Rugged Duty Actuators

Key Features

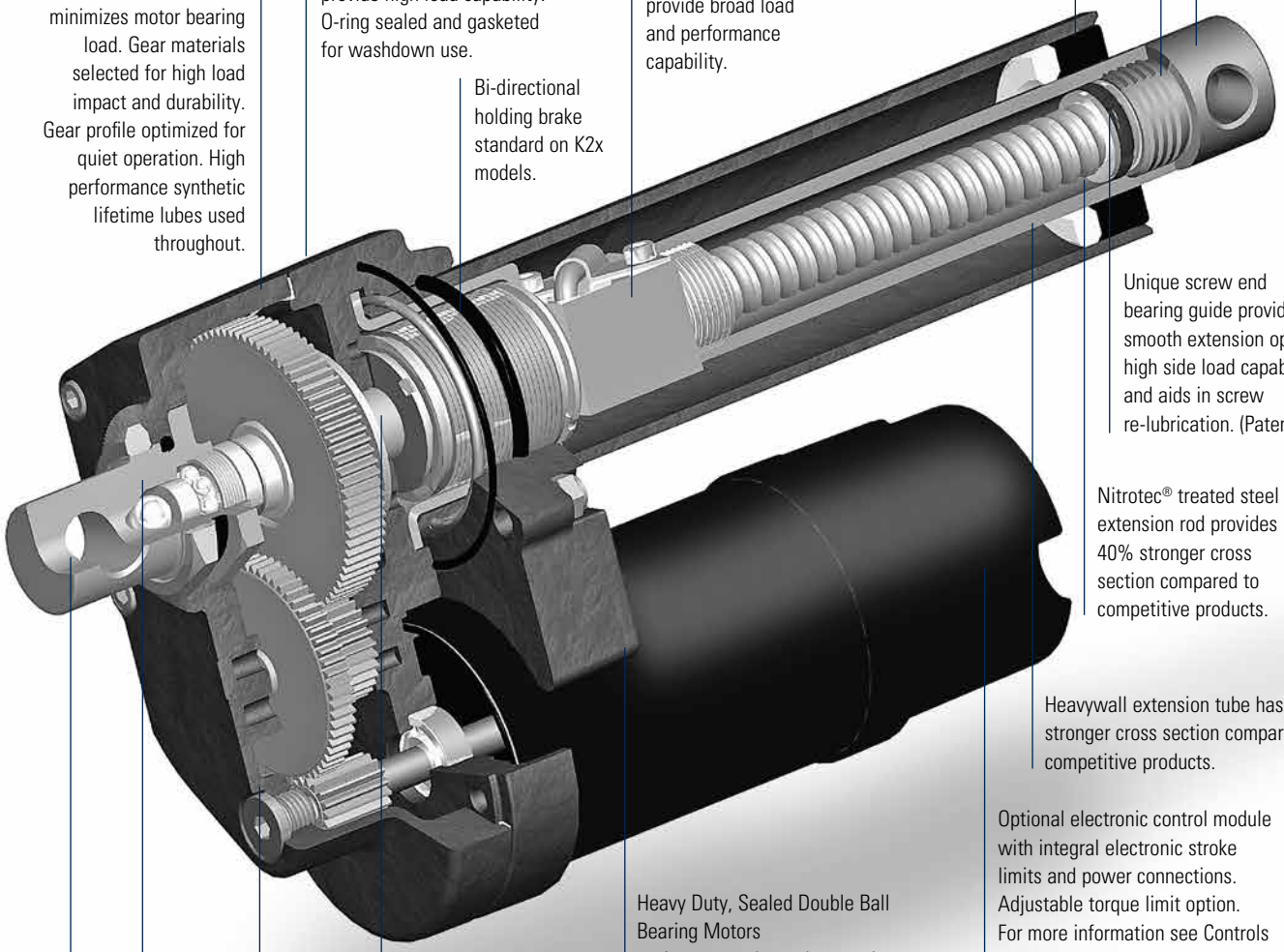
- Weather-tight sealed
- Patented in-line load transfer
- Heavy wall rod and cover tube
- High performance motors
- Up to 2,800 lb. (12455 N) capacity
- Speeds up to 2" per second

Standard Models

K2VL, K2, K2X, K2AC, K2XAC

Option Models

K2PL/K2XPL
K2JS/K2XJS
K2RA



How To Select

Step 1 – Determine Load and Stroke length requirements
Use the Quick Selection guide to identify the model family that will provide the load capacity and stroke length needed for your application.

Step 2 – Determine Gear Ratio
Select gear ratio from performance charts for allowable current draw and needed load.

Step 3 – Identify motor type and voltage
Select DC motor and motor voltage.

Step 4 – Motor Type
Select M for ignition protected motor (12 VDC only).
Select needed motor voltage.

Step 5 – Confirm the application Duty Cycle
At full load capacity, actuators have a 25% duty cycle. Duty cycle is the amount of 'on-time' compared to cooling time. A unit that runs for 15 seconds should be off for 45 seconds.

Step 6 – Select Nut Type
Select nut for unit selected. (K2x are all ball bearing).

Step 7 – Select Stroke Length
Choose standard lengths from chart. For special length consult factory.

Step 8 – Select end fitting orientation
Leave blank for standard orientation.

Important Unit Restrictions

Side loading and shock loads must be considered in actuator applications. Side loading and cantilevered mounting should be eliminated through proper machine design. Side loading will dramatically reduce unit life. While actuators can withstand limited shock loads, it is recommended that shock loading be avoided wherever possible. (See page 71)

B-Track Configurator

K2x – P1.x – G20 – 12V – M – BR – 04 – R120

Actuator Model No.
- **K2x**
- **K2**
- **K2VL**

Gear Ratio
- **G30** = 30:1
- **G20** = 20:1
- **G10** = 10:1
- **G05** = 5:1

Control Model
- **P1.x** Fixed Limit Switch
- **P2.x** Position Feedback
- **EP1.x** Adjustable Limit Switches
- **RP** Low Switching (K2VL Not Available)

Note: See control pages for full listing of model numbers.

Motor Voltage
- **12V** – 12 volts
- **24V** – 24 volts
- **36V** – 36 volts
- **48V** – 48 volts
- **90V** – 90 volts
- **115V** – 115 volts
- **230V** – 230 volts

Motor Type
- **M** – Ignition Protected Motor

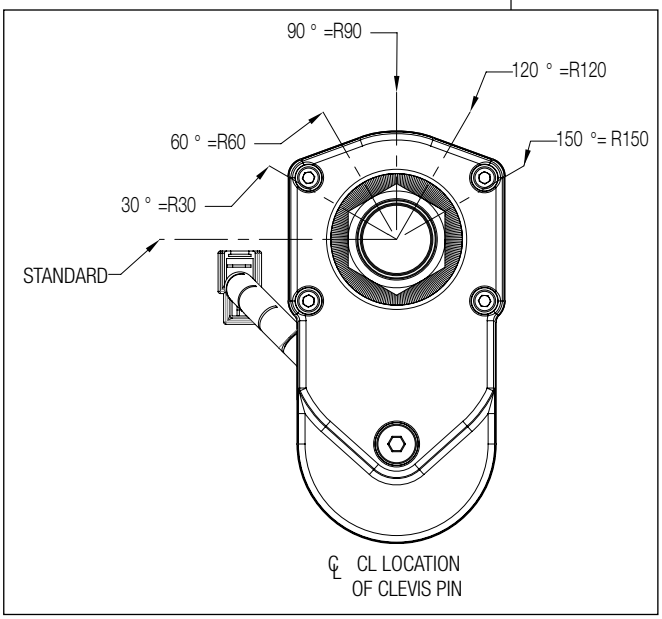
For standard motor, leave blank.

Nut Type*
- **Blank**–K2x
- **BR** – Bronze Nut
- **BRL** – Bronze Nut - Long
- **DN** – Delrin® Nut

*BRL matches K2x pin to pin

Stroke Length
- **04** – 4.00 (100 mm)
- **06** – 6.00 (150 mm)
- **08** – 8.00 (200 mm)
- **12** – 12.00 (300 mm)
- **18** – 18.00 (450 mm)
- **24** – 24.00 (600 mm)

Base Fitting Alignment
- **Blank**–Standard
- **R30** – 30˚ Fitting
- **R60** – 60˚ Fitting
- **R90** – 90˚ Fitting
- **R120** –120˚ Fitting
- **R150** –150˚ Fitting



Scan to watch!
Linear Actuator Basic Selection Video
https://p.widencdn.net/ydtpk6

Rugged Duty Actuator AC Motor Acme Screw

Up to 1,100 lbs. (4893 N) Rated Load
Up to 1 in. (25.4mm)/sec. Travel Speed

The K2 is the base model in the B-Track family. It incorporates a patented in-line load transfer design which provides high load capability for rugged-duty use, efficient power use, compact package size, excellent corrosion and washdown protection, and high performance synthetic lubrication for life, all at an affordable price.

The K2 uses a solid bronze or Delrin® nut with a rolled hybrid screw yielding high impact capability and long screw life. Heavy-duty double-ended ball bearing motors, hardened gears, O-ring seals and an extension rod bearing system that provides best in class capabilities.

Now Available Optional Adjustable Limit Switch These easy to use adjustable switches are mounted in a channel on the cover tube with custom cap for protection. They are easily moved to enable the end-user the flexibility of setting the stroke length at any position within the full stroke capability.

Features

- **Protective coatings** and O-ring seals throughout
- **Patented in-line load system**
- **Hybrid nut and screw** design, no brake needed
- **Ball detent overload clutch**
- **Stroke lengths** 4 to 24 inches (100 to 600 millimeters)
- **Load capacities** up to 1100 pounds (4893 N)
- **Speeds up to** 1 inches (25.4 millimeters)/sec. travel
- **Thermal overload** incorporated into the motor
- **Heavy wall construction**
- **Double ball bearing motors**
- **Heat treated gears**
- **Rugged extension rod** bearing support
- **Custom mounting** options available
- **Limit switches** offered only in the adjustable version (EP1.x)

Typical Applications

- Ergonomic lift tables
- Roof vents
- Conveyor diverters
- Bin/tank cover lifts

Scan to watch!
How to Adjust the Limit Switches for a K2 or K2X Actuator with External or EP Limit Switches
https://p.widencdn.net/imzc9v

Load/Current/Speed/Duty Cycle

- Maximum Static Rating: 3,000 lbs. (13345 N) Static (in-line load)
- Refer to performance chart for load/current/speed capabilities
- Stroke Length Tolerance: +/-.06" (1.52 mm)
- Motor is protected with auto reset breaker inside motor housing (temperature/current/time dependent)
- Overload clutch setting: +25% over rated dynamic load
- Duty cycle is time/temperature/load dependent, suggested guidelines are:
  - 50% max on-time/50% off-time for loads up to 50% of capability
  - 25% max on-time/75% off-time for loads between 50%-80% of capability
  - 10% max on-time/90% off-time for loads between 80%-100% of capability

(Load/stroke profiles will allow some adjustment variation from these guidelines.)

Operating Environment

- Ambient temp range: -20° F to +150° F (-29° C to +65° C), -40° F to +176° F (-40° C to +80° C) Upon Request.
- Weather resistant enclosure & seals (IP 54 capable, 250 hour salt spray, 500 hour for paint)
- Normal operating voltage: 115 VAC or 230 VAC

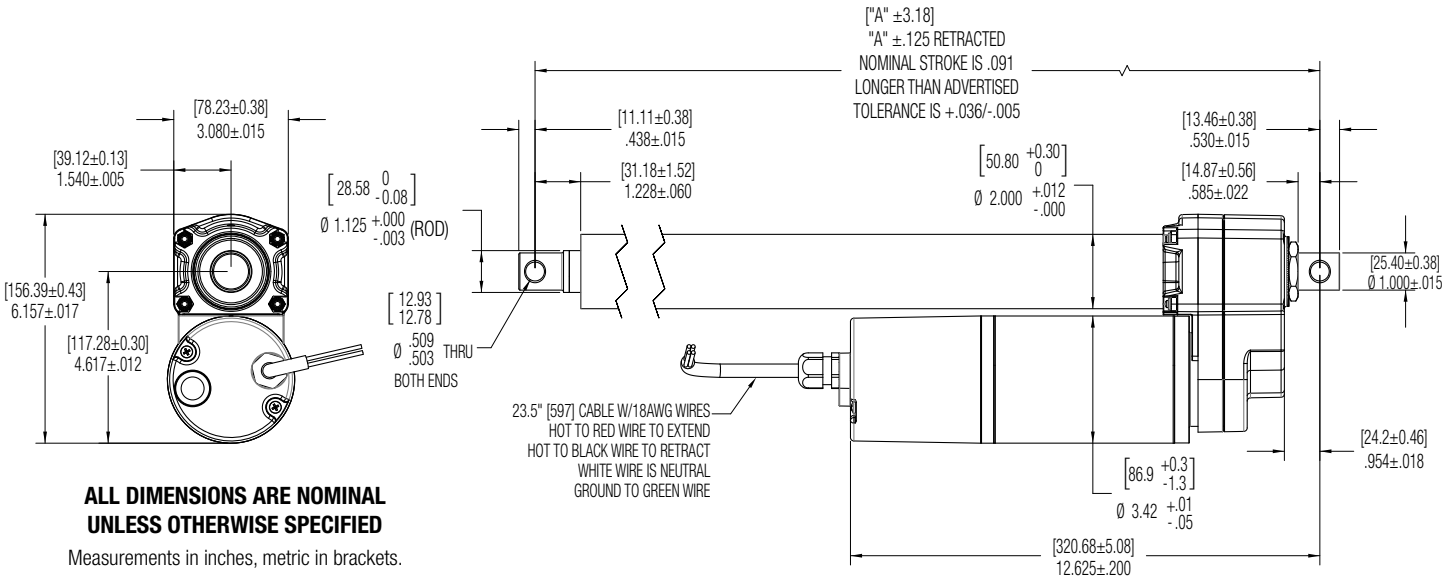
Control/Connections

- 14 gauge stranded lead wires-UL style 1230 w/PVC insulation Class F 105° C
- Use momentary contact switch in powering unit for extend/retract operation. (ON)-OFF-(ON) SPDT

Dimensions

B-Track K2AC	Stroke	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
		4	100	6	150	8	200	12	300	18	450	24	600
	A	14.96	380.0	16.97	431.0	18.94	481.1	22.95	582.9	28.94	735.1	34.92	887.0

Note: Special lengths available



ALL DIMENSIONS ARE NOMINAL UNLESS OTHERWISE SPECIFIED

Measurements in inches, metric in brackets.

Performance Graphs Imperial

Speed
Current Draw

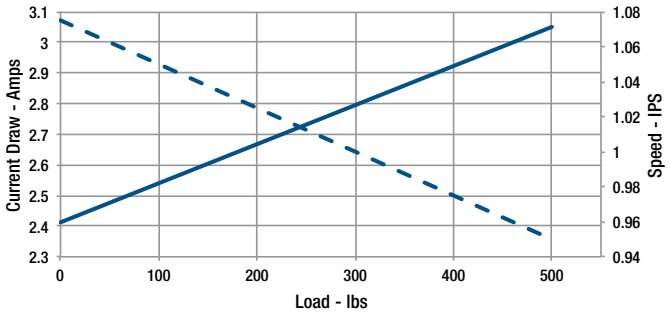
Measurements*

*Performance Chart Measurements are Nominal

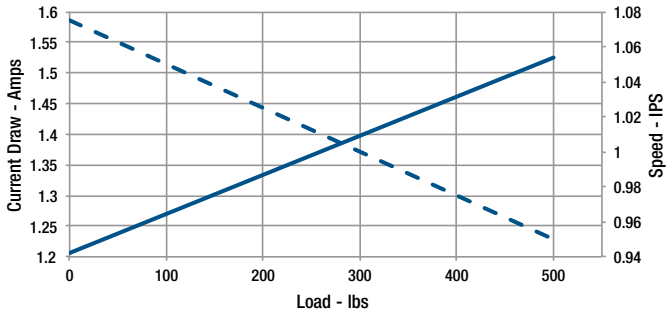
Load Capacity 500 lbs.

For Metric Measurements, see page 35.

K2G10-115VAC



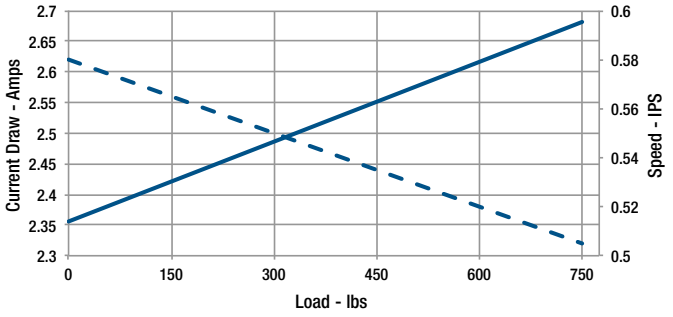
K2G10-230VAC



Load Capacity 750 lbs.

For Metric Measurements, see page 35.

K2G20-115VAC



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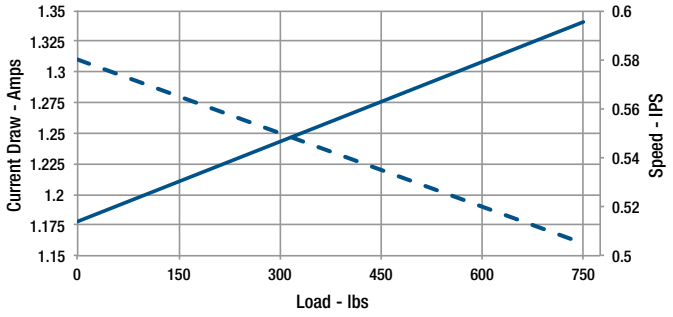
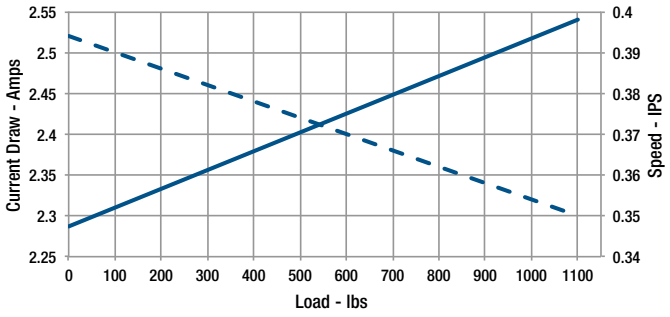


Load Capacity 1100 lbs.

For Metric Measurements, see page 35.

K2G30-115VAC



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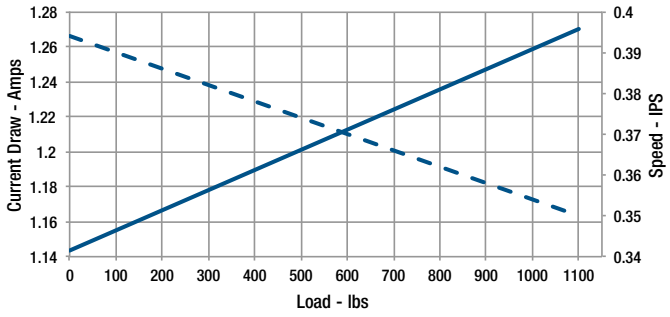


Speed
Current Draw

Performance Graphs Metric

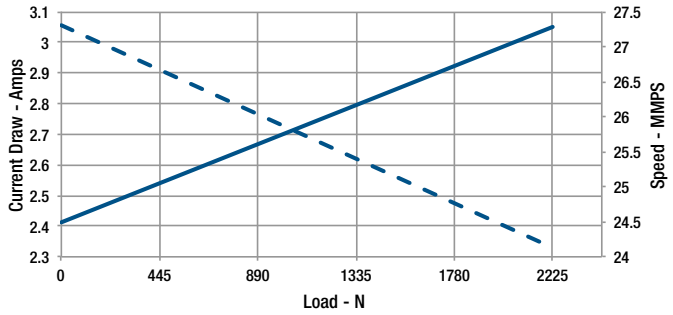
Measurements*

*Performance Chart Measurements are Nominal

Load Capacity 2225 N

For Imperial Measurements, see page 34.

K2G10-115VAC



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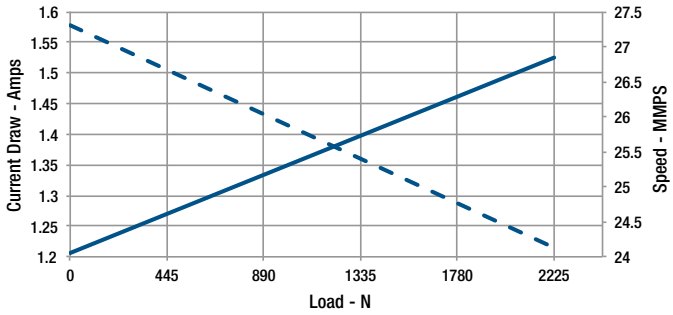

Load Capacity 3338 N

For Imperial Measurements, see page 34.

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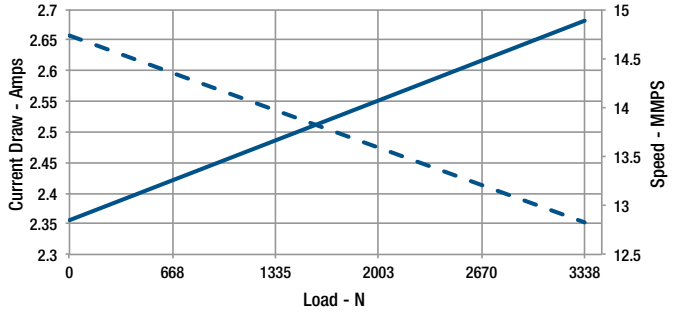

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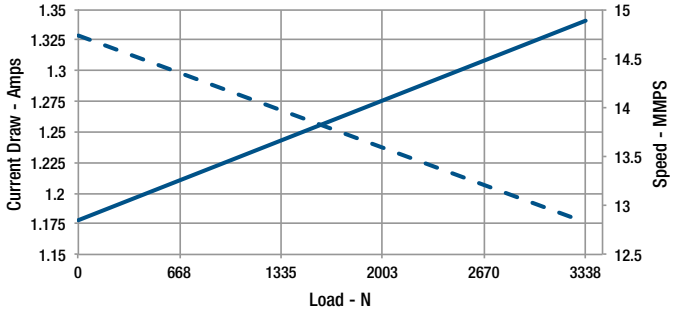

Load Capacity 4895 N

For Imperial Measurements, see page 34.

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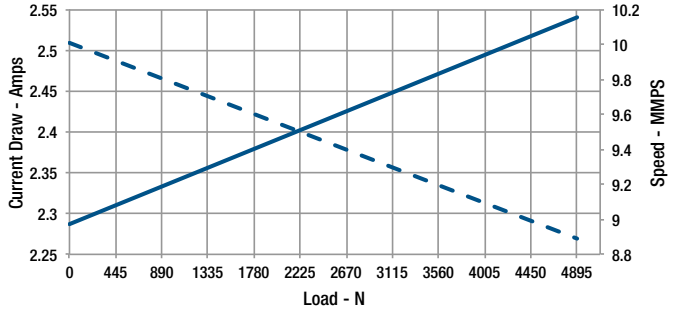

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