

Linear Motion Solutions



Experts in Customization

We are proud of our reputation as experts in customization, innovative design, manufacturing quality and engineering to meet demanding application needs.

With our talent, technology and facilities, we can design a solution that will put your challenging ideas into practical motion. Our resources allow us to collaborate with you to develop an ultimate solution for almost any application, while managing scheduling demands, technical requirements and financial considerations.

We're ready to assist





Haydon Kerk Pittman

is recognized as a leading manufacturer of brushed and brushless DC motors, stepper motor based linear actuators, precision lead screw and anti-backlash nut assemblies, linear rail and guide systems, gear motors, drives and complete custom automation sub-systems.



As part of AMETEK Advanced Motion Solutions, we continue to design and manufacture high quality products for our customers exact requirements.



SHOP ONLINE More than 500 Products Ship in 24 Hours www.HaydonKerkPittman.com

Linear Actuators

Simplifying rotary into linear motion. Rotary-to-linear conversion takes place within the motor itself – eliminating the use of belts and pulleys, rack and pinion or other mechanical components.

Hybrid Stepper

Engineered thermoplastics allow motors to be more quiet, more efficient and more durable. No maintenance and 10x longer life. Available in six sizes: Size 8 through Size 34, and three designs (captive, non-captive and external linear). Single or Double Stack. Select models available with integrated IDEA[™] Drive.

Can-Stack Stepper

For rapid linear motion and significantly higher thrust. Available in seven sizes: 15mm through 46mm, and four designs (captive, non-captive, external linear and rotary).

Dual Motion

Axially move components to their insertion positions and then rotate them. Simplified product development replaces far more bulky and complex mechanisms. Available in Size 14 or Size 17.

Photo (left to right): Captive Shaft Hybrid Stepper, Non-Captive Shaft Hybrid Stepper with integrated IDEA Drive, Dual Motion, Non-Captive Can-Stack Stepper.

Lead Screws & Nut Assemblies

Our Lead Screw assemblies are optimized for performance and easily interface with many types of rotary power sources. Available in a broad range of lead screw diameters, leads and nut styles, custom designed for your application.

Lead Screws

Available in standard diameters from 5/64" (2mm) to 15/16" (24mm) with metric and left-hand thread options. Most standard lead screws are manufactured from 303 stainless steel and are produced using our proprietary precision rolling process.

Other lead screw materials and lead accuracies to 0.0001in/in (0.0001mm/mm) are available for application-specific requirements.

Linear Rail Systems

Linear rails and slides are complete mechanical systems that include linear bearings, rotary bearings, mechanical frame, precision screw and nut, and when desired a motor or integrated motor/electronic drive.

Slide Guided

All moving surfaces include engineered polymers that provide a
precise, strong and stable platform. 6 Series to choose from:
RGS: High speedLRS: Higher thrustRGW: Wide baseSRA: Compact, no wear compensation
SRZ: Compact, with wear compensation

Ball Guided

Engineered for both normal and overhanging loads. Tight accuracy and repeatability is maintained even in applications requiring significant cantilevered loading. Available in 3 sizes.

Spline Shaft

Ideal choice for light load applications requiring minimal frictional drag, low cost and long wear. With a burnished, centerless ground stainless steel shaft (uncoated or with Kerkote[®] TFE for additional lubricity) and a graphite and PTFE-filled thermoplastic bushing. Anti-backlash design also available.

Guide Rail

Centerless ground and burnished stainless steel shaft mated with a composite polymer bushing. Thermal fluctuations will have a minimal effect on system performance. Optional Kerkote[®] TFE coating for additional lubricity and extended life.



Full line of Brushed and Brushless DC Motors

Photo (left to right): RGS Motorized Rail, Spline Shaft.

Lead Screw Nuts

Available in 11 standard designs. 3DP: Inserts for Rapid Prototyping BFW: General Purpose Long Life CMP: Low Tech Anti-Backlash KHD: Moderate Load Anti-Backlash NTB: Highly Customizable Anti-Backlash NTG: Adjustable Drag Anti-Backlash VHD: Maximum Load Anti-Backlash WDG: General Purpose Anti-Backlash ZBA: Adjustable Drag Anti-Backlash

ZBA: Adjustable Drag Anti-Backlash ZBM: World's Smallest Anti-Backlash ZBX: Ultra Smooth Motion Anti-Backlash Custom configurations also readily available.





Motors

We offer a full line of Brushed, Brushless and Stepper DC motors in a wide range of sizes. Custom shaft diameters, lengths and mounting flanges are also available.

Brushed DC

For smooth low speeds, quiet operation and long life. Sizes from 22 - 54mm diameter, 3 - 94 watts.

Brushless DC

For applications that require uniform motion control at all speeds. Capable of high acceleration. Sizes from 10 - 120mm diameter, 6 - 2000 watts.

Brushless DC with IDEA[™] Drive

A high-torque, precision servo motor and IDEA[™] Drive as a single compact unit. Enables distributed control without the use of a costly PLC or external motion controller. Offered in 3 motor lengths with continuous torque up to 0.15 Nm.

Can-Stack Rotary Stepper

Patented, enlarged rotor with low inductance coils for superior torque and continuous reliable high performance. Sleeve and ball bearing designs. Sizes from 20 - 46mm.

Pancake Stepper

For the most restricted small space, high torque applications. Ultra-compact, low profile to 13mm thick.

Motor Accessories

Programmable Brushless Motor Drive

Available in many configurations from simple analog controlled single quadrant drives to fully programmable servo motion controllers.

- PC computer programmable that features an intuitive patent-pending GUI that removes the complexity of programming. Simple to use drive software, with on-screen buttons and easy to understand programming guides.
- Compact, 4-quadrant positioning controllers incorporate protection against over-voltage, low voltage and excessive temperature.

Non-Programmable Brushless Motor Drive

For simple speed control applications.

Brake

Power off, rail safe. Best suited for small frame servo and stepper motor applications used to hold a load in position.

Encoder

Utilizes either reflective or transmissive optical technology, with and without differential line drivers, to provide a multitude of line counts. Standard and low profile options available. Factory installed.

Encoder



Brushless DC Motor with IDEA Drive



Programmable Drive



Material Options

Our Lead Screws can be rolled in 316 stainless, 400 series stainless, precipitate hardening materials, carbon steel, aluminum, and titanium. Nuts can be produced in many alternative plastics including PEEK, polyester, Torlon[®], Vespel[®], PVDF, UHMW, Ertalyte[®], customer-supplied specialty materials, and metal nuts made from bronze, brass and stainless steel.

Kerkite[®] Composite Polymer Nuts are compounded with lubricants, reinforcements and thermoplastic polymers formulated to provide optimum performance.

Teflon TFE Coating Options

Kerkote[®] TFE Coating is a long-term soft coating, maintenance-free, dry lubricant, optimized for softer plastics like acetals and nylons, with or without mechanical reinforcement.

Black Ice® TFE Coating is a long-term hard coating and is exceptionally durable in all types of environments, with virtually any type of polymer nut. The Black Ice coating remains on the screw, offering a low friction surface upon which the nut travels. Ideally used in more aggressive environment conditions, or anywhere reduced friction and a permanent coating is desired.

