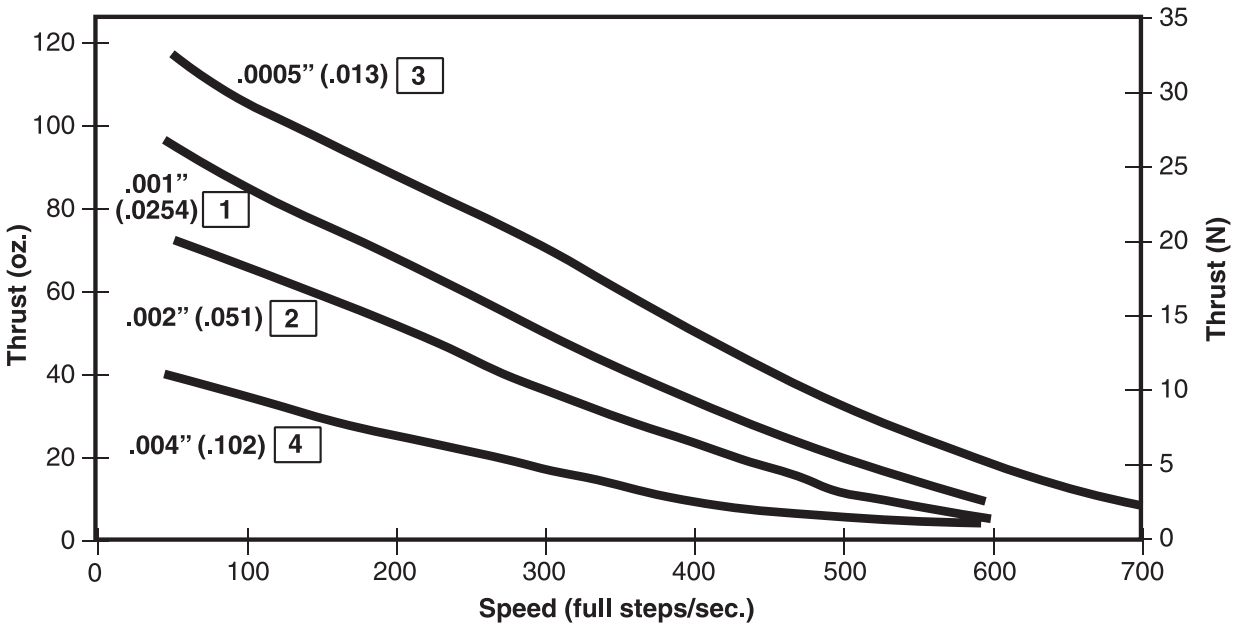


Linear Series 26000 Nut Option

ø.328±.002 PLASTIC NUT
(ø8.33±.05)
OVER MEDIUM
STRAIGHT KNURL

THRUST vs. FULL STEPS/SECOND

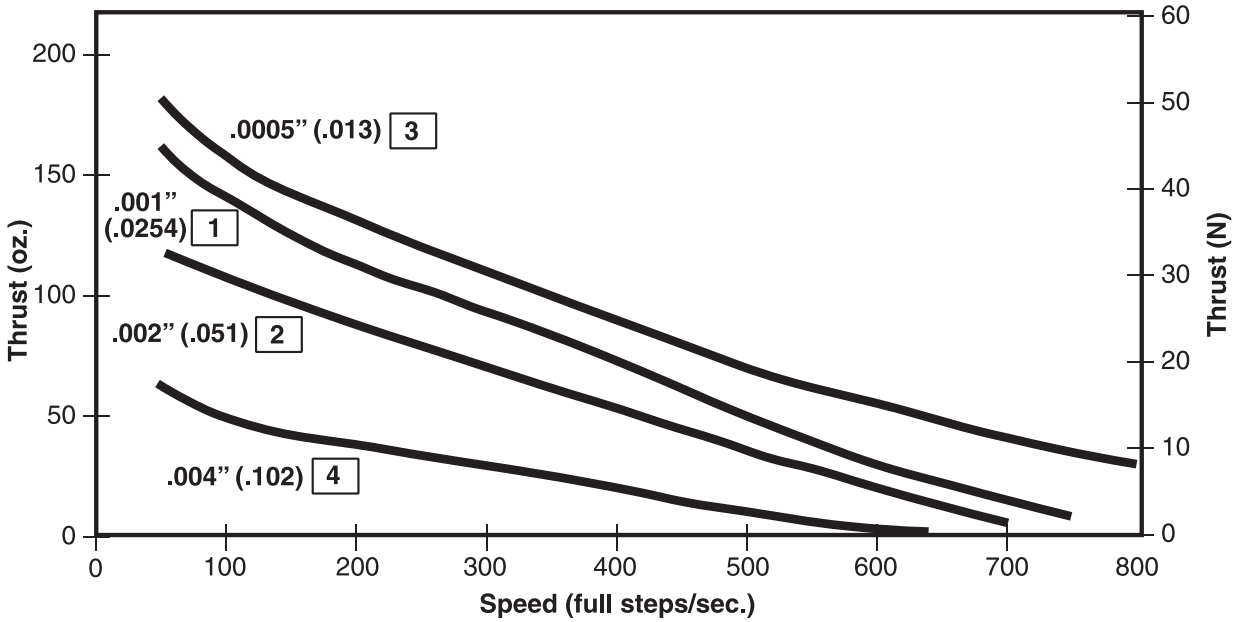
L/R Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 25% Duty Cycle

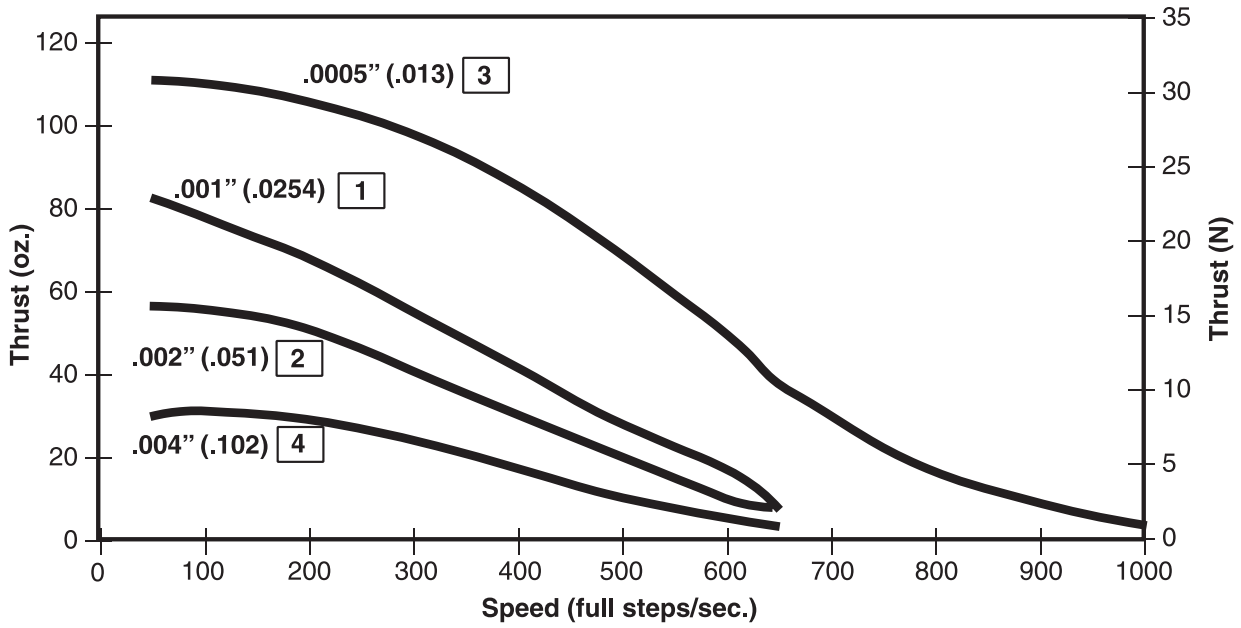
25% duty cycle is obtained by a special winding or by running a standard motor at double the rated voltage.



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

THRUST vs. FULL STEPS/SECOND

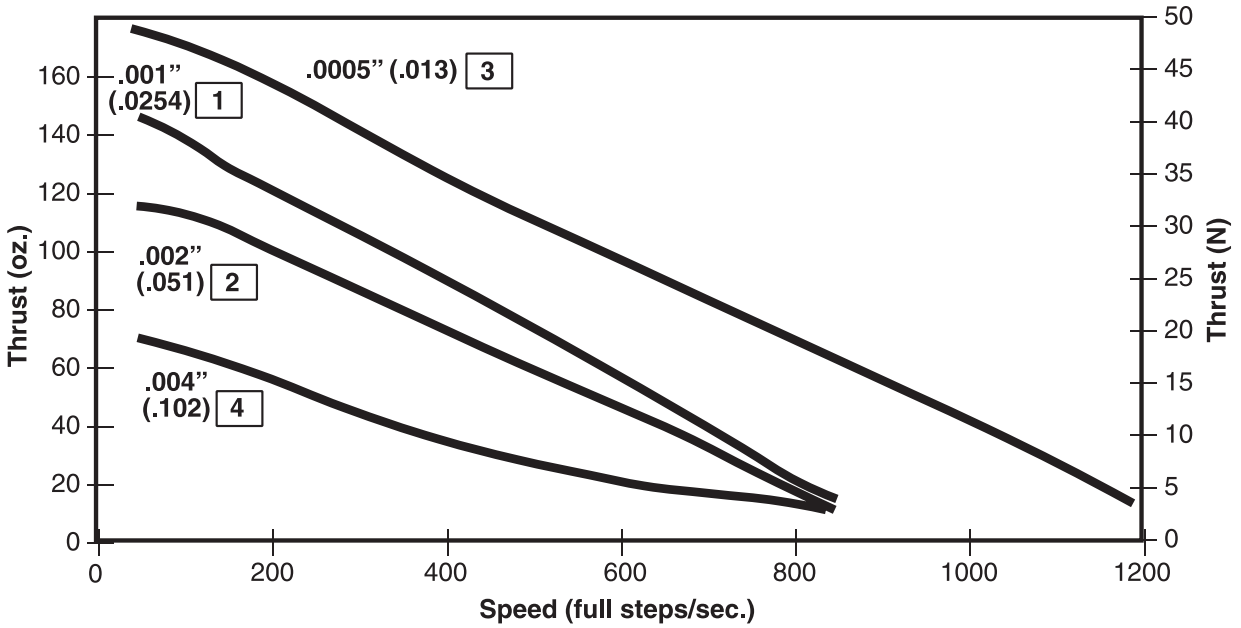
Chopper Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

Chopper Drive • Bipolar • 25% Duty Cycle

25% duty cycle is obtained by a special winding or by running a standard motor at double the rated current.



NOTE: All chopper drive curves were created with a 5 Volt motor and a 40 Volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

Exceptional performance at an economical price.

The Z26000 Series motors are ideal for high volume. Utilizing rare earth (neodymium) magnets. Also, available in a special "earless" configuration without a mounting flange.

All units are built with reliable dual ball bearings.

Salient Characteristics

Ø 26 mm (1-in) Z-Series motor					
Wiring		Bipolar			
Part No.	Captive	Z2644X-V		Z2654X-V	
	Non-captive	Z2634X-V		Z2684X-V	
	External**	Z2644X-V**		Z2654X-V**	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		340 mA	140 mA	340 mA	140 mA
Resistance/phase		14.7 Ω	84 Ω	14.7 Ω	84 Ω
Inductance/phase		8.5 mH	55 mH	6.7 mH	44 mH
Power consumption		3.4 W			
Rotor inertia		1.4 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		1.2 oz (34 g)			
Insulation resistance		20 MΩ			

Ø 26 mm (1-in) Z-Series motor					
Wiring		Unipolar*			
Part No.	Captive	Z2646X-V		Z2656X-V	
	Non-captive	Z2636X-V		Z2686X-V	
	External**	Z2646X-V**		Z2656X-V**	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		340 mA	140 mA	340 mA	140 mA
Resistance/phase		14.7 Ω	84 Ω	14.7 Ω	84 Ω
Inductance/phase		4.3 mH	24 mH	3.4 mH	19 mH
Power consumption		3.4 W			
Rotor inertia		1.4 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		1.2 oz (34 g)			
Insulation resistance		20 MΩ			

Linear Travel/Step			Order Code I.D.
Step	inches	mm	
7.5° Angle	0.0005	0.013	3
	0.001	0.0254	1
	0.002	0.051	2
15° Angle	0.00164	0.04166	AS
	0.002	0.051	2
	0.004	0.102	4

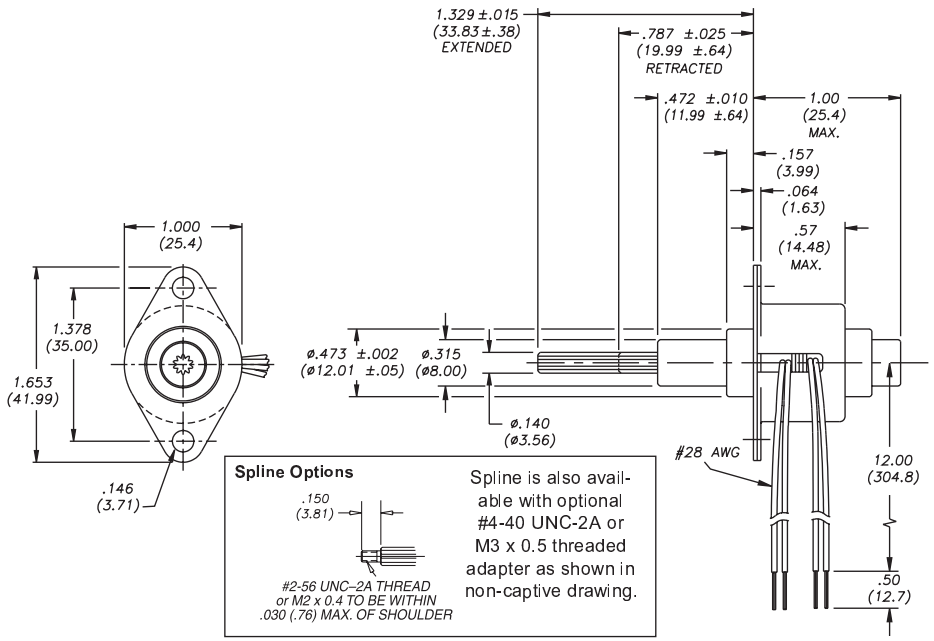
Special drive considerations may be necessary when leaving shaft fully extended or fully retracted.

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

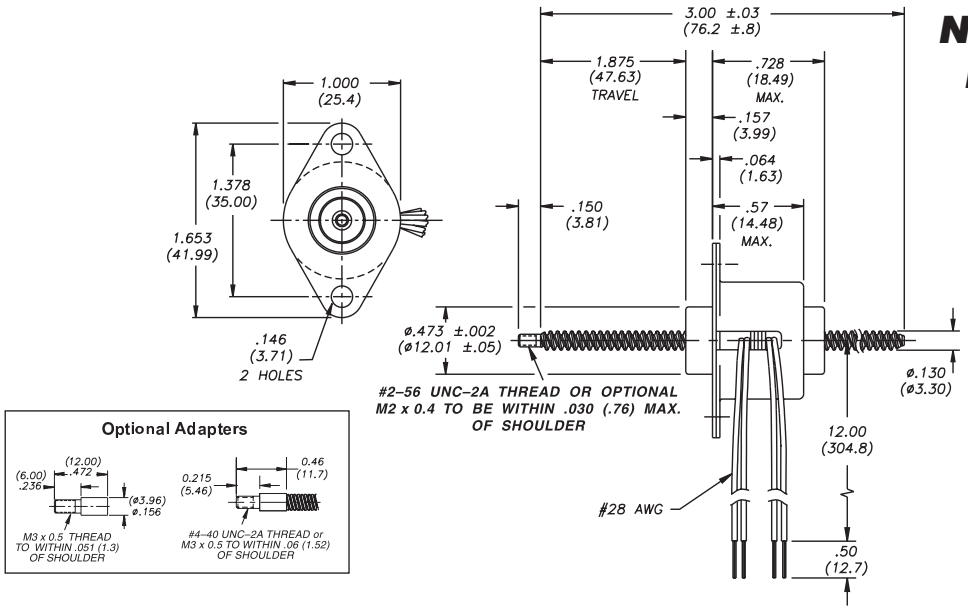
* Unipolar drive gives approximately 40% less thrust vs. bipolar drive.

** When ordering Z-Series External Linear motors, add -900 to end of the Part Number.

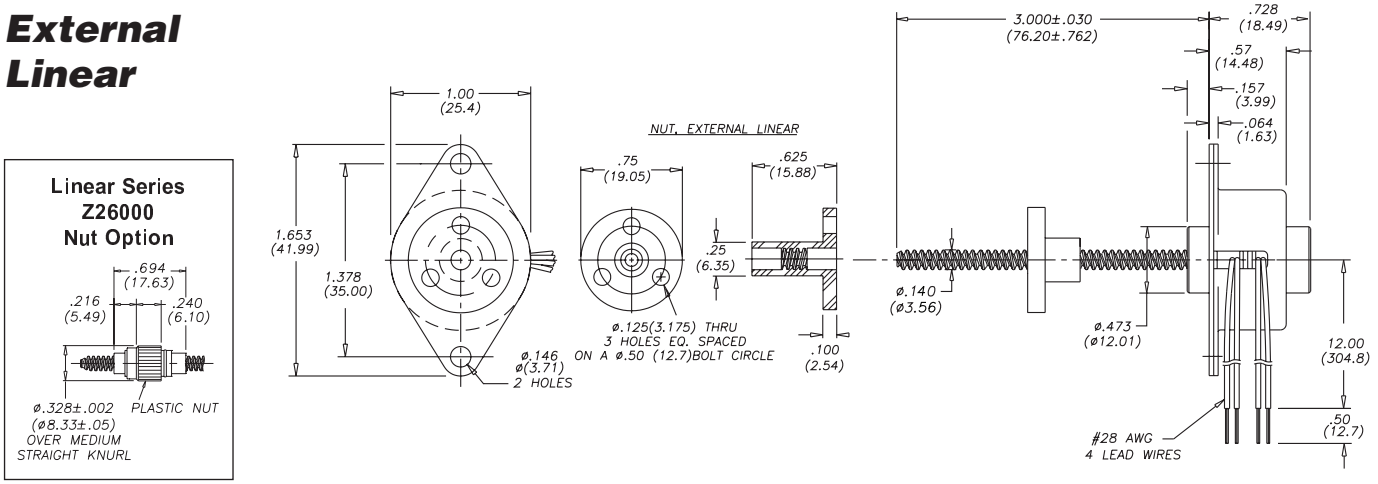
Captive Leadscrew



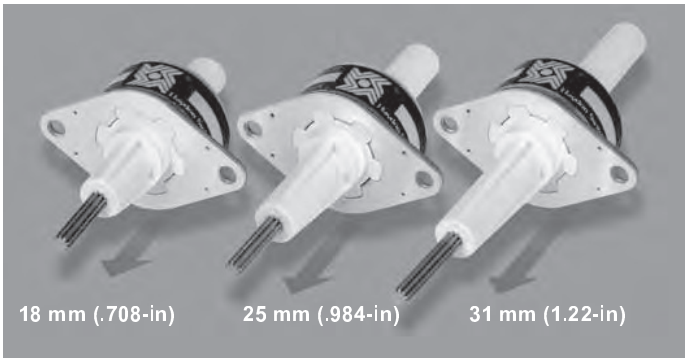
Non-Captive Leadscrew



External Linear



Specially engineered Z26000 (Ø 26 mm, 1-in) linear actuators that extend captive leadscrew travel beyond 12.7 mm (1/2-in).



Salient Characteristics

Ø 26 mm (1-in) Z-Series motor					
Wiring		Bipolar			
Part No.	Captive	Z2644X-V		Z2654X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		340 mA	140 mA	340 mA	140 mA
Resistance/phase		14.7 Ω	84 Ω	14.7 Ω	84 Ω
Inductance/phase		8.5 mH	55 mH	6.7 mH	44 mH
Power consumption		3.4 W			
Rotor inertia		1.4 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		1.2 oz (34 g)			
Insulation resistance		20 MΩ			

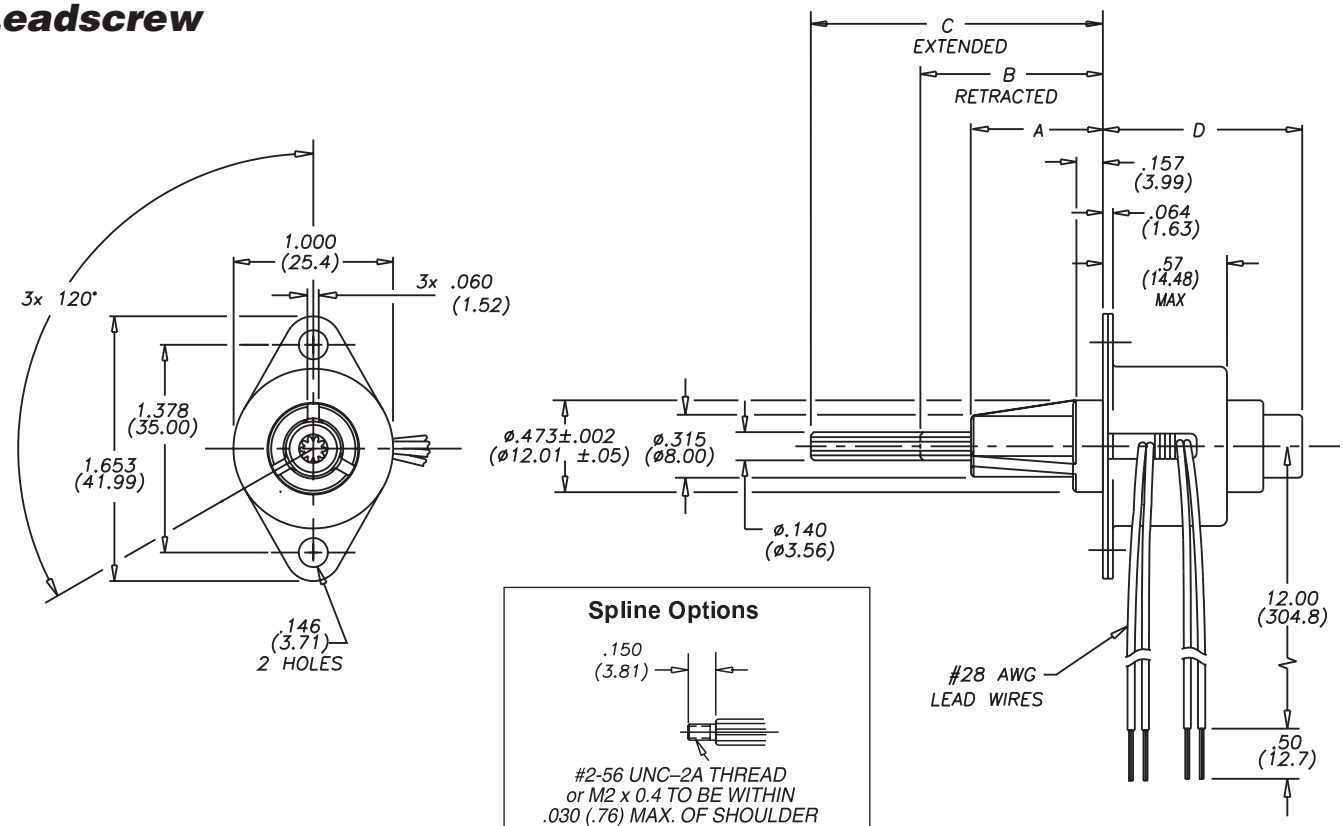
Ø 26 mm (1-in) Z-Series motor					
Wiring		Unipolar*			
Part No.	Captive	Z2646X-V		Z2656X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		340 mA	140 mA	340 mA	140 mA
Resistance/phase		14.7 Ω	84 Ω	14.7 Ω	84 Ω
Inductance/phase		4.3 mH	24 mH	3.4 mH	19 mH
Power consumption		3.4 W			
Rotor inertia		1.4 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		1.2 oz (34 g)			
Insulation resistance		20 MΩ			

* Unipolar drive gives approximately 40% less thrust vs. bipolar drive.

Linear Travel/Step			Order Code I.D.
Step	inches	mm	
7.5° Angle	0.0005	0.013	3
	0.001	0.0254	1
	0.002	0.051	2
15° Angle	0.00164	0.04166	AS
	0.002	0.051	2
	0.004	0.102	4

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Captive Leadscrew

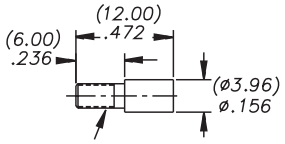


Spline Options

#2-56 UNC–2A THREAD
or M2 x 0.4 TO BE WITHIN
.030 (.76) MAX. OF SHOULDER

Adapter Option

Spline is also available with optional #4-40 UNC-2A or M3 x 0.5 threaded adapter.

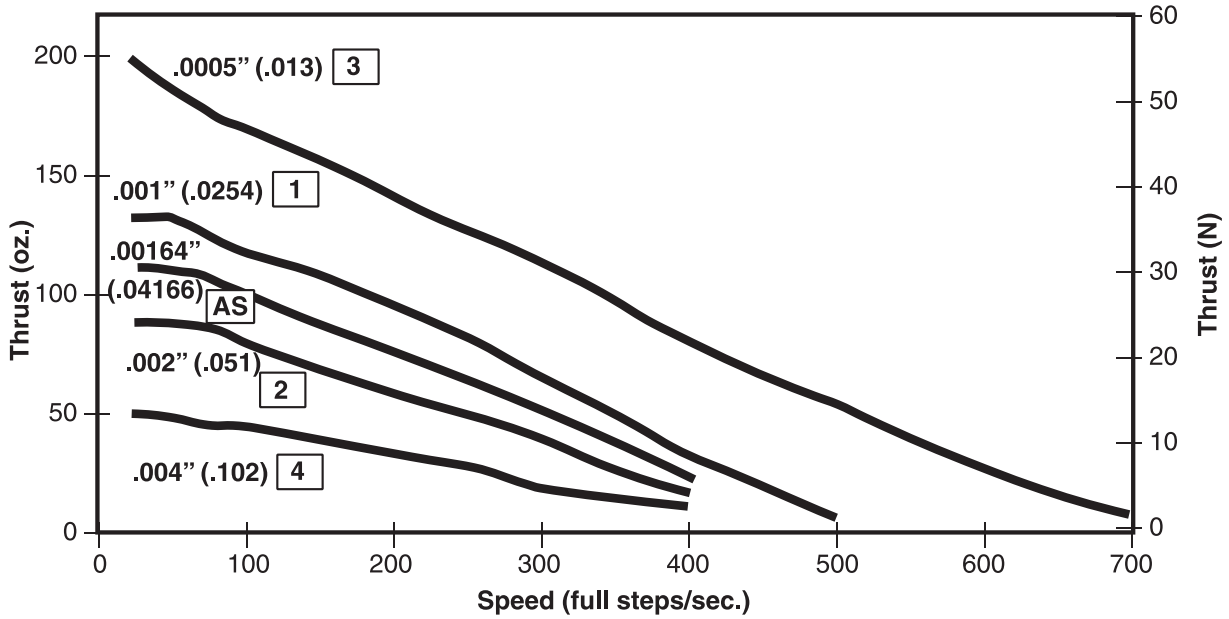


M3 x 0.5 THREAD
TO WITHIN .051 (1.3)
OF SHOULDER

Stroke (min.)	Front Sleeve A	Retracted B	Extended C	Rear Sleeve D	Suffix Code
.708 (18 mm)	.679±.010 (17.25±.25)	.994±.025 (25.25±.64)	1.743±.015 (44.27±.38)	1.21 max. (30.7 max.)	– 907
.984 (25 mm)	.955±.010 (24.26±.25)	1.269±.025 (32.23±.64)	2.293±.015 (58.24±.38)	1.48 max. (37.6 max.)	– 910
1.22 (31 mm)	1.191±.010 (30.25±.25)	1.505±.025 (38.23±.64)	2.765±.015 (70.23±.38)	1.72 max. (43.7 max.)	– 912

THRUST vs. FULL STEPS/SECOND

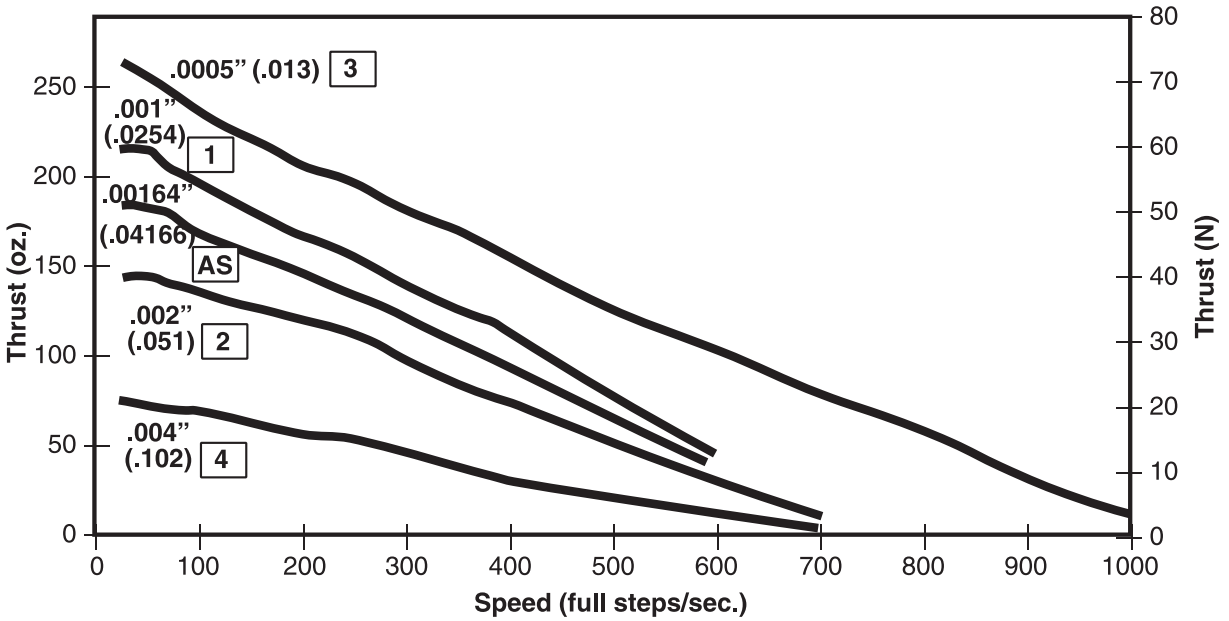
L/R Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 25% Duty Cycle

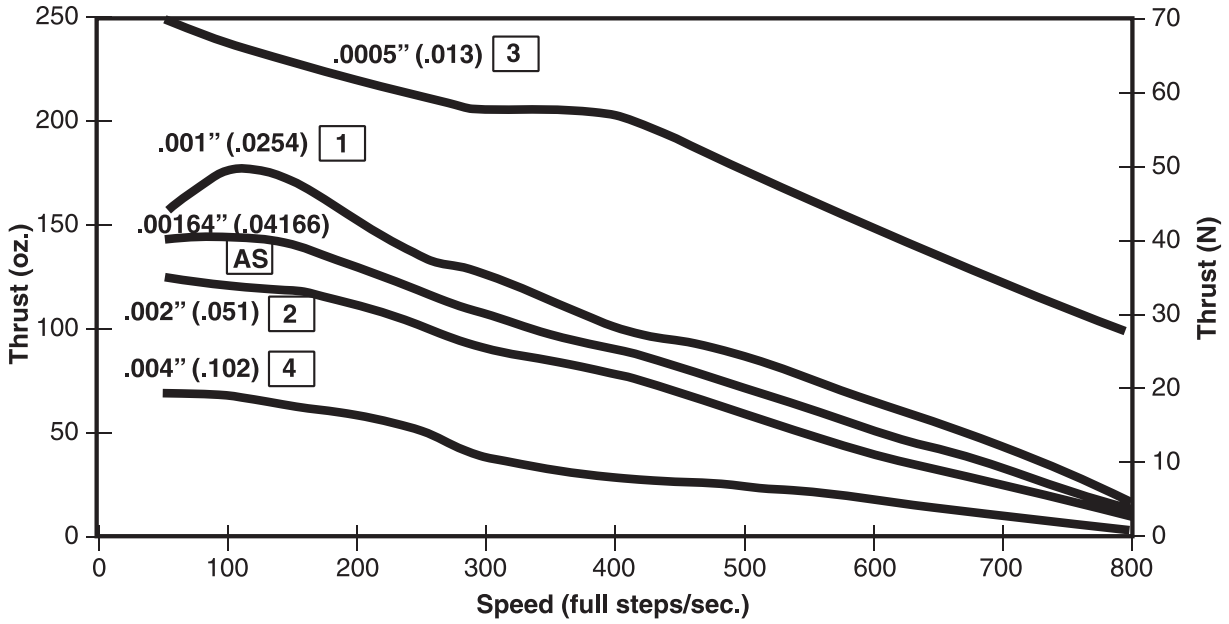
25% duty cycle is obtained by a special winding or by running a standard motor at double the rated voltage.



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

THRUST vs. FULL STEPS/SECOND

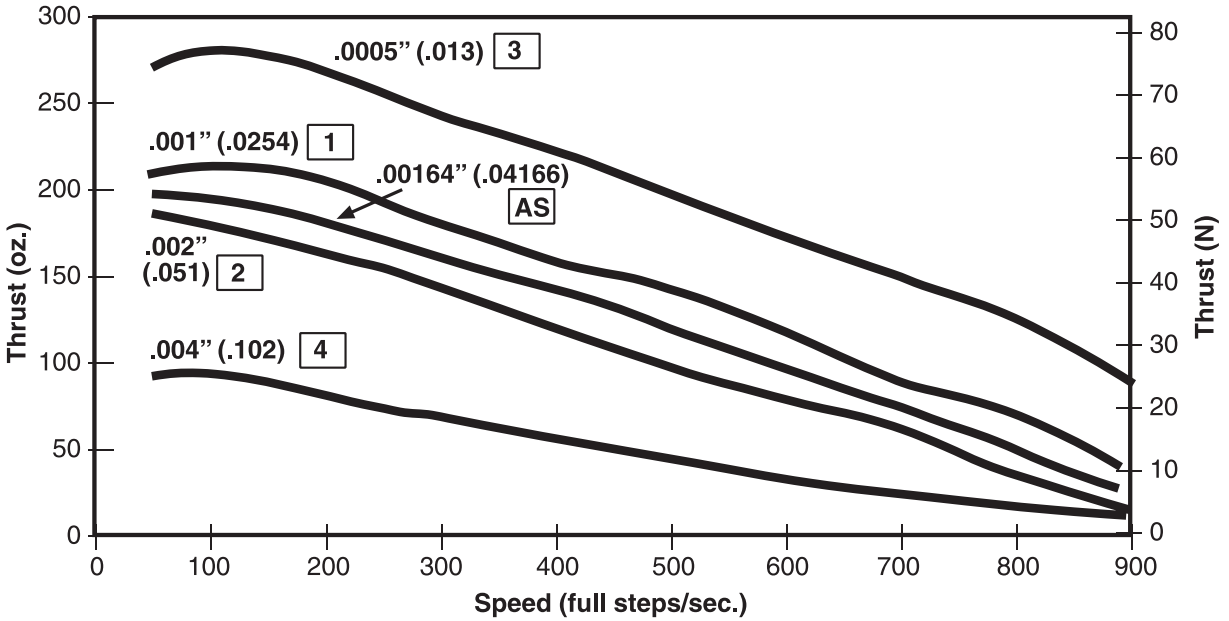
Chopper Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

Chopper Drive • Bipolar • 25% Duty Cycle

25% duty cycle is obtained by a special winding or by running a standard motor at double the rated current.



NOTE: All chopper drive curves were created with a 5 Volt motor and a 40 Volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

High resolution steppers for applications requiring fine step increments down to 0.00025-in (0.0064 mm).

The Haydon™ High Resolution 26000 Series features the smallest capability in a permanent magnet linear actuator. Motors can also be electronically micro-stepped.

Salient Characteristics

Ø 26 mm (1-in) High Resolution Motor					
Wiring		Bipolar		Unipolar*	
Part No.	Captive	26449-V		26469-V	
	Non-captive	26349-V		26369-V	
	External	E26449-V		E26469-V	
Step angle		7.5°			
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		340 mA	140 mA	340 mA	140 mA
Resistance/phase		14.7 Ω	84 Ω	14.7 Ω	84 Ω
Inductance/phase		8.5 mH	55 mH	4.3 mH	24 mH
Power consumption		3.4 W			
Rotor inertia		1.2 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		1.2 oz (35 g)			
Insulation resistance		20 MΩ			

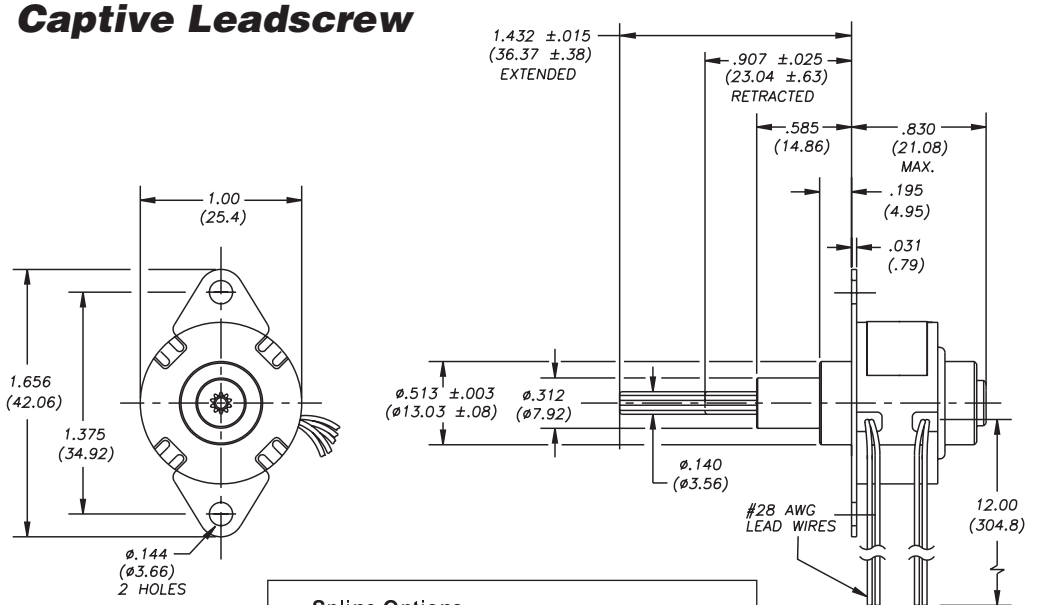
* Unipolar drive gives approximately 30% less thrust vs. bipolar drive.

Linear Travel/Step: Bipolar & Unipolar			Order Code I.D.
Step	inches	mm	
7.5° Angle	0.00025	0.00643	9

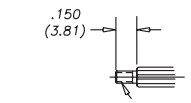
Special drive considerations may be necessary when leaving shaft fully extended or fully retracted.

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Captive Leadscrew



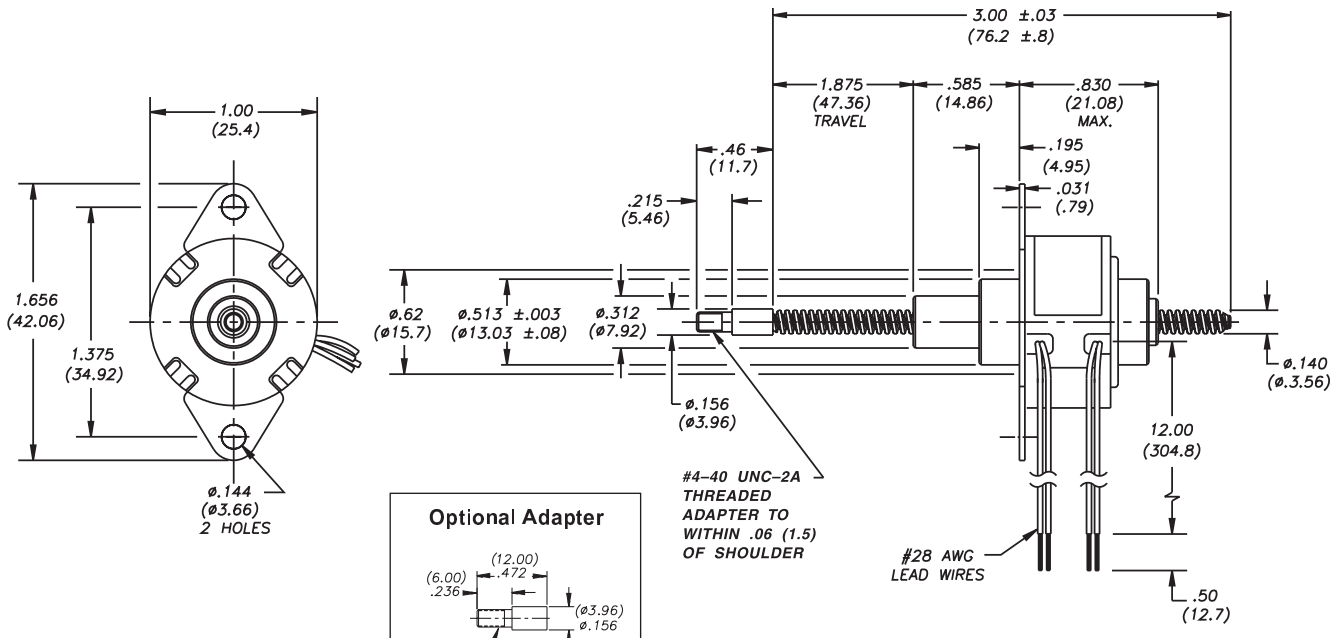
Spline Options



#2-56 UNC–2A THREAD
or M2 x 0.4 TO BE WITHIN
.030 (.76) MAX. OF SHOULDER

Spline is also available with optional #4-40 UNC-2A or M3 x 0.5 threaded adapter as shown in non-captive drawing.

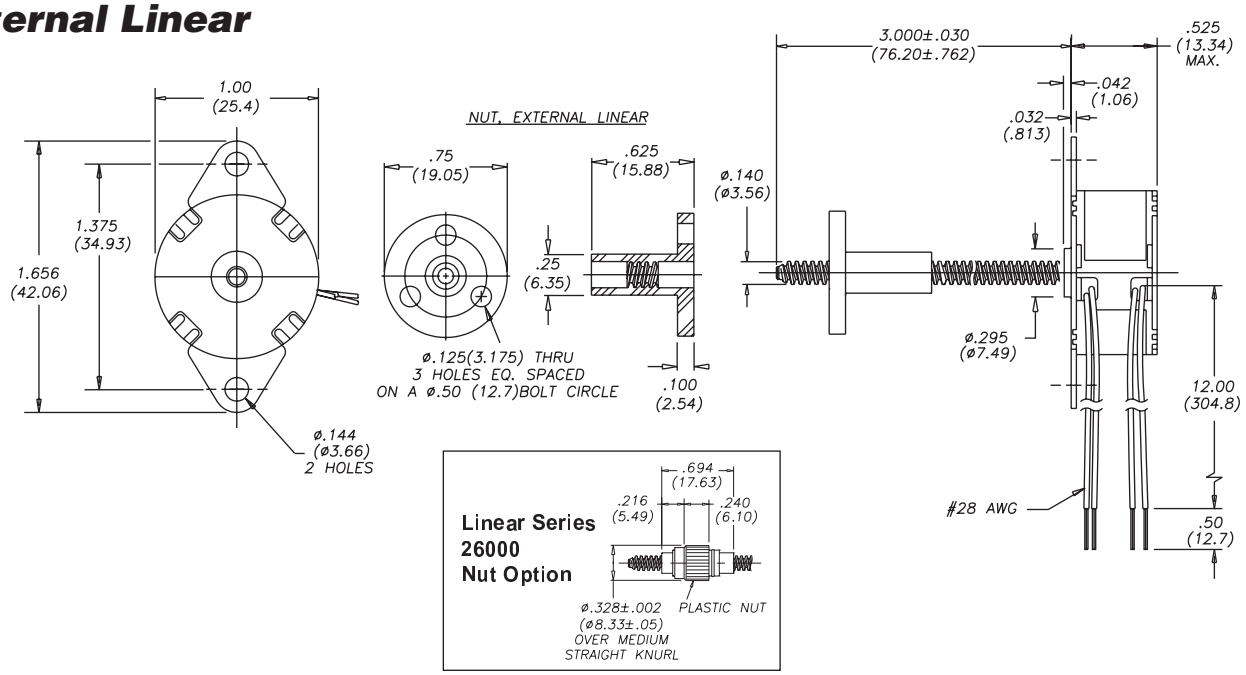
Non-Captive Leadscrew



Optional Adapter

M3 x 0.5 THREAD
TO WITHIN .051 (1.3)
OF SHOULDER

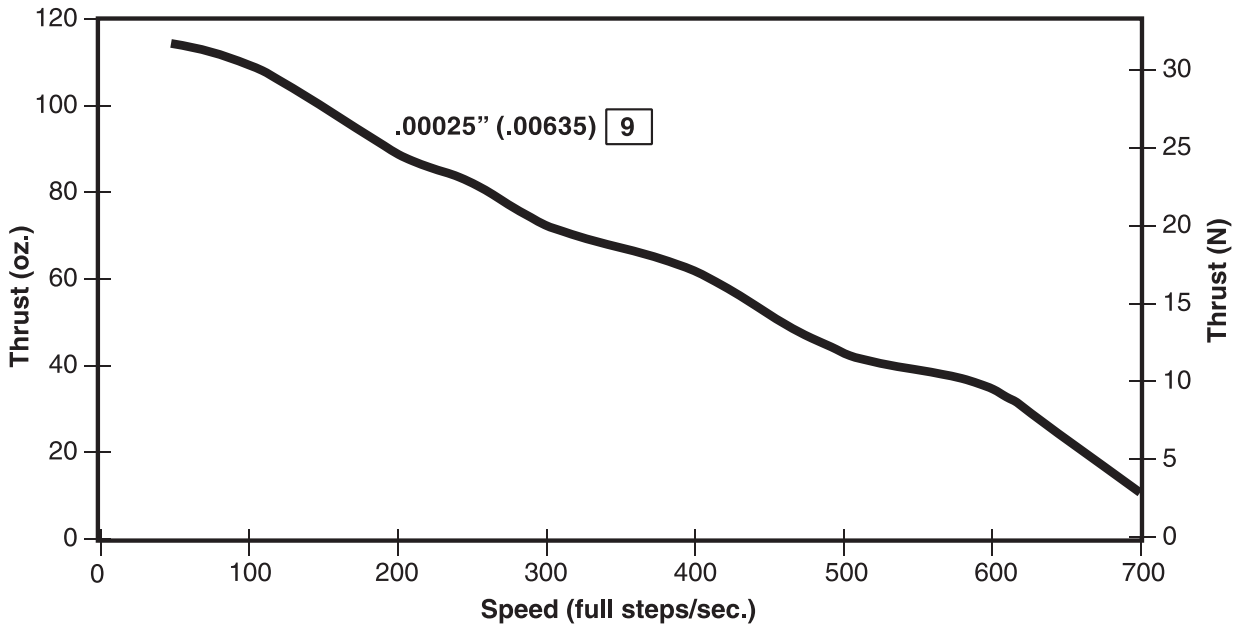
External Linear



26000 Series: Can-Stack High Resolution Performance Curve

THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 100% Duty Cycle



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

Higher thrust... more versatility and greater durability.

Salient Characteristics

Ø 36 mm (1.4-in) motor					
Wiring		Bipolar			
Part No.	Captive	3644X-V		3654X-V	
	Non-captive	3634X-V		3684X-V	
	External	E3644X-V		E3654X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		460 mA	190 mA	460 mA	190 mA
Resistance/phase		11 Ω	63 Ω	11 Ω	63 Ω
Inductance/phase		7.2 mH	45 mH	5.5 mH	35 mH
Power consumption		4.6 W			
Rotor inertia		10.5 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		3 oz (86 g)			
Insulation resistance		20 MΩ			

Ø 36 mm (1.4-in) motor					
Wiring		Unipolar*			
Part No.	Captive	3646X-V		3656X-V	
	Non-captive	3636X-V		3686X-V	
	External	E3646X-V		E3656X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		460 mA	190 mA	460 mA	190 mA
Resistance/phase		11 Ω	63 Ω	11 Ω	63 Ω
Inductance/phase		3.8 mH	19 mH	3 mH	15 mH
Power consumption		4.6 W			
Rotor inertia		10.5 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		3 oz (86 g)			
Insulation resistance		20 MΩ			

* Unipolar drive gives approximately 30% less thrust vs. bipolar drive.

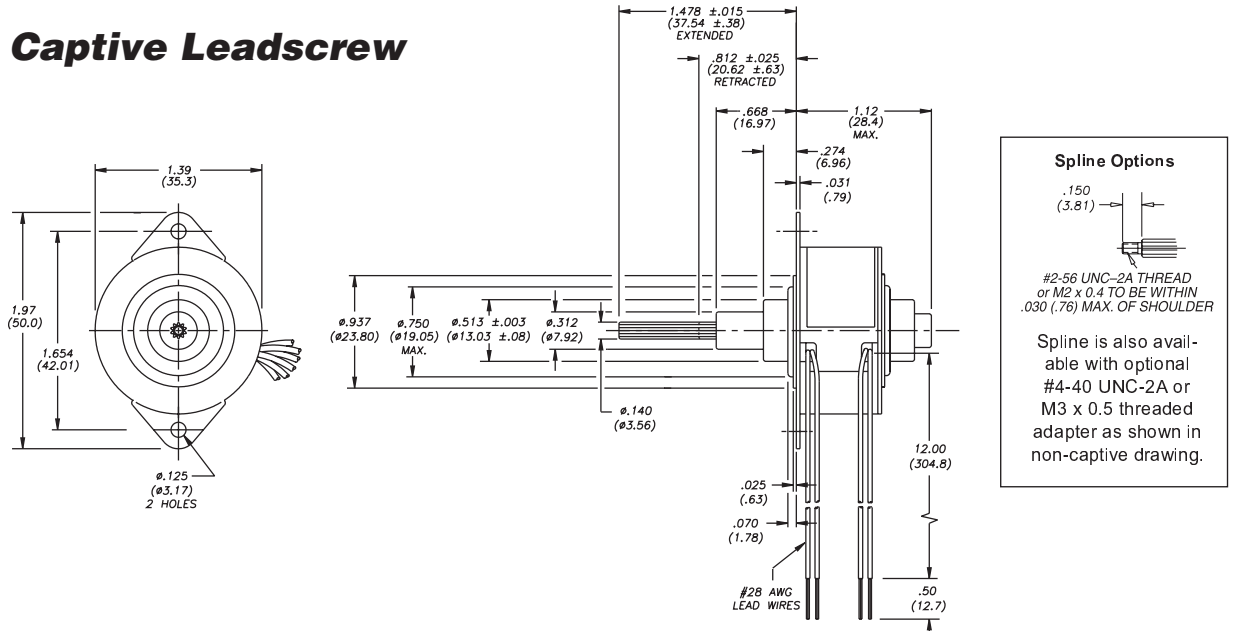
Other styles available...

- High Resolution Series
- Teflon® lead-screw
- High Temperature Option

Linear Travel/Step			Order Code I.D.
Step	inches	mm	
7.5° Angle	0.0005	0.013	3
	0.001	0.0254	1
	0.002	0.051	2
15° Angle	0.002	0.051	2
	0.004	0.102	4

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Captive Leadscrew

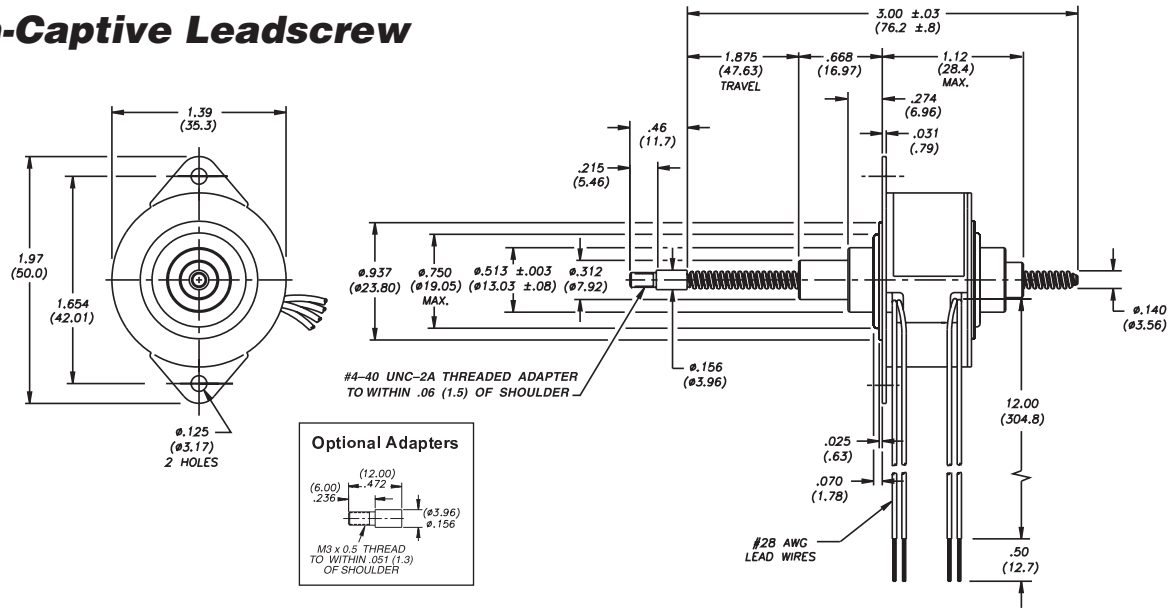


Spline Options

#2-56 UNC–2A THREAD
or M2 x 0.4 TO BE WITHIN
.030 (.76) MAX. OF SHOULDER

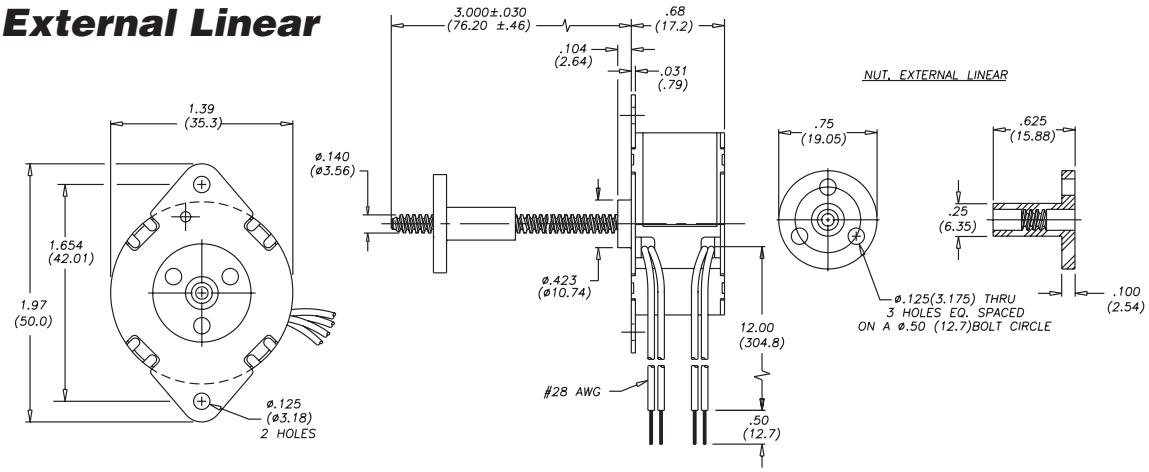
Spline is also available with optional #4-40 UNC-2A or M3 x 0.5 threaded adapter as shown in non-captive drawing.

Non-Captive Leadscrew

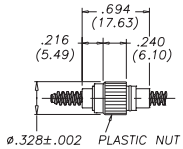


Optional Adapters

External Linear



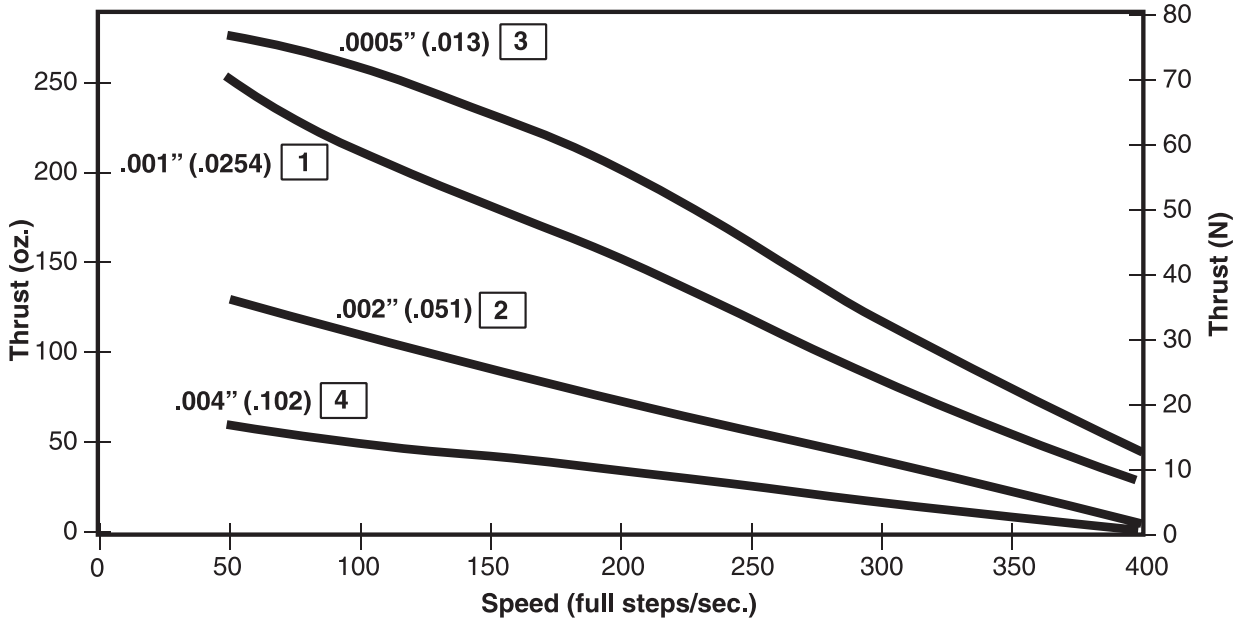
Linear Series 36000 Nut Option



ø.328±.002
(ø8.33±.05)
OVER MEDIUM
STRAIGHT KNURL
PLASTIC NUT

THRUST vs. FULL STEPS/SECOND

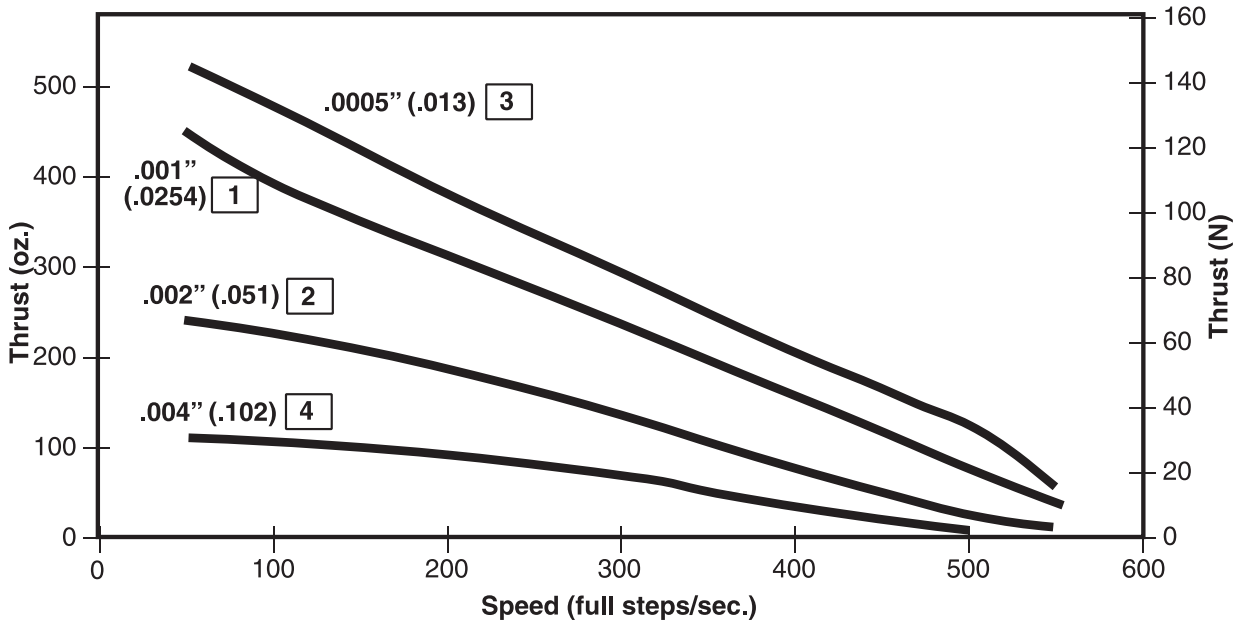
L/R Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 25% Duty Cycle

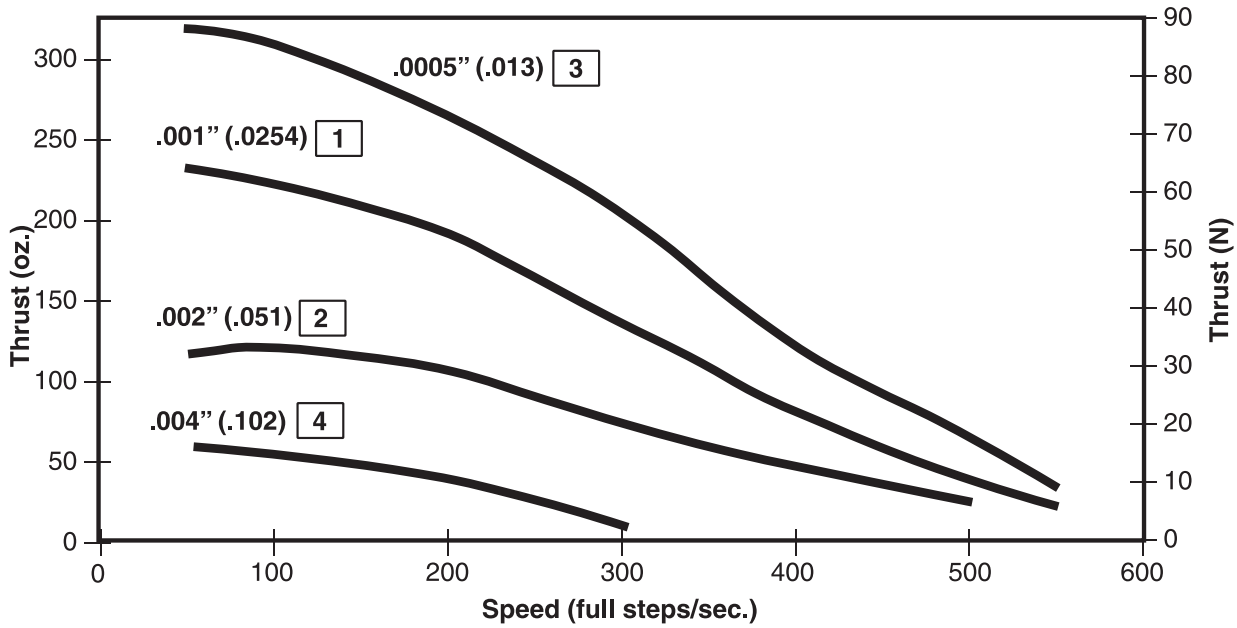
25% duty cycle is obtained by a special winding or by running a standard motor at double the rated voltage.



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

THRUST vs. FULL STEPS/SECOND

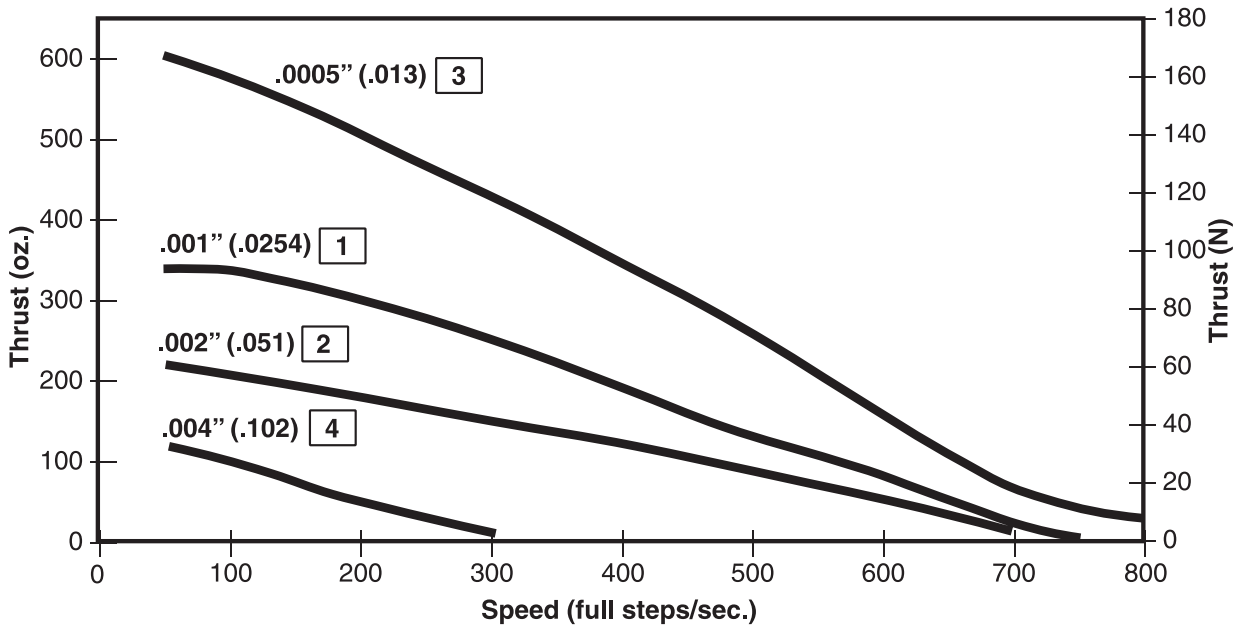
Chopper Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

Chopper Drive • Bipolar • 25% Duty Cycle

25% duty cycle is obtained by a special winding or by running a standard motor at double the rated current.



NOTE: All chopper drive curves were created with a 5 Volt motor and a 40 Volt power supply.

Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

Precise linear motion control down to 0.000125-in (0.0032 mm)

The Haydon™ High Resolution 36000 Series features a choice of two extremely small step increments, 0.000125-in (0.0032 mm) and 0.00025-in (0.0064 mm). Motors can also be electronically micro-stepped.

Salient Characteristics

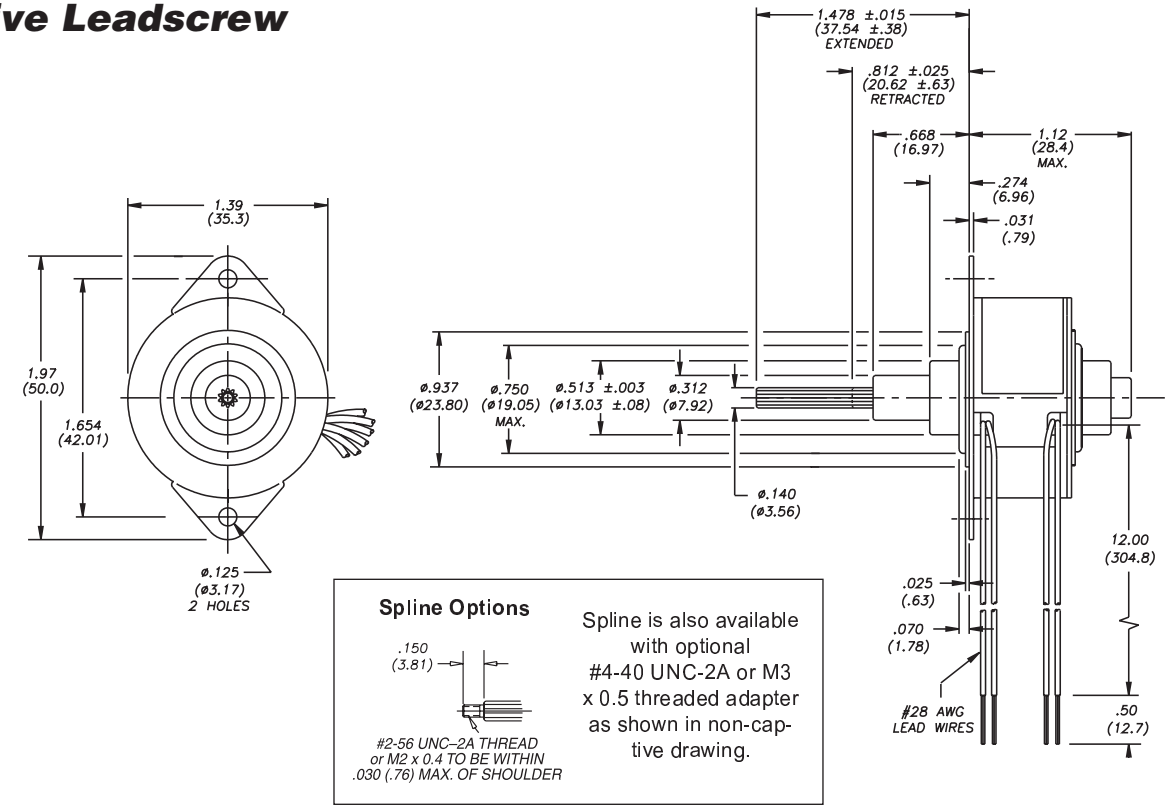
Ø 36 mm (1.4") High Resolution Motor					
Wiring		Bipolar		Unipolar*	
Part No.	Captive	3624X-V		3626X-V	
	Non-captive	3614X-V		3616X-V	
	External	E3624X-V		3626X-V	
Step angle		3.75°			
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		460 mA	190 mA	460 mA	190 mA
Resistance/phase		11 Ω	63 Ω	11 Ω	63 Ω
Inductance/phase		9.2 mH	53 mH	4.6 mH	26 mH
Power consumption		4.6 W			
Rotor inertia		10.5 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		3 oz (86 g)			
Insulation resistance		20 MΩ			

* Unipolar drive gives approximately 30% less thrust vs. bipolar drive.

Linear Travel/Step: Bipolar & Unipolar			Order Code I.D.
Step	inches	mm	
3.75° Angle	0.000125	0.0032	7
	0.00025	0.0064	9

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

Captive Leadscrew

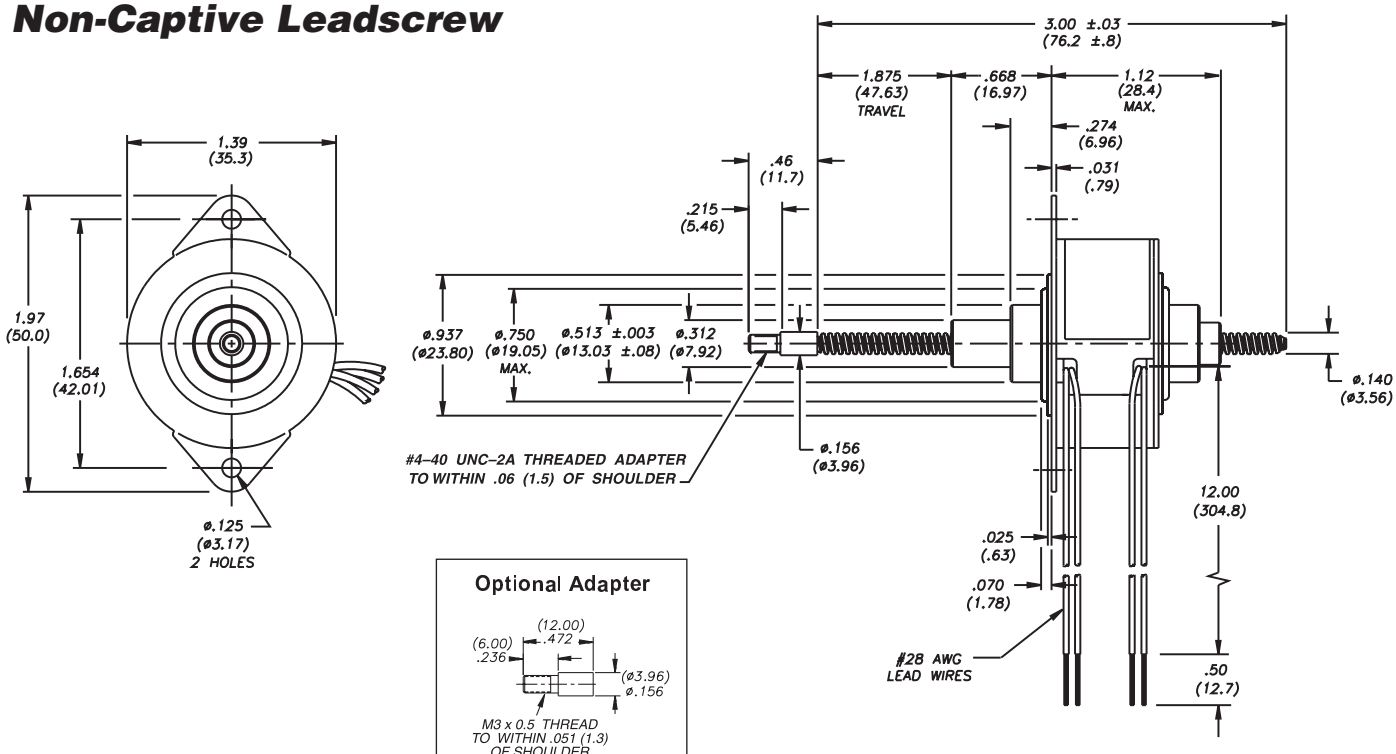


Spline Options

#2-56 UNC–2A THREAD or M2 x 0.4 TO BE WITHIN .030 (.76) MAX. OF SHOULDER

Spline is also available with optional #4-40 UNC-2A or M3 x 0.5 threaded adapter as shown in non-captive drawing.

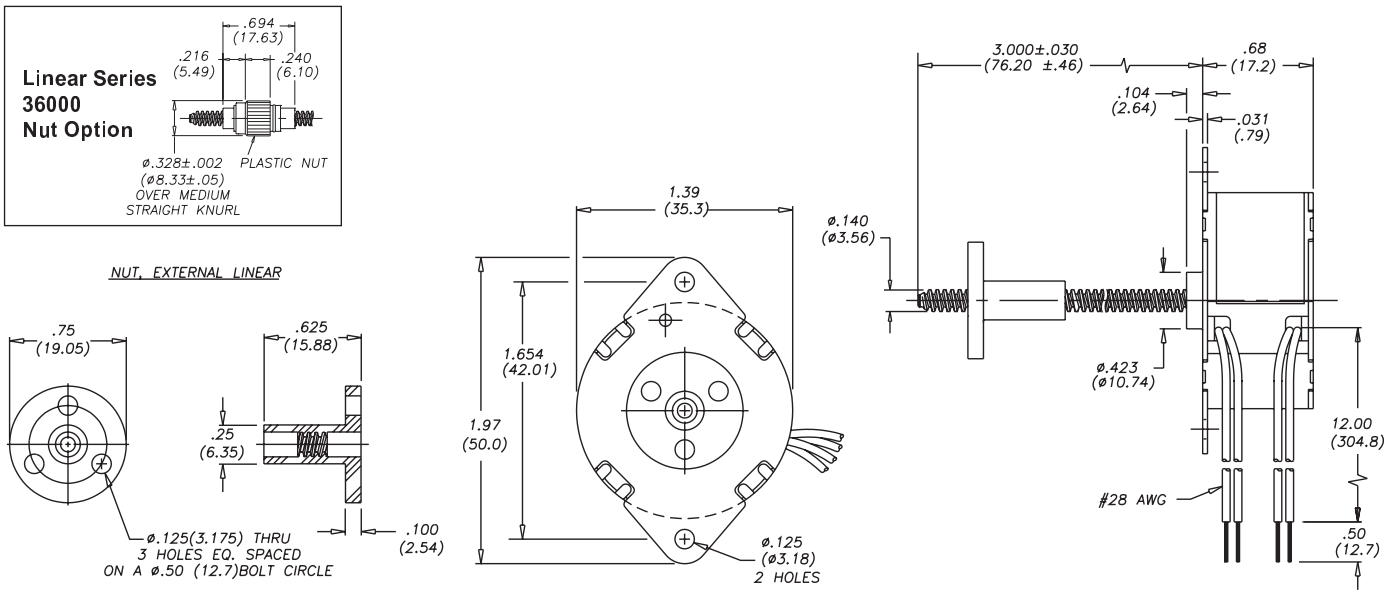
Non-Captive Leadscrew



Optional Adapter

M3 x 0.5 THREAD TO WITHIN .051 (1.3) OF SHOULDER

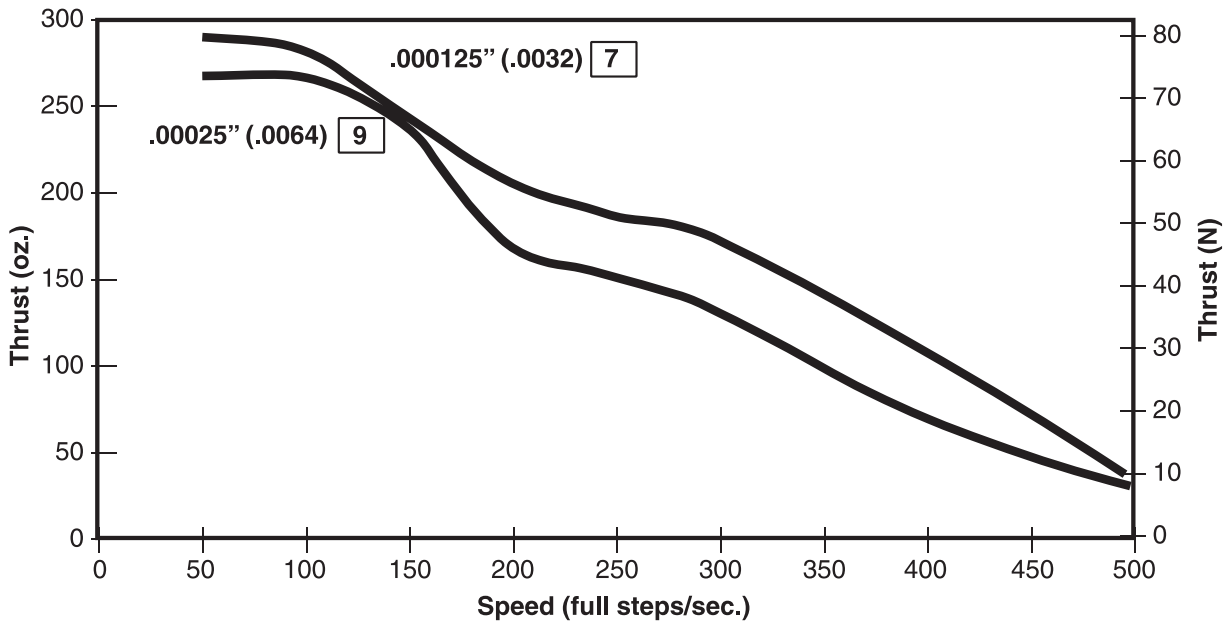
External Linear



36000 Series: Can-Stack High Resolution Performance Curves

THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 100% Duty Cycle



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

Heavy-duty... power, versatility, size and long-lasting durability.

Salient Characteristics

Ø 46 mm (1.8-in) motor					
Wiring		Bipolar			
Part No.	Captive	4644X-V		4654X-V	
	Non-captive	4634X-V		4684X-V	
	External	E4644X-V		E4654X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		1.0 A	.41 A	1.0 A	.41 A
Resistance/phase		5 Ω	29 Ω	5 Ω	29 Ω
Inductance/phase		9 mH	52 mH	7.1 mH	39 mH
Power consumption		10 W			
Rotor inertia		25.0 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		9.0 oz (255 g)			
Insulation resistance		20 MΩ			

Ø 46 mm (1.8-in) motor					
Wiring		Unipolar*			
Part No.	Captive	4646X-V		4656X-V	
	Non-captive	4636X-V		4686X-V	
	External	E4646X-V		E4656X-V	
Step angle		7.5°		15°	
Winding voltage		5 VDC	12 VDC	5 VDC	12 VDC
Current/phase		1.0 A	.41 A	1.0 A	.41 A
Resistance/phase		5 Ω	29 Ω	5 Ω	29 Ω
Inductance/phase		4.5 mH	26 mH	3.5 mH	20 mH
Power consumption		10 W			
Rotor inertia		25.0 gcm^2			
Temperature rise		135°F Rise (75°C Rise)			
Weight		9.0 oz (255 g)			
Insulation resistance		20 MΩ			

* Unipolar drive gives approximately 30% less thrust than bipolar drive.

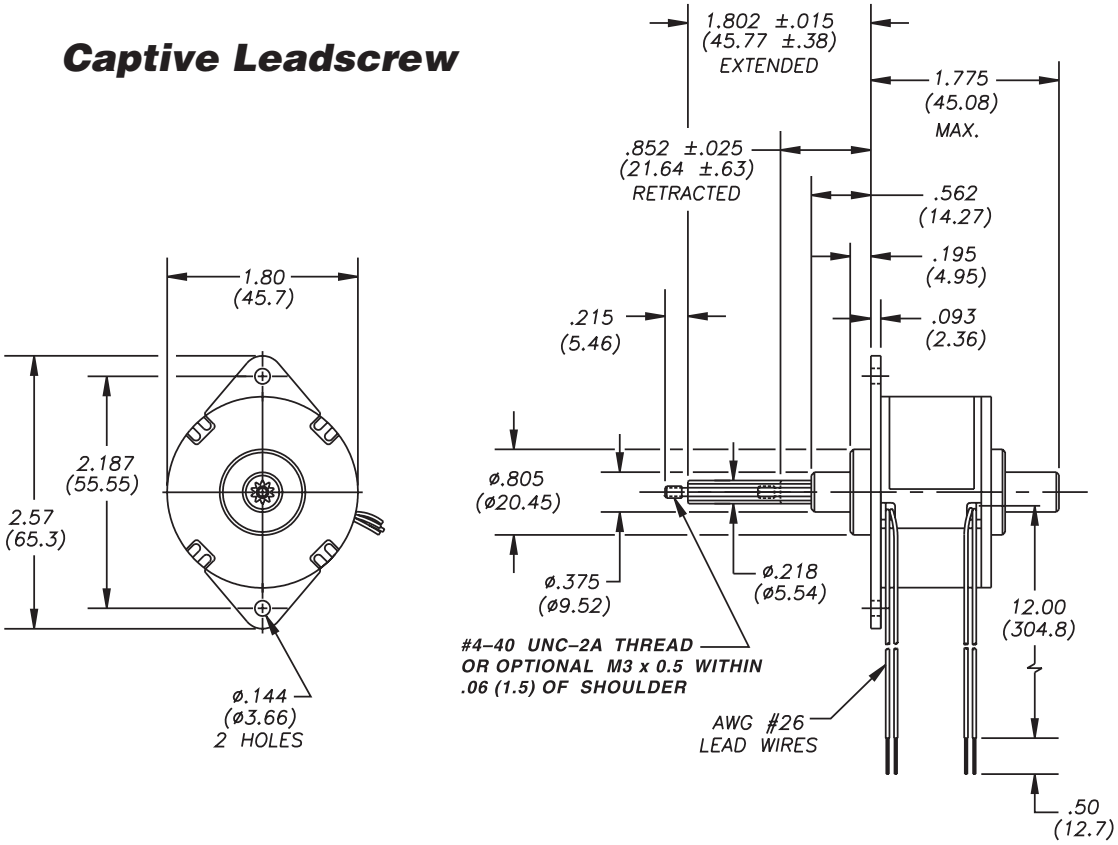
Other styles available...

- Teflon® lead-screw
- High Temperature Option

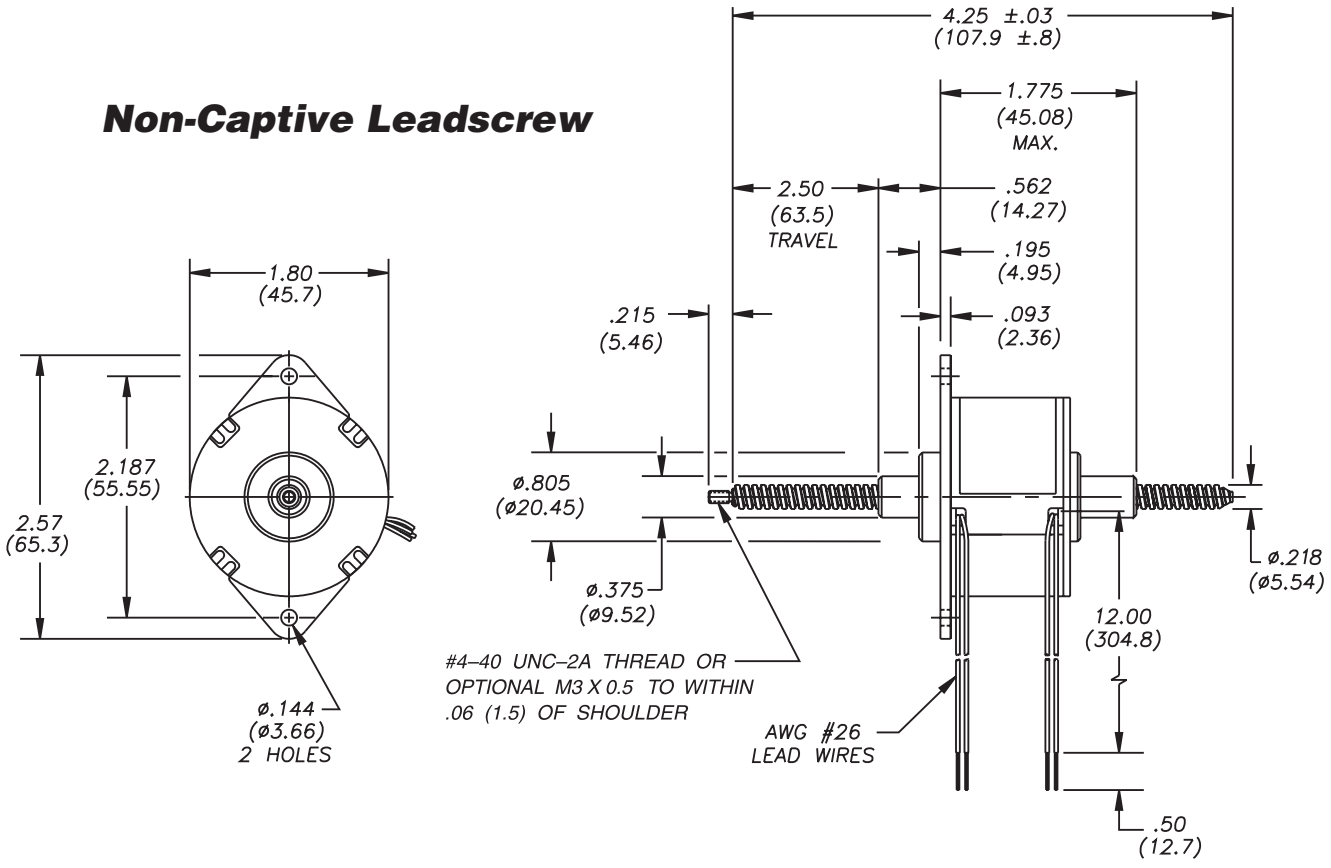
Linear Travel/Step			Order Code
Step	inches	mm	I.D.
7.5° Angle	0.0005	0.013	3
	0.001	0.0254	1
	0.002	0.051	2
	0.004	0.102	4
	0.008	0.203	8
15° Angle	0.004	0.102	4
	0.008	0.203	8
	0.016	0.406	G

Standard motors are Class B rated for maximum temperature of 130° C (266° F).

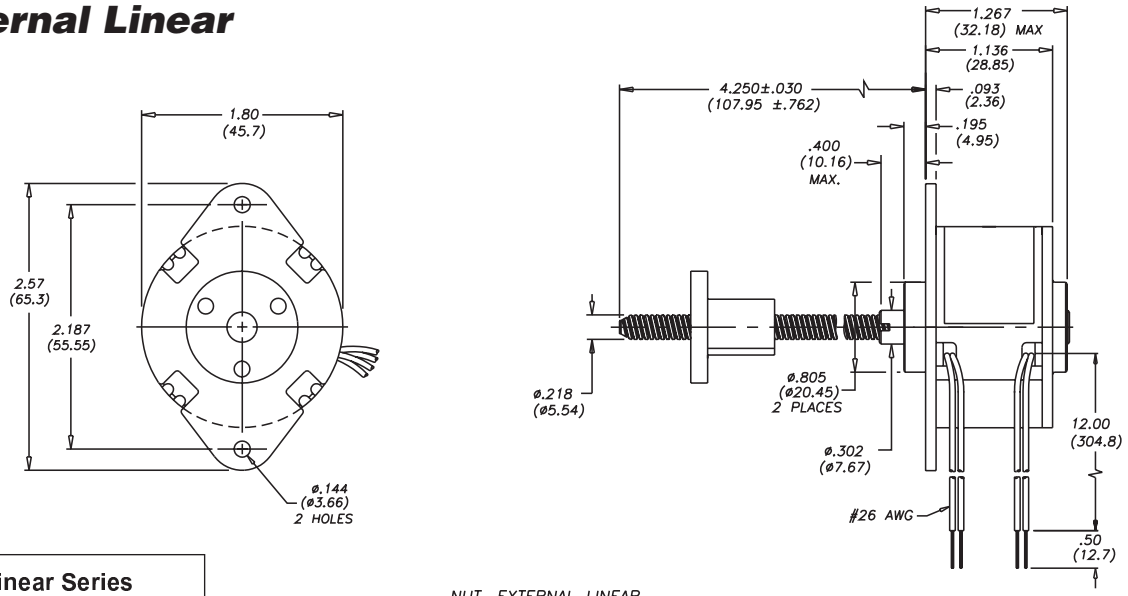
Captive Leadscrew



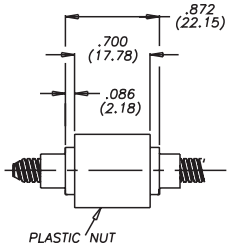
Non-Captive Leadscrew



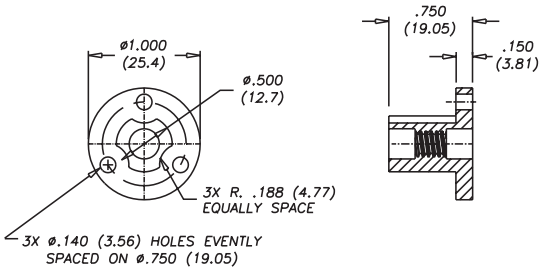
External Linear



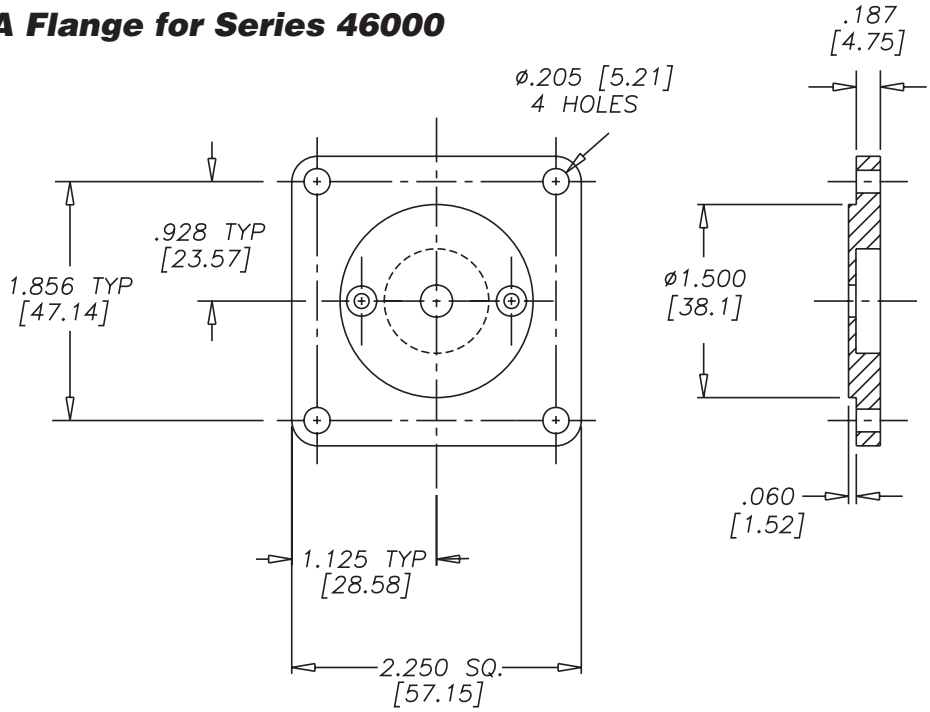
Linear Series
46000 Nut Option



NUT, EXTERNAL LINEAR

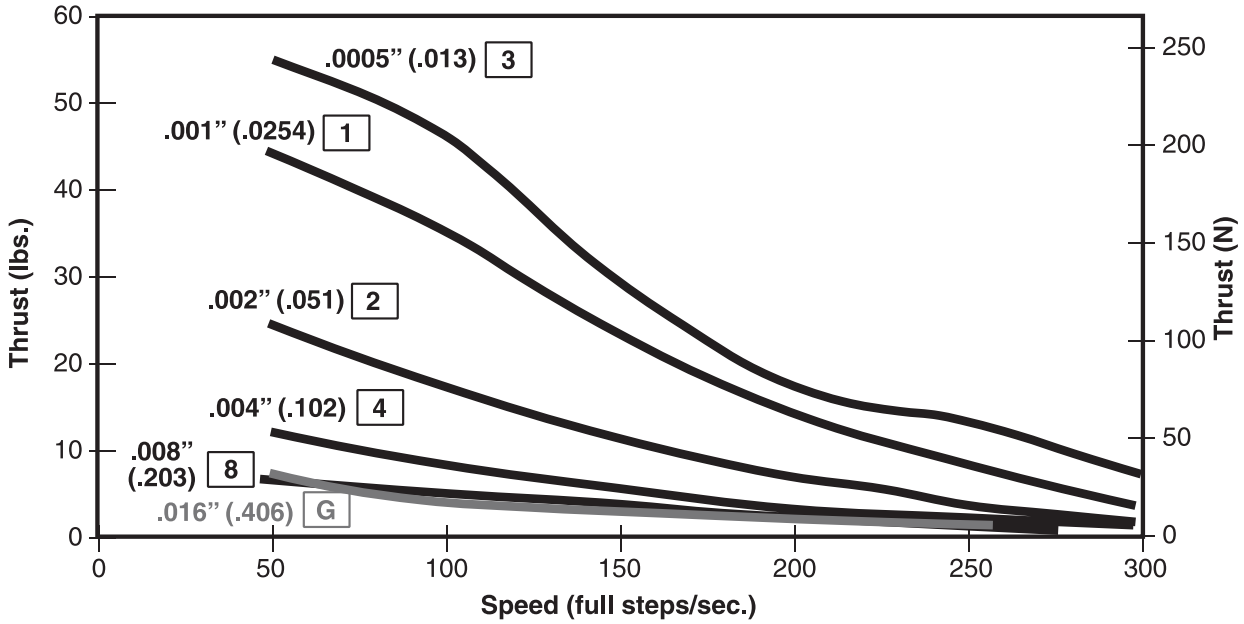


Optional NEMA Flange for Series 46000



THRUST vs. FULL STEPS/SECOND

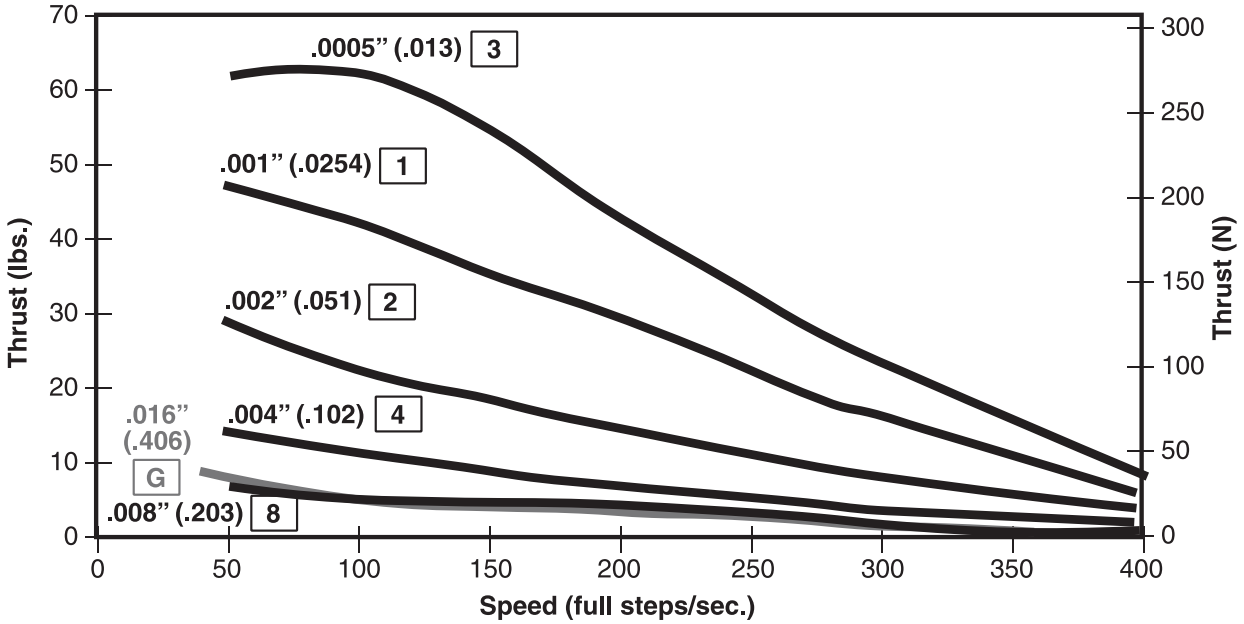
L/R Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

L/R Drive • Bipolar • 25% Duty Cycle

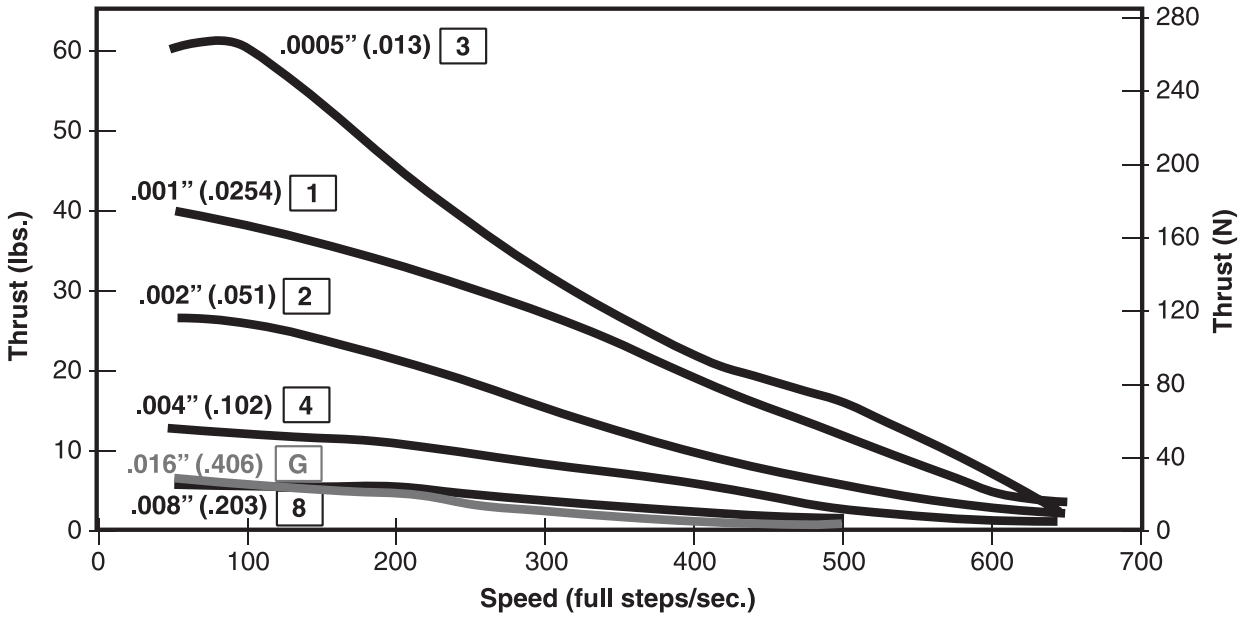
25% duty cycle is obtained by a special winding or by running a standard motor at double the rated voltage.



NOTE: Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

THRUST vs. FULL STEPS/SECOND

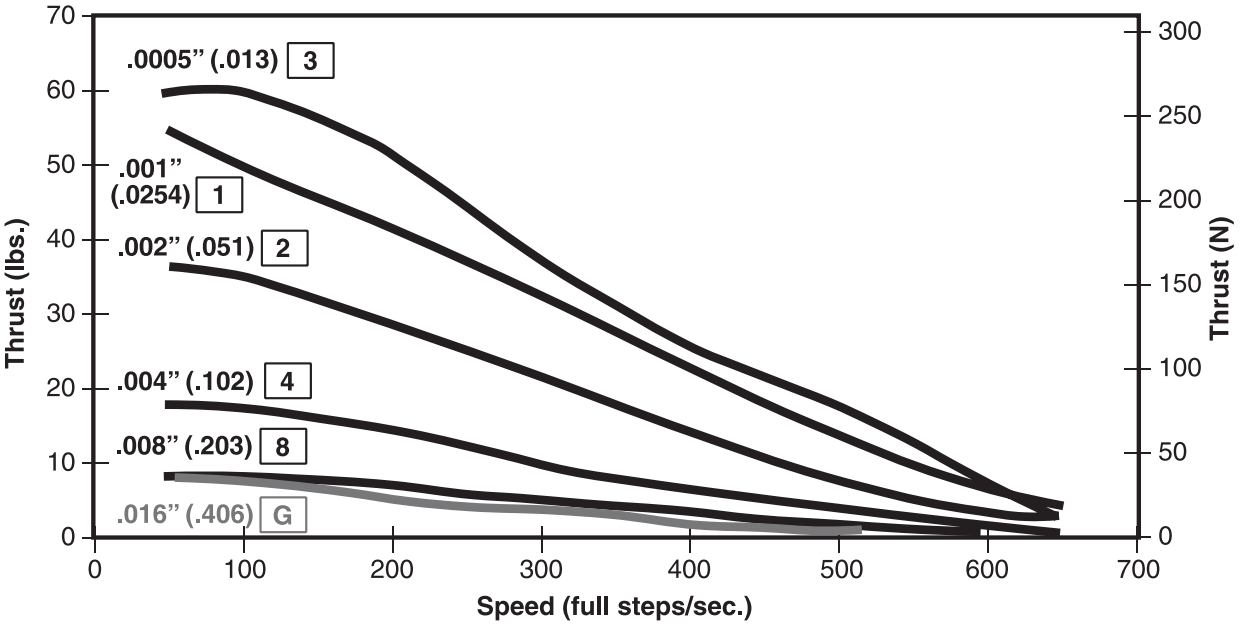
Chopper Drive • Bipolar • 100% Duty Cycle



THRUST vs. FULL STEPS/SECOND

Chopper Drive • Bipolar • 25% Duty Cycle

25% duty cycle is obtained by a special winding or by running a standard motor at double the rated current.



NOTE: All chopper drive curves were created with a 5 Volt motor and a 40 Volt power supply.

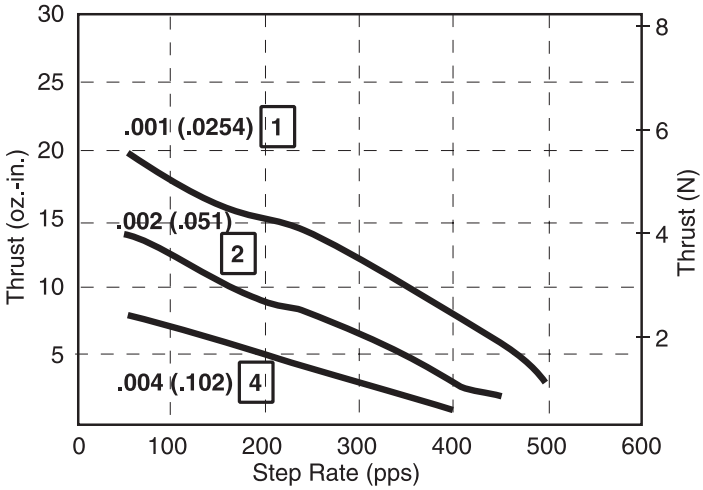
Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.

Specially engineered can-stack linear actuators made with technology capable of temperatures beyond 155° C (311° F).

Haydon Kerk Motion Solutions, Inc. offers a line of stepping motors specially designed for high temperature environments. The motors are constructed using the proven techniques employed for Haydon™ motors. Special materials which meet IEEE class F temperature ratings of 155° C (311° F) are used in construction. Specialized components include high temperature bobbins, coils, lead wires, lubricant and adhesives. If your application requirements exceed 155°C contact our applications group for a customized solution.

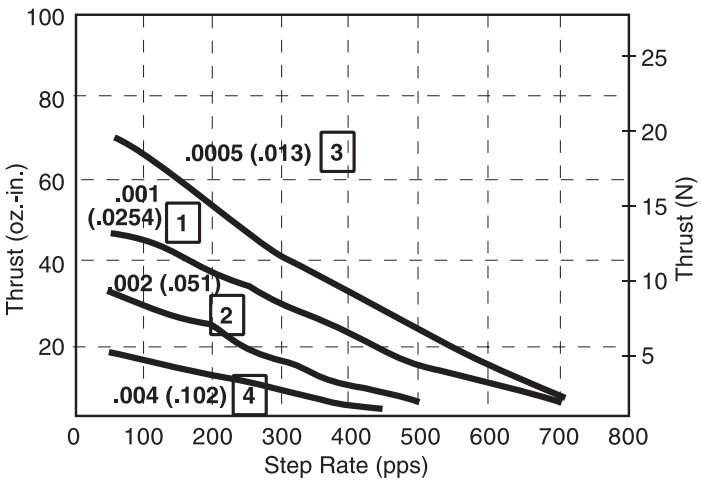
20000 Series High Temperature

L/R Drive, 100% Duty Cycle



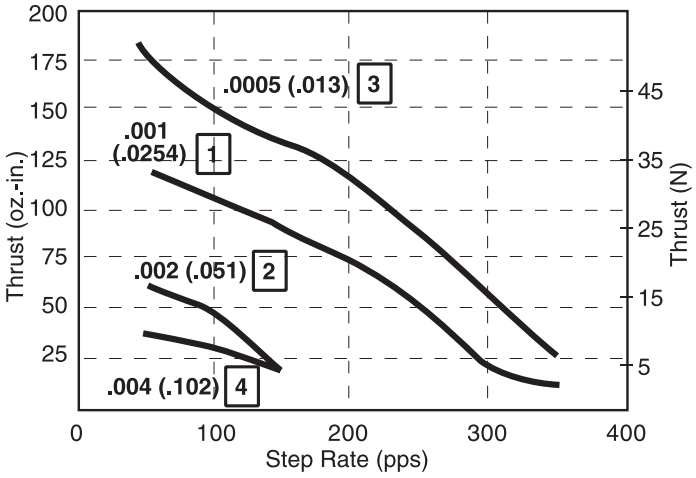
26000 Series High Temperature

L/R Drive, 100% Duty Cycle



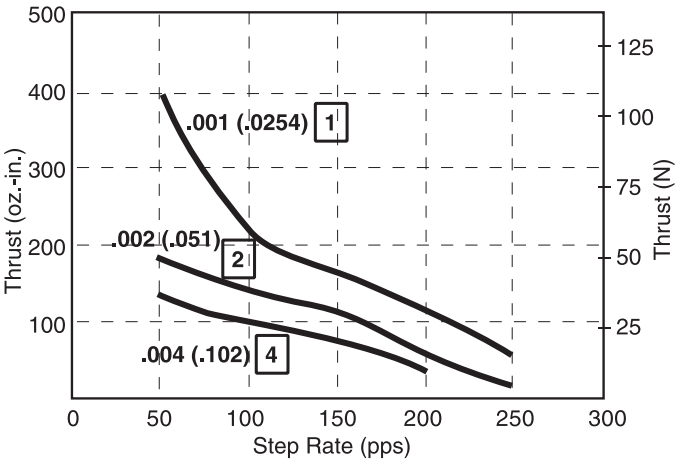
36000 Series High Temperature

L/R Drive, 100% Duty Cycle



46000 Series High Temperature

L/R Drive, 100% Duty Cycle



All data was taken at 155°C motor winding temperature (ambient temperature plus motor heat rise).


20000 Series, non-captive


26000 Series, non-captive


36000 Series, non-captive


46000 Series, non-captive

Teflon® coated leadscews for applications that require a permanent, dry lubricant

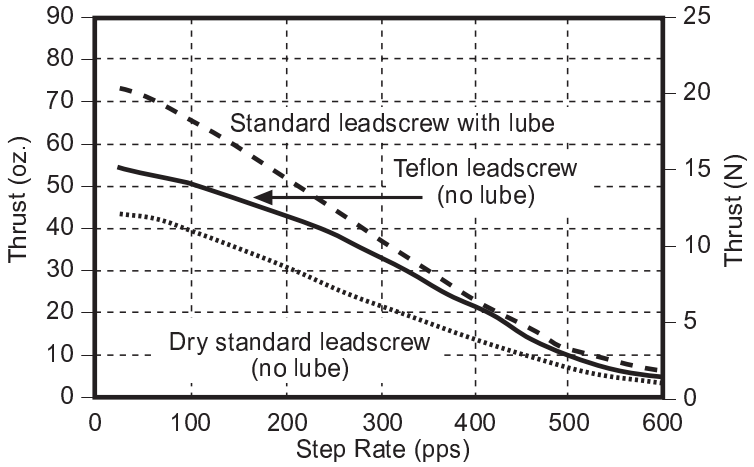
Haydon Kerk Motion Solutions, Inc. offers a Teflon® coated leadscrew option for its Can-Stack Series linear actuators. The use of a Teflon coated lead-screw allows for a "greaseless" screw and nut interface. This lead-screw option is ideal for applications where conventional oils and greases can not be used for lead-screw lubrication.

A non-lubricated Teflon coated lead-screw provides improved performance in both life and thrust as compared to a "dry" stainless steel lead-screw. Teflon can be applied to a wide variety of lead-screw pitches and is available for the Haydon™ captive, non-captive and external linear linear actuators.

The Teflon coated lead-screw is typically used for applications where contamination from grease or lubricants must be avoided, such as silicon wafer handling and clean room applications. Other applications include medical equipment, laboratory instrumentation or anywhere precise linear motion is required.

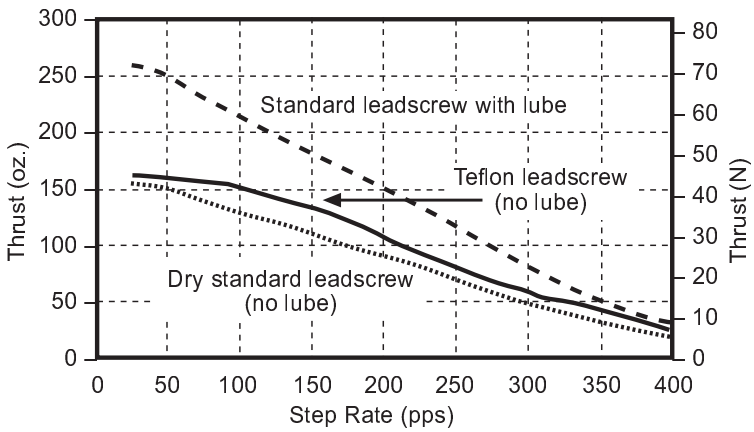
Teflon® 26000 Series

P/N T26542 • L/R Drive • 100% Duty Cycle



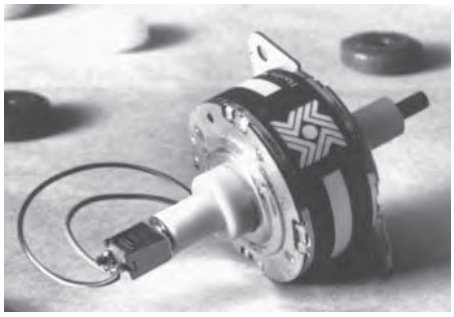
Teflon® 36000 Series

P/N T36441 • L/R Drive • 100% Duty Cycle



Teflon is a registered trademark of DuPont

Home Position Switch

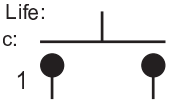


A miniature electronic home position switch capable of monitoring the home positions of linear actuators. The switch mounts on the rear sleeve of captive linear motors and allows the user to identify start, stop or home postions. Depending on your preference, contacts can be normally open or normally closed. The contact closure is repeatable to within one step position, identifying linear movements as low as 0.0005-in (0.0013 cm) per step. Multiple contact switches are also available.

The switch allows device manufacturers the ability to monitor movements more precisely for greater control and improved Q.C. When ordering motors with the home position switch, the part number should be preceded by an "S".

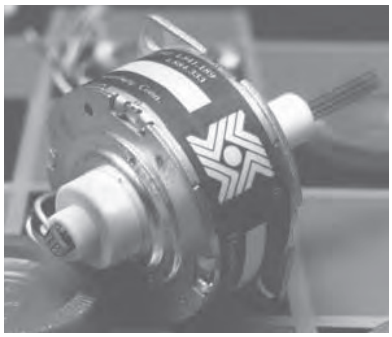
Technical Data

Contact Ratings (Standard):	1.00 AMP @ 120 VAC 1.00 AMP @ 28 VDC
Operating Temperature:	-30°C to +55°C (-22°F to 131°F)
Contact Resistance:	< 20 milliohms typ. initial at 2-4 V DC, 100 mA
Electrical Life:	Tested to 60,000 make-and-break cycles at full load
Schematic:	



Multiple contact options available.

End of Stroke Proximity Sensor



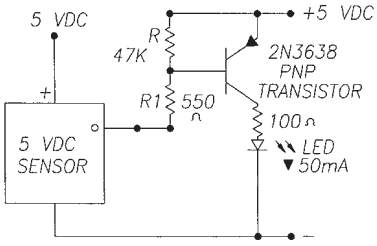
36000 series with end of stroke proximity sensor (without protective cap).

The sensor incorporates a hall effect device, which is activated by a rare earth magnet embedded in the end of the internal screw. The compact profile of the sensor allows for installation in limited space applications.

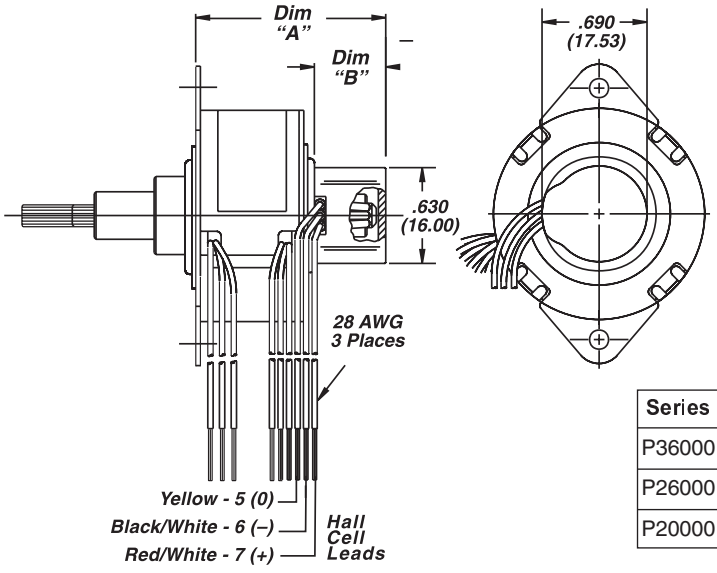
The sensor has virtually unlimited cycle life. Special cabling and connectors can also be provided.

Technical Data

Supply Voltage (VDC):	3.8 min. to 24 max.
Current consumption:	10 mA max.
Output voltage (operated):	0.15 typ., 0.40 max.; Sinking 20 mA max.
Output current:	20 mA max.
Output leakage current (released):	10µA max. @ Vout = 24 VDC; Vcc = 24 VDC
Output switching time	
Rise, 10 to 90%:	.05 µs typ., 1.5 µs max. @ Vcc = 12 V, RL = 1.6 KOhm
Fall, 90 to 10%:	.15 µs typ., 1.5 µs max. @ CL = 20 pF



Note: Sensor is category 2 ESD sensitive per DOD-STD-1686A. Assembly operations should be performed at workstations with conductive tops and operators grounded.



Series	Dim. "A"	Dim. "B"
P36000	1.220 (31.0)	.470 (12.0)
P26000	0.950 (24.13)	.370 (9.4)
P20000	1.120 (28.45)	.470 (12.0)