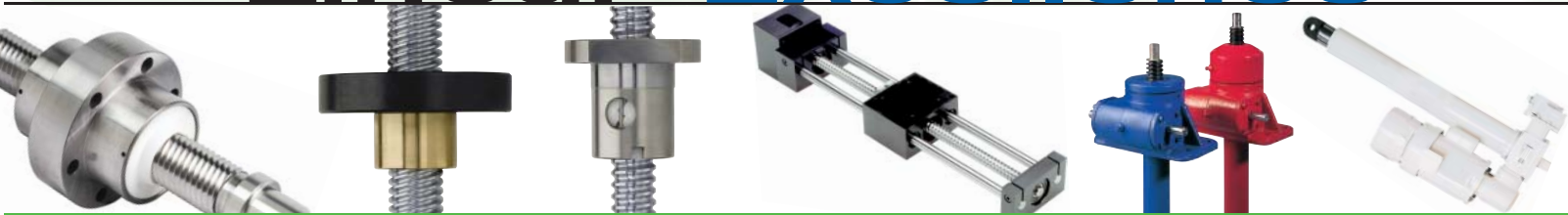


# Linear Excellence



Roller Screws

Acme Screws

Ball Screws

Linear Components and Slides

Screw Jack

Electric Cylinders

EXPERIENCED PROFESSIONAL ENGINEERING,

DESIGN, ANALYSIS AND MANUFACTURING

IN THE LINEAR MOTION INDUSTRY

NOOK INDUSTRIES, INC. IS COMMITTED TO CUSTOMER SATISFACTION.

WE WILL PROVIDE A HIGH QUALITY, HIGH VALUE PRODUCT DELIVERED

ON TIME AND AT A COMPETITIVE PRICE. WE CONTINUALLY IMPROVE OUR

PROCESSES AND PRODUCTS THROUGH TECHNOLOGY, INVESTMENT AND

EMPLOYEE PARTICIPATION.



## 1969

Ball Bearing Screw Supply Company founded by Joseph H. Nook, Jr.

## 1970's

- Installed end-machining capabilities to provide precision high tolerances required by ball screw applications
- Ball Bearing Screw Supply changes name to Nook Industries, Inc. with the focus of manufacturing and marketing PowerAc™ Acme Screw Assemblies
- PowerTrac™ Ball Screw Assemblies and ActionJac™ Worm Gear Screw Jack product lines established
- Opened a 35,000 square foot facility in Beachwood, Ohio

## 1980's

- Secured ActionJac™ Worm Gear Screw Jack orders for Satellite Dish Actuators
- Purchased Skidmore Gear Company to control the manufacture of worm gears for screw jacks
- Granted member status for The Association for Manufacturing Technology (AMT)
- Granted member status for Power Transmission Distributors Association (PTDA)
- PowerTrax™ Linear Bearing, Shafting and Component product line established

## A history of Success

Joseph H. Nook, Jr. founded Nook Industries in 1969 with the primary goal of stocking and machining ball screws manufactured by Saginaw Steering Gear. This early role as a master distributor for Saginaw enabled Nook Industries to gain experience and technical expertise in the world of linear motion. Since then, the company has grown to engineer, design and manufacture eight major product lines comprising over 10,000

configurable products. Nook Industries core manufacturing excellence includes: ball screw assemblies, acme screw assemblies, planetary roller screws, worm gear screw jacks, electric cylinder actuators, linear bearings, shafting, slide systems, end bearing supports and precision end machining for inch and metric markets.

## Making moves in the Linear Motion Industry

Nook Industries manufactures one of the most comprehensive selections of integrated linear motion components in the world. Whether the application requires an off-the-shelf linear motion component or an engineered solution tailored to fit your application, we provide complete engineering, design, analysis and manufacturing capabilities.

The exponential growth and maturity of Nook Industries is a result of a solid and stable management team that leads the company with a passion for the linear motion industry. Always emphasizing “continuous

improvement,” we use statistical methods and on-going training to increase the knowledge and skills of all employees.

Nook Industries knowledge and vast experience provide flexibility to design, engineer and manufacture linear motion products that will exceed application performance expectations.

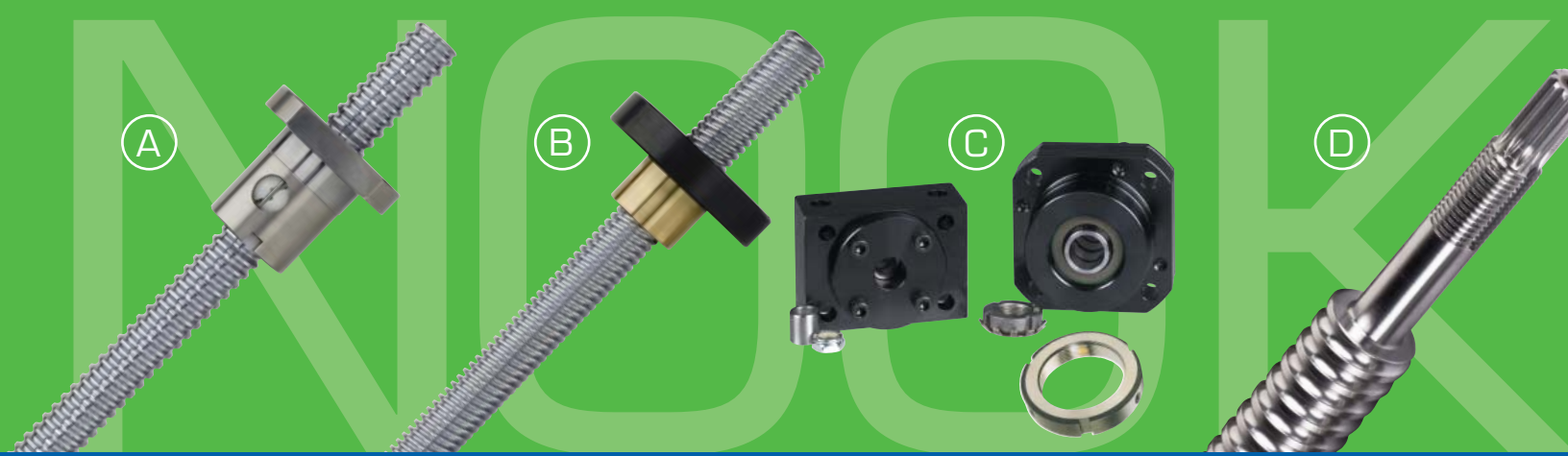


### 1990's

- Awarded the 'Quality Products and Service Award' from Scientific-Atlanta Network Systems Group
- Installed world's largest capacity precision thread roller Regular production 1/4" – 6" diameter, ability to roll up to 14" diameter
- Opened a 120,000 square foot manufacturing and office space in Cleveland, Ohio
- Awarded the 'Acme Spirally Wound Paper Products, Inc. Certificate of Appreciation'
- Granted member status for the Semiconductor Equipment and Materials International (SEMI) Association
- Awarded the 'Family Firm of Distinction' by the Weatherhead School of Management at Case Western Reserve University
- Introduced an industry first 5-year guarantee on ActionJac Worm Gear Screw Jacks

### 2000's

- Provided configurable and downloadable 2D & 3D CAD Models at nookindustries.com, reducing engineer's development time
- Published a 416 page product catalog introducing Planetary Roller Screws, Metric Lead Screws, Ball Screws, Worm Gear Screw Jacks, MM Slides, Linear Shafting, and Pillow Blocks along with existing inch products
- ISO 9001:2000 Certification
- NRS™ Planetary Roller Screw product line established
- Precision Locknut product line established
- Granted member status for the Association for High Technology Distribution (AHTD)

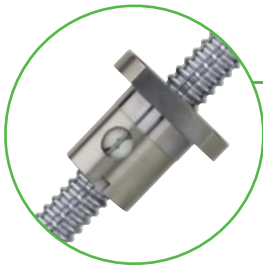


BALL SCREW ASSEMBLIES

ACME SCREW ASSEMBLIES

END BEARING SUPPORTS & LOCKNUTS

PRECISION END MACHINING



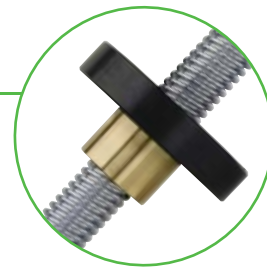
A

### BALL SCREW ASSEMBLIES

Nook PowerTrac™ ball screws are manufactured in standard rolled ( $\pm 0.004$ "/ft), precision rolled ( $\pm 0.001$ "/ft) and ground screw ( $\pm 0.0005$ "/ft) accuracies. Nook ball screws provide an efficient means of turning rotary motion to linear motion while providing highly accurate and repeatable movement. Several ball nut styles are available, matched with over 60 screw diameters and leads. Twin-lead screw assemblies and metric Carry™ ball screw assemblies are also available.

### ACME SCREW ASSEMBLIES

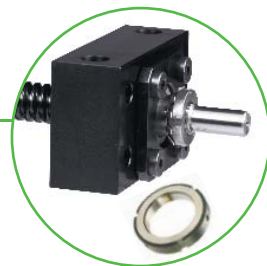
Nook PowerAc™ acme screws are manufactured with a centralizing thread form to prevent wedging. Standard rolled ( $\pm 0.0003$ "/in), milled ( $\pm 0.002$ "/ft) and ground screw ( $\pm 0.0005$ "/ft) accuracies are available. Nuts, including bronze, plastic and anti-backlash styles are matched with over 110 screw diameters and leads. Twin-lead screw assemblies and metric Speedy™ lead screw assemblies are also available.



B

### END BEARING SUPPORTS & PRECISION LOCKNUTS

EZZE-MOUNT™ end bearing supports offer a complete, easy installation for supporting precision-machined ball screw and acme screw assemblies. Single and double bearing base, flange mount and integrated motor mount versions are available. Precision locknuts secure bearings or machine components to shafts and other rotating elements while providing adjustment and preload.



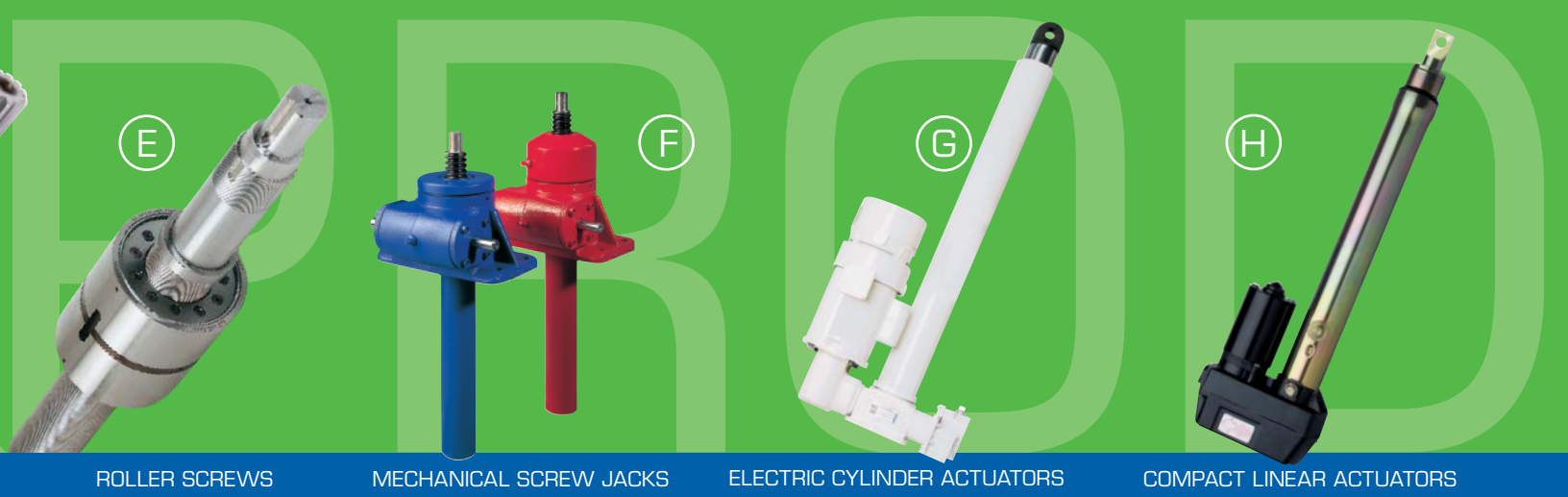
C



D

### PRECISION END MACHINING

Ball screws, acme screws and linear shafting can be supplied machined to customer specifications or to Nook standard end configurations.



ROLLER SCREWS

MECHANICAL SCREW JACKS

ELECTRIC CYLINDER ACTUATORS

COMPACT LINEAR ACTUATORS

## ROLLER SCREWS

NRS™ planetary roller screws are used in the most demanding and precise linear motion applications. With a greater number of contact points, roller screws provide greater stiffness and higher load ratings than equally sized ball screws and acme screws. Several nut styles are available, matched with over 45 screw diameters and leads.

E



F

## MECHANICAL SCREW JACKS

ActionJac™ Worm Gear Screw Jacks are produced in standard ball and acme screw actuated models with multiple configurations available per model size. All jacks offer customized travel lengths to meet application requirements. Inch and metric models available.

## ELECTRIC CYLINDER ACTUATORS

ActionJac™ electro-mechanical actuators are produced in standard ball and acme screw actuated models with multiple capacities and travel rates available. All cylinders offer customized travel lengths to meet application requirements.

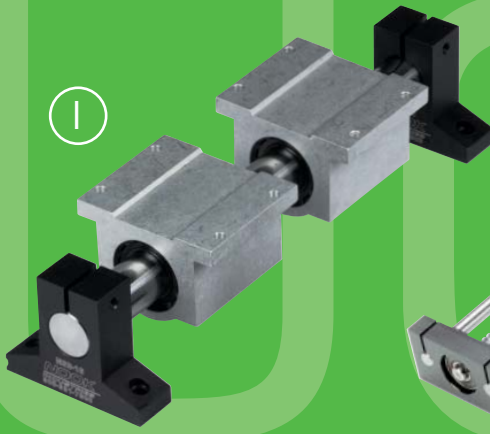
G



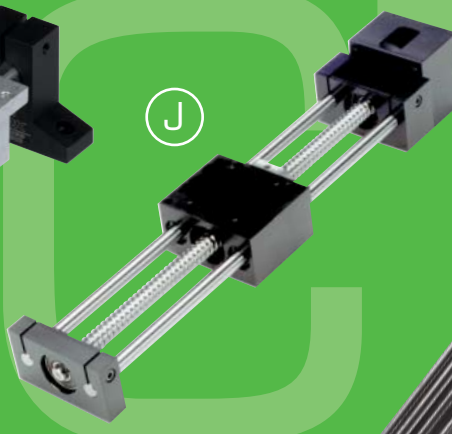
H

## COMPACT LINEAR ACTUATORS

CC™ and Minilift™ electro-mechanical actuators are produced in standard lengths with ball screw or acme screw actuation for compact, high performance and accurate positioning. A complete line of accessories offers customizable solutions to meet application requirements.



SHAFTING, BEARINGS & PILLOW BLOCKS



LINEAR SLIDE SYSTEMS



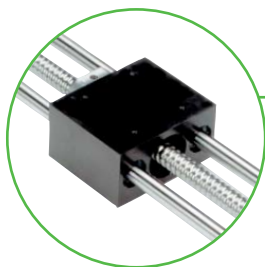
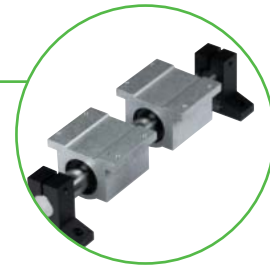
BALL SPLINES



SPECIALIZED LUBRICANTS

## SHAFTING, BEARINGS & PILLOW BLOCKS

PowerTrax™ offers a full range of self-aligning linear bearings, pillow blocks, solid shell linear bearings and instrument bearings that are matched with Nook precision ground 60 HRC shafting. Metric shafting, bearings and pillow blocks are also available.



## LINEAR SLIDE SYSTEMS

PowerTrax™ linear slides offer a full range of pre-assembled and ready to mount slide systems. Systems include manual and automated drive options, protective boots, special motor mounts and custom carriage plate machining. Inch and metric models available.



## BALL SPLINES

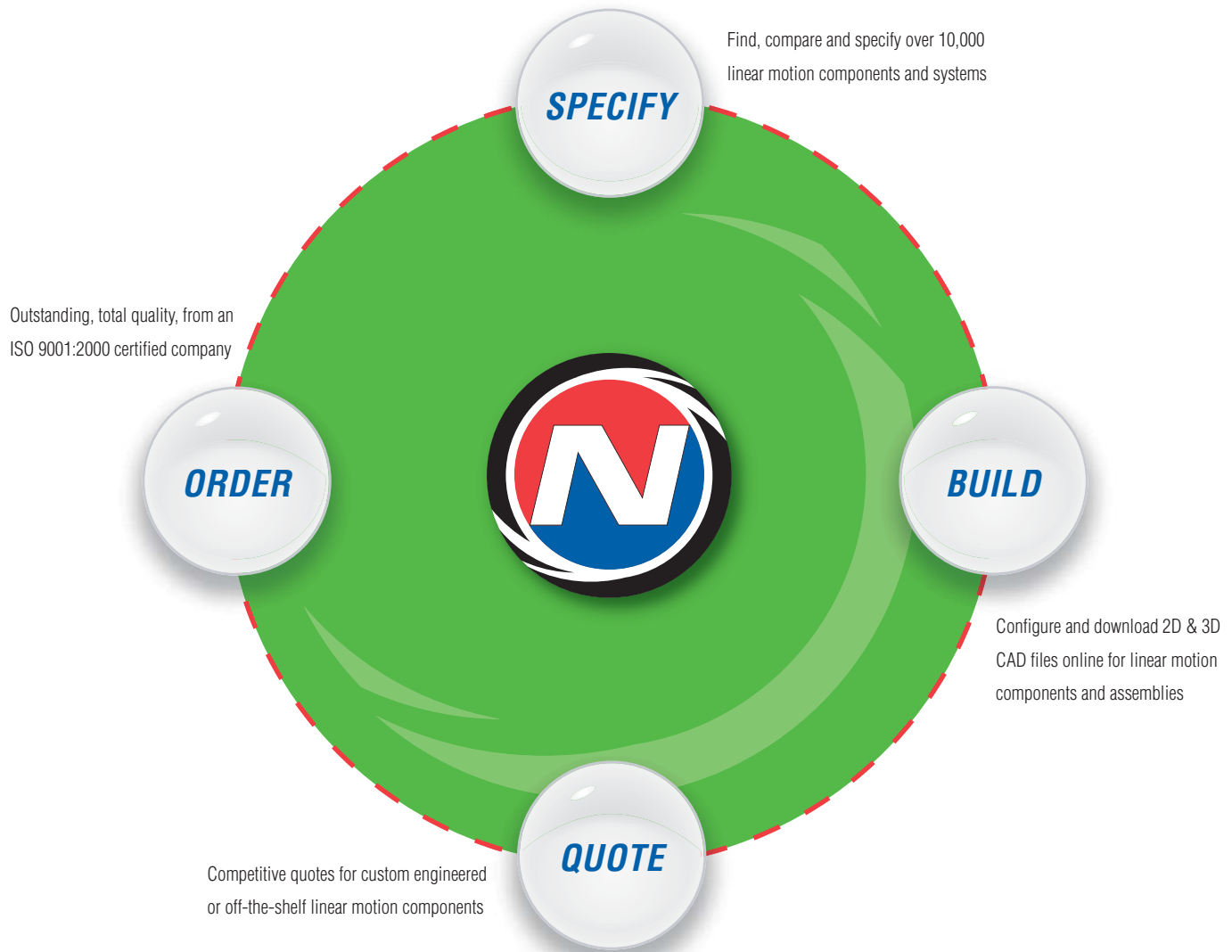
PowerTorq™ precision ball spline assemblies allow friction-free linear motion while transmitting torque. With reliable performance and high efficiency these ball splines are utilized to replace conventional splines. Standard and high performance outer races are available.

## SPECIALIZED LINEAR PRODUCT LUBRICANTS

Proper lubrication is the key to continued performance and reliability for ball screw, acme screw and linear assemblies. Nook E-900 ball screw, PAG-1/E-100 acme screw and LBL-1 linear bearing lubricants facilitate the installation and performance of product by providing exceptional wear protection, reducing friction and inhibiting corrosion.



# The heart of a **Good Product**



## Manufacturing and effective **Concurrent Engineering**

Vertically integrated manufacturing capabilities at Nook Industries allows custom engineering, design and fabrication of assemblies to application specifications and strict engineering standards. With on-site control of thread rolling die design and manufacturing, we offer flexible, efficient customization with design validation through the use of precision measurement equipment.

Nook Industries knowledgeable design and manufacturing engineers explore innovative methods to ensure product safety, reliability and performance. Throughout the manufacturing process, products are fully inspected to verify they meet or exceed performance requirements.

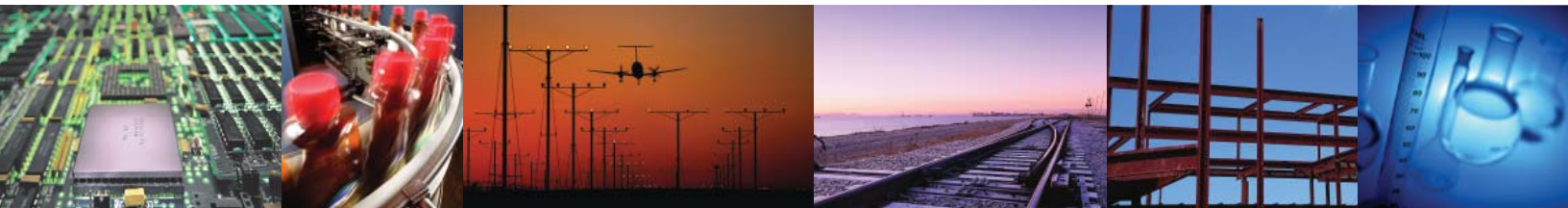


# Markets Segments

Nook Industries produces precision, cost-effective solutions utilizing leading edge technology and manufactured equipment. Whether the application requires an off-the-shelf linear motion component or a custom engineered solution, Nook Industries offers performance with the high quality our customers have come to expect.

## Nook products are used in many market segments including:

- Military and Defense
- Aerospace
- Communications
- Electronics
- Semiconductor
- Medical/Diagnostics
- Automotive
- Transportation and Tire Manufacture
- Metals Processing
- Chemical
- Food and Beverage
- Forestry
- Packaging
- Paper
- Factory Automation
- Tooling and Fixturing
- Converting
- Instrumentation and Analysis



“ . . . TO SUPPLY THE ACTUATION WE NEEDED . . . AT THE COST POINT WE NEEDED, WAS IMPRESSIVE. NOOK WAS AN IMPORTANT FACTOR THAT HELPED US TO SUCCEED. ”

JOHN LANARI  
Project Manager, Uni-Systems

## Online 2D and 3D CAD Models

Nook Industries provides a robust and flexible solution for downloadable CAD files through its company website. This interactive online catalog, allows customers to configure, view and download 2D drawings and 3D models of Nook products directly into their native design programs.

This time-saving tool provides a cost-effective and efficient means for generating complete linear motion assemblies in minutes. Reference numbers created online provide a part number to request a quote.



acme screw assemblies



ball screw assemblies



linear slide systems



electric cylinders



screw jacks

## Our people A phone call away

At Nook Industries, our dedication to achieve complete satisfaction starts at the top. That's why every employee from the CEO to our Application Engineers are just a phone call away.

We employ experienced engineers, professionals and machinists to provide the knowledge and perspective you need. We don't just offer prepackaged 'off-the-shelf' products; we delve into your application challenges and give you innovative solutions to reduce cost and improve performance.

Our knowledgeable ESG Application Engineers, Business Development and Customer Service departments work together to provide stellar service with integrity, enthusiasm and competence. We believe in what we sell and have the tenacity and commitment to make things happen.



## engineered solutionsgroup

The Engineered Solutions Group "ESG" combines state-of-the-art design tools and engineering to extend your ability to design a linear motion system to fit your application.

**Contact our ESG group for assistance:  
216.271.7900 or 800.321.7800**

“ NOOK WAS THE ONLY VENDOR WE CONTACTED  
THAT COULD HANDLE THE LONG-LIFTING  
SHAFTS OF 26 FEET AND DELIVER THE BALL  
SCREW JACKS ON-TIME AND WITHIN OUR BUDGET. ”

STUART KYDD  
Project Manager  
Isleburn Mackay & Macleod Ltd.



216.271.7900 • 800.321.7800 • 216.271.7020 fax  
4950 East 49th Street • Cleveland, Ohio 44125 – 1016 USA  
[www.nookindustries.com](http://www.nookindustries.com)



NCC-4/05



Nook Industries products are available from your authorized Nook Industries product distributor. Many are members of the trade associations whose logos are shown

Nook Industries, the Nook Logo, ActionJac, PowerAc, PowerTrac and PowerTrax are trademarks of Nook Industries, Inc. All other trademarks are the property of their respective owners.