



LONE WORKER PROTECTION

FALL PROTECTION

SUSPENSION TRAUMA PREVENTION





ASSIGNED MONITORING ATTENDANTS



Grace Web Portal Dashboard Custom Check-In Schedule TEXT/Email Notification



Receive a GPS Map Link Check-In System



LEARN MORE

GRACE GATEWAYS

Iridium Satellite/Cellular Mobile or Portable Worksite Models SALTI™ System Loop Test Indicator Supports up to 20 Grace Pendants



WORKFORCE® LONE Worker Pendant

Fall Detection
Manual Panic Button
Motion Detection
GPS Location



THE SECRET TO

UNDERGROUND POWER TRANSMISSION



OUR WUNPEECE TRANSMISSION SPACERS REDEFINE THE INDUSTRY STANDARD FOR UNDERGROUND POWER TRANSMISSION INSTALLATIONS.
WITH PRECISION ENGINEERING AND UNMATCHED QUALITY.

JOIN THE RANKS OF INDUSTRY LEADERS WHO TRUST UNDERGROUND DEVICES FOR THEIR POWER TRANSMISSION NEEDS.



VISIT WWW.UDEVICES.COM

AND EXPERIENCE THE FUTURE OF UNDERGROUND POWER INSTALLATION

TEC Contents · March 2025

Company Profile: Grace Industries Inc

PG 6 Aquiline Drones - Pioneering Drone Technology for Energy

and Utility

PG 16 Company Profile: Voltec Inc

PG 18 Ad Index

PG 4





Electric Motor Testing the need for on-going calibration requirements and the training to understand everything - there is no wonder the maintenance professional is overwhelmed. With the availability of new and upcoming technology, information overload can quickly set in when trying to put together the best maintenance solution. That's where we come in. EDE can demystify electrical testing programs, offer support, training programs and the high tech equipment to make your maintenance activities straight forward and motors and generators doing what they are supposed to do - run. We will help you Find the Way.

• 970/292-8207 • www.edeinst.com •



Vol. 25 Issue 3

PRESIDENT

Glen Hobson 205-441-5591 glen@handfmedia.net

ASSOCIATE PUBLISHER

Steven Goodwin 205-624-2181 steve@handfmedia.net

ADMINISTRATIVE DIRECTOR

Steven Hobson steven@handfmedia.net

EDITOR

Brandon Greenhill brandon@handfmedia.net

CREATIVE/ WEB DIRECTOR

Jacklyn Greenhill jacklyn@handfmedia.net

P.O. Box 1568 · Pelham, AL 35124 Phone: 205-441-5591 · Fax: 205-624-2181 www.theelectriccurrent.com info@theelectriccurrent.com



The Electric Current™ is published twelve times a year on a monthly basis by Southern Digital Publishing, Inc. The Electric Current™ is distributed free to qualified subscribers. Non-qualified subscription rates are \$57.00 per year in the U.S. and Canada and \$84.00 per year for foreign subscribers (surface mail). U.S. Postage paid at Birmingham, Alabama and additional mailing offices.

The Electric Current™ is distributed to to qualified owners and managers in the electrical industry. Publisher is not liable for all content (including editorial and illustrations provided by advertisers) of advertisements published and does not accept responsibility for any claims made against the publisher. It is the advertiser's or agency's responsibility to obtain appropriate releases on any item or individuals pictured in an advertisement. Reproduction of this magazine in whole or in part is prohibited without prior written permission from the publisher.

POSTMASTER: Send address changes to Southern Digital Publishing, Inc. P.O. Box 1568 Pelham, AL 35124 PRINTED IN THE USA





We're Proud to be the Electricians' Friend for Over 50 Years!



Saie

HDPE CUSTOM TEMPLATES

In Any Configuration Required



PVC Offset

Sizes 1/2" thru 6" Meets Flexible Mandrel Test Requirements



Sizes 1/2" thru 6"

Roll assembled conduit into caissons and under c(UL)us obstructions





IP1

Assemble Conduit Above Trench-No Workers Below -Prevents Injuries and Deaths. Also Allows Digging a Narrower Trench for Less: Excavation, Concrete, Slurry, Backfill & Shoring.

IP13A-F

Conduit Transition Coupli



PVC Schedule 40 & 80 Transitions in Less Than 5 Minutes





PVC/Alum

IP14a

PATENT PENDING

c(UL)us **End Bell** PATENT PENDING **Adapter** Schedule

40/80 PVC

Save Cost on the Rigid Nipple, Tape & Labor Use for Entire Job - Not Just for Repair

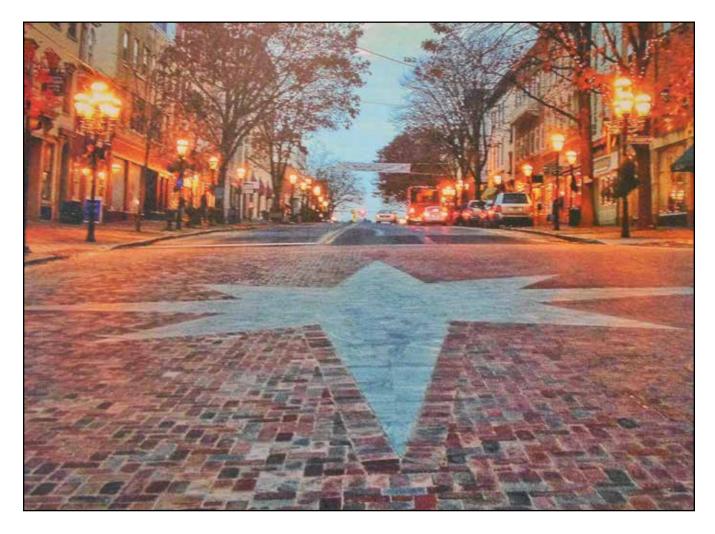
PVC/Liquidtite

1 Piece 1/2" thru 6" Schedule 40/80

Plus More Being Invented for **SAFER BETTER FASTER** Jobs . . . Call With Your Ideas!



Trace Industries



Grace Industries, Inc. is a proud, family-run business founded in 1986 by Ronald C. Check. Strategically located in Bethlehem, Pennsylvania, the heart of the Lehigh Valley, Grace is a site development and excavation firm specializing in complete site preparation packages for industrial and residential construction, roadway and bridge construction, and athletic field/facility construction.

Grace Industries prides itself on being one of the leading and cutting-edge civil site contractors in the region. Grace has access to over thirty years of civil construction strength, expertise, and value. Our dedicated team facilitates the effective and efficient completion of any project.

At Grace Industries, we live and work by a value system that places quality, reliability, and integrity above all business practices and principles. We are a highly committed and passionate team that embraces challenge and change head-on. Grace is constantly adapting and improving its civil construction techniques and procedures to ensure that all work is performed in strict accordance with current safety and technology standards.

www.graceconnectedsafety.com •



Busway & Plugs

Circuit Breakers

Fuses

Motor Control Centers

Panelboards

Safety Switches

Switchgear

Transformers

If we don't have what you're looking for, we find it.

GET 10% OFF

With code **ELECUR10**

Home of Thousands of Transformers, Breakers, Switches, Bus Plugs, Circuit Breakers and Motor Controls.



250,000sf of inventory



Every product certified



Quick Ship Fast lead-time

EMSCO stocks obsolete, reclaimed, and hard to find electrical components.

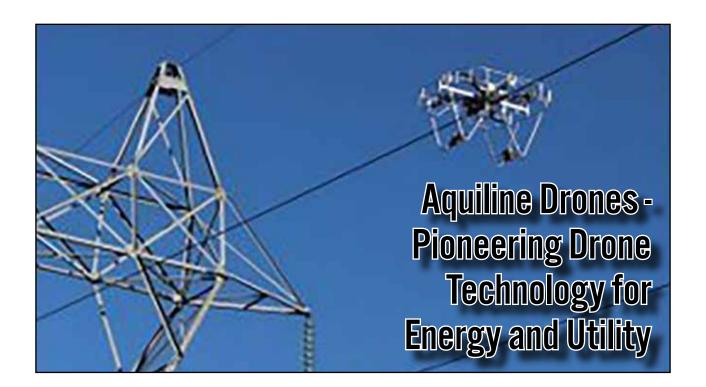
www.EMSCOMN.com



Get what you need, when you need it.

CONTACT US 800.328.1842

24-Hour Emergency Line



Aquiline Drones (AD) partners with Drone Volt (ALDRV) to advance LineDrone technology for power-line inspection services in the US.

Aquiline Drones (AD) signs historic licensing agreement with long-time partner Drone Volt SA (ALDRV) to introduce and provide electrical power line inspection services in the United States using the Line-Drone – a unique combination of advanced and pioneering technology.

AD, a leading U.S.-based drone technology enterprise, has announced a strategic partnership with Drone Volt to introduce and expand the capabilities of the LineDrone to the US market. Dubbed an engineering marvel, the LineDrone is a specialized unmanned aerial system (UAS) developed in collaboration with Hydro-Québec – Canada's largest energy producer. This groundbreaking technology is designed to revolutionize the inspection and maintenance of high-voltage power lines, by offering advanced, non-contact measurement solutions.

Hydro-Québec is renowned not only for its extensive hydroelectric power generation but also for its significant investments in research and development, particularly in robotics for power line inspection and maintenance. The company's research is primarily conducted through its Institute de recherche d'Hydro-Québec (IREQ), established in 1967.

Using artificial intelligence (AI) to control the drones and analyze acquired data – along with other pioneering technologies, Aquiline Drones will introduce and deploy LineDrone inspection services nationwide.



Maddox is the one-stop shop for your transformer needs

Founded by a team of industry veterans focused exclusively on the transformer and transformer-related needs of industrial and commercial clients.



Sell

Maddox stocks and sells the highest quality transformers from dry types and padmounts to substations.

Repair

With shops on both coasts Maddox inspects, tests, and repairs transformers to ensure that they are in top working condition.

Rent

With thousands of units in stock, Maddox rents out transformers for the temporary power needs of customers across North America.

Purchase

We offer a great price that includes handling all the transportation and environmental issue.

The LineDrone is the only drone - globally, capable of landing on live high-voltage lines (315,000 volts / 2,000 A) to conduct inspections by traversing the power lines using a unique motorized rolling system – LineOhm and LineCore probes, to analyze and document the condition of overhead conductors without having to de-energize the line. The LineDrone is also engineered to perform critical diagnostics on live transmission lines using state-of-the-art sensors to conduct high-precision inspections, including resistance measurements, corrosion assessments, and splice evaluations, without requiring power outages. This innovation significantly reduces operational risks while enhancing grid reliability and efficiency.

By reducing the need for costly helicopter and high-risk manual inspections, the LineDrone represents a safer, more cost-effective, and environmentally friendly alternative for the energy industry. With increasing demand for efficient grid management solutions, this collaborative effort aims to redefine how utility companies monitor and maintain their critical infrastructure.

Aquiline Drones will leverage its extensive expertise in autonomous drone operations and regulatory compliance to help deploy the LineDrone technology for utility companies and infrastructure service providers throughout the US.

"Our collaboration with Drone Volt aligns perfectly with our mission to deliver cutting-edge drone solutions that enhance safety, efficiency, and sustainability," said Barry Alexander, Founder and CEO of Aquiline Drones. "By incorporating advanced AI and cloud technology into the LineDrone system, we aim to set a new industry





Step 1: Remove Damaged Conduit



Step 2: Cut Split Duct Conduit to Fit



Step 3: Snap in



Step 4: Attach



Step 5: Finish Job in Record Time

REPAIR CONDUITIN A SNAP!

- No Tape
- No Plastic Straps,
- No Metallic Straps

NO KIDDING!

Designed especially for power, communications, and fiber optics







"The World Leader In Split Conduit Products"



800-670-1804

fax: 435-673-8724

email: crs@conduitrepair.com

Please Visit Our Website at WWW.CONDUITREPAIR.COM

standard for high-voltage power line inspections" Alexander says.

Like AD's Flight to the Future (F2F) online drone training course – in scope and scale, the Line-Drone project aims to train a workforce of professional drone service providers (DSPs) to then participate as professional LineDrone DSPs (LDSPs).

The US has 600,000 + miles of transmission lines that move electricity from power plants to cities and towns nationwide.

The following is an overview of F2F: https://www.youtube.com/watch?v=hgd0zD-mcw4

AD aims to expand the distribution of LineDrone

services within the US, to provide high-tech job opportunities as LDSPs. Under the agreement AD will provide the following:

Expanded distribution of Line-Drone services across the USA.

Specialized drone pilot training for operational support to energy sector professionals adopting the technology. AD-trained pilots or drone service providers (DSPs) could then work as AD affiliates – ensuring FAA compliance and integration with evolving U.S. drone regulations: https://www.youtube.com/watch?v=u_Hul4x-ensc

Competitive commercial liability insurance and warranty options to the US drone marketplace, primarily focusing on individuals and entities trained through our program. Various insurance coverages will be available for purchase through Aquiline Drones Indemnity Corporation (ADIC). Contracted opportunities for LD-





Line Guard | Pole Guard | BirdBloc Learn More at CritterGuard.org

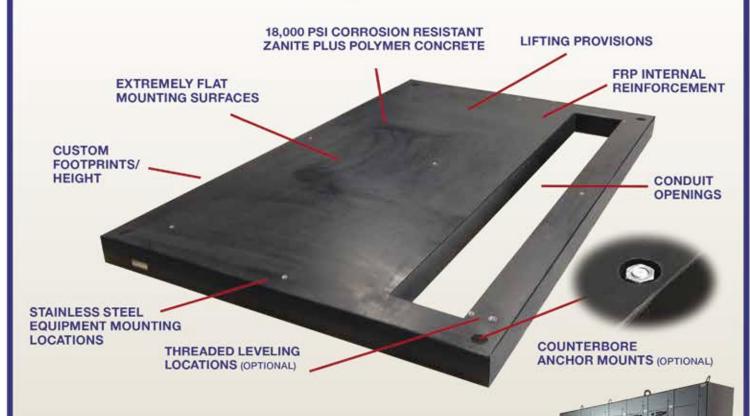


Made to order precast polymer

HOUSEKEEPING PADS

ZANITE PLUS POLYMER COMPOSITE

A base you can build on.



ADVANTAGES OF POXYBASE® PADS

Outperforms

traditional concrete

Quick Installation

no waiting for concrete to cure

Labor Saving

no forms or pouring field materials

Mounting

stainless steel inserts for equipment and floor anchors

Flexible Designs

built to exact size specifications including conduit openings

Built to Last

corrosion resistant and extremely durable (seismic ready)

Quick Delivery

with limited colors available



basetek.com 877-712-2273 info@basetek.com



Built to last and outperform. We guarantee it.

SPs through extended Service Level Agreements (SLAs) held by AD, under contract with industry stakeholders.

Transmission lines require rigorous and routine maintenance, involving inspection processes that are typically less-safe, cumbersome and more restrictive than what can be more easily achieved using an Al drone solution. Regional Transmission Organizations (RTOs) can now use this much safer LineDrone system to replace having to shut down lines, and can realize significant manpower and equipment savings, often done with the addition of helicopters and linesmen.

"This agreement extends our existing partnership with Aquiline Drones and enables AD to include specific and adapted drones as part of a proven next generation power grid infrastructure inspec-

Extend transformer life!
Increase transformer capacity up to 166%!

expert technical assistance
low sound levels
energy-efficient motors

low sound levels
energy-efficient motors

apacity up to 166%!
experimental energy-efficient motors

apacity up to 166%!
experimental energy-efficient motors

apacity up to 166%!

apacity up to 166%!
energy-efficient motors

apacity up to 166%!

tion system" says Marc Courcelle, CEO of DroneVolt SA. Aquiline Drones is able to provide an entire ecosystem of AI controlled drones, inspection data analysis, FAA pilot training, operating liability insurance and lifetime system support of each client. No other drone provider in the US can offer this broadly encompassing and complete solution.

About Aquiline Drones

Aquiline Drones Corporation (AD) is an all-American drone technology company specializing in drone manufacturing, artificial intelligence (AI), and superior drone pilot training. AD is also self-insured through Aquiline Drones Indemnity Corporation (ADIC). AD's core management comprises highly experienced aviators, systems engineers, IT gurus, military personnel (including veterans), and business strategists. AD delivers a vertically integrated blend of products and services. AD's full spectrum of technological solutions is widely applicable across countless industries and environments for superior, real-time data processing and insights. Visit www. AquilineDrones.com for more information.

www.AquilineDrones.com





Pre-Engineered Buildings Built to Withstand The Rugged Northeast Winters

- Commercial, Industrial and Agricultural Buildings Built to Satisfy Your Building Needs
 - Pre-Engineered Steel Packages
 - Pre-Engineered Post Frame Packages
 - Mini Storage Buildings



Call For a Quote On Your Next Project

We Manufacture 26 & 29 ga. Steel Roofing & Siding



STRUCTURAL STEEL CO., INC.



607 Rt. 13 S, Cortland, NY 13045

National: 1-800-323-7739



(607) 753-9384 • Fax: (607) 753-6272 • www.essexsteel.com

THE SAFEST WAY TO CLIMB A STEEL POLE IS WITH WINOLA INDUSTRIAL INC.







SUNBELT SOLOMON

REGULATORS

- 24/7 customer support
- 5 dedicated regulator shops across the US, with factory-trained technicians
- Retrofitting to your preferred control panels
- Comprehensive field service offerings

GET A QUOTE TODAY

Evaluations and estimations provided on all units prior to repair

- 800.830.0251
- info@sunbeltsolomon.com
- sunbeltsolomon.com



FUSEBOX SAFETY MATS BY A RHIDD



Rhino Switchboard Mats For The "If" in "Life."

Extreme-Duty Series Class 4

1/2" thick Corrugated Surface Test Voltage 50,000 VAC Proof Test 40,000 VAC Recommended 36,000 VAC



Fuse-box switchboard mats should be used in any area where Health and safety risk assessment shows a possibility of high-voltage shock. Easily carried to job or construction sites, Rhino Switchboard Mats provide a pro tempore electrically insulating mat

Focused. Results Driven

Rubber-insulating gloves, insulated hand tools, and switchboard-insulating mats are vital components of a successful PPE system. All should be used in conjunction with engineering safeguards and associated work practices.

Quality You Can Count On

All are tested to ASTM D178/ANSI J6.7 specifications with certification printed on the back. Two sizes available 2ft X 3ft and 3ft X 3ft, and two gauges

Available at Electrical and Safety Supply Houses and Home Depot or Contact us at 713-228-5543 / Info@rhinomats.com

www.rhinoswitchboardmats.com

Heavy-Duty Series Class 2

1/4" thick Diamond Surface Test Voltage 30,000 VAC Proof Test 20,000 VAC

Recommended 17,000 VAC





5,000 Lumen (50W) Rechargeable/AC Dual Head LED Tripod Work Light





Voltec-Industries

Voltec Power & Lighting has over 30 years of experience in the manufacturing & distribution of premium power and lighting products, servicing the needs of the Electrical, STAFDA and Industrial Distributors. With our high standard of quality manufacturing and new product development, we strive to maintain the most complete breadthof-line product offering in the market place today. Our EXTREME All-Weather line of products are 100% exclusively manufactured at our USA facilities in Newark, NJ and Anderson, South Carolina with globally sourced components. We know and understand that growth is directly related to new products. So here at Voltec, with a focus on efficiency and innovation, we strive to bring you the right products to help grow our partnership and enhance your margins. We have trained and honed our personnel to provide excellence through prompt, efficient and friendly customer service. Our goal is to surpass your expectations. Voltec Power & Lighting is where Quality, Value and Innovation come together!

866-486-5830

www.voltecpowerlighting.com



Pre-Engineered Buildings Built to Withstand The Rugged Northeast Winters

- Commercial, Industrial and Agricultural Buildings Built to Satisfy Your Building Needs
 - Pre-Engineered Steel Packages
 - Pre-Engineered Post Frame Packages
 - Mini Storage Buildings



Call For a Quote On Your Next Project

We Manufacture 26 & 29 ga. Steel Roofing & Siding



STRUCTURAL STEEL CO., INC.



607 Rt. 13 S, Cortland, NY 13045

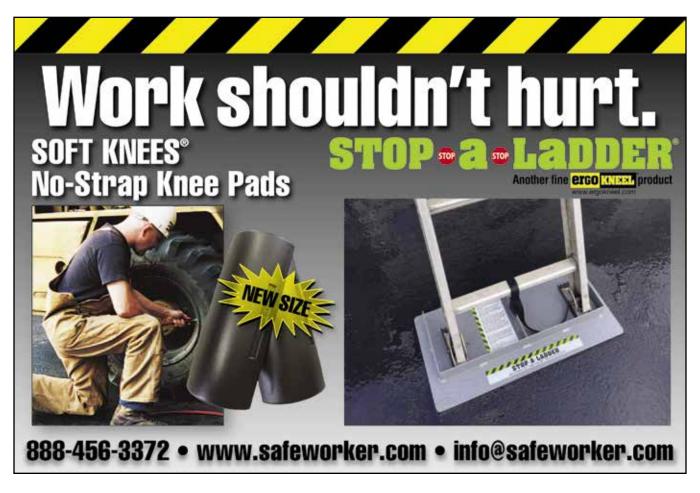
National: 1-800-323-7739



(607) 753-9384 • Fax: (607) 753-6272 • www.essexsteel.com

Ad Index

Company	Pg.	Website
Base Tek	11	www.basetek.com
Conduit Repair	ВС	www.conduitrepair.com
CopperWeld	IBC	www.copperweld.com
Critter Guard	10	www.critterguard.org
EDE	2	www.edeinst.com
Emsco	5	www.emscomn.com
Essex Steel	13	www.essexsteel.com
Grace Industries	IFC	www.graceconnectedsafety.com
Krenz Vent	12	www.krenzvent.com
LS Cables	8	www.lscusa.com
Maddox	7	www.maddox.com
Rhino Switchboard Mats	15	www.rhinoswitchboardmats.com
SP Products	3	www.spproducts.com
Sunbelt Solomon	15	www.sunbeltsolomon.com
Underground Devices	1	www.udevices.com
Voltec	16	www.voltecpowerlighting.com
Working Concepts	18	www.safeworker.com





Upgrade Your Building Wire with Copper-Clad Aluminum (CCA).



Cost Stable

Reduce your exposure to volatile price fluctuations.



Code Compliant

NEC referenced since 1971, Copperweld is accepted by builders and inspectors.



Easy to Install

A **similar metal to copper** for electrical connections, CCA is light and easy to bend.





Copper where it counts $^{\text{\tiny{M}}}$

Contact us for sales and info: 615-622-4662
buildingwire@copperweld.com
copperweld.com



Step 1: Remove Damaged Conduit



Step 2: Cut Split Duct Conduit to Fit



Step 3: Snap in



Step 4: Attach



Step 5: Finish Job in Record Time

REPAIR CONDUIT IN A SNAP!

- No Tape
- No Plastic Straps,
- No Metallic Straps

NO KIDDING!

Designed especially for power, communications, and fiber optics







"The World Leader In Split Conduit Products"



800-670-1804

fax: 435-673-8724

email: crs@conduitrepair.com

Please Visit Our Website at WWW.CONDUITREPAIR.COM