

## Motorized Wide Guide Screw Linear Slides

Made of the same quality components used in the RGS® series, the **Kerk® Motorized WGS Linear Slide** utilizes a screw-driven carriage that offers reliable, continuous linear speed while maintaining accurate positioning. The length and speed of the WGS is not limited by critical screw speed, allowing high RPM, linear speed and long stroke lengths. The WGS slide has a unique, compact profile that provides improved torsional stiffness and stability over RGS and RGW products. The integral mounting base can provide support over the entire length that can extend up to 8 feet (2.4 meters). Longer lengths are possible on a special order basis.

Standard leads include .100-in, .200-in, .500-in and 1.00-in (2.54, 5.08, 12.7 and 25.4 mm) travel per revolution. Many optional leads, both inch and metric based, offer everything from high efficiency to non-backdriving leads for vertical applications, eliminating the need for brakes.



With Haydon Kerk Motion Solutions, Inc. wide range of available leads, speeds of more than 60 inches per second (1.5 meters per second) are possible, rivaling belts and cables while offering superior positioning accuracy, repeatability and axial stiffness.

The WGS utilized sliding plane bearings on a low profile aluminum guide rail that keeps the motion smooth throughout the travel distance. The lead-screw is precision-made of high-quality stainless steel rolled on-site at our U.S. manufacturing facility. All moving surfaces include Kerkite® high performance polymers running on Kerkote® TFE coating.

This system combines many Haydon Kerk Motion Solutions patented motion technologies into a single integrated, linear motion control system. The Motorized WGS linear rails feature standard wear-compensating, anti-backlash driven carriages to insure repeatable and accurate positioning. When integrated with an IDEA™ Drive, the system combines Haydon™ hybrid linear actuator technology with a fully programmable, integrated stepper motor drive. By combining technologies into a single preassembled unit, Haydon Kerk Motion Solutions is able to improve system integration for the equipment OEM or end user.

The slides come with a wear-compensating, anti-backlash driven carriage. Additional driven or passive carriages can be added, along with application specific customization. Linear guides, without the drive screw, are also available.

### Identifying the part number codes when ordering **Wide Guide Screw Slides**

<b>WG</b>	<b>S</b>	<b>06</b>	<b>K</b>	—	<b>M</b>	—	<b>0100</b>	—	<b>XXX</b>
<b>Prefix:</b> <b>WG</b>	<b>Frame Style</b>	<b>Frame Size: Load**</b>	<b>Coating</b>		<b>Drive/Mounting</b>		<b>Nominal Thread Lead Code (inches)</b>		<b>Unique Identifier</b>
= Wide Guide Screw	<b>S</b> = Standard	<b>06</b> = 35 lbs (156 N)	<b>K</b> = Kerkote® <b>X</b> = Special (ex: Kerkote with grease)		<b>M</b> = Motorized <b>G</b> = IDEA Programmable Drive, Size 17 only		Code numbers in Part Number Selector Chart		Proprietary suffix assigned to a specific customer application. The identifier can apply to either a standard or custom part.
		<b>Carriage holes available in Metric sizes:</b>	<b>M3</b> <b>M4</b> <b>M5</b> <b>M6</b>						

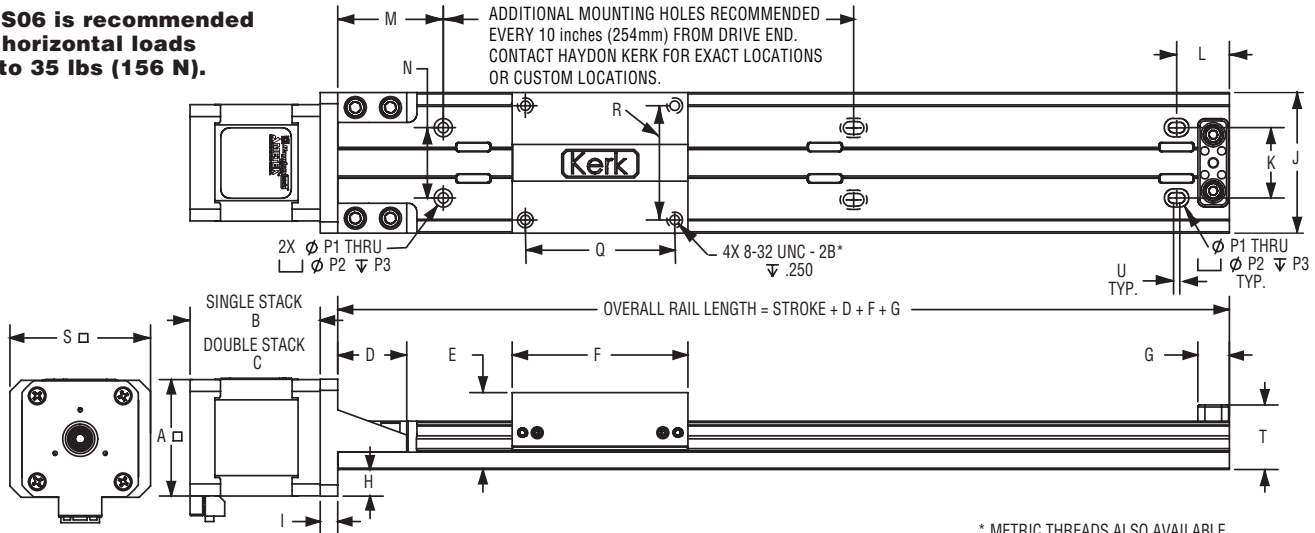
### Motorized WGS06 Selector Chart

#### Motorized WGS with Size 17 and Size 23 Single and Double Stack Hybrid Linear Actuator Stepper Motors

Inch Lead	inch (mm)	0.050 (1.27)	0.079 (2.00)	0.100 (2.54)	0.157 (4.00)	0.197 (5.00)	0.200 (5.08)	0.250 (6.35)	0.375 (9.53)	0.400 (10.16)	0.472 (12.00)	0.500 (12.70)	0.750 (19.05)	0.984 (25.00)	1.000 (25.40)	1.200 (30.48)
<b>Thread Lead Code</b>		<b>0050</b>	<b>0079</b>	<b>0100</b>	<b>0157</b>	<b>0197</b>	<b>0200</b>	<b>0250</b>	<b>0375</b>	<b>0400</b>	<b>0472</b>	<b>0500</b>	<b>0750</b>	<b>0984</b>	<b>1000</b>	<b>1200</b>

**Dimensional Drawing: Motorized WGS06 with Size 17 Hybrid Motor**

**WGS06 is recommended for horizontal loads up to 35 lbs (156 N).**



\* METRIC THREADS ALSO AVAILABLE

Dimensions = (mm) inch

(MM) INCH	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P1	P2	P3	Q	R	S	T	U
-M43 SIZE 17	(42.2) 1.660 MAX.	(33.8) 1.330 MAX.	(47.75) 1.880 MAX.	(24.9) .98	(27.9) 1.1	(63.5) 2.50	(11.2) .44	(9.7) .38	(6.4) .250	(50.8) 2.00	(25.4) 1.000	(19.1) .75	(38.1) 1.50	(25.4) 1.000	(3.81) .150	(6.60) .260	(6.50) .256	(53.95) 2.124	(41.25) 1.624	(50.8) 2.00	(23.3) .92	(2.3) .090

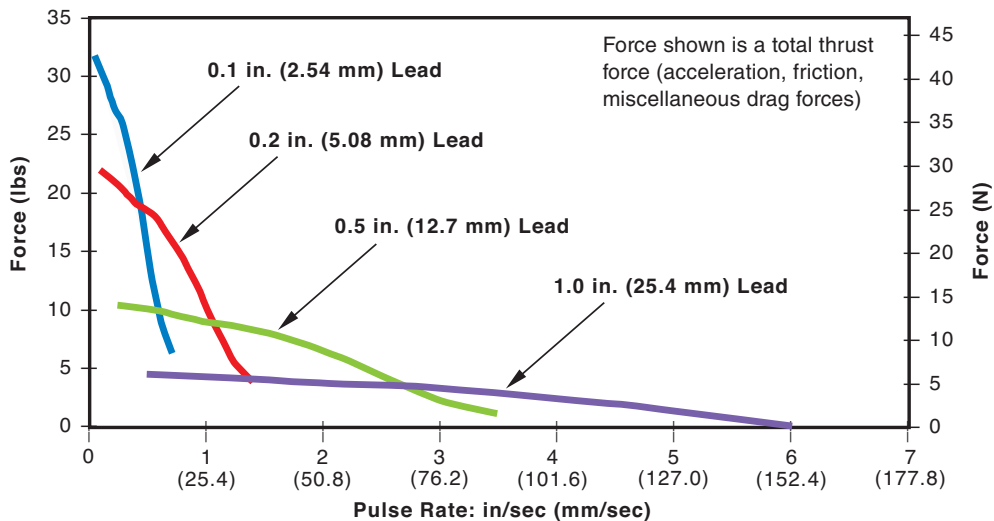
**Salient Characteristics: Motorized WGS06 with Size 17 Single Stack Hybrid Motor**

Size 17: 43 mm (1.7-in) Single Stack Hybrid Linear Actuator (1.8° Step Angle)					
Wiring	Bipolar			Unipolar**	
Winding Voltage	2.33 VDC	5 VDC	12 VDC	5 VDC	12 VDC
Current (RMS)/phase	1.5 A	700 mA	290 mA	700 mA	290 mA
Resistance/phase	1.56 Ω	7.2 Ω	41.5 Ω	7.2 Ω	41.5 Ω
Inductance/phase	1.9 mH	8.7 mH	54.0 mH	4.4 mH	27.0 mH
Power Consumption	7 W				

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

**Performance Curves: Motorized WGS06 with Size 17 Single Stack Hybrid Motor**

Bipolar • Chopper • 100% Duty Cycle • 5 V Motor • 40 V Power Supply



For more information about **Size 17 Hybrid Motor** click to go on line:

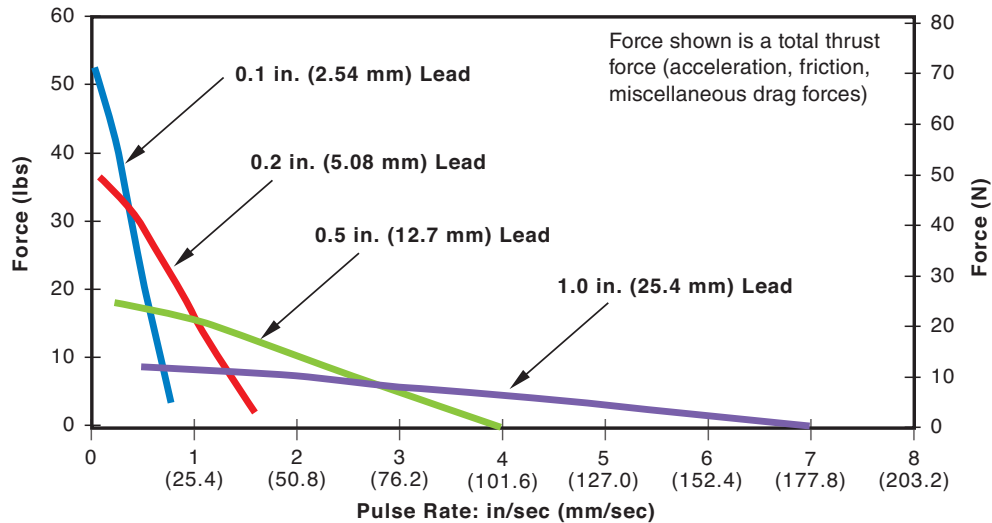
<http://haydonkerk.com/LinearActuatorProducts/StepperMotorLinearActuators/LinearActuatorsHybrid/Size17LinearActuator/tabid/79/Default.aspx>

**Salient Characteristics:  
Motorized WGS06 with  
Size 17 Double Stack  
Hybrid Motor**

Size 17: 43 mm (1.7-in) Double Stack Hybrid Linear Actuator (1.8° Step Angle)			
Wiring	Bipolar		
Winding Voltage	2.33 VDC	5 VDC	12 VDC
Current (RMS)/phase	2.6 A	1.3 A	290 mA
Resistance/phase	0.9 Ω	3.8 Ω	41.5 Ω
Inductance/phase	1.33 mH	8.21 mH	45.1 mH
Power Consumption	10.4 W		

**Performance Curves: Motorized WGS06 with Size 17 Double Stack Hybrid Motor**

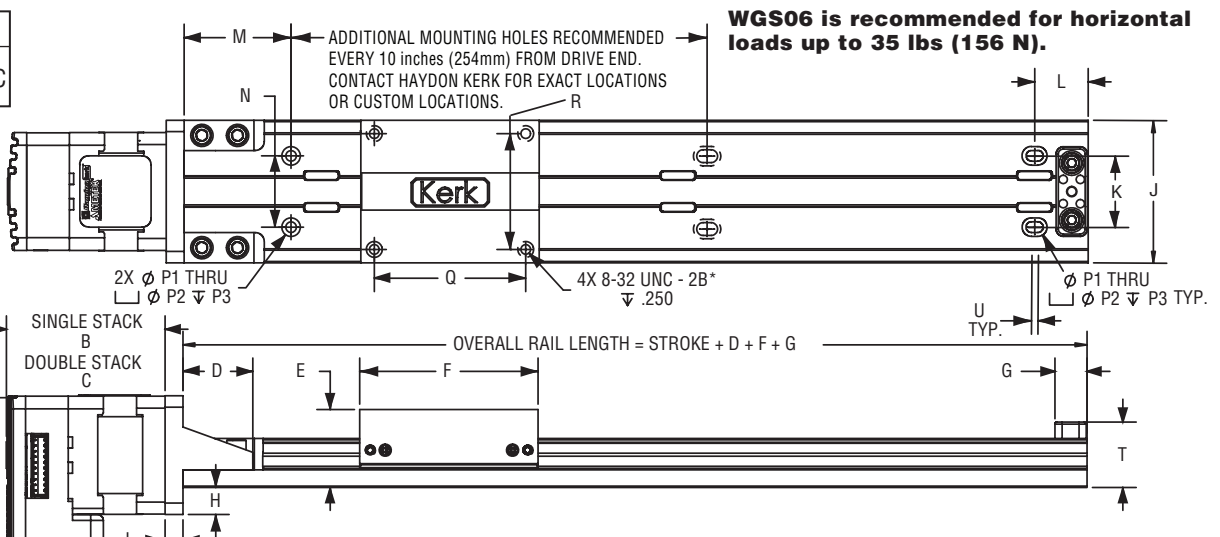
Bipolar • Chopper • 100% Duty Cycle • 5 V Motor • 40 V Power Supply



**Dimensional Drawing: Motorized WGS06 with Size 17 Hybrid Motor with IDEA™ Drive**

Wiring	Bipolar
Winding Voltage	2.33 VDC

Contact Haydon Kerk if a higher voltage motor is desired.



Dimensions = (mm) inch

(MM) INCH	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P1	P2	P3	Q	R	S	T	U	V
-G43 SIZE 17	(58.0) 2.283 MAX.	(63.72) 2.509 MAX.	(77.67) 3.058 MAX.	(24.9) .98	(27.9) 1.1	(63.5) 2.50	(11.2) .44	(9.7) .38	(6.4) .250	(50.8) 2.00	(25.4) 1.000	(19.1) .75	(38.1) 1.50	(25.4) 1.000	(3.81) .150	(6.60) .260	(6.50) .256	(53.95) 2.124	(41.25) 1.624	(50.8) 2.00	(23.3) .92	(2.3) .090	(42.0) 1.66

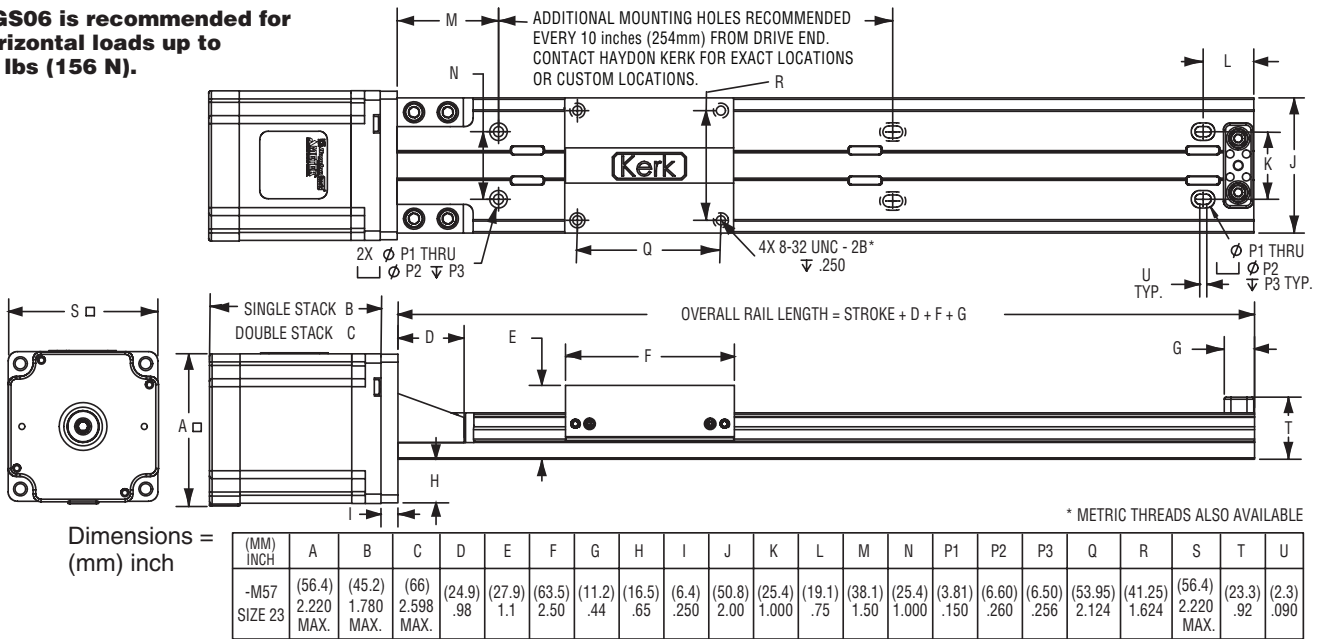
\* METRIC THREADS ALSO AVAILABLE

For more information about **Size 17 Hybrid Motor** with **IDEA™ Drive** click to go on line:

<http://haydonkerk.com/LinearActuatorProducts/IDEAStepperMotorController/Size17IDEADriveLinearActuator/tabid/372/Default.aspx>

**Dimensional Drawing: Motorized WGS06 with Size 23 Hybrid Motor**

**WGS06 is recommended for horizontal loads up to 35 lbs (156 N).**



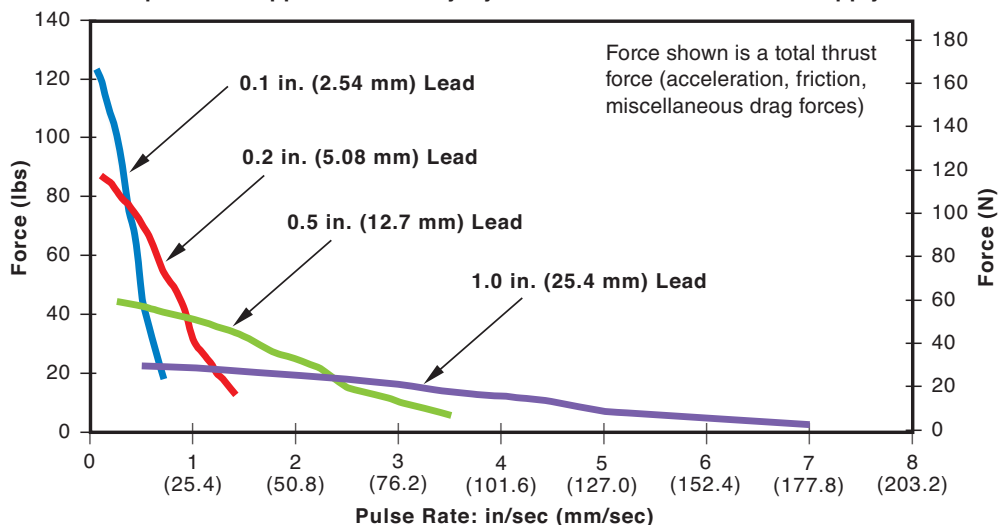
**Salient Characteristics: Motorized WGS06 with Size 23 Single Stack Hybrid Motor**

Size 23: 57 mm (2.3-in) Single Stack Hybrid Linear Actuator (1.8° Step Angle)					
Wiring	Bipolar			Unipolar**	
Winding Voltage	3.25 VDC	5 VDC	12 VDC	5 VDC	12 VDC
Current (RMS)/phase	2.0 A	1.3 A	.54 A	1.3 A	.54 A
Resistance/phase	1.63 Ω	3.85 Ω	22.2 Ω	3.85 Ω	22.2 Ω
Inductance/phase	3.5 mH	10.5 mH	58.0 mH	5.3 mH	23.6 mH
Power Consumption	13 W				

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

**Performance Curves: Motorized WGS06 with Size 23 Single Stack Hybrid Motor**

Bipolar • Chopper • 100% Duty Cycle • 5 V Motor • 40 V Power Supply



For more information about **Size 23 Hybrid Motor** click to go on line:

<http://haydonkerk.com/LinearActuatorProducts/StepperMotorLinearActuators/LinearActuatorsHybrid/Size23LinearActuator/tabid/82/Default.aspx>

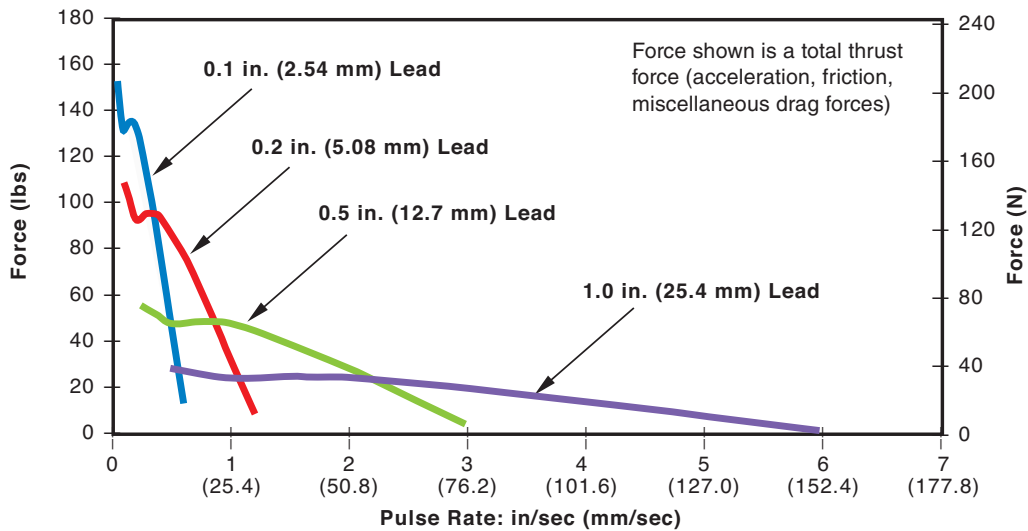
**Salient Characteristics: Motorized WGS06 with Size 23 Double Stack Hybrid Motor**

Size 23: 57 mm (2.3-in) Double Stack Hybrid Linear Actuator (1.8° Step Angle)			
Wiring	Bipolar		
Winding Voltage	3.25 VDC	5 VDC	12 VDC
Current (RMS)/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		

**WGS06 is recommended for horizontal loads up to 35 lbs (156 N).**

**Performance Curves: Motorized WGS06 with Size 23 Double Stack Hybrid Motor**

**Bipolar • Chopper • 100% Duty Cycle • 5 V Motor • 40 V Power Supply**



For more information about **Size 23 Double Stack Hybrid Motor** click to go on line:

<http://haydonkerk.com/LinearActuatorProducts/StepperMotorLinearActuators/LinearActuatorsHybrid/Size23DSLlinearActuator/tabid/83/Default.aspx>