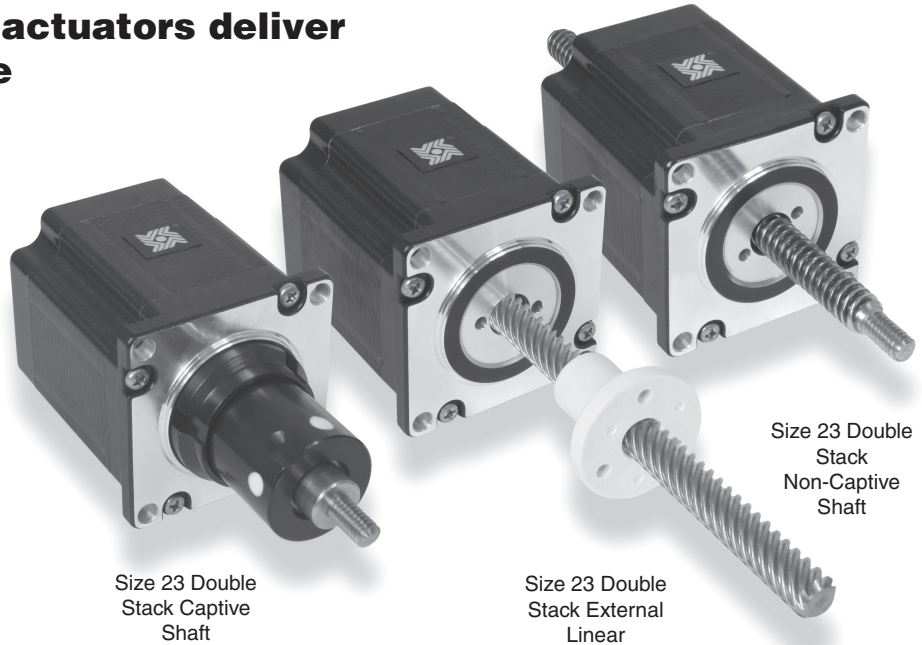


**Haydon™ 57000 Series Size 23 Double Stack hybrid linear actuators deliver greater performance in a compact size.**

The various patented designs deliver exceptional performance and new linear motion design opportunities. Three designs are available, captive, non-captive and external linear versions. The 57000 Series is available in a wide variety of resolutions - from 0.0005-in (.0127 mm) per step to 0.005-in (.127 mm) per step. The motors can also be microstepped for even finer resolutions. The Size 23 actuator delivers thrust of up to 200 lbs. (890 N).



HYBRID LINEAR ACTUATOR  
STEPPER MOTORS

**Salient Characteristics**

Size 23: 57 mm (2.3-in) Double Stack Hybrid Linear Actuator (1.8° Step Angle)			
Part No.	Captive	57M4(X)-V	
	Non-captive	57L4(X)-V	
	External Lin.	E57M4(X)-V	
Wiring		Bipolar	
Winding voltage	3.25 VDC	5 VDC	12 VDC
Current/phase	3.85 A	2.5 A	1 A
Resistance/phase	0.8 Ω	2.0 Ω	12.0 Ω
Inductance/phase	2.3 mH	7.6 mH	35.0 mH
Power consumption	25 W Total		
Insulation Class	Class B (Class F available)		
Weight	32 oz (958 g)		
Insulation resistance	20 MΩ		
Max. Load Limit	200 lbs (890 N)		

Linear Travel / Step		Order Code I.D.
Screw Ø.375" (9.53 mm) inches	mm	
.0005	.0127	3
.001	.0254	1
.002	.0508	2
.0025	.0635	Y
.005	.127	Z

\*Values truncated

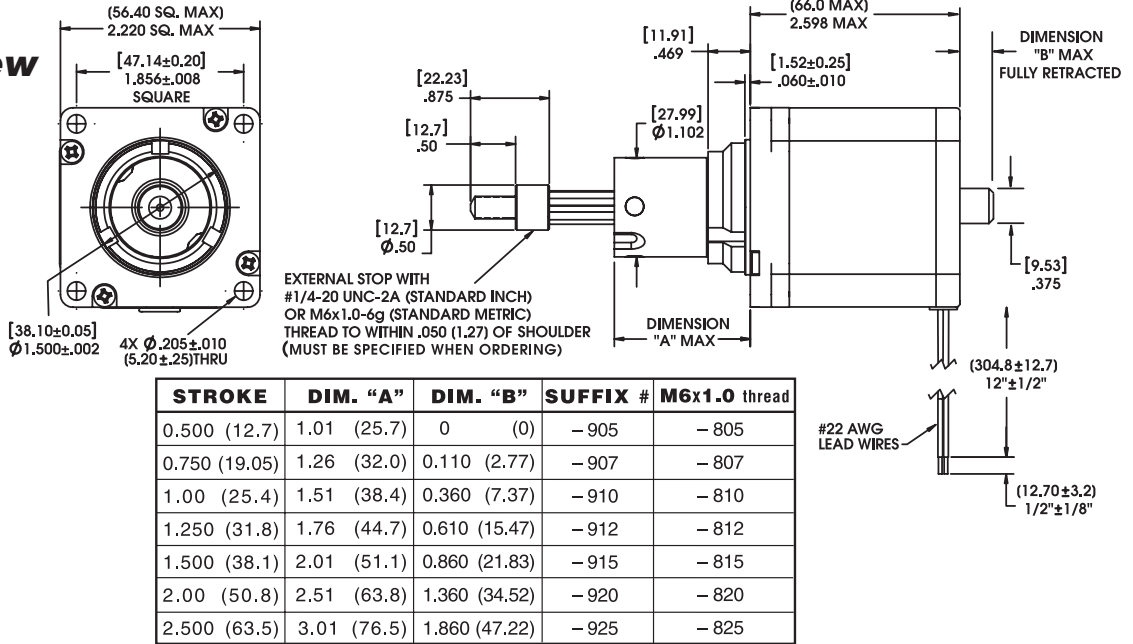
Standard motors are Class B rated for maximum temperature of 130°C.

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

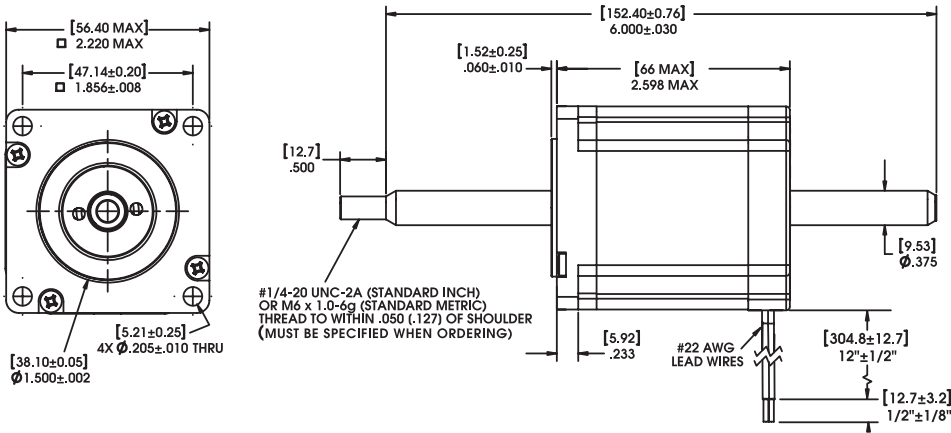
# 57000 Series: Size 23 Double Stack Dimensional Drawings

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

## Captive Lead-screw



HYBRID LINEAR ACTUATOR  
STEPPER MOTORS

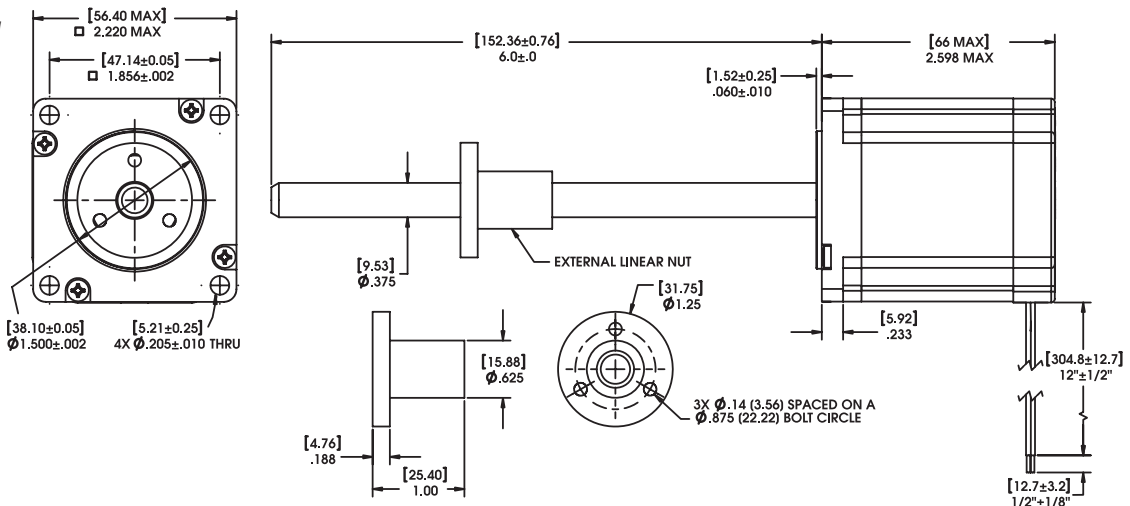


## Non-Captive Lead-screw

Up to 18-in (457 mm) standard screw lengths. Longer screw lengths are available.

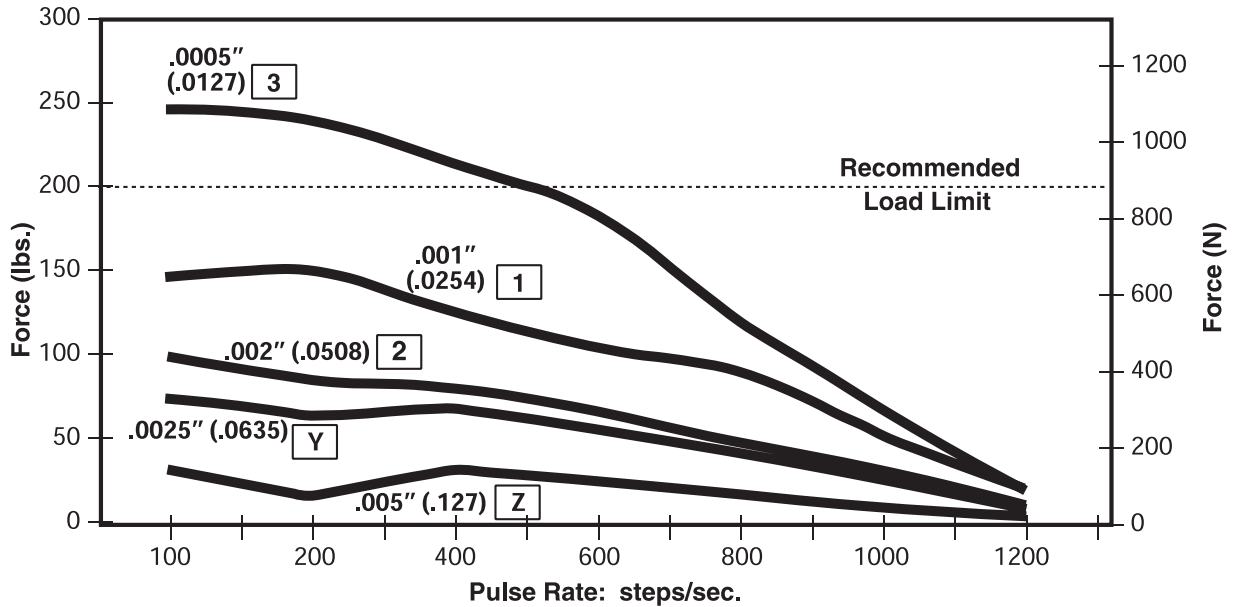
## External Linear

Up to 12-in (305 mm) standard screw lengths. Longer screw lengths are available.



**FORCE vs. PULSE RATE** Bipolar • Chopper • 100% Duty Cycle

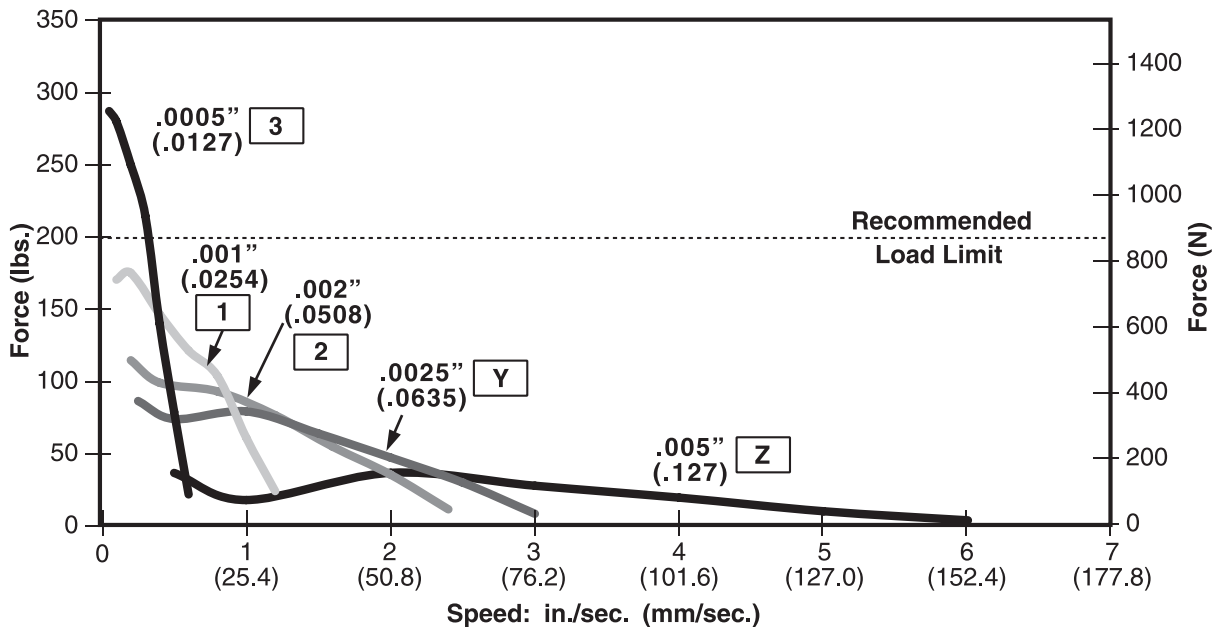
Ø .375 (9.53) Lead-screw



HYBRID LINEAR ACTUATOR  
STEPPER MOTORS

**FORCE vs. LINEAR VELOCITY** Bipolar • Chopper • 100% Duty Cycle

Ø .375 (9.53) Lead-screw



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.

With L/R drives peak force and speeds are reduced, using a unipolar drive will yield a further 30% force reduction.