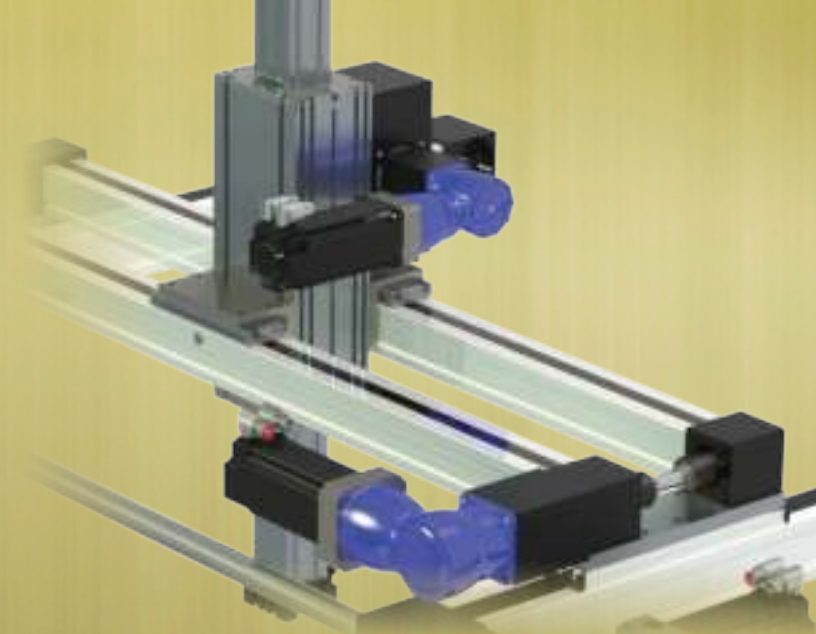




MODULAR ACTUATORS PRODUCT GUIDE

www.nookindustries.com



Our Mission

Our mission is to be an innovative and responsive organization. Nook Industries knowledge and vast experience provides us with the flexibility to design, engineer and manufacture high quality linear motion systems and solutions.

Our Vision

Our vision is to be a global leader in providing linear motion system solutions by leveraging our engineering and manufacturing expertise.

Our Brand Promise

Our primary focus is on customer satisfaction. You can trust us to deliver world-class quality and reliability each and every day. This guiding principle has helped us to become one of the world's leading full-service providers for linear motion solutions.

The Nook Industries Advantage

- > The only manufacturer in the industry with onsite die design, manufacturing and control
 - > Affordable standard or custom engineered solutions
 - > Engineering support for design and application
 - > Vertically integrated manufacturing process located in the USA
 - > ISO 9001-2008 certified and AS9100 registered/certified
 - > Multi-touch, multi-level customer support teams
-

Applications

With Nook's flexible, high-quality linear motion systems, it's easy to build a state-of-the-art multi-axis motion control system for any application, including machine tool, packaging and material handling, assembly, test & measurement, medical, robotics or automation. Nook offers standard or customized solutions to meet any challenge.

- Gantry
- Automated Drilling
- Part Transfer
- XYZ Pick and Place
- Spraying Machines
- Step and Scan
- Machine Tool
- Simultaneous Multi-Axis
- Coordinated Motion
- High Speed/Precision Positioning
- Conveyor Automation and Transport
- Handling, Packing, Palletizing

Our high-quality, high-performance products are made of self-supporting and wear-resistant aluminum profiles.



> Ideally suited to perform in harsh environments (wet/dusty/dirty). Corrosion resistant models can be used in chemically adverse environments.

> Easily integrated into users' existing control networks with standardized connecting profiles.

Features

- Standard or custom-made positioning systems
- Positioning speed up to 12 mm/s acceleration
- Repeatability up to 0.02 mm
- Positioning weight up to 1000 kg
- System length up to 60 m
- Unique precision at lengths greater than 3 meters
- Clean room capability (ISO 14644-1) and ATEX 2014/34/EU certification

Benefits

Fully flexible portfolio with more than 1000's of combinations

- Quick lead times of 3–7 weeks from order
- Long lifetime
- Great individualization options
- Low maintenance levels
- Engineering support in early design phase

Drive and Screw Technology

Nook offers linear actuators with a choice of screw or belt drive systems. We use a diverse variety of screw and belt types to meet the challenging demands for all possible applications. They include maintenance free ball bearings and are easily adjusted.



Screw Drive

- Use the finest ACME and Ball screws
- Direct in-line motor mount
- High thrust /torque/stiffness
- **Ball Screw** = 0.025 mm repeatability
- **Ball Screw** = high efficiency/accuracy
- ACME Screw = 0.2 mm repeatability
- ACME Screw = standard accuracy, minimum wear
- Up to 3 M screw length

Screw Drive Type	Benefits
Screw driven with ball guides	High loads and high precision
Screw driven with V-Groove guides	Medium to high load and durable roller system



Belt Drive

- High tension steel belt material
- Internal or external belt
- Clean room and explosion proof versions
- No minimum length
- Standard accuracy
- 0.1 mm repeatability

Belt Drive Type	Benefits
Belt driven with ball guides	High load and dynamics
Belt driven with wheel guides	Applications requiring extreme speed and acceleration
Belt driven with V-Groove guides	Low cost and durable guide system



Rack and Pinion Drive

- Ideal for lifting movements
- Driven along guide rods by high precision rack

Rack and Pinion Type	Benefits
Belt driven with ball guides	High load and dynamics
Belt driven with wheel guides	Applications requiring extreme speed and acceleration
Belt driven with V-Groove guides	Low cost and durable guide system

Guidance Technology

Nook offers linear actuators with a choice of guidance systems. We use a diverse variety of guidance types to meet the challenging demands for all possible applications. They are adjustable to reduce lash, splash-proof and dust-tight.

Light Loads (Fz)

Forces up to 1125 N

V Groove Guided

The carriage moves along the unit guided by V-slides that are adjustable to reduce lash. The linear opening of the unit is sealed with a stainless steel cover plate to make the unit splash-proof and dust-tight.



Moderate Loads (Fz)

Forces up to 6000 N

Internal Roller Bearing Guided

The carriage moves along the unit guided by hardened steel guide rods on the inside of the actuator that are adjustable to reduce lash. The linear opening of the unit is sealed with a stainless steel cover band to make the unit splash-proof and dust-tight.



Moderate Loads (Fz)

Forces up to 6000 N

External Roller Bearing Guided

The carriage moves along the unit guided by hardened steel guide rods on the outside of the actuator that are adjustable to reduce lash. The linear opening of the unit is sealed with a stainless steel cover band to make the unit splash-proof and dust-tight.



Heavy Loads (Fz)

Forces up to 20600 N

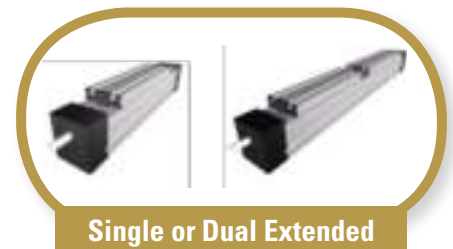
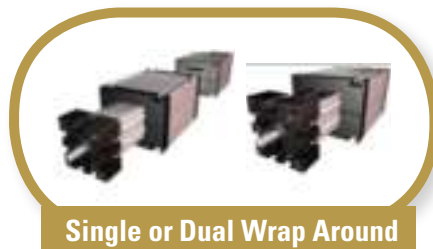
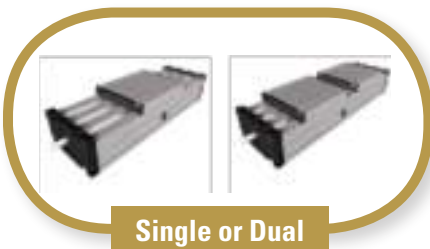
Internal Profile Rail Guided

The carriage moves along the unit guided by a single or dual internal profile rail on the outside of the actuator that are adjustable to reduce lash. The linear opening of the unit is sealed with a stainless steel cover band to make the unit splash-proof and dust-tight.



Carriage Configuration Options

Multiple carriage lengths are available



Flexible Systems with Multi-Axis Solutions

The ELZU external belt driven actuator consists of two Y-axes and single X-axis, driven by one rotating belt. This belt runs around different deflection pulleys. Positioning is achieved by two motors. The coordinate is diagonal to the deflection points of the Y-axis. Advantage: A smaller amount of inertia is needed, which allows achieving higher accelerations. The ELZU belt driven actuator is available in multiple configurations.

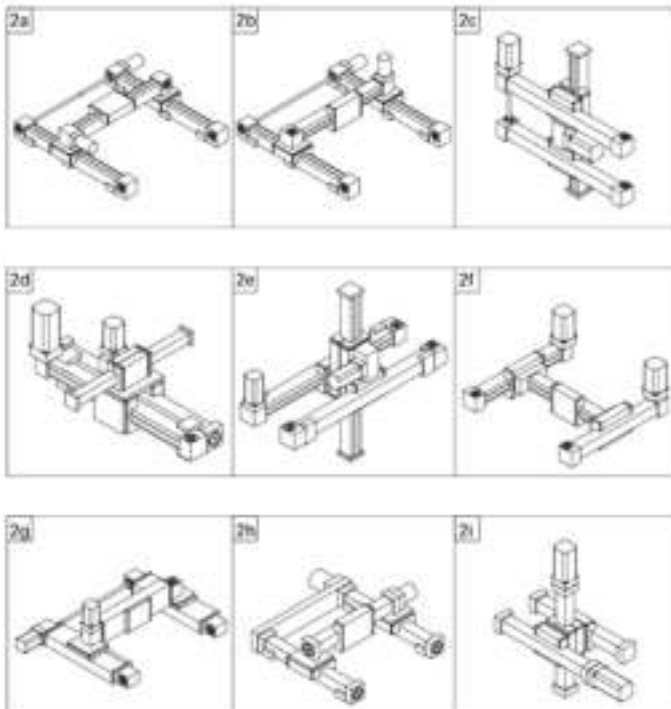


Distinct Advantages

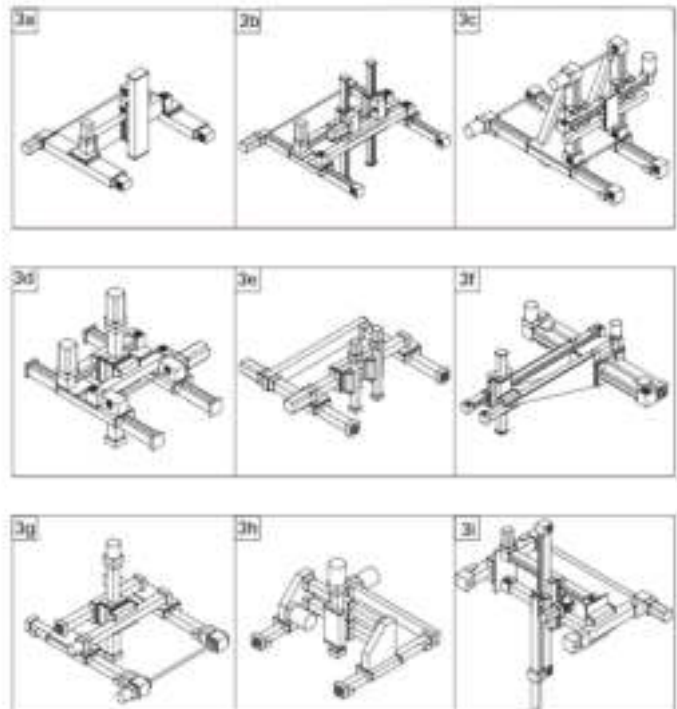
- **Fit.** Can be manufactured in virtually any length
- **Simplicity.** Pre-engineered to provide bidirectional movement across two or more planes



2-Axis Systems



3-Axis Systems



Offered with an Unparalleled Selection of Accessories:

Proximity Switches, Sensors, Mounting Systems, Limit Sensors, Clamps, Non-Driven, and much more...

Technical Support



Nook provides outstanding technical support with dedicated subject matter experts and a variety of online tools to lower your development costs by simplifying the design process. We collaborate with customers to put your unique designs into motion by providing engineering expertise and state-of-the-art technology. Available in different drive configurations, including screw, rack and pinion, and belt.



How to contact us

> Contact form and contact information

This link includes a Contact Us form that you can use to contact our customer support team. It also has all of our contact information as well as a map to our facilities.

> Information Request Form

If you have a general idea about the type of product you need but you are unable to configure your product completely or have some specific questions, submitting this form is the best method of contacting us.

> Live Chat

Live Chat is a great way to get the answers you need while you are browsing our website. Our Product Specialists can answer your questions and direct you to pages on our site in real time. We offer Live Chat during normal business hours which are Monday through Friday 8 AM to 5 PM EDT.

> Ask An Expert

Expertise comes standard with all Nook Linear Motion Solutions! If you've got some technical questions regarding our products and how they might be used specific to your particular application, then this is just the place for you to have those questions answered. Our Application Engineers are standing by to assist you.

> Application Data Forms

We have designed some Application Data Forms that will assist you in conveying the specifics of your application to our Application Engineers. Simply select the appropriate form, fill in some details and submit it to one of our experts.



Easily configure a part number, download 2D/3D models, view product specifications, or request a quote online.



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Also find us at:

