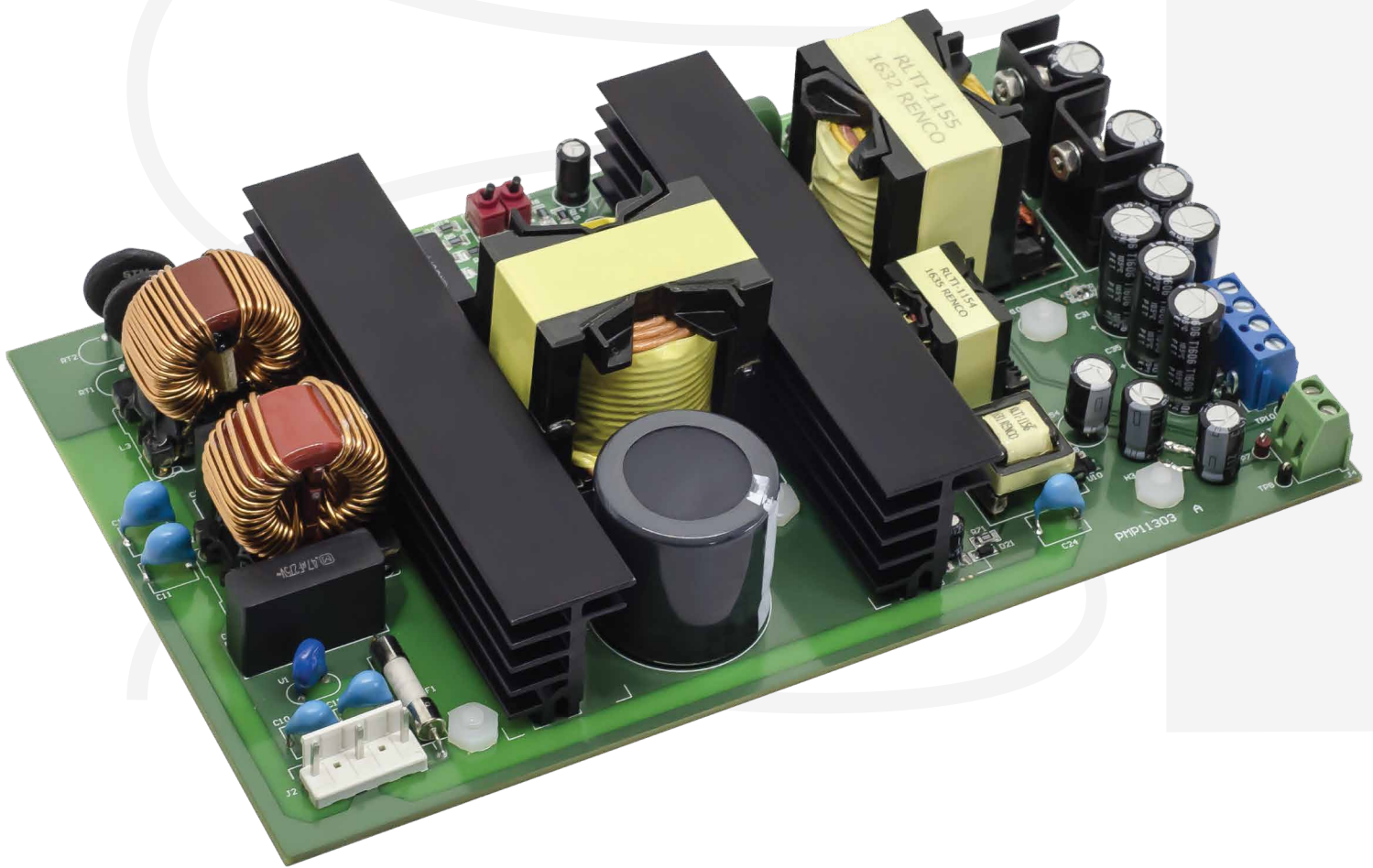




RENCO ELECTRONICS

DESIGNED & ENGINEERED QUICK-TURN
CUSTOM MAGNETICS



Standex Electronics *at a Glance*

Publicly traded

division of Standex
International Corporation
(NYSE:SXI)

Fairfield, OH

division headquarters

Global

geographic coverage through
facilities in North America,
Europe, and Asia

Diverse

capabilities for custom or
standard product solutions

\$240M

in annual revenue

1,500+

employees worldwide

70+

years of innovation

1960 National Transistor
1969 Paul Smith Company

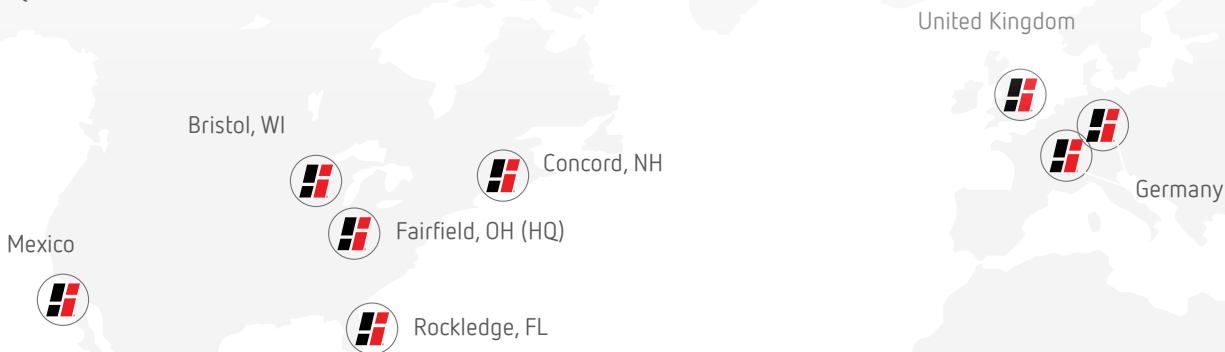
1960



Global Locations

Standex Electronics

Division Headquarters
4150 Thunderbird Ln
Fairfield, OH 45014 USA
+1.866.STANDEX (+1.866.782.6339)
info@standexelectronics.com



Standex Electronics has been innovating for over 50 years by developing new products, partnering with customers, and expanding our global capabilities. We have also grown our global reach and local touch through synergistic acquisitions.

1970	1990	2000	2010
1971 Comtelco 1973 Underwood Electric 1974 Van Products	1998 ATR Coil / Classic Coil Winding	2001 ATC-Frost Magnetics 2002 Cin-Tran 2003 Magnetico /Trans America 2004 Lepco 2008 BG Laboratories	2012 Meder Electronic 2014 Planar Quality Corp. 2015 Northlake Engineering® 2017 OKI Sensor Device Corp. 2018 Agile Magnetics 2020 Renco Electronics, Inc.

ATC-FROST
Magnetics Inc.



NORTHLAKE ENGINEERING®
A STANDEX ELECTRONICS COMPANY

Agile
Magnetics
A STANDEX ELECTRONICS COMPANY

What We Do

PARTNER | SOLVE | DELIVER®



PARTNER // TEAMWORK

We dig deep into the customer's project and develop relationship through our thought leadership, expertise, team, and global footprint.



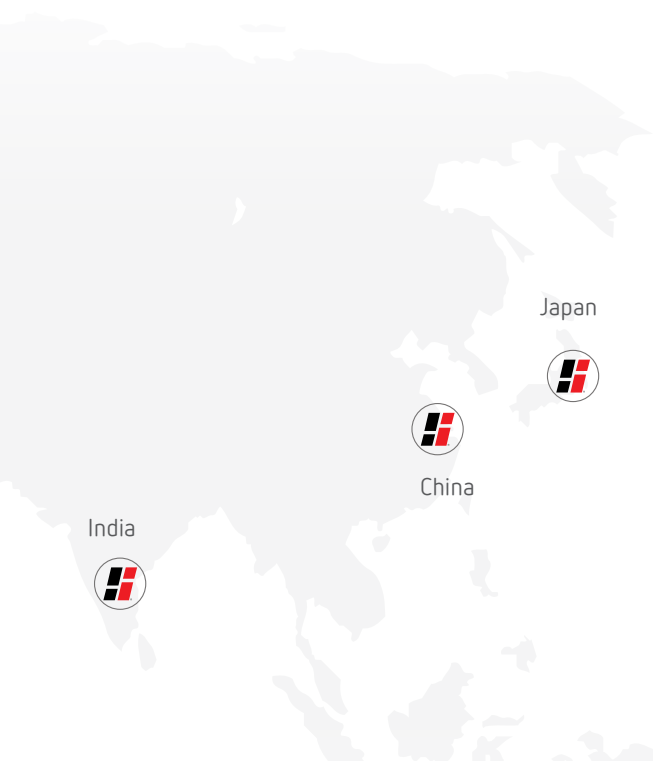
SOLVE // UNDERSTAND

Confronting a challenge to solve through our diverse products and dynamic capabilities.



DELIVER // QUALITY

Help customers win through delivering solutions and products that address your needs as a business.



Customer-Focused Solutions

Standex Electronics is a worldwide market leader in the design, development, and manufacture of standard reed switch-based solutions & custom magnetics and power conversion components and assemblies. Through customer-first attitude, and our collaborative approach, we help customers win in the market. We **partner, solve, and deliver®** custom engineered solutions to meet the demands of our customers across all major markets. Our versatile engineering and manufacturing expertise allows us to produce reliable high-quality transformers, inductors, chokes, and reactors used in a wide variety of assemblies.





IATF 16949
CERTIFIED



NIST



Capabilities

LEAN MANUFACTURING

- 52 to 5awg Magnetic Wire Winding
- Foil, Flat, & Square Wire Winding
- Automatic CNC Winding
- Bobbin, Layer & Self-Supporting Winding
- Toroidal Hook & Shuttle Winding
- Thermoplastic & Thermoset Overmolding
- Impregnation, Casting & Potting
- Void-Free Vacuum Potting
- NASA Certified Soldering
- Wire Prep & Harness Assembly
- Injection Molding
- Metal & Plastic Fabrication
- Complete, In-House Machine Shop
- Laser Welding

TESTING & VALIDATION

- Automated Transformer Testing
- Medical Safety Testing
- High Voltage / Partial Discharge Testing
- Temperature Rise Testing
- 2-D / 3-D Microfocus X-ray Inspection
- Digital Microscopic Inspection
- MIL-STD-202 In-House Qualification
 - Mechanical, Shock & Vibration
 - Burn-In & Life Testing
 - Thermal Shock & Temperature Cycling
 - Humidity, Salt Fog, & Solderability
 - Moisture Resistance & Seal Testing

ENGINEERING

- 3-D CAD Modeling
- 3-D Printing
- Mechanical Design & Packaging
- Rapid Prototyping
- Magnetics Simulation Software
- Mechanical, Thermal & FEA Analysis
- Plastic Mold Flow Simulation
- APQP Project Management
- Custom Bobbin/Header Tooling
- Custom Core Tooling
- Safety Agency Compliance Services
- Mission Critical Design Services

QUALITY & CERTIFICATIONS

- AS9100 Certification
- ISO9001 Certification
- IATF16949 Certification
- ITAR Compliance
- NIST Compliance
- Regulatory Agency Approvals
- PPAP & First Article Inspection
- AS9102 First Article Inspection

AEROSPACE & MILITARY // ALTERNATIVE ENERGY // AUTOMOTIVE (EV) & TRANSPORTATION
SMART GRID & METERING // INDUSTRIAL & POWER DISTRIBUTION // ELECTRIC POWER & UTILITIES
TEST & MEASUREMENT // MEDICAL // SECURITY & SAFETY // HOUSEHOLD & APPLIANCES

RENCO WCO

USA Facilities & Headquarters

Renco Electronics has been designing and manufacturing coils and transformers since 1955. Our state-of-the-art facility has over 50,000 square feet of manufacturing space on 14 acres. In our facility, we design, perform reliability testing, and manufacture transformers and coils for worldwide distribution.



ORLDWIDE



Asia Facilities

With over 100,000 square feet of manufacturing space on 16 acres, our Asia facilities have the capacity to produce millions of transformers and coils per month. In addition to manufacturing, our Hong Kong Logistics center makes the distribution channels easy and free flowing. Sales and engineering design support in Asia combine to make Renco the best engineered solution supplier available.



RENCO HEADQUARTERS

ROCKLEDGE, FLORIDA



Engineering team with a well-rounded background in transformer and inductor design



Our prototype department quickly produces samples.

Renco Electronics is an engineering driven company. US Engineering staff and Field Application Engineers are focused on helping clients bring new and improved products to market by providing valuable engineering services.

US engineers work with the Prototype Department to create designs to work within clients' parameters. Once the initial design is complete, the prototype is created to test in the client's application. This dual-layered process allows Renco to quickly provide custom samples.



Quick design and development of in-house tooling.

Renco Electronics operates as a vertically integrated company. The in-house machine shop and manufacturing expedites production and prototyping process since all resources are all under one roof at the Rockledge, Florida facility.

The design process starts with engineering and flows to the machine shop.



Surface grinder from gapping cores.



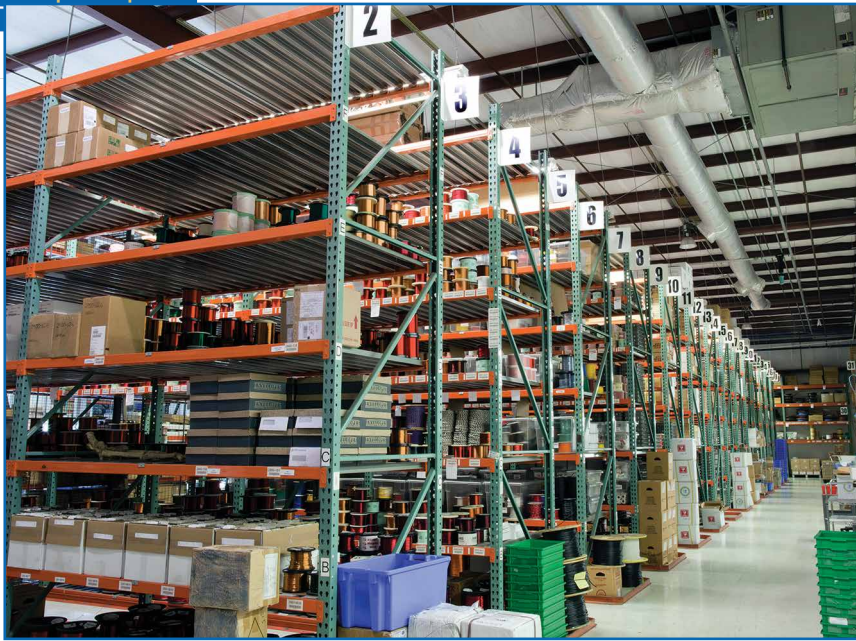
Complete in-house machine shop with core gapping capability.



Miltronics CNC Machine.



Precision tape slitting.



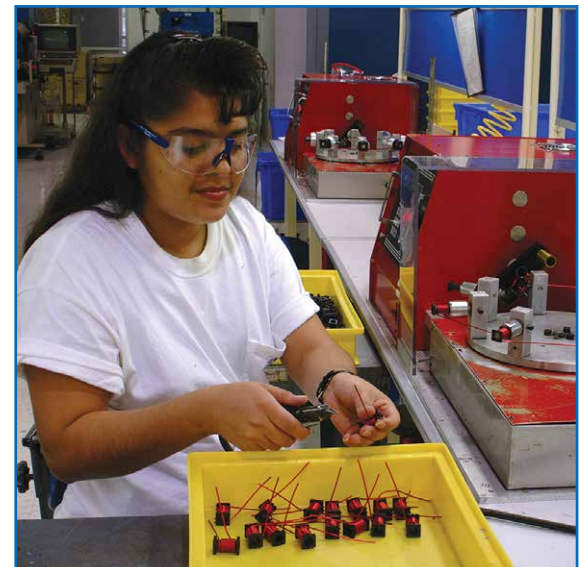
Renco Electronics maintains an extensive inventory of goods at the Rockledge, Florida headquarters. This inventory supports rapid prototyping and initial production requirements. The domestic facility also stocks Asian bobbins and cores to create initial designs using the same material used in final production to avoid performance issues.



Programmable winding speed, pitch and traverse.



High-speed, fully-automated coil winding.



High-speed turret winding.



Computer controlled multiple piece winding up to 12,000 rpm.

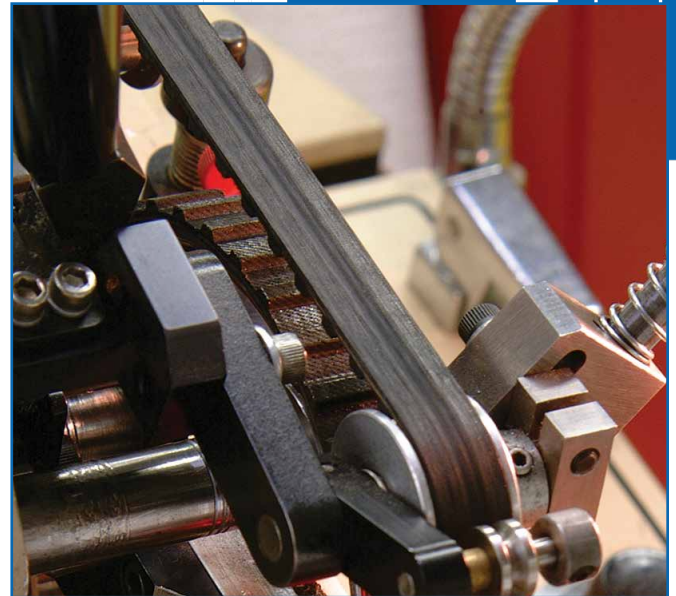
Renco boasts a wide variety of manufacturing equipment to support all magnetic requirements. Semi and automatic equipment are present throughout the USA and Asian facilities. Process supervision enhances quality assurance.



Process controlled flow manufacturing.

With our varied manufacturing lines, Renco easily handles small and high volume requirements. Each manufacturing associate undergoes specialized training in magnetic manufacturing.

Renco operates a unique manufacturing approach, which is highly flexible to quickly change to new configurations for different product specifications.



State-of-the-art toroid winding.



Specialized transformer techniques.



Heavy gauge toroid pull winding line.



Heavy gauge toroid winding up to #8 AWG.

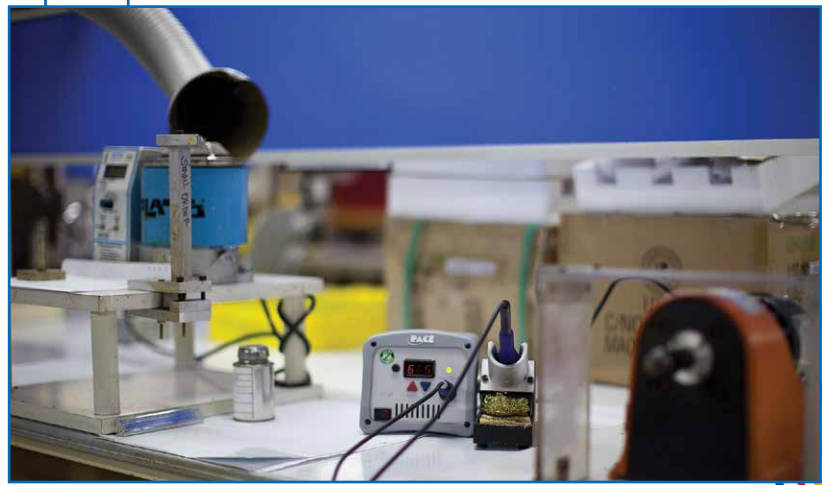


Continuous process monitoring.

Supervisors regularly check the manufacturing during the process to ensure quality and consistency.



Wave soldering to eliminate contamination.



Soldering and wire-stripping tools of the trade.



Epoxy dispensing and curing equipment.



These images of the manufacturing floor in the Rockledge, Florida Headquarters show a variety of equipment with advanced manufacturing capabilities. Renco continuously adds new equipment to stay on the leading edge of magnetics manufacturing. Renco maintains the capital resources to invest in equipment for the best interest of the company's clients.

Attention to detail and precision are hallmarks of Renco manufacturing throughout the production process.

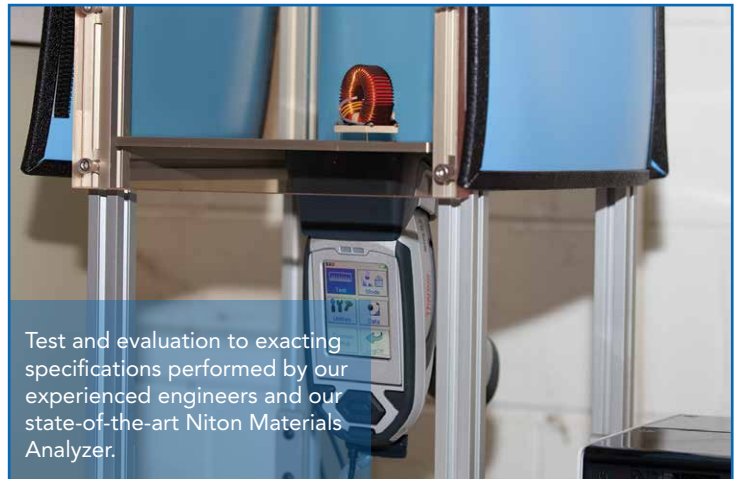


Custom designed dual vacuum impregnation system.



Vacuum varnishing with precise level control.

100% TESTING

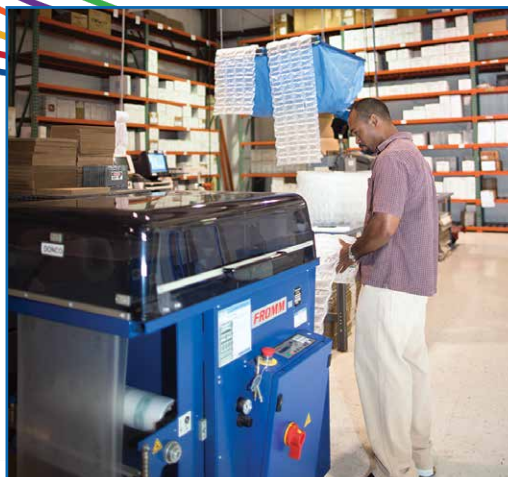


Test and evaluation to exacting specifications performed by our experienced engineers and our state-of-the-art Niton Materials Analyzer.



Renco uses a "first-article" approach to product manufacturing. The process builds a product through to completion prior to a full line run to ensure quality.

Sophisticated quality testing takes place at the final QA checkpoint. At this point, parts are run through a series of diagnostics in a matter of seconds. Results are delivered electronically to the quality department for review.



Another quality shipment handled with care.

RENCO ASIA FACILITY



Multi-head high-speed winding equipment.

Renco Electronics operates multiple manufacturing facilities in Asia. Additionally, the company maintains a logistics center located conveniently in Hong Kong for container consolidation and worldwide shipping. Raw materials are stocked at the logistics site to reduce production lead times.

Product designs created in the US use the identical raw materials as used in Asia for production. This doubly ensures repeatable quality products. Another element in the quality assurance process includes identical production line layouts in Asia and the US to maintain consistent flow manufacturing.



Varnish dipping process.



Continuous flow of production.



Start up production often begins in Florida and high volume orders are typically handled in Asian facilities. Customers value the low cost, high volume, ISO certified benefits of production in Asia.

Renco is staying ahead of customer demand, expanding the logistics center and staffing with quality engineering and sales personnel overseas.



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