

# B-Track Features

## 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

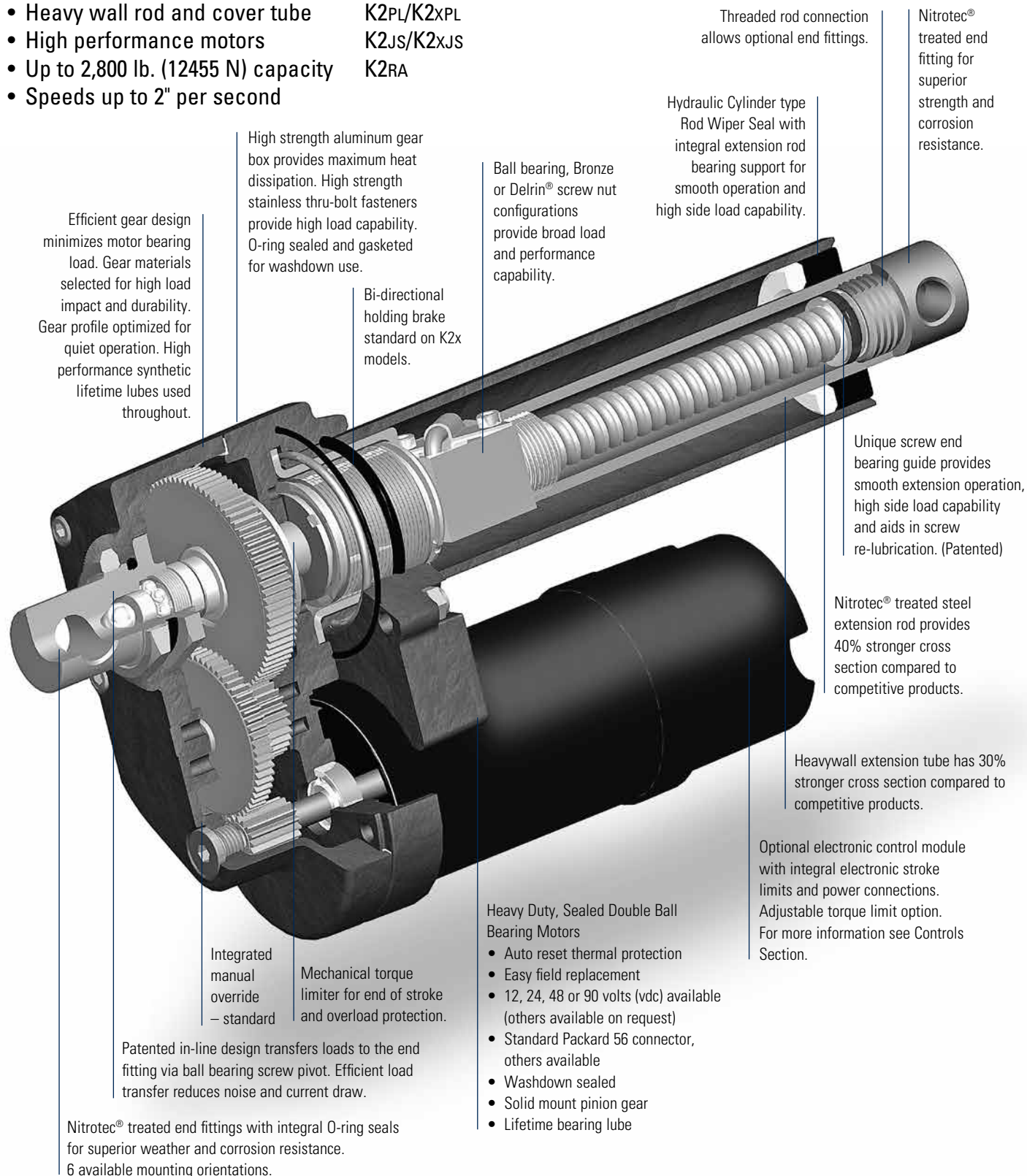
K2VL, K2, K2x, K2AC, K2xAC

### 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

<b>K2x</b>	<b>P1.x</b>	<b>G20</b>	<b>–</b>	<b>12V</b>	<b>M</b>	<b>–</b>	<b>BR</b>	<b>–</b>	<b>04</b>	<b>–</b>	<b>R120</b>
<b>Actuator Model No.</b> K2x K2 K2vL	<b>Gear Ratio</b> G30 = 30:1 G20 = 20:1 G10 = 10:1 G05 = 5:1	<b>Motor Voltage</b> 12V – 12 volts 24V – 24 volts 36V – 36 volts 48V – 48 volts 90V – 90 volts <b>115V – 115 volts</b> 230V – 230 volts		<b>Nut Type*</b> Blank–K2x BR – Bronze Nut BRL – Bronze Nut - Long DN – Delrin® Nut *BRL matches K2x pin to pin	<b>Stroke Length</b> 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)	<b>Base Fitting Alignment</b> Blank–Standard R30 – 30° Fitting R60 – 60° Fitting R90 – 90° Fitting R120 – 120° Fitting R150 – 150° Fitting					
<b>Control Model</b> P1.x Fixed Limit Switch P2.x Position Feedback EP1.x Adjustable Limit Switches RP Low Switching (K2vL Not Available) <b>Note:</b> See control pages for full listing of model numbers.		<b>Motor Type</b> M – Ignition Protected Motor For standard motor, leave blank.									



Scan to watch!  
**Linear Actuator Basic Selection Video**  
<https://p.widencdn.net/ytgpk6>

# B-Track K2

## Rugged Duty Actuator DC Motor Acme Screw



Shown with optional  
adjustable limit switch feature

**Up to 1,500 lbs. (6672 N) Rated Load**  
**Up to 2.7 in. (68.58 mm)/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 Acme style 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. Just pop the cap off, loosen the set screw and slide the switch into the desired position.

### 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.)

### Features

- **Protective coatings** and O-ring seals throughout
- **Patented in-line load system**
- **Hybrid Acme style nut and screw** design, no brake needed
- **Ball detent overload clutch**
- **Stroke lengths** 2 to 24 inches (50 to 600mm)
- **Load capacities** up to 1500 pounds (6672 N)
- **Speeds up to** 2.7 inches (68.58 millimeters)/sec. travel
- **Thermal overload** incorporated into the motor
- **Heavy wall construction**
- **Double ball bearing motors**
- **Heat treated gears**
- **Rugged extension** rod bearing support
- **Optional 90 vdc motor** for use with SBC-AC control (IP54)
- **Custom mounting** options available

### Typical Applications

- Heavy duty platform and engine lifts
- Deck and implement lifts for tractors and mobile applications
- Table positioning
- Wheelchair and scooter lifts
- Bin and tank cover lifts
- Flow gate open/close



Scan to watch!

**How to Adjust the Limit Switches for a K2 or K2X Actuator with External or EP Limit Switches**  
<https://p.widenet.net/imzc9v>

### Operating Environment

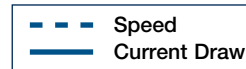
- Ambient temp range: -20° F to +150° F (-29° C to +65° C), -40° F to +176° F (-40° C to +80° C) Upon Request.
- Weather resistant enclosure & seals (IP69K Static, IP65 capable, 250 hour salt spray, 500 hour for paint)
- Normal operating voltage: 10-16 vdc (Ratings are at 12 vdc Normal.)

### Control/Connections

- 14 gauge stranded lead wires-UL style 1230 w/PVC insulation Class F 105°C
- Lead wires abrasion protected with spiral covering
- Use momentary contact double pole/double throw switch in powering unit for extend/retract operation. (ON)-OFF-(ON) DPDT
- Connectors:
  - Packard 56 series or Delphi Weather-Pack
    - Packard 56 series with 56 series blades (#2984883 & #2962987)
    - Delphi Weather-Pack series (#121015792 & #12010973) Upon Request

## Performance Graphs Imperial Measurements\*

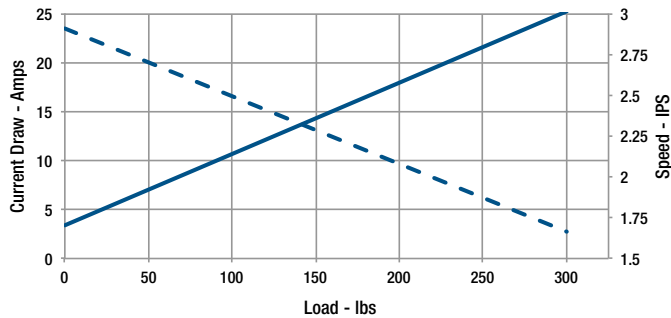
\*Performance Chart Measurements are Nominal



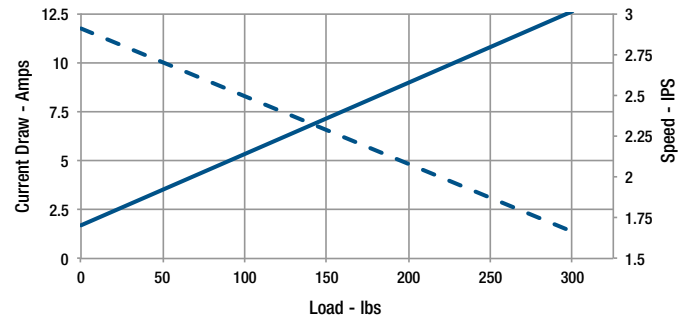
### Load Capacity 300 lbs.

For Metric Measurements, see page 30.

K2G05-12VDC



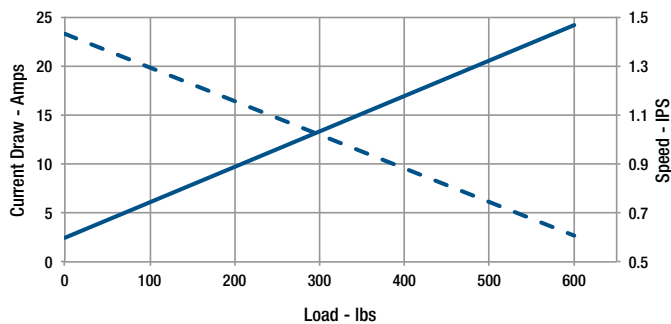
K2G05-24VDC



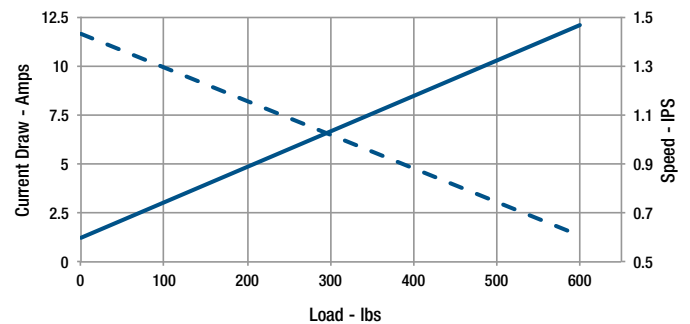
### Load Capacity 600 lbs.

For Metric Measurements, see page 30.

K2G10-12VDC



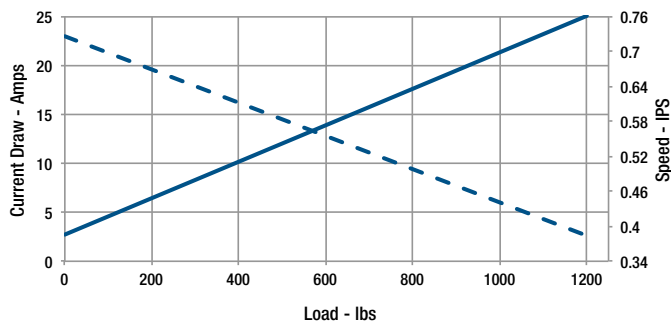
K2G10-24VDC



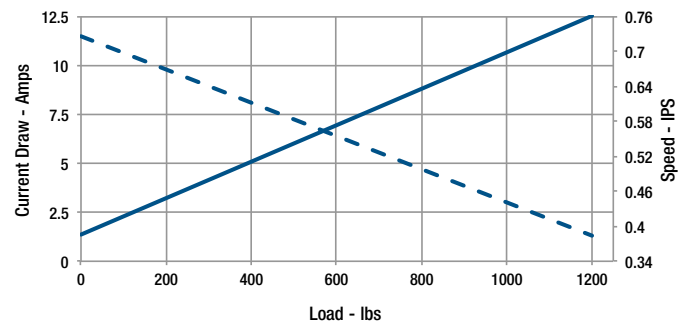
### Load Capacity 1200 lbs.

For Metric Measurements, see page 30.

K2G20-12VDC



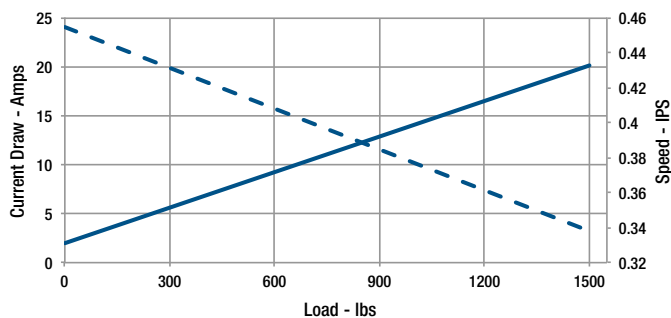
K2G20-24VDC



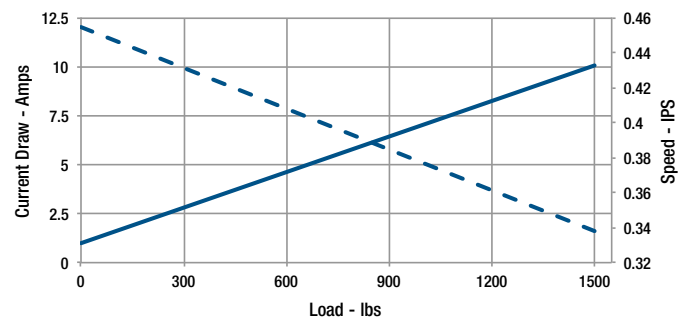
### Load Capacity 1500 lbs.

For Metric Measurements, see page 30.

K2G30-12VDC



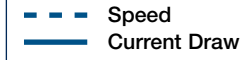
K2G30-24VDC



# B-Track K2

## Performance Graphs Metric Measurements\*

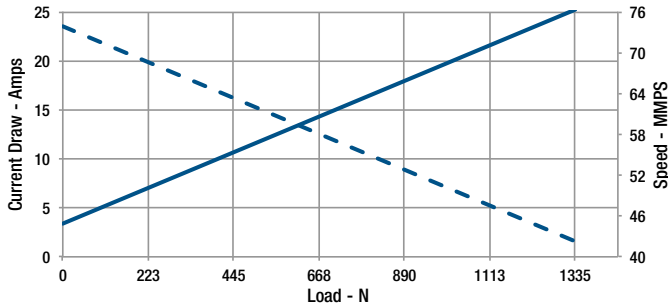
\*Performance Chart Measurements are Nominal



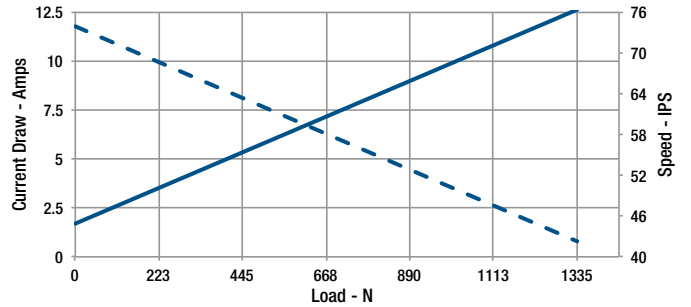
### Load Capacity 1335 N

For Imperial Measurements, see page 29.

#### K2G05-12VDC



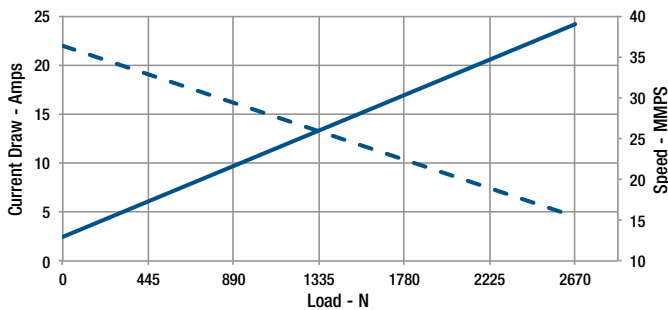
#### K2G05-24VDC



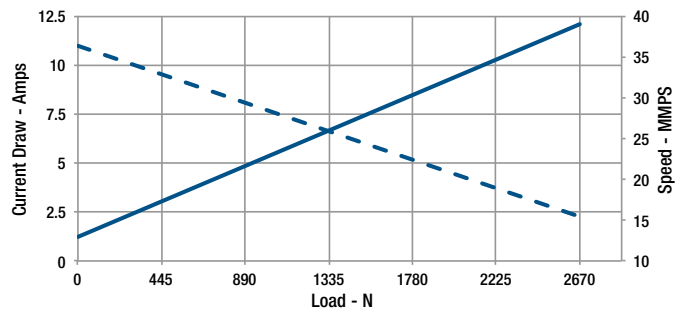
### Load Capacity 2670 N

For Imperial Measurements, see page 29.

#### K2G10-12VDC



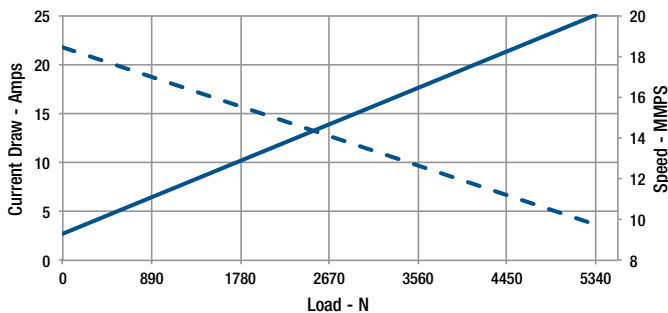
#### K2G10-24VDC



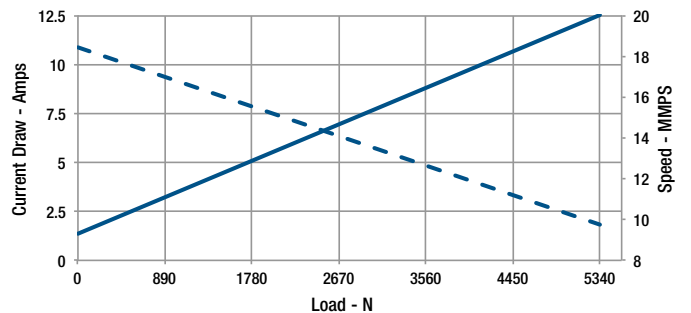
### Load Capacity 5340 N

For Imperial Measurements, see page 29.

#### K2G20-12VDC



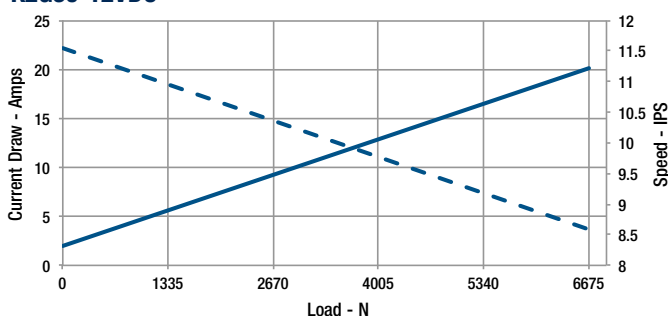
#### K2G20-24VDC



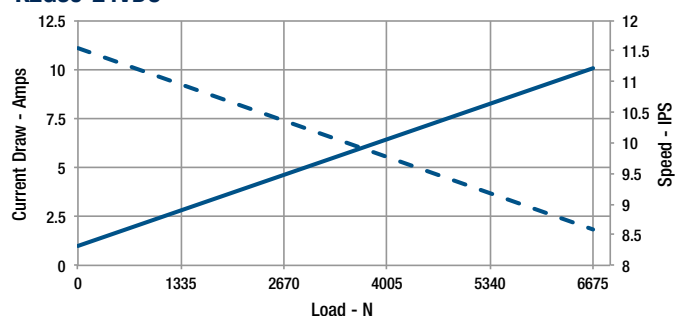
### Load Capacity 6675 N

For Imperial Measurements, see page 29.

#### K2G30-12VDC



#### K2G30-24VDC



## Dimensions

B-Track K2	Stroke	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
		2	51	4	102	6	152	8	203	10	254	12	305
	A	8.32	211.3	10.32	262.1	12.32	312.9	14.32	363.7	16.32	414.5	18.32	465.3

**Note:** Special lengths available

B-Track K2	Stroke	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
		14	356	16	406	18	457	20	508	22	559	24	610
	A	20.32	516.1	22.32	566.9	24.32	617.7	29.32	744.7	31.32	795.5	33.32	846.3

**Note:** Special lengths available

