

## Power Transmission Engineering

### Engineering Showcase 2018

**O**ne of our goals at *Power Transmission Engineering* is to help you understand, identify and select the best technology for your mechanical power transmission or motion control applications. With every project, you have to decide which components to use, and which suppliers, based on functionality, quality and price. We aim to help you make *informed* decisions by providing the latest information on current technology, especially when it comes to mechanical components.

With that in mind, we are pleased to present our fourth annual Engineering Showcase, a celebration of some of the leading products and companies in mechanical power transmission. In the pages that follow, you'll find examples of engineering excellence and technological know-how in the field of gears, drives, couplings, machine parts and other mechanical components.

This guide is meant as a complement to our annual Buyers Guide and our permanent online directory of suppliers at [powertransmission.com](http://powertransmission.com). In this special section, we have the opportunity to go into more depth in describing the products and capabilities that make each of these suppliers unique.

So please browse through the section and read about the latest these suppliers have to offer. If you have an upcoming project that matches their manufacturing capabilities, we're confident that giving one of them the opportunity to bid will be well worth your efforts.



**Randy Stott,**  
**Associate Publisher & Managing Editor**

# Andantex USA Inc.

1705 Valley Road, Ocean Township, NJ 07712  
 Phone: 877-966-9151 (732-493-2812)  
 Fax: 732-493-2949  
 Email: [info@andantex.com](mailto:info@andantex.com)  
[www.andantex.com](http://www.andantex.com)

**Andantex USA Inc.** has been providing quality, unique gearboxes for use on industrial machinery for over 35 years, delivering engineered solutions using high-precision motion control components.

New products provide complete solutions to Rack and Pinion Axis drives:

The complete solution is built from standard building blocks:

- Racks & Pinions
- Precision Speed Reducer
- Automatic Lubrication System
- Engineering Selection and Guidance to Optimize the Solution
- Installation Instructions and Assistance



## The axis building blocks are:

**Modular rack & pinion** system providing standard rack sections and modules for building any length or precision linear axis.

## Four families of planetary reducers optimized for stiffness & precision.

**KRP+** Rack & Pinion dedicated planetary reducers are the SingleDRIVE flange mounted components in this family that provide minimum or ZERO-BACKLASH.

**DRP+** DualDRIVE & TwinDRIVE includes integral output pinions and monoblock housing for universal mounting and dedicated solutions to ZERO-BACKLASH rack & pinion and rotary table drives.

**KRPX** are Side Mounted high performance planetary Servo-Reducer dedicated to rack & pinion or rotary applications. The accessible side mounting offers a cost effective, easy to implement installation.

**SRP** High-Tech Planetary reducers with ISO 9409-1 output flange are used for heavily loaded precise positioning applications.

## HPG Servo-Worm Reducers for Positioning Applications

Servo-worm reducers offer cost-effective solution for material handling or pick and place requirements.

## Mini In-Line Servo Reducers

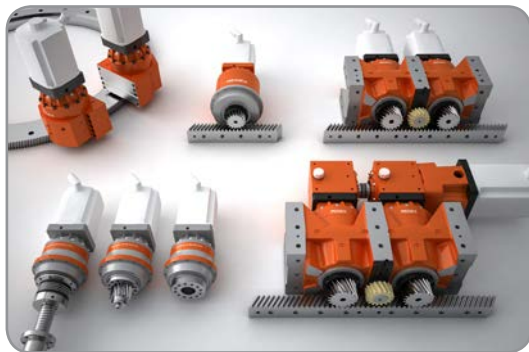
This range of planetary reducers is designed for use with servo-motors in all kinds of industrial applications.

## Automatic Relubrication System

The Flexxpump, a high-performance system to lubricate racks & pinions, open gearing, linear guideways, ballscrews and chain drives.

**These building blocks are combined together to provide axis drives with the correct balance of precision, power and price for the following applications:**

- Axes requiring precise positioning and repeatability
- ZERO-BACKLASH positioning and contouring drives
- Horizontal or vertical axes drives



## These applications are found in the following industries:

- Machine Tool: Gantry Milling Machines, Horizontal Boring Machines, Large Horizontal & Vertical Lathes
- Carbon Fiber Placement Machines
- Material Handling Pick & Place Robots
- Ultrasonic Inspection Machines
- Cutting Machines: Laser, Waterjet, Plasma, Stone

# ANDANTEX USA Inc.

# 2018 Engineering Showcase

## Stock Drive Products/Sterling Instrument (SDP/SI)

250 Duffy Avenue, Hicksville, NY 11801

Phone: 516-328-3300

Toll Free: 800-819-8900

Fax: 516-326-8827

Email: [sdp-sisupport@sdp-si.com](mailto:sdp-sisupport@sdp-si.com)

[www.sdp-si.com](http://www.sdp-si.com)

### SETTING IDEAS INTO MOTION

Stock Drive Products/Sterling Instrument is a leading manufacturer of timing belt and pulley drive systems, precision gears, gear assemblies, molded components, and other machined parts.

SDP/SI stocks a wide selection of small mechanical components that can ship the same day. Extensive online resources include design tools, a library of technical information, 3D CAD models, and detailed product specifications. SDP/SI engineers provide technical support and custom solutions.

Find the parts you're looking for; get the new SDP/SI Inch Master Catalog.

### SDP/SI PROVIDES SOLUTIONS FOR MOTION CONTROL & SMALL POWER TRANSMISSION APPLICATIONS

Stock Drive Products/Sterling Instrument (SDP/SI) is a manufacturer of motion control and small power transmission components. Design engineers and original equipment manufacturers rely on SDP/SI for

high-quality components, subassemblies, and engineering expertise. As a company founded and managed by engineers

we understand and respond to the developing needs of our customers better than anyone.

Standard sizes or customized, our precision gears,

high-quality machined parts and molded components can be utilized in a wide variety of applications and industries.

SDP/SI manufactures thousands of inch and metric, precision and commercial quality, small mechanical components. With years of application and product experience our engineers can assist in selecting the best part for your need. We also manufacture custom components and assemblies to your exact specifications.

Stock Drive Products/Sterling Instrument is a Designatronics company, serving customers globally since 1950. ISO 9001:2015 + AS9100D registered.

### CUSTOMIZED COMPONENTS AND ASSEMBLIES

SDP/SI offers a wide variety of products and services used in applications worldwide, including aerospace, defense, medical, and commercial.

- Timing Belts and Pulleys
- Precision Gears
- Precision Gearboxes
- Precision Machined Components
- Molded Components
- Miniature Components
- Mechanical Assemblies
- Contract Manufacturing



# Napoleon Engineering Services (NES)

1601 Johnson Street, Olean, NY 14760

Phone: Toll-free (in the US and Canada) 877-870-3200

Outside of North America 716-372-6532

Fax: 716-372-1448

Email: [sales@nesbearings.com](mailto:sales@nesbearings.com)

[www.nesbearings.com](http://www.nesbearings.com)

## Napoleon Engineering Services

(NES) specializes in custom bearing manufacturing. We are also the largest independent bearing inspection and bearing testing facility in North America. Our goal is to empower you with specialized bearing solutions related to custom bearing manufacturing and inspection and testing.

### Why should NES be your bearing solution?

- Corrosion Resistant
- Temperature Extremes
- Load Extremes
- High Fatigue Life
- High Life Materials
- Cost Effective Solutions
- Bearing Size Range 20–350 mm
- Short Lead Times
- Small Production Runs
- High Precision Capabilities
- Advanced Design Technologies
- Over 100 years combined application experience and engineering knowledge
- Made in America



### Custom Bearing Manufacturing

NES's design engineering and manufacturing capabilities provide customers with custom designed bearings without long lead times. Our knowledge and expertise allow us to analyze your application conditions and develop an advanced product that will meet or exceed your needs.

### Types of Custom Bearings:

- Deep groove ball bearings
- Angular contact ball bearings
- Double-row self-aligning ball bearings
- Needle roller bearings
- Cylindrical roller bearings

### Bearing Inspection & Testing

NES is the creator of inspection & testing programs supporting global bearing sourcing & bearing qualification. NES has been leading OEMs through the global bearing qualification process for 20 years providing technical information through bearing inspection, modeling and testing programs to evaluate bearing design, manufacturing capability, overall quality of workmanship, and the relationship these attributes have on bearing life. No other source has the experience, capacity or capability to service your bearing qualification needs like **NES – the World Leader.**

### Industries & Applications

- Aerospace
- Defense
- Oil & Gas
- Power Generation
- Marine
- Industrial
- Transportation
- Gear Drives
- Medical
- Food Processing
- Agriculture
- Pumps/Turbines
- Generators
- Off-Highway
- Certifications
- ISO 9001:2008 Certified
- AS9100C Certified



# 2018 Engineering Showcase

## R+W Coupling Technology

254 Tubeway Drive, Carol Stream, IL 60188

Phone: 630-521-9911

Fax: 630-521-0366

Email: [info@rw-america.com](mailto:info@rw-america.com)

[www.rw-america.com](http://www.rw-america.com)

**R+W** has always stayed in the forefront of breakthrough coupling technology and does its best to exceed customer's requirements and expectations. An ever-expanding product line helps them design the most optimal solution for nearly every application in any industry.

The most recent expansion of the ST product line shows the commitment that this company has to take on new markets and provide more customers with overload protection. A newly updated torque limiter department with its own facility has been created to focus on customization efforts. This line of new industrial safety clutches has undergone vigorous testing not only at the company's R&D center, but also at partnered Universities in Germany including RWTH Aachen and University of Bayreuth. The added models feature new sizes as well as connection methods to provide more options than ever before.

Over the past 25 years, R+W has established itself as a precision couplings expert, and with these new safety coupling additions it plans to expand its expertise into the industrial sector as well. As always, customer's demands are top priority as engineers are ready to assist with customized solutions for complex coupling applications. Find out what the coupling technology leaders can do for you and get the best connection, worldwide.

**RW-AMERICA.COM**



**R+W**  
A POPPE + POTTHOFF COMPANY



# Schaeffler Group USA Inc.

308 Springhill Farm Rd., Fort Mill, SC 29715

Phone: 803-396-3643

Fax: 803-548-8599

Email: [info.us@schaeffler.com](mailto:info.us@schaeffler.com)

[www.schaeffler.us](http://www.schaeffler.us)

## Schaeffler Engineering: Greater Than the Sum of Our Parts

When it comes to bearings, Schaeffler, together with our INA and FAG brands, has always been at the forefront of technological innovation. Industry firsts - such as the development of the needle roller & cage assembly, or the groundbreaking ball grinding machine that is regarded as the foundation of the entire rolling bearing industry - have earned Schaeffler a unique distinction among the world's great bearing companies.

With nearly 90,000 employees working in approximately 170 locations in over 50 countries, Schaeffler is one of the world's largest technology companies in family ownership.

In addition to rolling bearings for practically any application, linear bearings and guidance systems are also a vital part of Schaeffler's product portfolio. Unrivalled in scope and versatility, Schaeffler's linear product lineup ranges from shafts with linear ball bearings and monorail guidance systems

to sophisticated actuators with drives and control systems, plus special coatings and every conceivable accessory.

But that's only the start. Schaeffler's linear portfolio is based on a modular concept that goes far beyond mere components. We can design a complete system solution tailored to the customer's specific application - from large gantry robots to intricate circuit board inspection systems. In fact, many of our linear guidance systems started out as solutions to customers' needs! Case in point: Schaeffler's ingenious H-Bot XY positioning system.

Sometimes, of course, a Schaeffler solution

comes about because a customer's needs were not being met by the conventional standard. Such is the case with Schaeffler's innovative differential roller screw. Within the pantheon of traditional mechanical/linear drive systems, the screw category has been limited to lead screws, ball screws and roller screws.

Until now, that is.

In response to a customer's request for a solution that better addressed its ambitious price-performance target, Schaeffler recently developed the PWG differential roller screw: a new option that offers the high forces of a traditional roller screw, but at a price point closer to a ball screw.

So while innovative products make up the heart of Schaeffler's offerings to our customers, service represents the soul of what we do. Because when it comes to linear guidance systems, Schaeffler has all the pieces; you only have to supply the puzzle. Together, we'll create the perfect linear solution... yours.

# SCHAEFFLER



**PWG Differential Roller Screw**



**H-Bot XY Positioning System**

# 2018 Engineering Showcase

## Zero-Max

### Innovation & Leadership

For over 60 years, Zero-Max, Inc. has created innovative solutions to motion control problems worldwide. With strategic distribution points located throughout the world, Zero-Max can deliver your motion control solution.

The Zero-Max team of application specialists can engineer a solution to meet your motion control requirements. With many years of application experience Zero-Max excels in these areas:

- Experienced Practical Application Advice • Responsive to customer needs • Predictable high quality • Fast Delivery
- Integrity • High Value • ISO 9001: 2008 certified • Configurable 3D CAD downloads

Zero-Max Primary Product lines include: Shaft Couplings and Torque Limiters for Servomotors, Linear Actuators, Wind Turbines, Printing Presses, Label Printing, Converting Machines, Machine Tools, Test Equipment, Feedback devices, Packaging Machines, Process Equipment, Dynamometers, and other high performance applications.



**ZERO-MAX**

Variable Speed Mechanical Drives for Agricultural, Printing, Peristaltic Pumps, Food Processing, Pharmaceutical, Packaging, and many other applications.

Overhung Load Adaptors for Timber processing, Brush Clearing, Road Construction, Marine, and other rugged applications that need overhung load protection for hydraulic pumps and motors.

Keyless Locking Bushings for Packaging, Processing, Tooling, Automated Assembly, and applications that would benefit from the unique qualities of these bushings.

## Gear Technology

**Gear Technology** is where the world turns for information about gears and gear manufacturing. We reach a broad-based audience of gear industry professionals involved with every phase in the life of gears and geared products, from conception to design, from design to manufacturing, from manufacturing to inspection, from inspection to purchase and from purchase to end use.

Our magazine, website and e-mail newsletters are read in more than 60 countries around the world, at huge multinational corporation and small job shops, in high-tech engineering offices and on the factory floor.

If you have an interest in gear design, engineering or manufacturing, you should subscribe at: [www.geartechnology.com/subscribe.htm](http://www.geartechnology.com/subscribe.htm)

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1840 Jarvis Ave., Elk Grove Village, IL 60007 USA

Phone: 847-437-6604

Fax: 847-437-6618

E-mail: [publisher@geartechnology.com](mailto:publisher@geartechnology.com)

[www.geartechnology.com](http://www.geartechnology.com)



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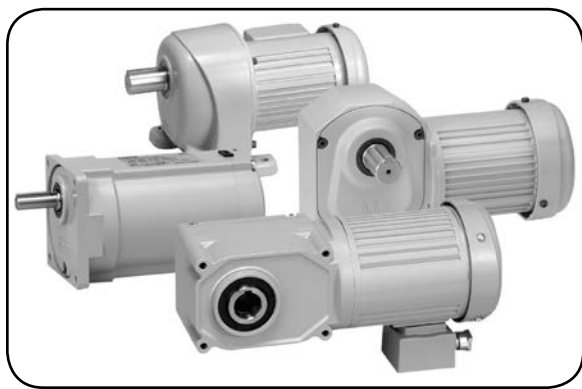
# Brother Gearmotors

A division of Brother International Corporation, Brother Gearmotors offers a wide range of high-quality, sub-fractional AC gearmotors and reducers in demanding industries such as food & beverage, packaging and material handling. Brother Gearmotors is one of the world's largest fine-pitch gear manufacturers, meeting ever-increasing demands for smaller, lighter, more reliable and energy-efficient power transmission and motion control components.

Virtually maintenance-free, Brother's ie3 gearmotors are sealed for life with universal mounting options that offer maximum flexibility. ie3

gearmotors feature a hypoid/helical combination that maintains a compact drive package at higher ratios, and also run cooler and with less noise. A key factor in their enhanced durability is Brother's ultralong-lasting e-coat paint.

Among other offerings, the Brother Gearmotors recently introduced a line of Brushless DC gearmotors (BLDC) ideal for environments requiring virtually maintenance-free operation and accurate speed control, as well as operation over a wide speed range. Cost-effective, compact and long-lasting, the brushless gearmotors are especially desirable for settings where brush dust contamination must be avoided, or where brush contact arcing could affect sensitive equipment.



200 Crossing Blvd., Bridgewater, NJ 08807-0911

Phone: 866-523-6283

Customer Service: [garmotors@brother.com](mailto:garmotors@brother.com)  
Technical Support: [garmotortech@brother.com](mailto:garmotortech@brother.com)

[www.BrotherGearmotors.com](http://www.BrotherGearmotors.com)

**brother**  
at your side

# Sesame Motor

Sesame Motor Corporation was founded in 1990 as a manufacturer of motors and gear reducers in Taiwan. Our main products include precision **planetary gearbox, gear reducer, gear motor** and **AC motor**. SESAME lines of planetary gearbox offer a wide variety of size, precision levels and configurations to satisfy the full range of applications from highly dynamic control to very simple motion profiles. All are competitively priced and provided in industry standard dimensions to help users select the best power transmission solution.

Step forward is the only way to stay ahead in this time of rapidly changes. Sesame Motor well experienced production and engineering teams offer support and quick respond to unique demands and customized requirements. Products are provided to be used in machine tools, industrial robots, semiconductor devices, aerospace industry, medical and rehabilitation equipment, palletizer robots, green energy related industries and precise automation equipment with servo motors.

The clients are also assured of receiving **CE, CCC** and **UL** certified products by an **ISO9001** and **ISO14001** certified company.

180 Covington Dr, Bloomingdale, IL 60105

Phone: 630-980-1133

Email: [info@diequa.com](mailto:info@diequa.com)  
Email: [info@sesamemotor.com](mailto:info@sesamemotor.com)

[www.diequa.com](http://www.diequa.com)  
[www.sesamemotor.com](http://www.sesamemotor.com)



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