

Linear Rail Systems

Haydon Kerk offers both motorized and non-motorized linear rails, guides and splines that deliver enhanced system stability, high positional accuracy, low friction and long life for a variety of linear motion applications.

Mini Motorized Slides

The compact, low profile MiniSlide™ saves engineering time. Perfect for small lab, medical equipment and optical stage applications. Highly configurable mini slide assemblies offer 2 motor options, 9 different lead screw options, 4 different lubrication options, as well as English or Metric standards.



Save Engineering Time!

new MiniSlide™ motorized with Hybrid Stepper Actuator

small size, big power

Exceedingly configurable, simple to integrate MiniSlide™ assembly is ideally suited for small lab and automation equipment.

- Compact, low profile
- Super efficient motor
- Small step resolution with 1.8° step angle
- High power density and force
- Encoder or encoder-ready options

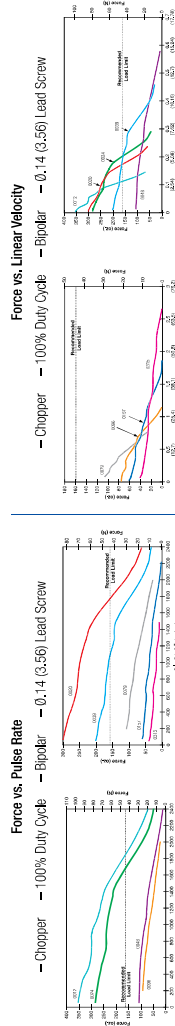
Size 8 Hybrid Stepper Linear Actuator: 21 mm (0.8-in) (1.8° Step Angle)	
Winding	Bipolar
Winding Voltage	2.5 VDC
Current (RMS)/phase	.49 A
Resistance/phase	5.1 Ω
Inductance/phase	1.5 mH
Power Consumption	2.45 W
Rotor Inertia	1.4 gcm ²
Insulation Class	Class B (Class F available)
Weight	1.5 oz (43 g)
Insulation Resistance	20 MΩ

MiniSlide is also available with 20mm Can-Stack Motor.

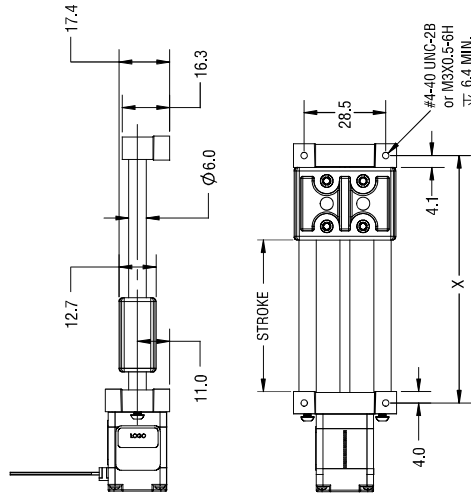
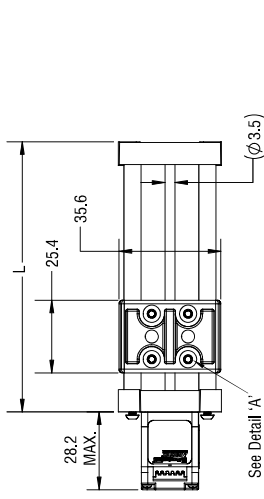
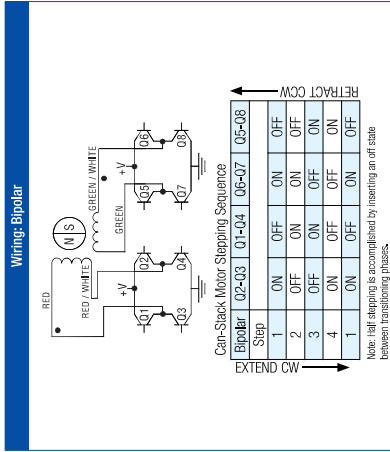
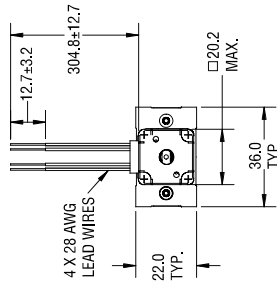
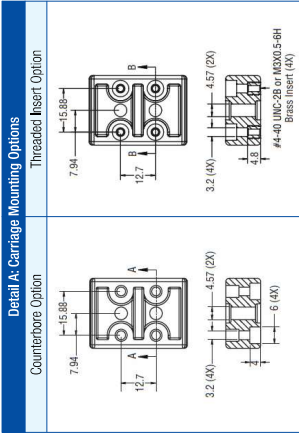
MiniSlide Load Specifications	
Design Payload (mass)	2.5kg (5 lbs)
Axial Force	45N [10 lbf]
Roll Moment*	1.13N-m [10 lb-in]
Pitch Moment*	1.13N-m [10 lb-in]
Yaw Moment*	0.56N-m [5 lb-in]
Repeatability	±25µm [0.001 in]

* Moment data based on 0.5° deflection

Performance Curves



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 LFR drives peak force and speed are reduced, using a bipolar drive will yield a further 30% force reduction.



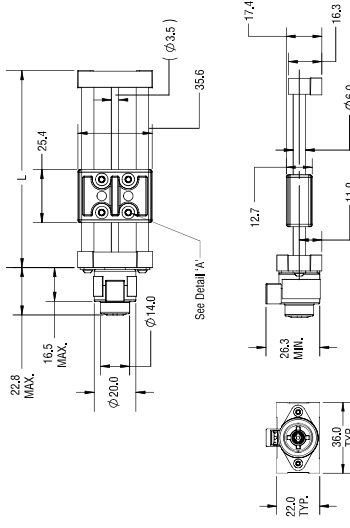
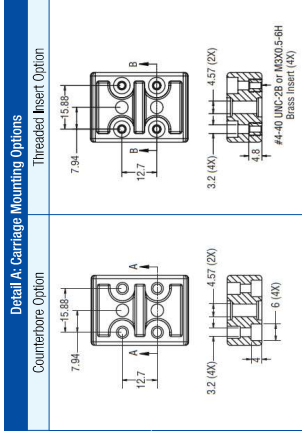
Stroke	Rail Length "L"	Mounting Holes "X"
25 mm	69.4 mm	61.5 mm
50 mm	94.4 mm	86.5 mm
75 mm	119.4 mm	111.5 mm
100 mm	144.4 mm	136.5 mm

Ordering Part Numbers for MiniSlide™ motorized with Size 8 Hybrid Stepper Actuator

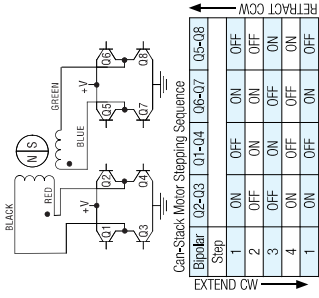
MSA	02	K	H	0020	XXX
Prefix	Frame Size	Coating	Motor	Nominal Thread Lead Code	Suffix
MSA = MiniSlide Actuator	02 = 1/8" Screws	K = TFE Kerkote B = TFE Black Ice G = Grease S = No Lubricant	H = Size 8 Hybrid Stepper Linear Actuator	0020 = 1/2mm lead 0024 = 0.012" lead 0024 = 0.024" lead 0039 = 1mm lead 0049 = 0.048" lead 0079 = 2mm lead 0157 = 4mm lead 0315 = 8mm lead	809 = 50mm stroke M3 mounting 810 = 100mm stroke M3 mounting 905 = 50mm stroke #4-40 mounting 910 = 100mm stroke #4-40 mounting XXX = Unique Identifier*

NOTE: Choices must be included in the part number as shown above, for assistance call our Engineering team at 203 756 7441.

* Unique Identifier can be used to indicate additional options and/or product modifications.

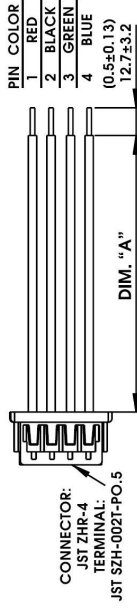


Wiring: Bipolar



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

Connector



CONNECTOR: JST ZHR-4 TERMINAL: JST SZH-002T-PO.5

Stroke	Dimensions
25 mm	Rail Length "L" Mounting Holes "X"
50 mm	69.4 mm 61.5 mm
75 mm	94.4 mm 86.5 mm
100 mm	119.4 mm 111.5 mm
	144.4 mm 136.5 mm

Part Number	Dimension "A"
56-1318-4	(24 ±0.39) 61.0 ±1.0 mm
56-1318-3	(18 ±0.39) 45.0 ±1.0 mm
56-1318-2	(12 ±0.39) 30.5 ±1.0 mm
56-1318-1	(6 ±0.39) 15.0 ±1.0 mm

Ordering Part Numbers for MiniSlide™ motorized with 19000 Series Can-Stack Motor

MSA	D2	K	C	0020	XXX
Prefix	Frame Size	Coating	Motor	Nominal Thread Lead Code	Suffix
MSA = Mini Slide Actuator	D2 = 1/8" Screws	K = TFE Kerokote B = TFE Black Ice G = Grease S = No Lubricant	C = 20mm G4 19000 Can-Stack Stepper Motor	0020 = 1/2mm lead 0024 = 0.024" lead 0028 = 1mm lead 0039 = 2mm lead 0079 = 4mm lead 0157 = 8mm lead 0315 = 8mm lead	805 = 50mm stroke M3 mounting 810 = 100mm stroke M3 mounting 905 = 50mm stroke #4-40 mounting 910 = 100mm stroke #4-40 mounting XXX = Unique identifier *

NOTE: Suffixes must be included in the Part Number (A) as shown above. For assistance call our Engineering Team at 202-756-7441. *Unique identifier can be used to indicate additional options and/or contact modifications.



Save Engineering Time!

new MiniSlide™ motorized with Can-Stack Stepper small size, big power

Exceedingly configurable, simple to integrate MiniSlide™ assembly is ideally suited for small lab and automation equipment. Compact, low profile. Economically priced.

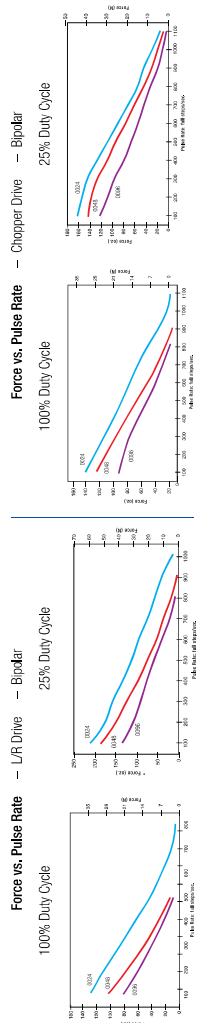
Ø 20mm (.79-in) 19000 Series Motor	
Step Angle	7.5°
Wiring	Bipolar
Winding Voltage	5 VDC
Current (RMS)/phase	350 mA
Resistance/phase	14.0 Ω
Inductance/phase	6.24 mH
Power Consumption	3.38 W
Insulation Class	Class B
Weight	1.24 oz (35 g)
Insulation Resistance	20 Ω

MiniSlide is also available with Size 8 Hybrid Stepper Linear Actuator.

MiniSlide Load Specifications	
Design Payload (mass)	2.3kg [5 lbs]
Axial Force	45N [10 lbf]
Roll Moment*	1.13N-m [10 lbf-in]
Pitch Moment*	1.13N-m [10 lbf-in]
Yaw Moment*	0.56N-m [5 lbf-in]
Repeatability	+/-25µm [0.001 in]

* Moment data based on 0.5° deflection

Performance Curves



NOTE: All chopper drive curves were created with a 5 volt motor and a 4.0 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 UR drives peak force and speeds are reduced, using a unipolar drive will yield a further 30% force reduction.