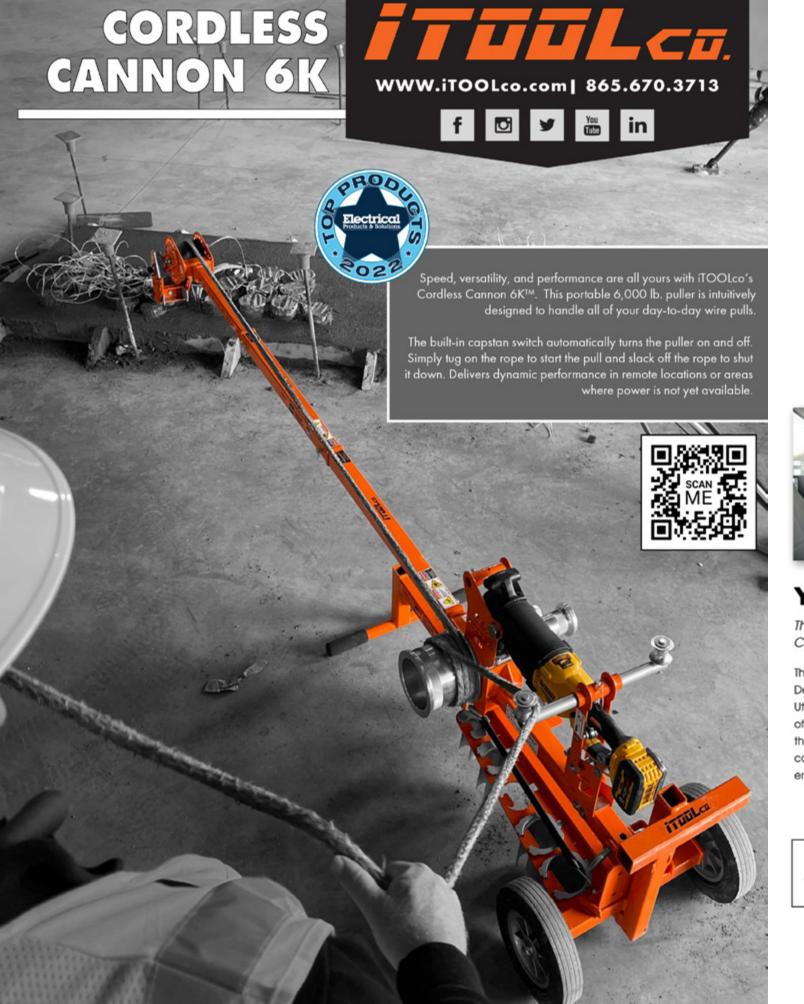
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Fighting Labor Shortage & Supply Chain Issues: How Prefab Can Help

The Top Reasons Electrical Contractors
Should Use Prefabricated Solutions





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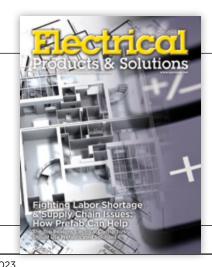
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Photo courtesy of Atkore



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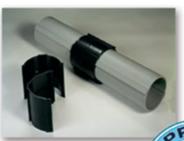




















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Protect Yourself

Miller Safety Consultants — A Leader in Arc Flash Protection

Vince Miller started Miller Safety Consultants, a veteran owned business in 1999. The goal of the business was to provide cost effective safety consulting, employee training such as: confined space entry, fall protection, electrical safety and provide sales of electrical shock and flash protective equipment and fall protection equipment to businesses in the Washington DC area.

protection products and much of the sales and training was on behalf of the supplier. In 2000, the owner decided to retire from his business, and Vince decided to discontinue the fall protection line of his business and concentrate more in the electrical training and products.

Vince had been a distributor for Certified Insulated Products (CIP), a manufacturer of electrical insulated tools and electrical arc flash clothing manufactured by Otex in Rochester, New York. As a distributor, Vince provided sales through his internet website and much through relationships with electrical contractors. His training was a classroom environment and was provided directly to customers but he also taught as a sub-contractor for other safety consulting companies and the

Reliance Industries provided fall Chesapeake Safety Council in Baltimore, Maryland. In 2005, Vince partnered with Vivid Learning Systems in Cascades, Washington to provide on-line training in safe work practices.

Training in electrical safe work practices is still provided locally in the Washington DC area and as a partner with an electrical engineering firm and online. The training is based on the Occupational Health and Safety Administration (OSHA) standards and the National Fire Protection Association (NFPA) 70E standard.

Miller Safety Consultants is now a distributor for Cementex USA, Burlington, New Jersey, for insulated tools and equipment and clothing from OTEX Protective, Rochester, New York.

The majority of his sales of products

are from the web-based store. Cementex is nationally known for their quality equipment. Otex Protective is becoming more known for their quality clothing. For years, they have manufactured their products under other provider labels. Vince chose to not create his clothing line, but to sell the manufacturer product.

Vince has worked with many electrical company employees to fine-tune the clothing to be more comfortable for the user. Working closely with the manufacturer, they have made slight changes in how the cloth pattern was modified to meet final production. An example is the lightweight 40 Calorie vented hood offered by Otex.

The material is of the latest technology. The vented assembly is constructed for balance on the back of the hardhat and the airflow is 27 CFM to prevent fogging of the face shield and provide cooling to the worker. It took over a year to develop the product with the user prior to having the hood "flash tested". This product is now standard issue with many electrical

Being a small business and having quality providers has resulted in satisfied customers for Miller Safety Consultants. Being a direct supplier for OTEX Protective, another small business means customized customer needs can be met. •

For more information, visit Miller Safety Consultants at: www.electricalsafetysupply.com, email Vince at: sales@millersafetyltd.com.



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Fighting Labor Shortage & Supply Chain Issues: How Prefab Can Help

The Top Reasons Electrical Contractors Should Use Prefabricated Solutions

BY GENE ELLIS

ACCORDING TO U.S. BUREAU OF LABOR STATISTICS.

the demand for electricians is expected to grow by 7% from 2021 to 2031. At the same time, however, labor shortages continue to be a challenge for the electrical industry. The COVID-19 pandemic greatly agitated this issue, with many experienced electricians deciding not to return to the workplace after initial shutdowns, instead choosing early retirement.

Additionally, new electricians are not currently entering the industry at a rate high enough to offset this increased influx of retirees. According to industry experts, the prerequisite hands-on experience needed to become a Journeyman Electrician, combined with a perceived lack of workplace flexibility, is deterring younger generations from entering the field.² Trade school interest is also on the decline, as many young people are instead opting to pursue a degree from a college or university.

On top of accelerated premature retirements, post-pandemic supply chain issues continue as material shortages delay shipments of individual parts. Contractors that would normally request their parts from one facility are being forced to order from multiple vendors, increasing the likelihood of supply chain mishaps. More than 50%

of an electrician's day can be lost due to supply chain issues.³ As a result, many more electrical contractors are turning to prefabricated solutions to help mitigate these labor shortage and supply chain problems.

Here are five reasons why electrical contractors should consider using prefab materials for their next project:

1. Prefab Saves You Time

Prefab saves time by reducing the amount of labor hours required for a typical job, specifically through installation. In a traditional assembly environment, contractors have to gather individual components for a job, organize them, and transport them to their jobsite. With prefab materials, the components are delivered to each site pre-wired, only requiring mere branch connection. Since prefab solutions are manufactured offsite in a controlled

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environment, this allows for increased onsite productivity and improved management of asset-based labor.

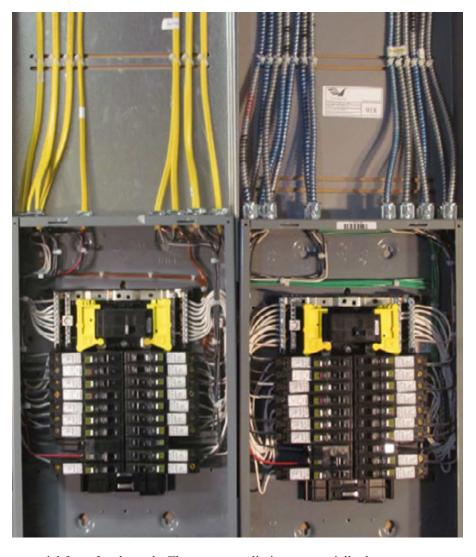
Transportation of materials is also a more organized process, as the consolidated components can be delivered at once rather than at separate times, leading to a more streamlined schedule and productive delivery process. With prefab solutions arriving at job sites already constructed, electricians can focus on broader tasks while conserving brain power, time, and energy.

2. Prefab Saves You Money

Prefab materials are not only more efficient for manual labor, but also more efficient for project budgets. With employees working faster, projects become less susceptible to inconvenient events such as weather delays or site delays due to pending permits. The concrete cost is more predictable as well. According to Dodge Data & Analytics' 2020 SmartMarket Report, 81% of firms and contractors agree that prefabrication provides significantly improved cost predictability.4 Without unrelated disturbances or setbacks, contractors will be more likely to predict exactly what a job will cost to complete, resulting in a more organized, standardized process. When it comes to prefab solutions, saved time equals saved money.

3. Prefab Improves Jobsite Safety

Prefab solutions mitigate various safety risks for all involved on the project, as the reduction of job installation time and required manual labor hours leads to a decreased



potential for safety hazards. The less time workers spend wiring and manufacturing, the less likely they will be to injure themselves. The prefab process itself dramatically minimizes the possibility of onsite hazards.

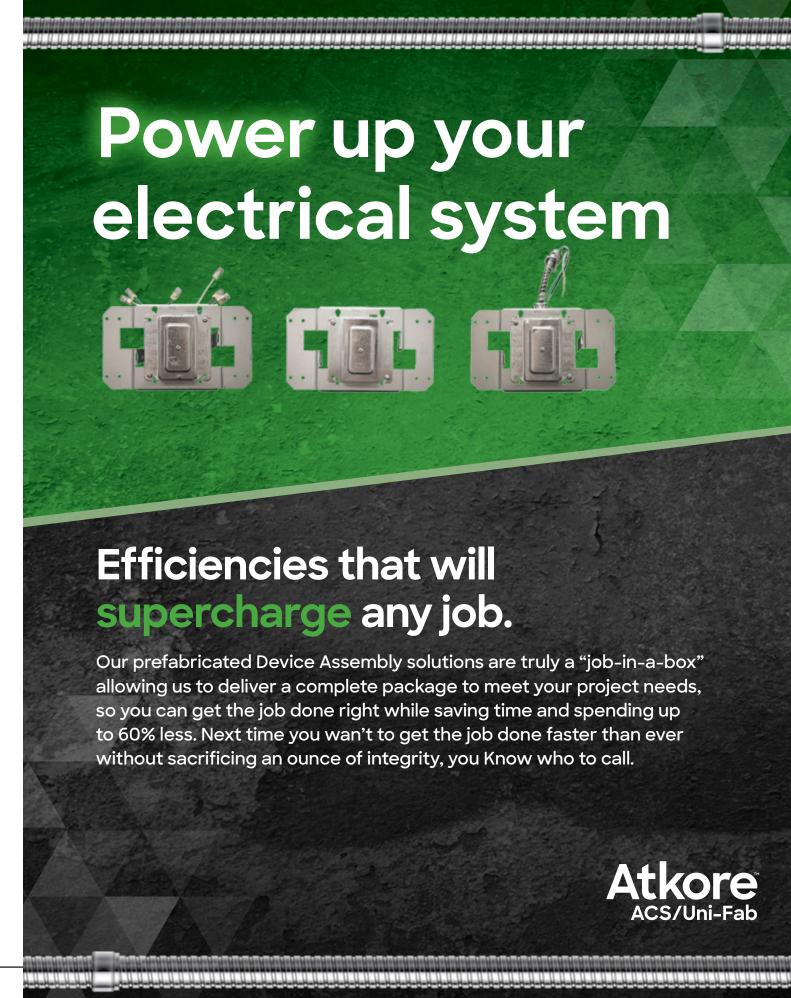
Prefab materials also help to

With prefab solutions arriving at job sites already constructed, electricians can focus on broader tasks while conserving brain power, time, and energy.

eliminate potentially dangerous remnants of wiring that would otherwise be left behind. Since prefab projects are primarily completed on the ground level, workers also will not need to climb ladders as often, decreasing the likelihood of one falling on the job. Additionally, reducing the man hours required for a project will lessen the chances of employees becoming overworked and fatigued, which could otherwise lead to a jobsite injury. Overall, prefab solutions make for a cleaner, safer worksite.

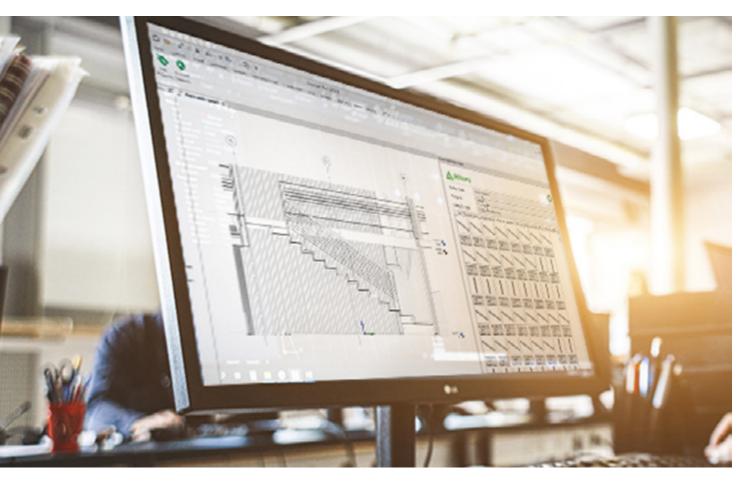
4. Prefab Increases Your **Competitive Advantage**

With improved efficiency metrics across the board, prefab means that contractors can plan and manage projects more effectively—a large





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factor in establishing new business. Shaving down project timelines and properly aligning with strict schedules can result in a competitive edge. Dodge Data & Analytics' 2020 SmartMarket Report reported that 80% of firms and contractors agreed that prefabrication increased client satisfaction.4

Since prefab materials result in a much more efficient use of time, the general quality of each project increases. Customers want the best results as quickly and as costeffectively as possible, and prefab materials are able to help meet these standards. Modifications, add-ons, and changes are executed easier with prefab than they would be with manual wiring. The modular format of prefab wiring is assembled in a way that allows for simplified rewiring and quick reinstallation.

5. Prefab Allows More Efficient **Project Planning**

The coupling of Building

Information Modeling (BIM) technology with prefab materials compounds worksite productivity by digitizing the entire lifecycle of a project. BIM Service Providers are essential in the planning and execution of projects that utilize prefab materials due to improved precision and elevated design abilities. Contractors can preassemble a project's entire electrical distribution framework from comprehensive 3D renderings that provide exact measurements of the materials.

The ability to visualize which elements of a project are suitable for prefab materials is crucial in the first stages of planning. 3D digital images of jobsites can easily detect early-stage errors and promote collaboration with the added benefit of shareability for the entire work team. BIM technology enables electrical contractors to identify the specific products they need for their designs by selecting the correct attributes every

time. This virtual tool then calculates the hardware needed and outputs the exact part number. BIM tools greatly expedite jobsite installation and preproject planning.

By drastically improving jobsite efficiency, prefabricated solutions allow electrical contractors to work smarter not harder. As contractors continue to deal with labor shortages and supply chain issues, prefab, especially when combined with digitized tools like BIM technology, delivers numerous advantages for all team members involved on a project, both on and offsite.

- 1 https://www.bls.gov/ooh/construction-andextraction/electricians.htm#tab-6
- ² https://gmerit.com/blog/finding-a-solution-to-thecurrent-electrician-shortage/
- 3 https://www.ecmweb.com/construction/ article/21258701/how-to-reduce-lost-labor-hourson-electrical-construction-projects
- 4 https://proddrupalcontent.construction.com/s3fspublic/SMR1219_Prefab_2020_small-compressed.pdf





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The Appleton™ Mercmaster™ Connect LED by Emerson is designed to illuminate hazardous and harsh industrial locations with integrated motion and illuminance sensors. Paired with Emerson's Plantweb Insight Connected Lighting Application, operators have access to lighting usage data and sustainability analytics.

The Mercmaster Connect LED provides facility managers with continuous monitoring of their LED lighting with real-time insights gained into sustainability goals, diagnostics and lumen levels from any remote location at dramatically lower costs as compared to wired alternatives, with faster installation time and minimal disruption to plant operations.

Learn more at: masteringled.com





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Liquatite® Nonmetallic High-Flex Type LNMP-Food Grade Conduit is Now Antimicrobial

ELECTRI-FLEX COMPANY,

Roselle, IL, announces UL-listed, flexible liquidtight, nonmetallic conduit Type LNMP-Food Grade now has an improved antimicrobial jacketing that offers a wider temperature range and is made with a new food processing blue jacketing. Type LNMP is made of flexible PVC with a nylon reinforcing braid and is ideal for continuous flexing applications as it does not contain a metal core that could fatigue with repeated flexing. Liquatite® Food Grade equipment, or with consistently hot electrical conduits now include Type LNMP-Food Grade, LAFG, LSSFG, and NMFG and are ideally suited for Food Processing, Pharmaceutical, Bottling Equipment, and Clean Room installations.

Antimicrobial | The flexible PVC jacketing now contains an antimicrobial biocide additive. This additive inhibits the growth of commonly known food processing microbes, such as E. coli, listeria, and salmonella, and even shows a reduction of these microbes over a 24hour period.

Wider Temperature Range | Type LNMP-Food Grade now offers a wider temperature range, from -37°C to 105°C. These temperatures are critical considerations when installing near freezers, heat-producing food washdowns.

Food Processing Blue Jacketing Food Processing blue is growing rapidly for use in food processing installations due to its increased safety features. The blue color is not found naturally in food products, and therefore can be spotted quickly in fast-moving machinery in the rare event fragments break off and get into the product stream.

Backed by Certifications | Type LNMP-Food Grade is UL listed (cULus) and has been tested to meet the safety standards of Canada and the United States by Underwriters Laboratories. It is a Certified Component for NSF/ ANSI 169 special purpose food equipment, meets FDA CFR21 & NSF 51/61 requirements, is WEEE & RoHS Compliant, and is ARRA Certified.

To learn more about Food Processing Liquatite® conduits, visit http://www. electriflex.com/flexible-conduits/foodgrade-flexible-liquatite-products/ Download the latest Food Processing sheet here https://www.electriflex.com/ resource-library/. Or email mktg@ electriflex.com and request more information today.

Antimicrobial Liquidtight Nonmetallic Type LNMP



ABOUT ELECTRI-FLEX COMPANY

Electri-Flex Company, a leader in electrical conduit design and manufacture for over 65 years, produces Liquatite[®], the most diverse line of liquidtight flexible electrical conduit in the industry. The company offers custom design, engineering, quality assurance, and testing capabilities. For more information on Electri-Flex Company, call (630) 529-2920 or (800) 323-6174; fax: (630) 529-0482; e-mail: mktg@ electriflex.com; visit: www.electriflex.com; or write: 222 West Central Avenue, Roselle, IL, 60172-1994.





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At Electri-Flex, we are proud to do our part in rebuilding America by providing top-quality, domestically sourced conduit made right here in the U.S. Our industry-leading Liquatite® flexible conduit line is second to none, offering options for virtually every application, from data and defense to transit, rail and bridges. And backed by more than 65 years of family ownership, we look after your business as if it were an extension of our own. Because we believe that America deserves the best.

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VMP Names Southeast Security Products New Rep Group

Effective Immediately, the Pompano Beach, Fla.- Based Firm Will Represent North Carolina, South Carolina, Georgia, Tennessee, Alabama, Puerto Rico, and the Caribbean Territories for VMP, and the Southern Virginia and Florida Territories Effective June 1

Video Mount Products (videomount. com), a leading provider of mounting solutions for the security, commercial, CI, residential, and pro audio/video markets, is proud to announce it has named Pompano Beach, Fla-based Southeast Security Products as its new manufacturer's representative serving the North Carolina, South Carolina, Georgia, Tennessee, Puerto Rico, and Caribbean territories effective immediately, and the southern Virginia and Florida territories effective June 1.

"To cover such an expansive territory, we needed a proven leader who could not only manage our growth, but our current customers over multiple categories in these markets," explained Keith Fulmer, president of VMP. "Roy Nilsen and his team at Southeast Security Products have the contacts, expertise, and product knowledge to handle our growth and needs in this vital territory. We are excited to be working with them."

Southeast Security Products' mission is to contribute to the development and growth of its represented brands through the utilization of demonstrated sales, marketing, and technical expertise. They concentrate on increasing the profits of companies they work with by increasing revenues and decreasing expenses. They specialize in direct and indirect



sales growth, dealer development and management, low voltage products, electronic security, program promotion and management, integrator and distributor training, distributor relationship management, and push-pull marketing.

"We are extremely excited to have VMP join our family of products," said Roy Nilsen, president of Southeast Security Products. "VMP fits glove and hand with our distribution and dealer partners throughout the Southeast and we look forward to expanding the brand to our entire channel."



For nearly three decades, VMP has been a leading provider of mounting solutions for the A/V, communications, and security industries.

For more information on Southeast Security Products, please visit www. sesproducts.com, email sales@ sesproducts.com, or call 954-786-5900.

Please follow VMP for the latest news on LinkedIn and Facebook.

For more information or if you need help choosing the right mount for your application, try the VideoMountTM-Finder at www.videomount.com or call toll free 877-281-2169.



For nearly three decades, Video Mount Products (VMP) has been a leading provider of mounting solutions for the A/V, communication, and security industries. VMP products consistently offer the latest designs in safety and flexibility, all at an outstanding value. VMP's product offering continues to grow by adding mounting systems to address growing segments across many markets. VMP has become the mounting systems company of choice for professionals and their customers everywhere. All products have been engineered for and installed with confidence in thousands of residences, businesses, hotels, restaurants, schools, hospitals, houses of worship and security applications throughout the world. VMP prides itself on providing the best products in the industry and by supporting those products with knowledgeable professionals who understand that "support" is the core of our business.







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Appleton Switchracks are Built to Exact Customer Specifications for Heavy-Duty Industrial Use

Appleton offers turnkey, fully customized industrial switchracks to serve as electrically and mechanically interconnected, single-point solutions for controlling electrical infrastructure on hazardous or non-hazardous industrial sites. Engineered to global standards, Appleton switchracks can be outfitted with motor controls, transformers, circuit breakers, panelboards, and other assorted switching and control equipment, and are designed for single-phase and three-phase low-voltage power.

As a turnkey supplier, Appleton provides all engineering, designing, wiring, and testing of individual components, along with transportation of the fully assembled, pre-wired switchrack. Completed switchracks are delivered to the customer's site where the only job remaining is to connect incoming power to the main bus and the load side. Working with Appleton means customers eliminate outside engineering costs, the expense of placing orders with multiple vendors, delivery hassles, and the time-consuming assembly of the switchrack.

INDUSTRIAL-GRADE ENGINEERING

The primary job of a switchrack is to protect the equipment that it powers. Therefore, every component on an Appleton switchrack is safely specified according to the applicable ratings of the NEC, ATEX, CEC, IEC, or other standards body.

Switchracks are typically installed outdoors, often in adverse climates where they are subjected to soaring heat, freezing cold, salty ocean spray, snow, rain, and ice. Appleton switchracks are configured to provide superior resistance to adverse weather, dust, dirt, and corrosion. Appleton switchracks can also be safely installed indoors within a factory or processing plant, including Class II hazardous locations containing ignitable flyings, fibers or dust.

> For more information, visit www.emerson.com/en-us/automation/brands/appleton/switchracks

Cementex Highlights Bare Headed Nut Driver **Options to Supplement Standard Offering**

Bare head construction makes this nut driver ideal for accessing tight spaces

Cementex, the safety tool specialists, highlights their bare headed nut driver options, offering unparalleled reach and access to tight spaces. Designed specifically for electricians, maintenance operators, linesmen and technicians, this offering of bare headed nut driver options permits access to equipment with limited clearances such as terminal blocks, bus bars and beyond. This tool is a great addition to customers' toolkits when one of Cementex's standard nut drivers will not fit.

The Bare Headed Nut Driver Options come equipped with the double insulated shaft protection, which customers have come to expect from Cementex. Uniquely, the insulation does not cover the head, offering additional functionality and enabling more access to tighter spaces than any other nut driver available on the market.

Proudly made and designed in the U.S.A., Cementex Nut Drivers' signature double insulated shaft and single layered insulated head are 10,000V tested and exceed industry safety guidelines, while providing the slimmest shaft insulation available.

Cementex tools not only comply with ASTM F1505 and IC 60900 standards but also help meet the requirements of OSHA 1910.331-.335, NFPA 70E®, and CSA-Z462.

For more information, visit www.cementexusa.com/catalog/screwdrivers-and-nut-drivers







SolaHD™ SDU DC - B Series DIN Rail UPS

The SolaHD™ SDU DC - B Series DIN Rail UPS by Emerson are perfect for mitigating power quality issues, minimizing loss of data and downtime.

The SDU DC - B UPS combines an industry leading compact design, wide operation temperature range -15 °C to +50 °C (+5 °F to +122 °F), enhanced communication and unique installation options to solve common application problems.

Learn more at: www.solahd.com





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DEWALT Expands Trades Solutions with New 20V MAX XR® Brushless Cordless 3/16 in. and 1/4 in. **Rivet Tools**

New tools fasten hundreds of rivets per charge with optimal pulling force

DEWALT, a Stanley Black & Decker (NYSE: SWK) brand and leader in total jobsite solutions, today announced new 20V MAX XR® Brushless Cordless 3/16 in. (DCF403) and 1/4 in. (DCF414) Rivet Tools for fastening aluminum, steel, and stainless-steel blind rivets. Designed to maximize productivity, the DEWALT Cordless Rivet Tools are light weight yet powerful and feature tool-free nose piece changes for ease of use in prefabrication, assembly, HVAC, roofing, and automotive applications.

The new 20V MAX XR® Brushless Cordless 3/16 in. Rivet Tool's (DCF403) brushless motor delivers up to 2,100 pound force (lbf) of pulling force with a 0.98 in. stroke length and can tackle up to 800 3/16 in. stainless steel rivets per charge† for efficiency on the jobsite. The 20V MAX XR® Brushless Cordless 1/4-in Rivet Tool (DCF414) boasts up to 4,500 lbf of pulling force with a 1.18-in. stroke length and fastens up to 300 1/4 in. stainless steel rivets per charge.

For user convenience and easy cleanup, the Rivet Tools are designed with on-board nose piece storage and a mandrel collector to catch rivets after each shot. Each tool is compatible with multiple size rivets including 3/32 in., 1/8 in., 5/32 in., and 3/16 in. rivets; the DCF414 is also compatible with 1/4 in. rivets. Additionally, an LED light helps to illuminate work areas for precision fastening.

The 20V MAX XR® Brushless Cordless 3/16 in. (DCF403) and 1/4 in (DCF414) Rivet Tools are now available for presale in kitted and bare (battery and charger sold separately) options.

> For more information, visit www.dewalt.com

Emerson Launches IIoT-Ready Power Supply Solution

SolaHD Communication Module Provides Networked Access to Power Supply Diagnostic Data, Alarms and Events

SolaHD, an Emerson brand, has launched a next generation power solution that brings network connectivity to its SDN-D high-performance DC power supply, enabling it to serve as an IIoT-ready device providing condition monitoring, asset tracking, and quick troubleshooting in addition to serving as a power converter.

Connecting the new SolaHD Communication Module (SCM) to an SDN-D power supply lets plant operators continuously monitor its diagnostics over standard Ethernet/IP or HART 7 protocols and transmit this data to supervisory systems. Operators and service technicians can now monitor the health of each power supply remotely. Key diagnostic information can be sent to a historian for predictive maintenance helping to ensure uptime and better utilize important resources

Slim and rugged, the DIN-rail mounted SCM provides network connectivity support for one or two SDN-D Series power supplies. SolaHD SDN-D power supplies deliver the industry's highest power efficiencies within an ultra-compact, slimline footprint. Available in 10 and 20 Amp models with 24 Vdc single-phase

output, these exceptionally robust power supplies support manufacturers requiring extensive hazardous location certifications, a wide operating temperature range, and quick drop-in compatibility to replace existing power supplies. By adding network intelligence to the SDN-D power supply, the SCM ensures greater reliability, reduced unscheduled downtime due to equipment failures, lower maintenance costs, and extended equipment life.

"Rapid growth in the IIoT demands a new type of power supply with enterprise-grade connectivity combined with industrial features to meet compliance and use case requirements," said Jay Hendrix, Product Marketing Manager-Connected Power | SolaHD. "That is what Emerson is bringing to the table with the SDN-D power supply and SCM module combination. This 'drop-in' upgrade is compatible with any current infrastructure, regardless of age or level of control sophistication. It starts diagnosing performance and monitoring key performance metrics the moment it is installed, so you can keep a check on what is happening in real-time, anywhere, and on any device."

> For more information, visit www.solahd.com





IP67 Power Supplies



The SolaHD™ SCP-X Series Standalone IP67 Power Supplies by Emerson can be mounted almost anywhere on a machine, conveyor, or wall. With no enclosure required they offer safety against arc flash hazards.

Ouick-connect cables ensure the IP67 rating and eliminate costly wiring. Available from 100 Watts to 240 Watts, the SCP-X Power Supplies meet the diverse needs of automotive manufacturing, conveyor systems, and equipment where 24 Vdc power is required for geographically dispersed devices.

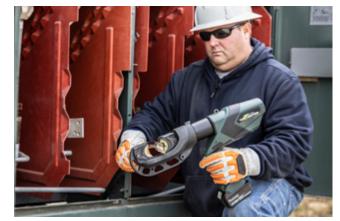
Learn More at: www.solahd.com





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Greenlee Introduces New 15-Ton Crimper: 15% Lighter than Previous Models

The 15T also has improved ergonomics, new C-head design and is optimized for weight balance

Greenlee®, a part of Emerson's professional tools portfolio, introduces the EK1550SLX 15-Ton Crimper, a pistol-grip style crimping tool that is 15% lighter compared to Greenlee's existing Kearney-style models, and features a new C-head design with optimized weight balance for overall improved ergonomics.

"15-ton crimping tools have historically been difficult to work with due to their weight and cumbersome flip-top head configuration, but thanks to continued advances in technology, Greenlee's new 15T Crimper addresses both of these concerns," said Ryan Berg, director of product

management, Greenlee. "The crimper's new head design reduces weight, improves balance and makes loading and unloading easier. Those improvements work together to improve ergonomics, putting less strain on the body throughout the day."

Designed for crimping large capacity conductor and connectors in overhead and underground applications, the 15T Crimper crimps up to 1500 kcmil copper and 1250 kcmil aluminum lugs and splices. It is compatible with all industry-standard U and P die configurations, eliminating the need to switch dies based on the job.

Weighing less than 18 pounds with battery, the 15T Crimper also has 350-degree head rotation to access tight spaces with ease and new built-in alignment guide to help ensure a quality crimp. Integrated Intelli-Crimp® System and real-time feedback OLED info center maximize productivity, battery longevity and provide instant tool performance metrics.

> For more information, visit Greenlee.com

Klein Tools® Launches New Rechargeable Thermal Imager with Wi-Fi Capabilities

Klein Tools, for professionals since 1857, introduces the new Rechargeable Pro Thermal imager, with more pixels and a wider emissivity range, plus Wi-Fi capabilities to easily transfer and save images.

Rechargeable Pro Thermal Imager (Cat. No. TI290)

- Over 49.000 pixels to troubleshoot hot and cold spots
- Easily capture, store and share thermal images with Wi-Fi capabilities
- User selectable high and low temperature alarms from -4 to 752-Degree Fahrenheit (-20 to 400-Degree Celsius)
- Adjustable emissivity from 00.1 to 0.99
- Select color palettes to best capture the event; ironbow, rainbow or grayscale
- Rechargeable lithium-ion battery
- App is available for free in Google Play[™] store and in the App Store
- Durable 6.6-Foot (2m) drop test protection
- Includes thermal imager, USB-C charging cable, molded soft-storage case with carabiner and instructions

"Klein Tools' new Rechargeable Pro Thermal Imager was designed with the professional in mind," says Elvin Bautista, product manager at Klein Tools. "It provides the highest resolution and screen size within the Klein Tools thermal imaging portfolio, and Wi-Fi capabilities to easily transfer, save and share images. The TI290 App (availabe for free on both Google Play™ and the Apple App Store) allows you to easily take thermal images on the go using just the device."

> For more information, visit www.kleintools.com/new-products







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

Inside PVC to Inside PVC



EasyHeat™ Crankcase Heaters

Pipe Freeze Protection, Self-Regulating, Pre-Terminated. For Commercial Applications.

Product Overview

 EasyHeat[™] Crankcase Heater provides a simple yet highly effective solution for heating motors and compressors, prolonging unit life.

Applications

 Pre-heating of compressors and motors in ordinary and hazardous refrigeration/HVAC environments.

Features

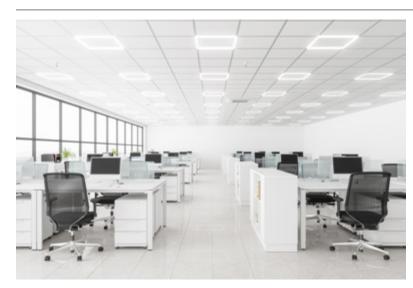
- Designed for use as a heater on air conditioning and refrigeration metal compressors up to 42 in (1 m) in circumference.
- Warms up compressors during off hours and in cold environments.
- One product for numerous compressor brands and types.
- Simple cable-tie and power connections.
- Proven SR technology with factory sealed connections and water-resistant thermoplastic elastomer (TPE) jacket.
- One year limited warranty.

Certifications

• UL Recognized to both U.S. and Canadian safety requirements.

EasyHeat crankcase heaters provide an effective solution for heating motors and compressors. They can be used as heaters on air conditioning and refrigeration compressors up to 42" in circumference. EasyHeat crankcase heaters warm the compressor casing to prevent refrigerant from migrating into the crankcase oil. The heaters facilitate "cold startup" by minimizing excessive motor wear and increasing compressor efficiency.

> For more information, visit www.easyheat.com



LEDVANCE Value Class Dual Selectable T-FIT Panel Bar

The LEDVANCE Value Class Dual Selectable T-FIT is an innovative, modern, and sustainable panel bar solution that fits in T-grid ceilings as an alternative to flat panels in offices, conference rooms, restaurants, and retail areas. With less plastic and raw materials than regular panels, this new solution is Dual Selectable (three CCTs and three lumen outputs in the same SKU), 120-347V and DLC Standard listed.

> For more information, visit www.ledvanceus.com





Install Peace of Mind!

First there was 4 square... and now the REVOLUTIONARY 5 Square® Box!!

You've struggled with 4 Square boxes for years - you know how small, cramped and time consuming they are. Finally, there is a solution that allows you the space you have always needed.

The **5 Square** Boxes (5" x 5" x 2-7/8") provide up to 88 in³ of interior volume which more than doubles that of most existing boxes on the market.

Create a robust and unrivaled infrastructure for the life of your facility with the 5 Square* Products!

Fire Signal



- TWICE THE VOLUME AS MOST BOXES
- SAVE LABOR...INCREASE PROFITS
- ELIMINATES TROUBLESHOOTING TIME AND COST
- FULLY UPGRADEABLE SYSTEM
- SPECIFIED BY ENGINEERING FIRMS. HOSPITALS, UNIVERSITIES & **GOVERNMENT AGENCIES**
- AVAILABLE IN ZINC OR RED

Telecommunications





- INTEGRAL CABLE MANAGEMENT
- SAVE LABOR...INCREASE PROFITS
- FACILITATES MIN. BEND RADIUS REQUIREMENTS
- SUPPORTS CURRENT AND EVOLVING SYSTEMS
- SUPPORTS PoE PLUS
- SPECIFIED BY ENGINEERING FIRMS. HOSPITALS, UNIVERSITIES & **GOVERNMENT AGENCIES**



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See our line of telecom & fire signal boxes at: www.RANDL-INC.com INDUSTRIES, INC. Making Communications & Fire Protection More Reliable & Cost-Effective





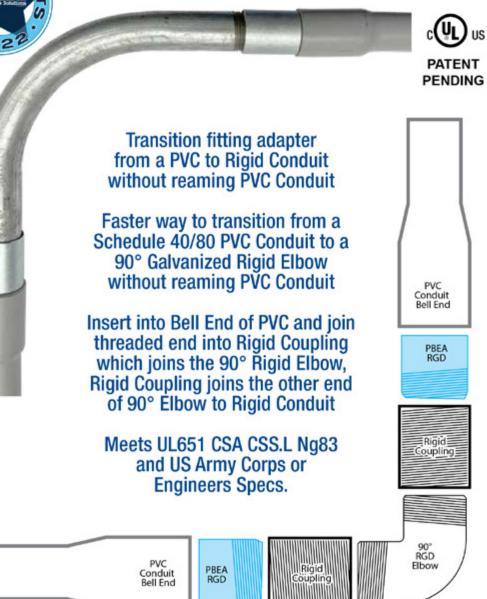


Transition Couplings PVC Bell End Adapter Galvanized Rigid Conduit



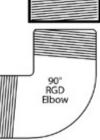








1/2" thru 6"



Transition Couplings Size Catalog # 1/2" PBEA/RGD 50 3/4" PBEA/RGD 75 PBEA/RGD 100 1-1/4" PBEA/RGD 125 11/2" PBEA/RGD 150 2" PBEA/RGD 200 2-1/2" PBEA/RGD 250 3" PBEA/RGD 300 3-1/2" PBEA/RGD 350 4" PBEA/RGD 400 5" PBEA/RGD 500 PBEA/RGD 600

Customer must satisfy all codes and owners' specifications.

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IP13r



Convenient Access to Power on Rooftop Applications

An innovative solution to provide convenient access to power on raised rooftop deck installations. Provide power access anywhere along a deck surface, perfect for outdoor events or furniture needing access to power and eliminate the need for extension cords along the decking surface — providing greater flexibility in power distribution on rooftops.

The box is designed to be installed flush alongside rooftop pavers and features a hinged top cover that allows access to 2-gangs of devices. The internal outlet box can be rotated upwards to allow for easy access to connections and rotates downwards to provide cord drip protection while-in-use.

Features & Benefits

- Easy Installation. The outdoor rooftop box is designed to integrate seamlessly into raised floor patio systems commonly used on rooftops.
- Weather Resistant GFCI Outlets. Prewired unit includes two 20A duplex weather resistant GFCI outlets. Unwired unit provides 2-gangs of capacity.
- Flush, Durable Design. The outdoor rooftop box sits flush with the floor and incorporates a slip resistant surface to prevent safety issues.
- Shallow Design. Can be used in any raised floor system with 7" or more space from top of floor to roof surface.
- RoHS, Prop 65 compliant.
- While-in-Use Design. Plug in your devices, route cables through egress and close the cover for NEMA 3R protection while in use.
- 1000 lb. Load Rating. Capable of withstanding loads of 1,000 lbs, this box can handle loads from foot traffic, drink carts or dollies suppling the outdoor area.
- Self-Closing Cover. Self-closing to prevent users from leaving the receptacles exposed to the elements and open cover tripping
- Match Space Aesthetic. Available in both gray and black cover finishes to complement rooftop decking.

For more information, visit www.legrand.us/wiremold

CableLocator from Megger Detects Hidden Cables and Conductors

The MCT105 identifies fuses, breakers, short circuits and piping



Technical Specifications

- Transmitter voltage range from 12 to 400 V
- Transmitter frequency range from 0 to 60 Hz
- Detect buried cables up to 2.5 M underground
- Operating temperature range of 0°C to 40°C

Megger now offers an instrument that is designed to detect and trace cables and metallic conductors that are in walls or buried underground. The MCT105 can also identify fuses and breakers on electrical circuits, locate breaks or short circuits in cables and electrical underfloor heating systems, as well as trace metal water and heating pipes that are hidden.

Designed with a separate transmitter and receiver, this cable locater works on both live and dead cables and conductors. The MCT105 comes equipped

with everything needed to trace and locate cables and conductors, including test leads, crocodile clips, test probes and a protective carrying

The cable locator's transmitter has a voltage range of 12 to 400 V and a frequency range of 0 to 60 Hz. The transmitter generates a visual and audible signal when it detects dead or isolated cables and conductors.

Able to detect buried cables up to 2.5 M deep, the locator's receiver offers either automatic or manual adjustment of its signal sensitivity for increased accuracy. A light built into the unit makes it easier to see while taking a reading or measurements. Its non-contact voltage detector keeps users safe.

Both the transmitter and receiver feature an auto power off feature, as well as low battery indicators.

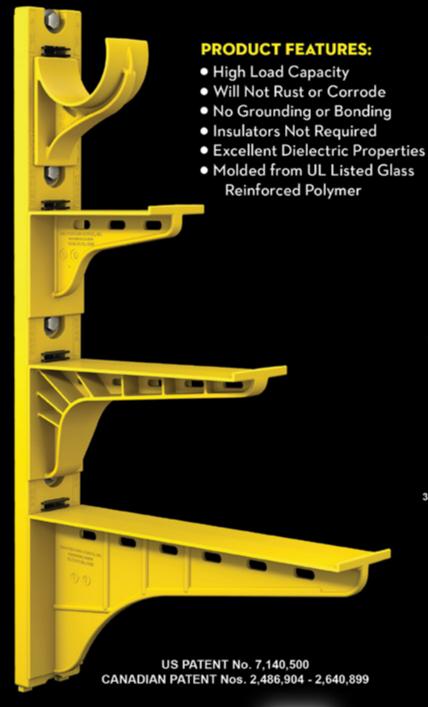
The MCT105 has an operating temperature range of 0°C to 40°C.

For more information, visit www.megger.com

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For Power and Communications Manholes And Vaults







HDL Arm Lock shown with RA04 Arm and CR36-B Stanchion



a cable secured by cable ties.



cables secured by cable ties.

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Leviton Announces New Line of Power Pedestals for Commercial. Marine and RV Applications

New pedestals provide power in previously unreachable locations while withstanding daily use and harsh environments.

Leviton announced recently the launch of a new line of indoor and outdoor power pedestals for commercial, marine and RV/campsite applications. Available in a variety of configurations, colors, heights, enclosure materials and sizes, the new portfolio offers a power solution for every environment.

"This exciting launch gives us the opportunity to partner with new and existing customers and understand their needs and requirements to provide them with customized power solutions wherever they need them," said Michael Mattei, executive vice president and general manager, Leviton Commercial & Industrial. "The new offerings range from a small pedestal for mobile charging to heavy-duty pedestals with power, water, metering and lighting for marinas and RV campsites."

Standing at either 18 or 24 inches tall, Leviton's power pedestals are ideal for a variety of commercial applications, including parks, campuses, office buildings and more. Made of welded stainless steel and featuring a NEMA 3R rating, these sleek pedestals are designed to blend in with their surroundings while also withstanding harsh outdoor environments. Configurations include one- or two-gang pedestals offered in a variety of colors and multiple hinge options, including a flush hinge, ideal for installations with very limited space. The pedestals can be installed onto a concrete surface or buried directly into the ground depending on the configuration, providing more flexibility for the installer.

All pedestals are available with different Leviton electrical wiring device options, including weather- and tamper-resistant GFCI receptacles for added safety and weather- and tamper-resistant Type A/C USB receptacles for added convenience. The pedestals allow for replacements should technology and charging demands adjust in the future.

> For more information, visit www.leviton.com/powerpedestals

Safety Goggles are Latest Addition to Lineup of Klein Tools® **Personal Protective Equipment**

Klein Tools, for professionals since 1857, introduces new Safety Goggles, designed with a continued focus on safety and innovation, engineered for superior impact protection and a with wide variety of unique features for long term comfort and convenience, like 4 adjustable vents, over-the-glasses design, superior anti-fog and high optical quality lens.





Safety Goggles, Clear Lens and Gray Lens (Cat. Nos. 60479, 60480)

- High-velocity Impact Rating (ANSI Z87.1+ 2020, CSA Z94.3-20, MIL-PRF 3232A-Class
- OTG (Over-The-Glasses) design accommodates most prescription glasses
- Easily adjustable vents (on top and bottom) for ventilation, minimize fogging and eliminate debris from getting in - no need for two separate goggle types
- Flexible and lightweight TPV frame protect lens from chips; helps conform to face
- Adjustable nylon grip strap for secure fit
- Anti-fog coating; UV protection; ANSI Z87.1 dust and splash rated
- Class 1-High optical clarity lens with anti-fog, UV protection, and scratch resistance
- User replaceable lens (sold separately)
- Includes soft fabric storage pouch that doubles as lens wipe

"Trade professionals perform a wide variety of tasks that require more protection than standard safety glasses can offer and need more than one type of goggle depending on the job," says Shantanu Deshpande, group product manager at Klein Tools. "Klein's Safety Goggles offer military grade impact protection from flying debris and liquids, while still providing exceptional comfort and fit. Unique adjustable vents allow you to independently open to cool off in hot environments or shut close in dusty or wet environments-all on one goggle. Over-the-Glasses design fits most prescription glasses; lightweight material for long term comfort makes these the most versatile goggles for most professional jobs."

> For more information, visit www.kleintools.com/new-products



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MODEL 15KVPSET VOLTAGE PROBES

THE MODEL 15KVPSET VOLTAGE PROBES ALLOW CONNECTING POWERSIGHT POWER ANALYZERS DIRECTLY TO 3-PHASE VOLTAGES UP TO 15 KILOVOLTS. NORMALLY, PROFESSIONALS WHO WISH TO MEASURE 12,470 VOLT LINES NEED TO LOCATE OR INSTALL A PT (POTENTIAL TRANSFORMER) IN ORDER TO MONITOR MEDIUM VOLTAGES. THE 15KVPSET ALLOWS DIRECT CONNECTION OF MEDIUM VOLTAGES TO POWERSIGHT ANALYZERS. SHOWN WITH OPTIONAL HOT STICKS, THE 15KVP HAS SHEPHERD HOOKS FOR HANGING ON BARE CABLE, TAPING



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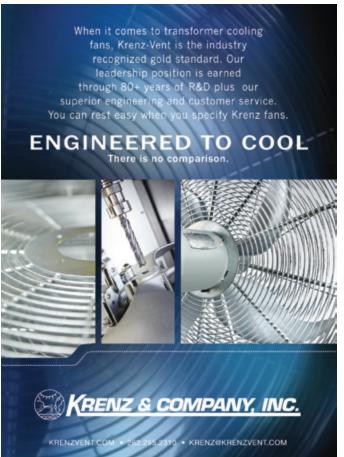


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Enter Any KO on **Both Sides of the Box**





4-Conduit Block





QwikBlock PATENT

Use 4-Conduit Block (IP19 or IP20) with QwikBlock (IP21a)



with Split Finge for Horizontal or Vertical Installation



IP6

4-Way

Enter Any KO on All 4 Sides of the Box Plus 4 Large Open KOs in Center Allows Entering **Back of Box**

¢(ŲL)⊌s



2-Way/Half

Enter Any KO on 1 or 2 Sides of the Box Plus Large Open **KOs in Center Allows Entering Back of Box**



c(VL) us

4-Way

with Split Fingers for Horizontal or Vertical Installation, Enter Any KO on All 4 Sides of the Box Plus 4 Large Open KOs in Center Allows Entering Back of Box.

Mount Horizontally or Vertically from One Single Support

Supports up to 12 x 12 J-Box

28 x 28

Supports up to 20 x 20 J-Box

MADE IN THE USA!

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