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- Unraveling Some of the Mystery of Social Media for Manufacturers
- Ontario and Michigan - A Tale of Two Recoveries
- Wire Wisdom - Fire Testing



Advanced Transit Manufacturing

By Fred Noer

In one respect, Advanced Transit Manufacturing has the perfect abbreviation - ATM. Everyone recognizes the more common denotation as automated teller machine, and who in the wiring harness industry would not love to have easy, unlimited access to an ATM?

That would be heaven. Just think of having an extravagance of money to maintain a healthy cash flow, to give all staff members an excellent compensation package, to buy the latest and greatest equipment and to develop and

implement a comprehensive sales and marketing effort.

What a delicious fantasy, eh?

But, this is the real world, and not even Advanced Transit Manufacturing can exploit its golden abbreviation. Operating a business today in the American and global economies requires dedication, intelligence, awareness, sacrifice and just plain hard work.

How well Margaret Walsh knows. She is president of ATM the company, which manufactures wiring harnesses and electromechanical assemblies (EMAs) at its plant in Canisteo, N.Y. The community of 2,400 people in western New York

REACH Basics for the Harness Manufacturer

By Joe Tito

REACH (Registration, Evaluation, Authorization, and restriction of Chemical substances) is the EU regulation governing chemicals and their safe use. It entered into effect in June of 2007. Previous to reach, a labyrinth of over 40 directives from Member States regulated the import and use of chemicals in Europe. REACH is intended to create a single platform to better understand the intrinsic properties of chemicals, and the potential detrimental effects they may have on human health and the environment. The regulation places the burden of proof on industry to manage the risks of chemicals, and to provide the testing and information regarding any ill effects from their use. REACH covers only products sold to EU Member States, Norway, Iceland, and Liechtenstein.

It is important to distinguish between EU regulations and directives. RoHS and ELV are EU *directives* where Member States comply, but set their own compliance systems and legislation. As an EU

regulation, REACH enforcement is consistent among Member States.

There are other important distinctions between the RoHS/ELV, and REACH. Whereas RoHS is concerned with eliminating a handful of harmful substances from electronics, and ELV targets substances related to a motor vehicle; REACH is all encompassing. Manufacturers selling products in the EU are required to gather information on the properties of all chemical substances, and register them in the central database run by the European Chemicals Agency (ECHA), the governing body of REACH. The RoHS list is static, where the REACH lists are dynamic and the legislation is evolving.

ECHA takes the data on substances and, based on input from Member States and non-governmental organizations, determines which ones fit into hazardous categories. The substances deemed to be truly hazardous (carcinogenic, mutagenic, toxic, bio-accumulative, etc.) are identified as SVHC's, or

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Margaret Walsh checks in with incoming materials inspector Jim Wilson.

lies 60 miles south of Rochester.

Walsh, 39, and her husband Barry, 40, who is vice president, bought ATM in February 2007 from Margaret Ahearn, 65. She founded the firm in September 1996 in Canisteo after working as a buyer for General Electric and Amerail. She is retired and lives in Canisteo.

"We bought ATM because it was a very good investment opportunity," Margaret Walsh said. "It had a lot of potential. Our goal is to be the highest quality, most efficient low- to mid-volume contract manufacturer in the nation, to buy cheaper, to produce faster and better while we still maintain the highest quality."

ATM serves customers in a variety of industries but specializes in mass transit and rail transportation, continuing Ahearn's focus. ATM products are in subway cars, electric trolleys, regional and commuter trains, high-speed trains, monorail vehicles and light-rail trains.

Harnesses and EMAs are used in systems for air conditioning, door control,

electrical coupling, power distribution and communication. ATM components also are in alarms, cab displays, low-voltage and high-voltage circuit breakers, low-voltage power supplies, relay panels and wayside antennas.

Among the customers producing and refurbishing rail vehicles are Alstom, Hornell, N.Y.; Bombardier Mass Transit Corp. in Plattsburgh and Kanona, N.Y.; and Talgo, Seattle, Wash.

Trucks with ATM products include snowplows, fire engines and ambulances. The truck and rail markets comprise 75 percent of ATM's business. The remaining 25 percent is in aerospace, defense, wind power generation, medical devices and video games.

The product split between harnesses and EMAs is 50-50. All are made to custom specifications. Order sizes range from one to 2000 pieces, and the average is 100 items.

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Evolution of Quick Connect, Low Insertion Force UP-TP Terminals

By Leo Hirschöcker

The search for an easy entry, quick connect terminal has always been one of the main objectives when trying to improve the characteristics of a terminal. Every day millions of terminals are connected - this has created the need to increase mechanical integrity while maintaining the electrical properties.

One of the first advances to quick connect terminals was to reduce the insertion force. The improvement was made by inserting a cut on the radii of the terminal thus decreasing the insertion force considerably. The result was good in terms of effort required but due to the resultant decrease in clamping force on the male or tab the contact area

of the terminal was also affected which in turn reduced the electrical properties considerably.



To solve these problems the design had to be changed completely so as to meet or exceed the requirements of the DIN design of push on terminal. Escubedo decided to start with a clean sheet of paper.

Continued on page 46

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1 Evolution of Quick Connect, Low Insertion Force UP-TP Terminals

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2010 Production Schedule

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| July/August 2011 | June 3, 2011 | June 10, 2011 |
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| November/December 2011 | October 7, 2011 | October 14, 2011 |
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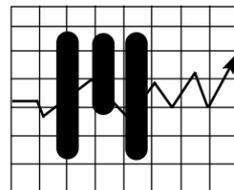
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Control Cable Achieves ISO 9001:2008 Certification

Control Cable, inc., a leading manufacturer of custom cable assemblies, is pleased to announce that the company's Baltimore facility has earned the International Organization for Standardization's ISO 9001:2008 certification.

"This is an important milestone for us," said Richard Meltzer, CEO of Control Cable. "Our reputation as a leading provider of the highest quality cables and top of the line customer service is further enhanced by achieving this certification. This sends a clear message to both our customers and potential customers that we are committed to continually improving our quality management systems in order to meet the needs of the customers in the markets we serve."

The ISO 9001 journey was championed by Control Cable's Quality Assurance Director, Rob Clement. Over the course of a year, Rob successfully implemented and developed the company's Quality Management System procedures and processes in preparation for registration and certification to the ISO 9001:2008 standard. The assessment was completed in February 2011 followed by the certificate of conformity and registration, which was awarded on March 2, from BSi Management Systems.

The 9001:2008 certification recognizes that the policies, practices and procedures of Control Cable are continuously reviewed and modified to ensure that the entire company is focused on the cus-

tomers. Because of the amount of time and effort companies must go through to achieve this certification, it is virtually assured that a company who successfully completes the process is truly dedicated to continual improvement towards achieving total customer satisfaction.

"A large part of our business comes from manufacturers who have chosen to outsource their cable assembly production to a US based company. Keeping manufacturing in the United States is something that Control Cable takes very seriously," continued Meltzer. "We are well aware of the price pressures that offshore manufacturers put on us but, quite frankly, US-based manufacturers can't be beat in terms of quality and delivery. Our customers choose to work with Control Cable because they trust us to get the job done. This was my motivation for attaining ISO certification- to further communicate to our customers that we are simply the best company to choose for their cable assembly needs."

Since 1975, Control Cable has been providing custom cable manufacturing and engineering for customers nationwide. The company specializes in the fabrication of custom cables for a variety of markets, including defense, energy, medical, transportation, robotics, and gaming. In addition to ISO 9001:2008 certification, the company is also ITAR registered with the US Department of State. For further information about Control Cable, Inc., visit www.controlcable.com

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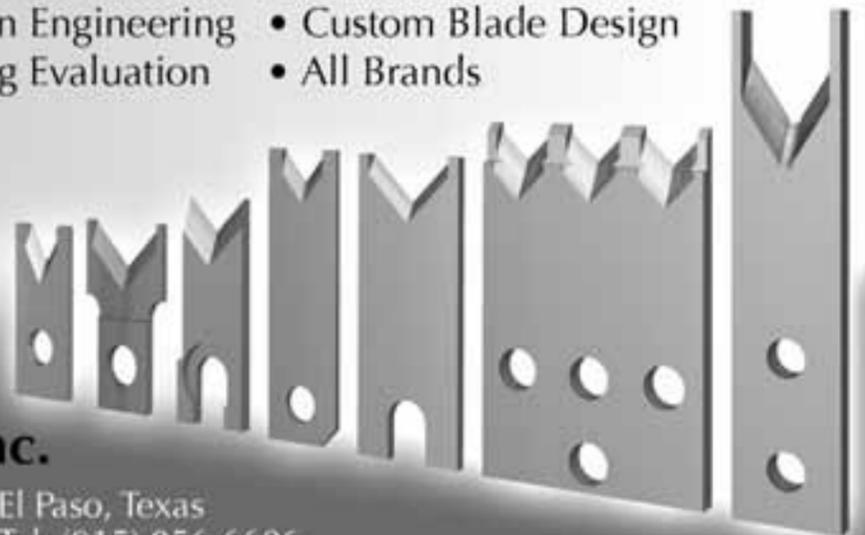
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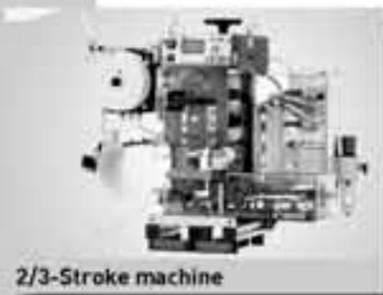
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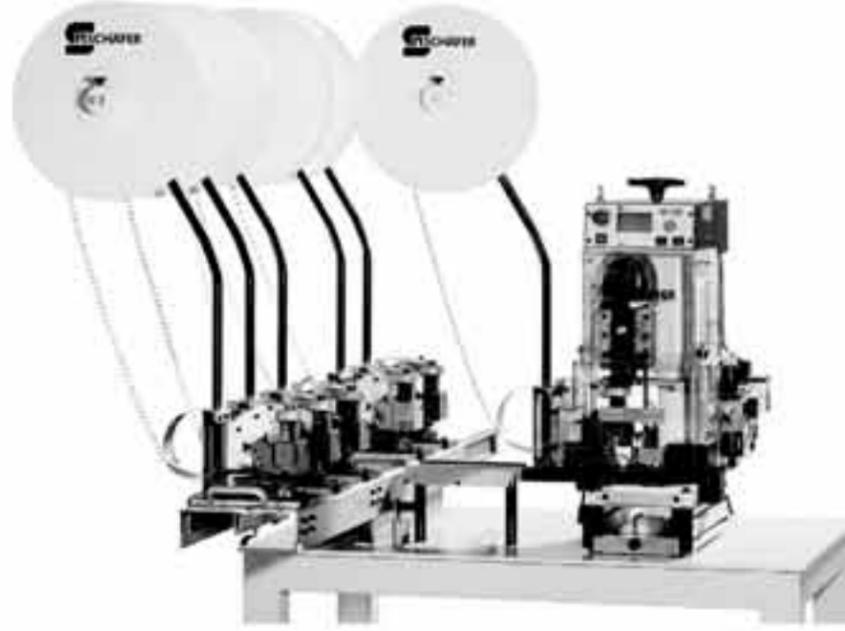
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Ontario and Michigan: A tale of two recoveries

By Paul Hogendoorn

Rebuilding a state or a province, how does that happen? How does that start?

In the last few months, I have done an extensive amount of travel to the different industrial regions in North America, including the southeast, the Midwest, the southwest, the "rust belt" and Ontario and Michigan, for the purpose of building up my own company. Through my role in the London Region Manufacturing Council ("LRMC"), I have participated in numerous "round table" discussions and have listened to industry and government leaders speak of their plans, or opinions, on rebuilding or re-igniting industries in their regions. And through it all, I see hope, sense optimism, and hear about "the light at the end of the tunnel".

And, over-all, I think it's true. But, some regions were hit harder than others, and some rebounded earlier than others, and the biggest two, Michigan and Ontario, are finally starting to show some positive signs too.

Ontario and Michigan have long been considered the two most significant manufacturing jurisdictions in North America, and their recovery seems to have been the slowest in happening. Perhaps



Paul Hogendoorn,
President OES, Inc.

this is just because of their size - it's harder for a big ship to change direction than a small ship. But in my travels through Michigan, I sense a new attitude at the grass roots level, a re-invention of sorts, and perhaps even a new identity. I don't sense this yet in Ontario.

In Ontario, there is still an attitude that suggests that governments have to step in and do something, that somehow government has to do more to protect the industries. In Michigan, it's the companies and factories themselves that are

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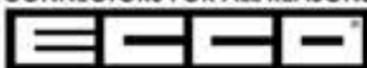
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reinventing themselves. They're not waiting anymore - the cavalry is not coming, no one else is coming to save the day. Those that have survived have survived because they have adapted and adjusted, and after tasting a bit of success, have adopted a whole hearted attitude of constantly adapting and adjusting.

Success comes with its baggage, which is all the things we hold on to and refuse to let go of, even after the usefulness ends and it just gets in the way. Ontario and Michigan both accumulated a lot of baggage during their 70 or 80 years of success, and both clung fiercely to what they perceived as "gains". But Michigan lost far more than Ontario, and as a result, reached the point of shedding some of that baggage far faster than Ontario. Ontario continues to layer on more and more legislation to control the industry or protect the workers not realizing that words like "lean", "flexible" as well as "responsible" and "accountable" are the key words in industry today. Nobody understands the true meaning of these words like a company that has managed to survive, and perhaps even thrive, in the toughest times for manufacturers since the depression. They had to be smart, and determined, and adaptable.

Not every story in Michigan is a turnaround or a success story, but many of the ones left standing certainly are - and that starts right near the top, with Ford. Ford held onto the vision and values it held close to its core, but was then will-

ing to challenge everything else about what it did or how it did it.

The successful Tier 1's have followed that lead. In Eastern Michigan, I have been in some facilities where workers and management have historically been on opposite sides of the table, but now they are on the same side, day in and day out. No one has to protect these workers from their employers because they know that together they can do a far better looking after their jobs themselves. In Western Michigan, I have been through other factories that were taken over by new companies after the original companies failed or became unsustainable. They were then retooled and reinvigorated, with new equipment and new attitudes, and they are once again profitable and confident of their future.

I'm not saying that companies have to be allowed to fail in order to eventually succeed. Failure is not a necessity; failure is only a necessity if unsustainable companies refuse to consider all the changes that might be necessary, including letting go of accumulated baggage.

I think it's time to stop expecting, or even worse 'asking', government to fix our manufacturing industry. Instead, we should ask that the government steps back and stops trying to "lead" the recovery. Most of the time government gets involved, they get in the way. Remember, the word "govern" doesn't mean to "lead", it means to regulate and control. We don't need more controls and regulations, we need less. And we need indus-

tries and companies to be able to, and willing to, lead courageously. Some jurisdictions offer tax cuts and other incentives, and those things are a good invitation for companies to look at investing there again, but that is just the start. Creating an environment where business success is welcomed is what is needed.

In the 80's, Lee Iacocca said "in the automotive industry, you lead, follow, or

get out of the way". Our mantra should be for industries to lead, and government to get out of the way, because few manufacturing companies are going to survive just by "following".

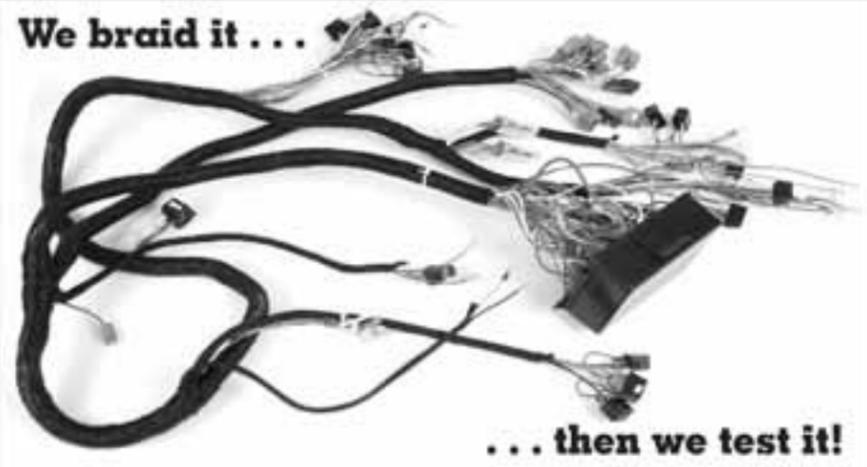
Paul Hogendoorn is president of OES, Inc of London, Ontario, and past chair of the London Region Manufacturing Council. He can be reached at phogendoorn@oes-inc.com

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STRUNK ConneCT GmbH & Co. KG (Kirchen-Freusburg, Germany), which has been a partner to the automotive and electric industries throughout Europe since 1972, has established a subsidiary in the United States to serve the needs of American manufacturers. Heinz Bockard, managing director of newly established STRUNK Connect Automation Solutions Inc., says the company will apply the experience and know-how of more than 37 years of process engineering to find the application technology that will provide the best possible support and service for customer applications in the automotive, medical

and solar power industries. "Our immediate goal with STRUNK Connect is to serve the automotive, medical, photovoltaic, appliance and home technology industries in the North American market," says Bockard.

Bockard points out that the core competence of the predecessor, STRUNK WELDING SYSTEMS, has been resistance welding technology ever since the firm was founded in 1972 by Helmut Strunk to build welding machines and accessories. In 1980 the company began producing measuring devices for resistance and arc welding, and developed the first data

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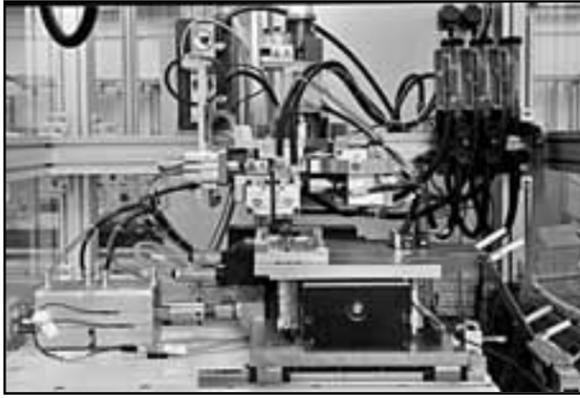
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recording system for welding quality, which was a worldwide breakthrough in the automotive industry.

In 1986 STRUNK began building customer-specific resistance welding machines for nonferrous metals, including the necessary control and inverter supply technology, which it continuously developed further according to automotive and medical standards, and still produces today. The first automation applications were undertaken in 1996, leading up to the development of handling robots with up to 6 mobile axes. STRUNK WELDING SYSTEMS was taken over in 2009 by Olaf Strunk, who then founded STRUNK Connect GmbH & CoKG.

Building on that core competence of connection technologies, Bockard says STRUNK Connect Automation Solutions offers stand-alone and fully automated machines for resistance welding and assembly. These machines weld both solid and stranded wire, from 0.04 inches to 0.5 inches in diameter, at rates up to 800 parts per minute with special cam-driven heads. The connections are homogeneous and inseparable, with near-zero contact resistance and no aging of the welded connection. In addition to wire splicing, these machines can also compact stranded wire and weld terminals to both solid and stranded wire. For joining nonferrous metal parts,



The STRUNK Connect semi-automated welding system.

the firm offers Nd:YAG, Ytterbium and CO2 laser welding machines. These machines feature automatic connector feeding and can be equipped with stamping and bending processes as well.

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Continued on page 10

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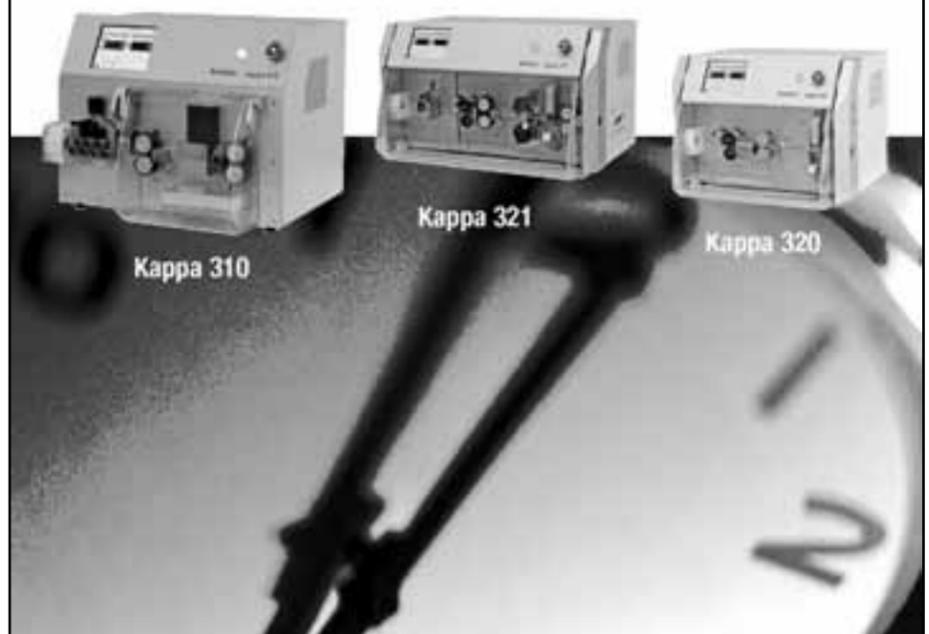
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Renowned German Firm Enters North American Automation Market

Continued from page 9

time and welding force. Control systems also monitor current, charge, power, energy, tension, displacement of electrodes, and height both before and after welding, which are presented in dynamic upper and lower limits. For traceability and 100 percent quality control, particularly in automotive applications, control systems monitor and store all welding parameters statistically with both warning and action limits. Welded components can also be labeled with batch or serial numbers by laser or printer. Alternatively, a report with needed information can be generated. Power supply options include:

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The STRUNK Connect AK testing line has been released to automotive OEMs and meets their requirements for testing automotive connectors used with air bags, brakes, sensors and myriad other components. Mechanical tests include radial peel force and axial pull force, both

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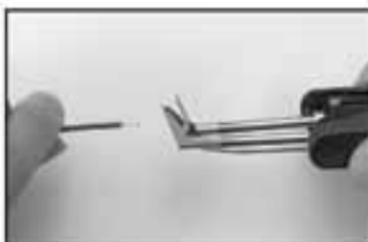
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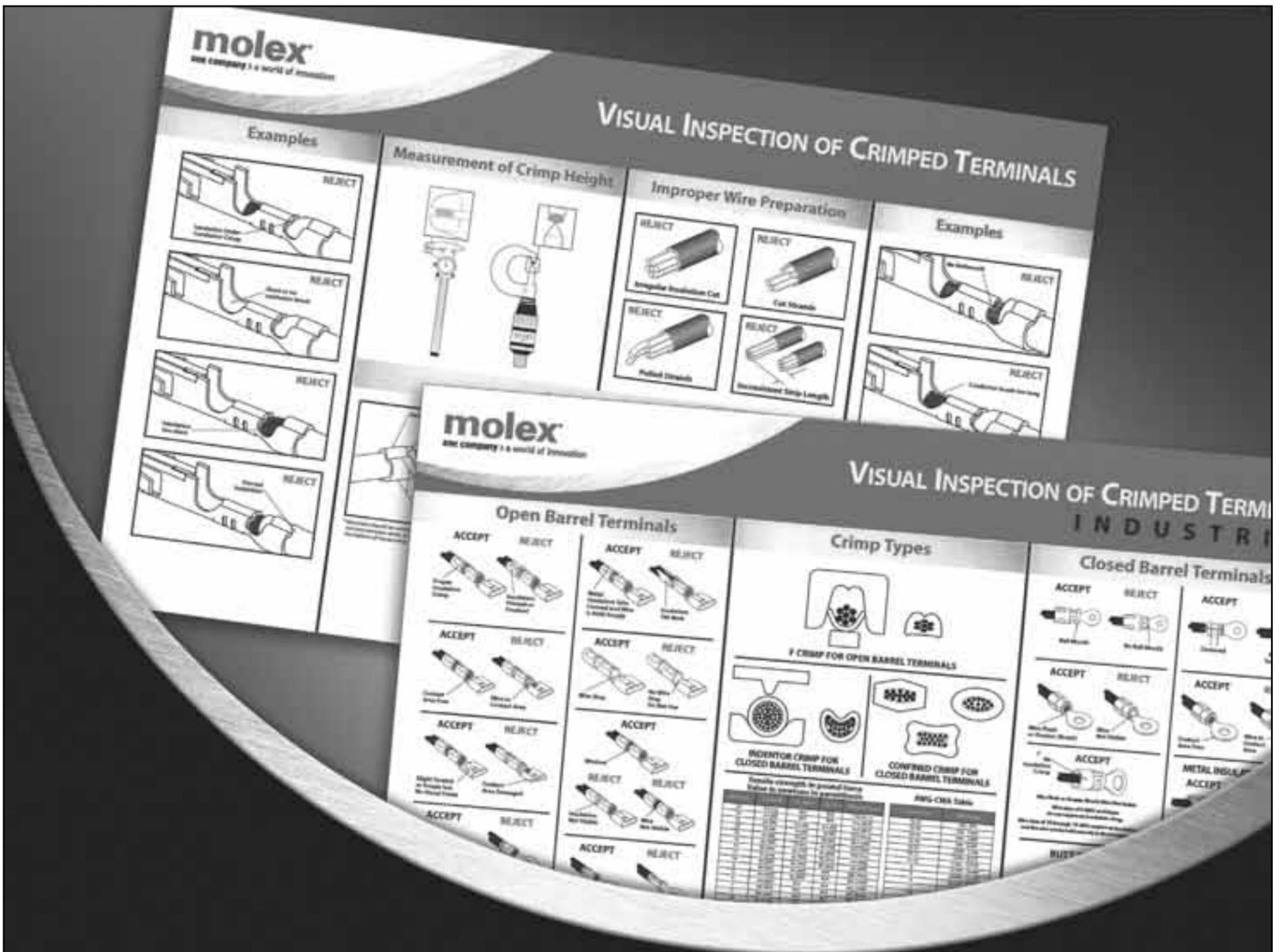


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REACH Basics for the Harness Manufacturer

Continued from page 1

substances of very high concern. These are the substances the EU would like to eliminate from use.

There are two subsets of the SVHC list. Member State committees or non-governmental organizations can propose substances to ECHA for inclusion on the SVHC list. These highly suspect substances are placed on the Candidate List where their impact on the environment and human safety is evaluated. ECHA decides if these substances will fall into a second list of substances to be banned altogether. These banned substances are said to fall under Annex 14 of the REACH legislation.

To better understand REACH, it is important to distinguish between substances, mixtures, and articles. A substance is the very basic chemical level such as acetone, alcohol, or some very basic polymers. A mixture (sometimes called a preparation) is a combination of any two substances. An article is something that has a special shape or surface. An article is defined by its function more so than what is in it. A wire is considered an article because a mixture of substance polymers is extruded onto strand-

ed copper to give it a specific shape and form. REACH registration is concerned at the substance level.

One of the main purposes of REACH was to offload the responsibility of testing and risk assessment from government to the importers of the substances, mixtures, and articles; and share the information with their downstream users. When manufacturers begin the process of registering substances and forming the appropriate dossiers on the safety of that substance, they often join or form a SIEF (Substance Information Exchange Forum). The intention is that costs for testing will be allocated among manufacturers based on the amount produced. Another intended outcome of REACH is once a substance is deemed harmful, industry can work together to devise a suitable substitute.

There are currently 143,000 substances or chemicals pre-registered (identified) with ECHA with about 3,500 at the Phase-in Registration stage (dossier formulation stage). Full testing dossiers exist for about 2,500 substances and are published on the ECHA website. There are currently 46 substances listed as SVHCs. The first six SVHCs were added to the REACH Annex



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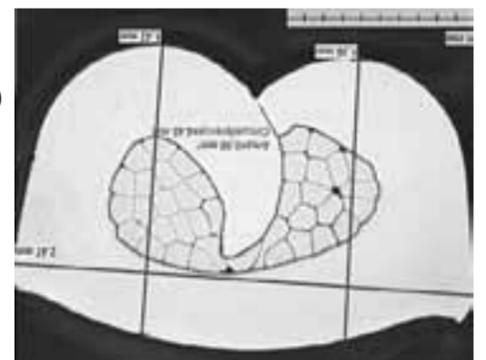
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14 (banned) list on February 17, 2011; and 15 more are coming up for a vote. It is expected that all substances on the SVHC list will make it to the Annex 14 list. Twenty one substances are currently under evaluation to be added to the SVHC Candidate List. Priorities for evaluation of chemicals in these lists are given based on the perceived risk, and total volume of the substance introduced into the EU. A detailed search for information on registered substances can be made on the ECHA website.

Effect on the Wire Harness Manufacturer

To comply with REACH, suppliers of electrical and electronic products must identify and track substances in the goods they purchase; along with other substances they add through processing. They must further determine whether there are any substances of very high concern or banned substances in their product. If any SVHC on the candidate list is present in the product with a concentration above 0.1% by weight, the supplier must inform the recipients of the article along the supply chain about the presence of the substance.

If it is discovered that the article contains any substance on the Annex 14 banned list, the company is prohibited from selling that article into the EU unless specific authorization has been granted by ECHA. Authorization is needed for each specific use of each individual product.

Unless an article contains an SVHC above the threshold of concern there is

little to worry about. But a downstream user or ultimate consumer can demand to know if an article contains an SVHC, and have an answer within 45 days. This is a relatively short amount of time for an entire supply chain to react, so the need for accurate and complete data is essential.

It is important to realize that if a wire harness manufacturer were to sell a wire with a new type of insulation that contains a substance not previously registered with ECHA; that manufacturer is responsible for registering the substance since they are the first to introduce it to the EU.

Labeling

There is a part of the REACH legislation called Classification Labeling Packaging. If it can be foreseen that an SVHC will be released during its intended use, suitable labeling and safety data must be present, along with proper shipping and storage data. Since wire harnesses do not fall into this category, manufacturers need only track SVHC content through the supply chain, and make any necessary declarations to their customers.

REACH In the Real World

Wiring Harness News recently spoke with Michael Wurzman, Materials and Software Specialist at RSJ Technical Consulting. RSJ Technical is a multi-faceted compliancy strategy consultant, and has served the wiring harness industry for

Continued on page 14

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many years. Wurzman began the discussion pointing out the biggest distinction of REACH to the newcomer. "We knew what was in RoHS; and although there were a few exemptions, the list was static and the language didn't change." But he warns that "REACH is dynamic and it's a regulation that has more teeth, including fines and jail time for those who are in violation in Europe." He stressed that with REACH, wire harness manufacturers will need to track ALL substances contained within the components and be able to know at any

point in time whether those substances are on the SVHC Candidate List, or the Annex 14 banned list.

Wurzman outlined the importance of developing trust and a working relationship with suppliers as the key element for the harness manufacturer. "I view REACH as working together with the supply chain to get toxic substances out of the production environment" for products sold in Europe. "What I have done with customers is work on a database of all the substances in all the components that come in, much like we do for ELV"

He continued, "If I know I have no SVHCs coming in the door, and I'm not creating any in my process, then the products are good for sale in the EU." The only responsibility then, he noted, is to be able to quickly demonstrate and communicate this to each company buying the product.

Wurzman again stressed caution with REACH and the issue of trust in the supply base. "You really have to know your suppliers, and this brings up the whole notion of risk management. Is your polymer supplier a small offshore company offering a 'same-as', or is it DuPont, Dow, or any of the other big names that have a lot at risk?" He advised that if a company is not confident with the supplier, the responsibility falls on them to have the product tested. "The way the legislation is written, you are responsible for knowing what is in the product you receive." REACH substances are often hard to test for, and he reiterated the importance of knowing the supplier is doing proper audits, along with the proper testing.

Once the supply chain has been verified, Wurzman indicated the next step is to build the database. "What I do with customers is work on a database of all the substances in all the components that come in, again, just like we do for automotive." Once this occurs, it becomes obvious to him where there is incomplete data. Sometimes those gaps are due to 'secret formulas'. When this is the case, he noted, it is only necessary to get information from the supplier that the formula does NOT contain any SVHCs.

Of equal importance to Wurzman is checking a company's facility from receiving to shipping. Wurzman related a story of an audit he performed where an engineer doing sporadic rework was using a product that contained an SVHC. The company had to make a declaration and it had a serious detrimental effect on customer relations. "When we do an audit," he said, "we go to

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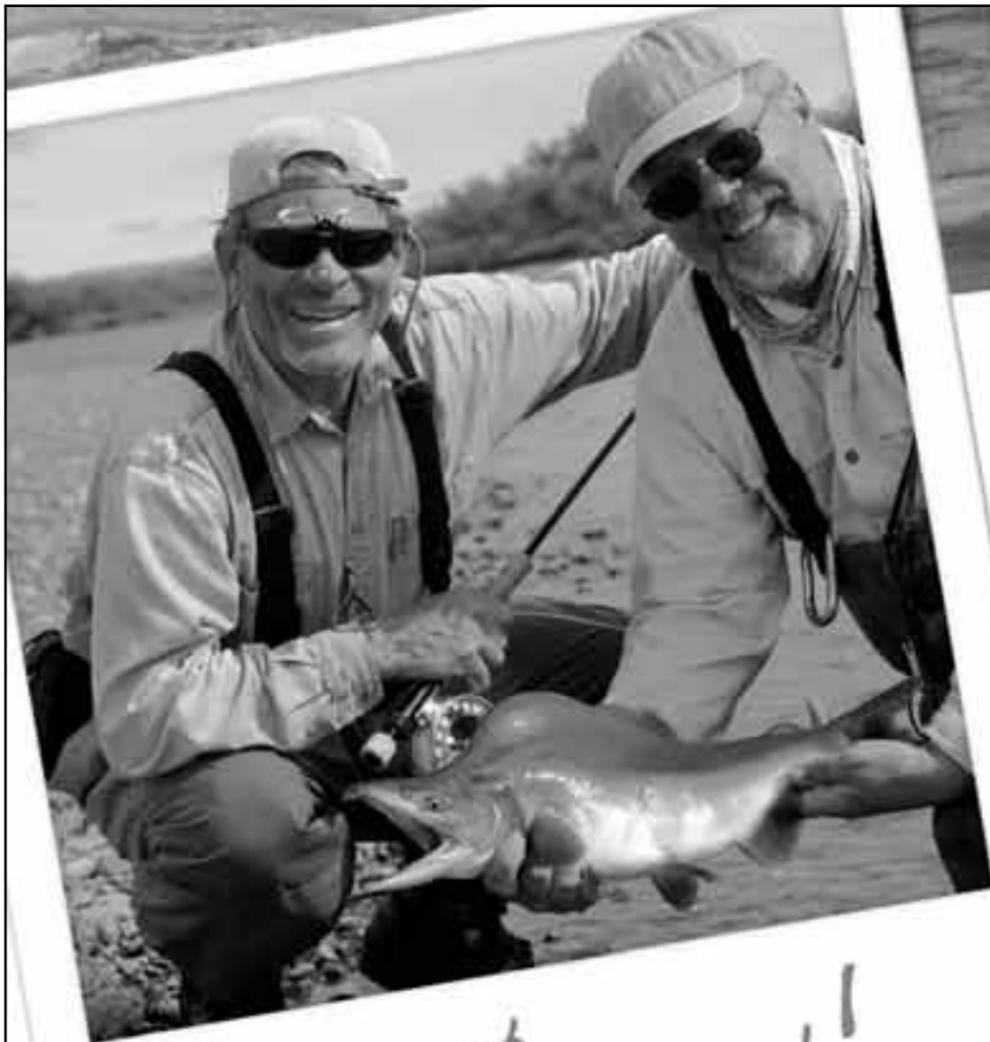
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WAGO 753 Series and 16-Point I/O Receive GL Approval

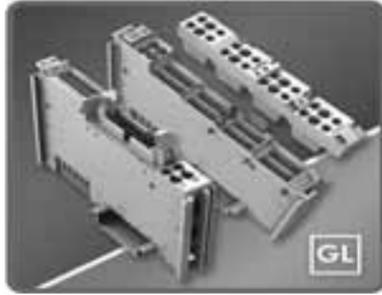
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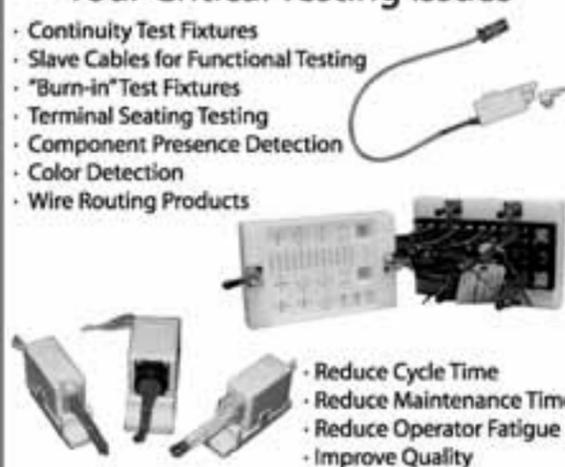
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REACH Basics for the Harness Manufacturer

Continued from page 14

every department; receiving, engineering design, manufacturing, and shipping; to make sure nothing is added that we don't know about."

When asked specifically about guiding his customers through the SVHC declaration process, Wurzman is proud to say "The way we handle that is, we have it out of there before it ever hits the SVHC list." RSJ Technical keeps close tabs on discussions between EU Member States and the various non-governmental advisory groups, "so we know what is coming down the pike for SVHC Candidate List inclusion, and can go to work on substitutes well in advance."

In concluding his assessment of REACH, Wurzman described the benefits that a good consultant brings in putting together a process to track materials. "It's really a matter of putting REACH in as part of your supply chain process. For

most companies, they don't have the time or adequate human resources, so that's where we come in" He expressed RSJ Technical's ability to provide varying levels of service depending on customer need. He also noted that their experience has led them to a select group of software products that improve the quality and manageability of environmental compliance data for various laws, directives and standards.

Resources

ECHA has a great website and the information is available in any language at www.echa.europa.com

RSJ Technical Consulting has a plethora of information on REACH, RoHS, EVL and other environmental compliancy standards at www.rsjtechnical.com.

You can contact Michael Wurzman at (972) 964-0981 office or (972) 679-8996 cell. Email: mwurzman@rsjtechnical.com

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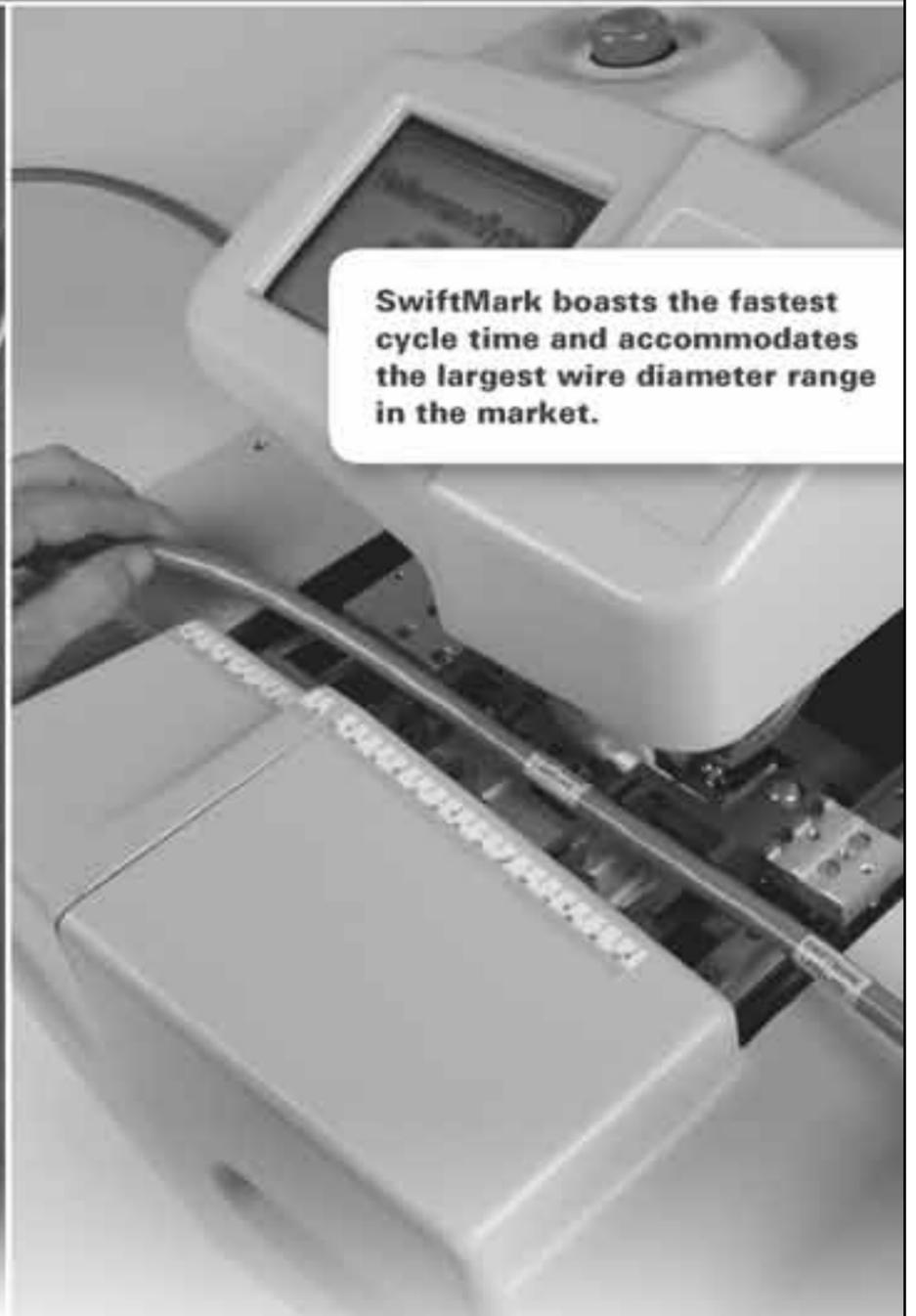
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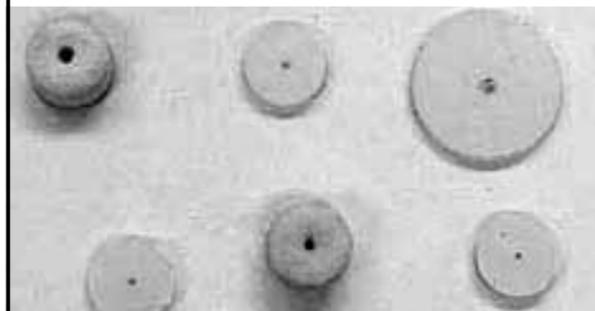
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Q&A

Unraveling Some of the Mystery of Social Media for Manufacturers

Joe Tito

While recently checking out the WHMA Yahoo Forum, I ran across a post from David Kasbee, Director of Sales & Marketing for Mecal by Starnes. They are the U.S. manufacturer of the Italian line of crimp applicators, presses, and spare part tooling. David had some questions about how to make good use of social media; and how a manufacturer can best utilize these tools. I thought they were excellent ques-

tions, and I sought the help of Todd Kelly of TaxTraxx, LLC for answers.

Todd has been working with his customers on their social media marketing for a few years. He has identified a niche working with manufacturers, and is familiar with the wire harness industry. Following are David's questions along with Todd's response:

Q How do you find groups/networks that you can follow?

A Depending upon the platform you use (e.g. LinkedIn, which is more for professionals, business people and jobseekers; Facebook, which is more general; Twitter, which is even MORE general) you would employ different search strategies that are native to that platform. For example, on LinkedIn, there are thousands of groups for business people related to broad-ranging topics (like entrepreneurship, or manufacturing) down to

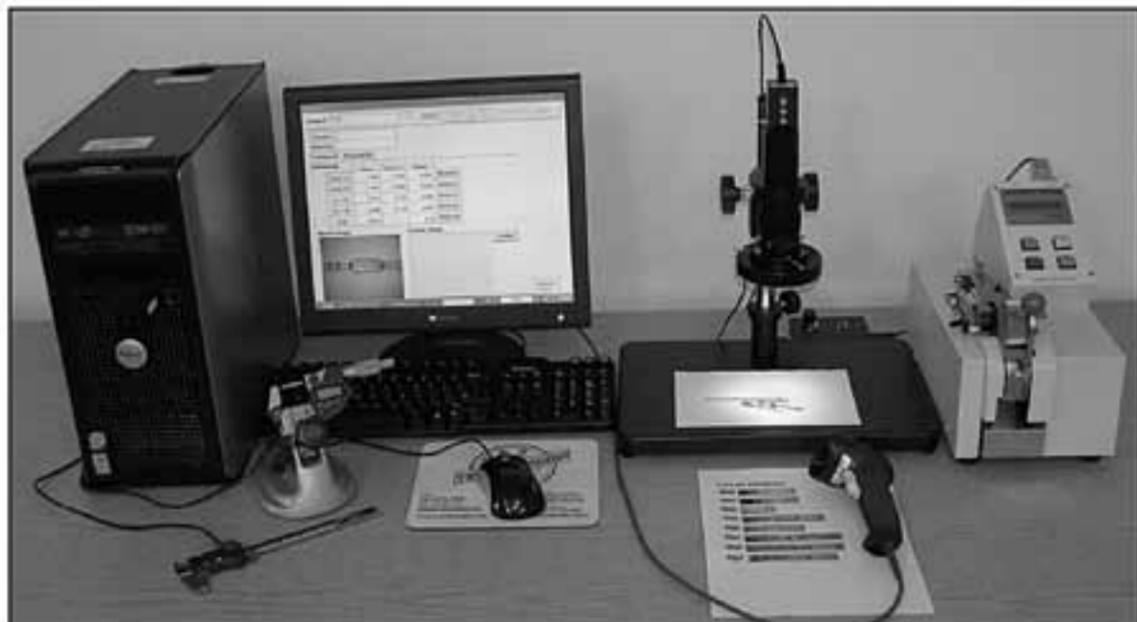
very specific topics (like Multi level marketing entrepreneurs who graduated from a specific school but live in the Midwest). LinkedIn and Facebook give you the ability to set up company pages that many companies have begun using as their business home page - or at least a portal through which you would access their homepage.

On Facebook and Twitter, you search keywords within your industry. The mechanics of the search are easy, but experimenting with the right words to search can take some patience. On Twitter for instance, you can search conversations about a specific tool, machine, tester or anything. You can set it so when that word is used anywhere by anybody on Twitter, it will pop up.

As for the actual tools you can use to manage this, there are TweetDeck or HootSuite. These are free downloads you can use that manage one or many searches all at the same time. TweetDeck is an easy-to-use dashboard that runs on your computer or your smart phone. With TweetDeck you can run multiple Twitter accounts. You can run Facebook, YouTube or any kind of social media accounts, and manage them all from one location, instead of having to go to separate programs. I know exactly what people are saying about my clients' accounts, or my personal accounts. I can also see any messages they

Crimp Inspection System

PC based system with bar code scanner, micrometer, caliper, pull tester, microscope and USB camera



First the operator scans the circuit number, his worker number and the machine number. The target crimp specs and master image are recovered from the hard drive and displayed. Using current production samples the operator measures the conductor and insulation crimp heights and widths. The operator measures the pull force. The operator captures an image, either cross section or terminal image. When finished the data is stored in Excel.

Set Up Master ver 1.22

Circuit # WXYZ [Release] [Print Chart] [Report Data] [Master Maintenance] [Quit]

| Dimension | Target | Target +/- | Actual | Measure |
|-----------|--------|------------|--------|---------|
| Cond. CH | 0.033 | 0.002 | 0.034 | Measure |
| Cond. CW | 0.070 | 0.002 | 0.071 | Measure |
| Ins. CH | 0.080 | 0.005 | 0.080 | Measure |
| Ins. CW | 0.088 | 0.005 | 0.088 | Measure |
| Pull | 20.00 | --- | 31.18 | Measure |

Master Image [Shutter] Sample Image [Shutter]

Save Into Excel



Scan the circuit number, operator number and machine number



Measure conductor and insulation crimp heights



Measure conductor and insulation crimp widths



Measure pull force



Capture cross section image or terminal image



cross section images or terminal images can be captured

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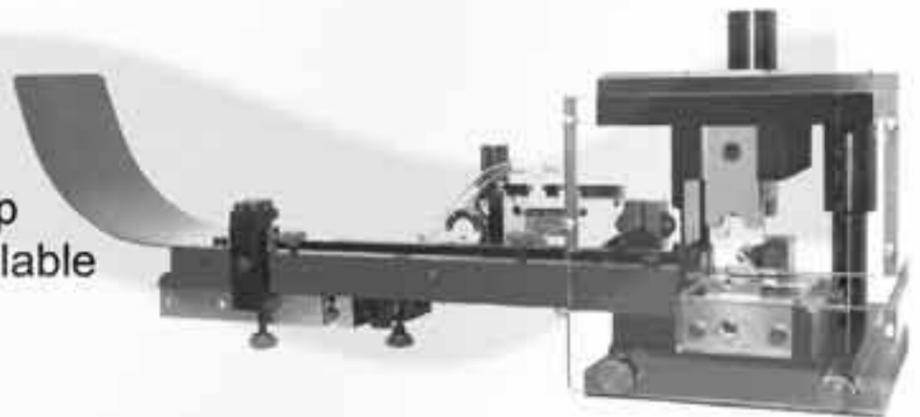


Model 1500



Model 2100

DSA applicators are designed for large terminals manufactured from heavy gage material with center to center distances up to 3 inches and widths to 3.5 inches. Available in left to right, right to left and rear feed configurations.



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Q&A

Unraveling Some of the Mystery of Social Media for Manufacturers

Continued from page 20

send, or be notified any time someone is talking about a client. I have terminology searches set up where I can go and look at what people are saying related to those search terms. HootSuite is very similar with a little different, owl-themed dashboard. TweetDeck has a more basic interface that I like.

Both programs add functionality from time to time, and once you get them up and running, you get automatic updates along with a link to show you how to use new function.

Q What other ways are there to use these social tools as a marketing strategy?

A Advertising, promoting tradeshows, promoting membership, advancing political positions, giving general information about the organization, recruiting (membership and employees), highlighting and/or discussing industry trends, syndication of news stories relevant to the industry, providing members a "voice" that can be heard

only by other members or by the Internet at large, selling things (like books, manuals, ebooks, trade publications, memberships, etc) opinion/editorializing, fraternization, surveys, team building, to name a few.

Here's one way I have used Twitter very effectively. At your next trade show you can put up a sign saying "Follow us on Twitter during the show," and give away door prizes only to Twitter followers who are at the show. People tweet that they are giving away a prize for the first person who walks up to your booth. Then they re-tweet saying "hey I just won a prize from XYZ Cable." You can have fun with it, and people who follow you will not necessarily unfollow you after the show. You can build a nice list this way. And it can trigger a response from someone who has followed you in the past, but could not make it to the show. I put the "follow us at the show" line on all communications leading up to the show. And you can do the same thing with Facebook.

Q Since we have a YouTube page, would videos of applicator assem-

bly/testing/running be beneficial to people in this industry?

A ABSOLUTELY - it's all about content, and video has the highest rate of feedback across the board. And once you have YouTube videos, you promote them on all platforms. Facebook and LinkedIn both have auto update features that will access your YouTube account. That means whenever a new video is put up on YouTube, a message goes out to members of the group on both platforms to prompt them to go watch it. Individual users can select to be informed every time something is posted, or in digest format (once a day, once a week, or so on.)

Q What types of gimmicks or information has the highest rate of feedback on social media?

A Again, if you post videos you will get the most feedback. But other things I use that get feedback are surveys and contests. Also, I like to solicit people to tell me a story related to

something specific that I do. The important thing is to provide content and not just sales solicitations. If you just hit people to buy stuff, you will lose followers. They will just turn you off. You can't give somebody a newsletter once a week; hit them with five sales blasts every day; and expect them to stay tuned in. People will stop following.

What I have learned is the more contacts you make that are not directly selling something, the more it will lead to sales. The big mistake people make with social media when they get started is going overboard with sales information. People want to be part of your community more than they want to get hammered with sales pitch after sales pitch. Genuine content provides the best results.

I hope this helps; I know I found some helpful hints in Todd's response. If you have additional questions, or would like to enquire about his social media marketing services, contact him at: Todd Kelly, TaxTraxx, LLC. Phone (404) 441-3738 or Fax (678) 302-9791. Twitter: PTODDKELLY



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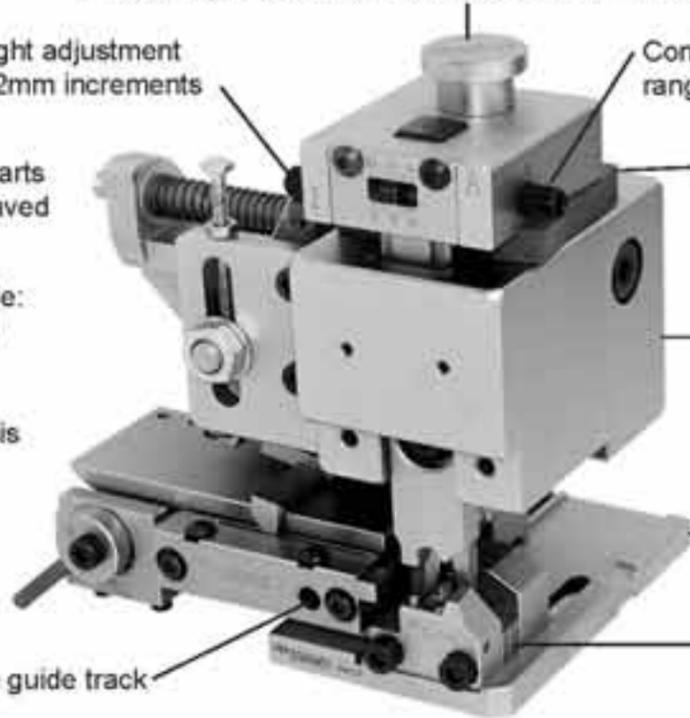
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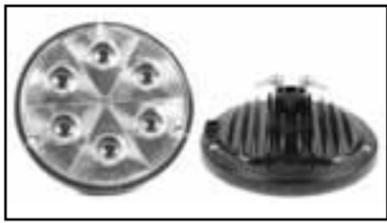
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Continued on page 26



Trilliant LED White Light Work Lamp

New Trilliant 36 LED White Light Work Lamp for Harsh Environments

Waytek, Inc. now carries the Trilliant 36 LED White Light Work Lamp designed to operate in adverse conditions where sodium chloride, high humidity and other corrosive elements wreak havoc on most PAR 36 incandescent work lamps.

The Trilliant 36 White Light Work Lamp is a direct replacement for PAR 36 incandescent bulbs. It shines brighter, lasts longer, delivers more value and easily snaps into any standard PAR 36 housing. By simply changing the bulb and wiring the pigtail, users can upgrade an incandescent or halogen lamp, transforming it into a 900 lumen LED White Light Work Lamp. The color temperature provides a natural contrast most like sunlight, reducing eye fatigue and optimizing job performance.

Rated for a service life of 40,000 hours, the Trilliant 36 White Light Work Lamp requires half the power and will provide 100 times the lifespan of a traditional PAR 36 bulb, at 1/8 the cost over its lifespan. It is manufactured with UV hard coated, polycarbonate lenses that can be replaced if damaged, and includes a Packard Metri-pack 150 connector that resists moisture and chemical intrusion. The female receptacle on the back of the lamp also accommodates the AMP Superseal connector style.

For more information on the new Trilliant 36 LED White Light Work Lamp, visit www.waytekwire.com/trilliant36. Or contact a customer service representative at 800-328-2724, Monday through Friday from 7:30am until 5:30pm central time.

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Continued from page 25

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Solutions for seal processing

You do have choices

When it comes to fully automatic seal applicators, you have a few to choose from. Your choices have just grown as Schaefer GmbH has introduced a new seal module or SSM for fully automatic wire process machines.

Your benefits

One of the many benefits of the SSM is it will work with seal kits that you may already own. The seal size range for the standard track in the Schaefer unit is the widest in the industry. Its narrow construction saves space on your machine table, allowing for a wider variety of other modules. The SSM is designed to achieve maximum process speeds while minimizing space requirements.

Wide range is standard

The new SSM unit can handle seals in a wider range of sizes and shapes. It is user friendly and will process seals with diameters up to 10 mm and 9 mm in length in its standard configuration. This includes many hard shell seal applications. Optional settings are available for large seals with diameters up to 17 mm and 16 mm lengths. The SSM has many other cost savings options available as well.

Schaefer Seal Kit SSK

Schaefer Seal Module SSM with SSK

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Signs of Full Recovery Shown in IPC's Electronics Industries Market Data Update - Leading Indicators Suggest Stable Growth for 2011

Economically, 2010 was a better year than expected in most parts of the world. Although Japan experienced exceptionally high growth in 2010, this was the year that China overtook Japan to become the second-largest world economy after the USA.

There are now strong indications that most economies around the world have fully recovered from the 2008-2009 recession. Most electronics industry segments are still experiencing strong but slowing growth. Markets are returning to normal. Data on these trends in specific industry segments and regions is covered in the recently released winter 2011 edition of IPC's quarterly business report, Electronics Industries Market Data Update.

Most segments of the electronic interconnect supply chain worldwide posted double-digit year-on-year growth in the fourth quarter of 2010.

PCB assembly equipment, laminate, electronics manufacturing services (EMS) and process consumables led the pack. Sales in most industry segments have returned to pre-recession levels.

In North America, the top performers in year-on-year growth for fourth quarter 2010 were PCB assembly equipment, flexible circuits and the EMS industry. The IPC Index of North American Electronics Industry Performance®, a composite of sales growth for major industry segments and leading economic indicators, shows the recovery cycle ending and a return to normal growth. The index for the fourth quarter of 2010 stood at 16.5, down from

Continued on page 34

Advanced Transit Manufacturing

Continued from page 1

Besides a wide assortment of harnesses, the firm manufactures boxes, junction blocks, cabinets, switch panels, relays, industrial controls, automation devices and electromagnetic clutches and brakes.

Since the Walshes bought ATM they made numerous changes based on the concepts of lean manufacturing and 5S, both of which had not been major concerns of Ahearn. "It took time to implement them and get everyone on board," Margaret Walsh said. "It was a transition for the people who had been here getting used to a new routine and being consistent.

"Some of them had a hard time breaking away from the ways things were

done and realizing new ideas can help you to work so much better," Walsh said. "There have been a few hurdles along the way, but we work through them."

Lean and 5S characteristics coincide closely with Walsh's experience, personality and leadership style. Before Barry Walsh took a job in operations with ATM in early 2004, the couple lived in Florida, where she worked flipping houses many years and in office management.

"I have a strong organizational background, so I expect everything to be organized," Walsh said. "I'm always looking for ways to make our plant cleaner and more easily accessible. I believe in 5S because it works wonders.

"I also know how to ask hard ques-

Continued on page 28



Computer testing of completed electromechanical assembly.



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Advanced Transit Manufacturing

Continued from page 27

tions," she said. "I keep pushing until I get the answers I need from those I need them." As president, she hires and fires, does the payroll, oversees the vice presidents, interacts with customers and evaluates and purchases equipment.

The methods used by Walsh and her husband resulted in tremendous growth. Sales in 2007 were \$4.9 million, but they shot up to \$10.2 million in 2008. They remained steady in 2009, even rising slightly to \$10.8 million. The increases were due to large contracts with rail companies.

Last year Walsh felt the full impact of the Great Recession when sales plunged to \$3.3 million. The number of employees was reduced from 45 to the current 29, 18 of whom are in production, where most of the layoffs were made.

Reductions also were implemented in wages, retirement benefits and health and dental insurance. Pay and benefit cuts affected all staff members. "If they weren't willing to sacrifice, I would have had to lay off a lot more people," Walsh said. "I'm proud of every one of the people here and the sacrifices they make. They deserve my gratitude. They have been very understanding."

Walsh decreased her pay the most. "As an owner, I don't feel that I can ask anyone to do what I'm not willing to do myself for the betterment of the company," she said.

As the company recovers and moves ahead, key roles are being played by several people. Randy Harkenrider, vice president of business development, is in charge of engineering, estimating, sales and marketing. Joe Kilmer is VP of operations, and Jim Green heads the quality department.

"This is small, family-orientated company, so everyone is a key employee," Walsh said. "I do not single any one person out more than another. We have a great team of people."

To nurture such a cooperative, cohesive culture, Walsh fosters openness. She visits with each person daily by walking through the building. Meetings are held on the floor about production and expediting.

Every week Walsh meets with the VPs and managers to discuss goals, plans and financials. All employees gather for an occasional breakfast, lunch or picnic.

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"The employees work with the projects on a daily basis, so I rely on them," Walsh said. "They are a vital key to make processes better."

Walsh's strong belief in 5S is prominent on the production floor. The five concepts of sort, set in place, shine, standardize and sustain are accentuated in a 20-day rotation. Everyone keys on one concept for four days before moving to the next one.

Persons are rewarded for their accomplishments under the 5S program. Employee photographs are posted, gift cards are handed out, and luncheons are held. "Each is a way to show people who shine that their efforts are not going unnoticed," Walsh said.

Not surprisingly, such a progressive attitude has yielded outstanding product quality. Walsh reported a customer acceptance rate of 99.7 percent over the last three years. Of the 53,000 items that were shipped, only 154 of them required attention.

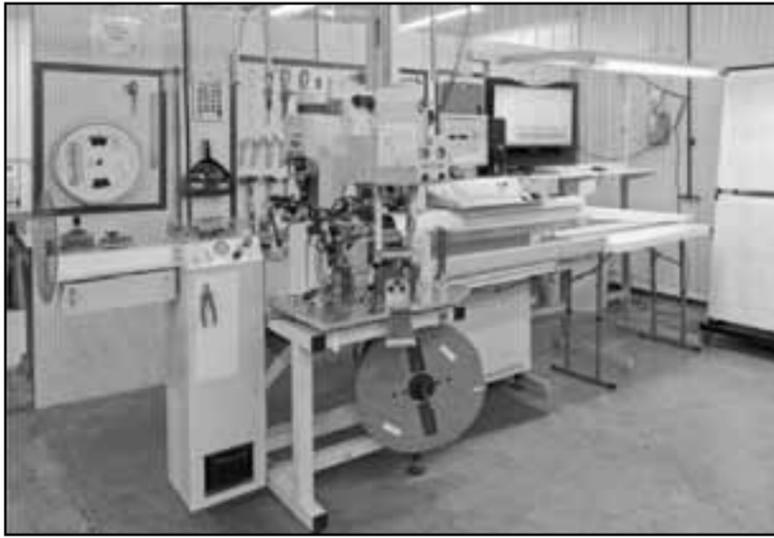
Such a low rejection rate is due to testing almost every harness, depending on customer dictates, and ISO 9001:2008 certification. It has been in place since May 2009. "We are always looking to improve our processes," Walsh said, noting that certification in the IPC/WHMA A-620 standards is being pursued.

Furthermore, ATM has an uncommon method to assure quality and customer satisfaction. Each product is photographed as proof that it leaves ATM in pristine condition. If a customer has a complaint about damaged products, it is filed with the shipper because ATM can prove they left the company intact as evidenced by the photographs.

"The photography has gone over very well," Walsh said of the practice that was started a few years ago. "The photos are e-mailed to customers, and sometimes they want things photographed extra."

Another service that saves customers money is returnable packaging that goes back and forth between ATM and its customers. Also, a box was designed with special inserts to hold harnesses that eliminates bubble wrap.

The number of customers is 17, a number that is subject to change due to



Gamma 333PC wire processing machine.

the daily telemarketing calls by Randy Regan and follow-up by Harkenrider. More leads will be obtained this October when ATM has a booth for the first time at the American Public Transporta-

tion Association trade show in New Orleans.

Additional customers will be accommodated because the ATM

Continued on page 30



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Continued from page 29

plant is at less than 50-percent capacity. Since its founding the company has been in the same building, which is owned by the Walshes.

The structure began as 10,000 square feet but was expanded with a 5,000-square-foot warehouse and was remodeled inside for more space and separating the offices from the production area. The downtown location of the building prevents additional expansion.

Given the opportunity, Walsh said she would like to move ATM to a 30,000-square-foot building. Even multiple locations closer to ATM customers are possible, and high-volume production in a foreign country may be considered.

Goals for this year include \$6 million in sales and \$4.5 million in revenue. Already \$1.5 million in contracts has been secured for 2012.

Profits will be affected by several factors. Walsh pointed out payments have to be made on two loans for purchasing the business. She stated employee health insurance, 65 percent of which she has to pay for laid-off workers, has doubled in the last year.

“Among the major challenges is trying

to hold the price for raw material for contracts to keep them stable,” Walsh said. “The increase in copper pricing looks like it is here to stay. The material we buy from other countries often becomes more expensive due to our dollar being worth less.

“The open trade system puts us at a disadvantage competing against other countries,” Walsh said. “They are willing to take on lower-volume work, which pushes the prices down, further making it harder to profit.”

So many different factors make forecasting hard. “I don’t like the uncertainty of the future because it is difficult to plan ahead,” said Walsh, who followed a three-year plan through February 2010. “Now I just take it one year at a time. With so many twists and turns in the economy, I don’t feel like hanging my head out too far at this point.

“Overall, I’m pleased with the decision to buy the company,” she said. “Everything happens for a reason, and it will all pan out in the end.”

For more information, call 607-698-4606, e-mail margaret.walsh@atmrail.com, fax 607-698-4851, visit www.atm-rail.com or write Advanced Transit Manufacturing, 14 S. Main St., Canisteo, NY 14823.

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In every issue of Wiring Harness News Anixter will bring you informative articles about wire and cable technology.

Fire Testing

Fire safety is an important issue for wire and cable. Every manufacturer, distributor, assembler and end-user of wire and cable needs to be aware of the latest regulations and products that meet fire safety standards. Many tests have been developed to measure the flame retardancy of wire and cable products. The flame retardancy of a cable is often defined as the ability of a cable to cease burning once the source of heat is removed.

Below is an overview of a few of the most widely used North American flame tests and ratings. For additional information on fire tests, including plenum and riser ratings, please refer to Anixter's *Wire & Cable Technical Information Handbook*, section 11.2.

Flame Tests and Ratings

UL Vertical Tray Flame Test (UL 1685)

This test is conducted on cables lashed to a vertical metal ladder tray 8 feet in height (see Figure 1). The combustion source is a ribbon burner with a flame, which supplies approximately 70,000 BTUs of heat per hour at a distance of 3 inches from the cable. The flame application time is 20 minutes.

This rating requires the cable to self-extinguish prior to reaching the top of the tray. A "tray-rated" cable must meet this test. Common tray-rated cables that pass this test are Types CM, CL3, CL2, TC, PLTC, and ITC. The IEEE 1202 and CSA FT4 are very similar to this test and identical to each other. IEEE 1202 replaces the vertical tray test in IEEE 383.

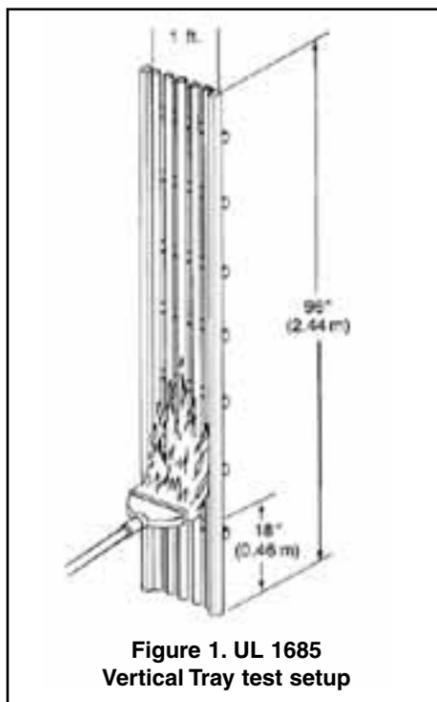


Figure 1. UL 1685 Vertical Tray test setup

Continued on page 32

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Continued from page 31

UL VW-1 Vertical-Wire Flame Test (UL 2556)

This is a small-scale test conducted on a single 24-inch length of wire or cable. The flame source is a Tirrill burner (similar to a Bunsen burner) with a flame height of approximately 5 inches having an inner blue cone of 1.5 inches. The burner is positioned so that the inner blue cone of the flame impinges on the specimen of wire or cable. The flame is applied for 15 seconds and removed for 15 seconds or until the specimen self-extinguishes. This cycle is repeated a total of five times. If the sample burns longer than 60 seconds after any application or if the indicator flag or cotton batting is ignited during the test, the cable fails the test.

The VW-1 test is typically performed to achieve an optional VW-1 rating for individual wires rather than cables, such as VW-1 rated RHW-2 or XHHW-2. However, there are some finished cables that must pass this test, such as CL3X and CL2X. The CSA (Canadian Standards Association) FT-1 test is similar.

ICEA T-29-520 Vertical Tray Flame Test (210,000 BTU/hr)

Though not a UL test, this test is sim-

ilar to the UL 1685 vertical tray test but with the heat source increased to 210,000 BTU/hour. This rating is not required by the NEC (National Electrical Code) or the CEC (Canadian Electrical Code), but is sometimes required by end-users.

MSHA Flame Test (US Code of Federal Regulations 30 CFR Part 7.407)

This test is required by MSHA (Mine Safety and Health Administration) to ensure adequate fire resistance for cables used in the mining industry. In this test, a 3-foot length of cable is mounted horizontally. During the test, all power conductors are connected to a current source to raise the conductor temperature to 400° F (204° C). A flame source consisting of a burner with a 5-inch flame containing a 3-inch blue cone is applied to the center of the cable for 60 seconds and then removed. Each of three test specimens must meet the following criteria: 1) the duration of burning must not exceed 240 seconds and 2) the length of the burned (charred) area must not exceed 6 inches. Cables that meet this test requirement are printed with an MSHA acceptance number such as "MSHA P-123" (see Wire Wisdom P-1 for additional informa-

tion on "P-numbers"). The CSA FT5 test for portable cables is similar.

CSA FT4 Vertical Tray Flame Test

This is the CSA flame test that most closely corresponds to the UL vertical tray flame test. The test varies slightly in both setup and passing criteria. To pass the test, the maximum allowable char distance is reduced to approximately 59 inches (1.5 meters) from the point of flame application versus the entire tray height for UL vertical tray test. This test is the same as the IEEE 1202 flame test and both are found in the UL 1685 document. Because of the reduced char height requirement, FT4 and IEEE 1202 are slightly more difficult to pass than the UL 1685 vertical tray version.

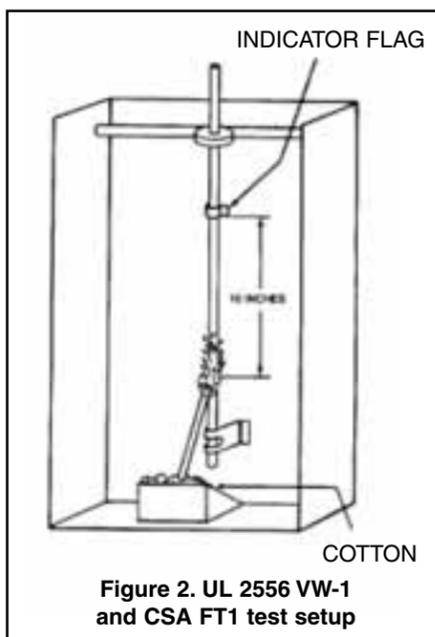
CSA FT1 Vertical Wire Flame Test

This is the CSA flame test that most closely corresponds to the UL VW-1 test. In fact, they are both found in the UL 2556 document. The test differs from the UL VW-1 test in that it does not have a waiting period for the wire to extinguish between each 15 second application of flame instead it monitors the length of time the wire burns after the final flame application. If the wire burns for more than 60 seconds after the final flame application or more than 25 percent of the indicator flag (see Figure 2) burns, it fails the test.

CSA FT2 Horizontal Flame Test

In this test, cables are subjected to a 30-second application from a five inch flame with an inner blue cone of 1.5 inches. Flameless charring of cotton placed under the specimen is OK, but ignition of the cotton may constitute a failing test.

Most North American commercial and industrial wire and cable will be required to meet one of the above flame tests. Some products carry multiple ratings and are indicated as such in the print legend or the product labeling. Flame tests are sometimes indicated on the product, but are not always required to be included in the product legend or label. Instead, it is sometimes easier to refer to the standard to which the cable is made to determine the flame testing requirements. We will address plenum and riser flame testing requirements in a future Wire Wisdom.



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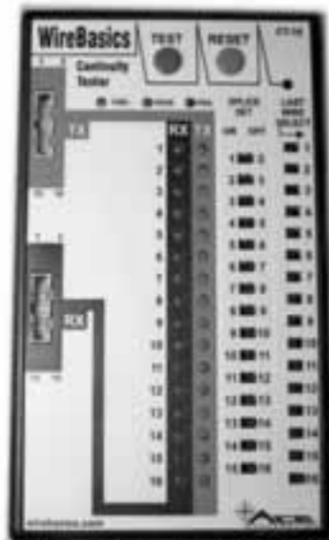
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NEWS PLUGS continued



Continued from page 26

31.0 in the third quarter, but still solidly positive.

Subscribers to the Electronics Industries Market Data Update also have access to an interactive graph built upon the index data and showing growth trends back to 2007. Users can add their own companies' quarterly year-on-year growth rates to the data table and see a line graph showing how their company has been performing in comparison to their industry segment as well as customer and supplier industries.

The Electronics Industries Market Data Update is free to all IPC members and can be accessed online, via a log-in page, at www.ipc.org/Update. Nonmembers can subscribe on a yearly basis. Subscription information is available at www.ipc.org/MDU-subscription.

New Side Entry Bushing (SEB) Thermoset to Naturally Conform to Circular Wire Bundles

TE Connectivity, a leading global provider of engineered electronic components, connectors and network solutions, introduces a new side entry bushing (SEB) for military, commercial aerospace and commercial marine environments. Designed for high temperature applications where tape or fixed grommets are used, one strip of the pre-coiled, reusable SEB can replace up to 6 feet and 40 wraps



TE Connectivity offers new side entry bushing (SEB).

of silicone tape traditionally used in strain relief of wire and cables.

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Currently available in six standard sizes, the bushings can be trimmed to fit to any size clamp/wire combinations. Side entry bushings are thermoformed from a silicon elastomer with a temperature rating to 180° C continuous use and flame-retardant. They maintain outstanding low-temperature flexibility and resist hydraulic fluids, fuel and lubricating oils. The bushings conform to MIL Standard AMS-DTL-23053/10, MIL-PRF-46846 Type II Class 1 and TE specification RT-1140 for silicone elastomeric materials.

For more information on TE's side entry bushing, contact the TE Product Information Center at (800) 522-6752. Follow us on Twitter for all the latest product news @TycoElectronics.

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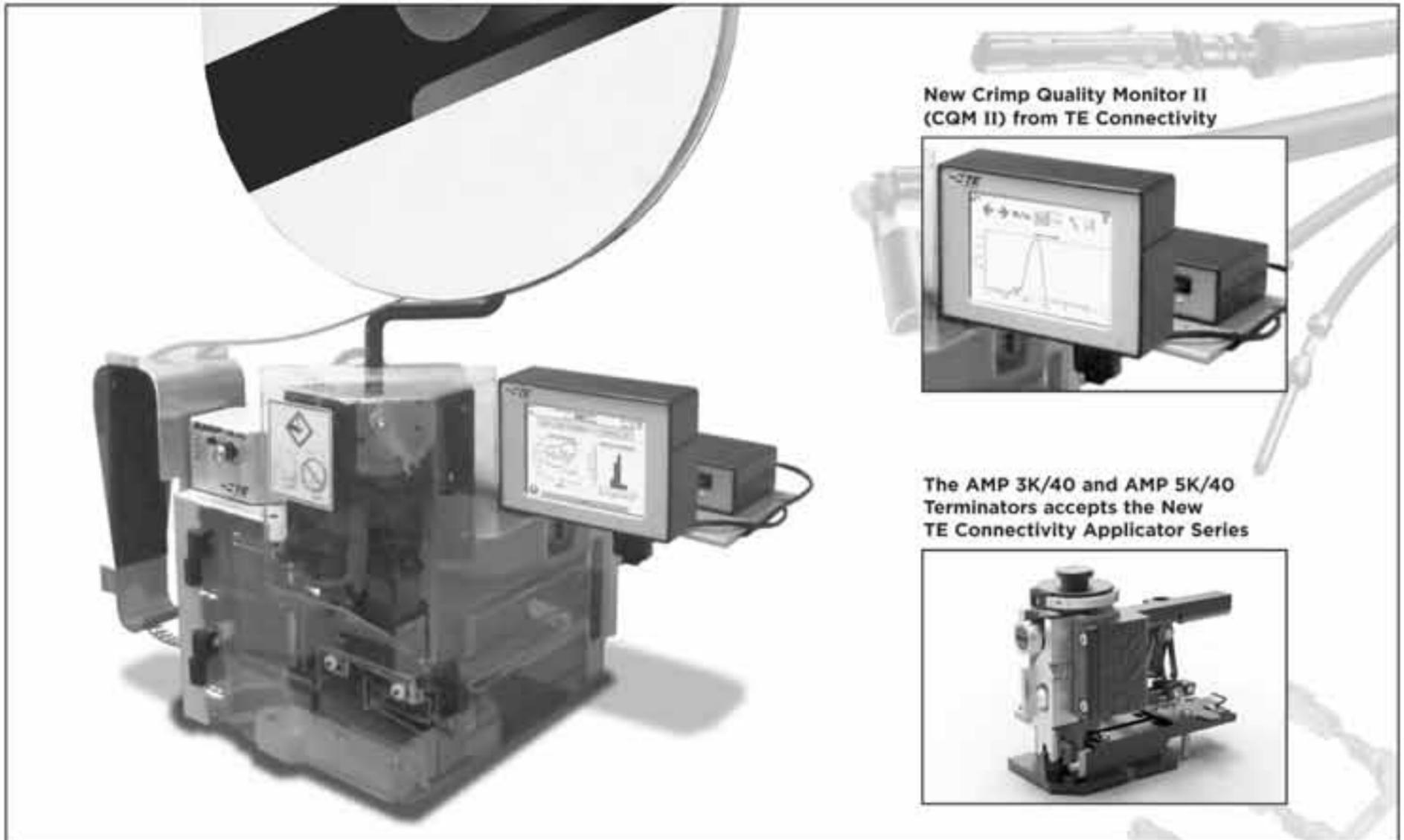
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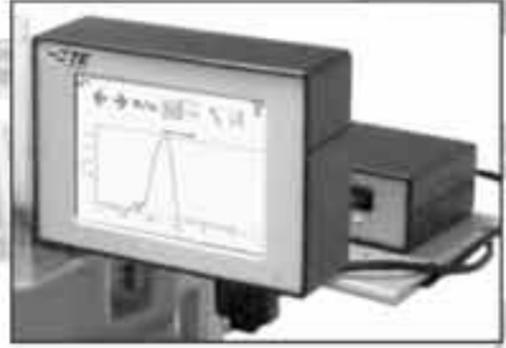
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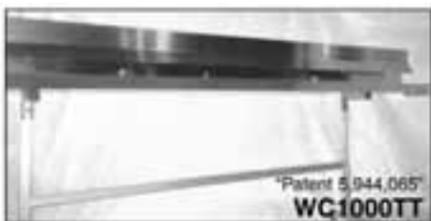
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NEWS PLUGS continued



Burndy® Introduces the MRE10-22B & MRE10-22NV Ergonomic Full Cycle Ratchet Hand Tools

BURNDY®, a leading manufacturer and provider of connector solutions to the industrial, energy, construction, telecommunication, petrochemical, data center, and transportation industries, introduces the new MRE10-22B and MRE10-22NV HYTOOL™. These ergonomic full cycle ratchet tools provide a complete positive crimp each time. The ergonomic comfort grip handles reduce operator fatigue during continuous use.

Each tool is for use with BURNDY® insulated and non-insulated small HYDENT™ terminals, #10-22 AWG. The MRE10-22B crimps uninsulated (bare) terminals and splices; the MRE10-22NV crimps nylon and vinyl insulated terminals and splices. The dies are color coded and stamped with the conductor size to provide an easy match of the die and proper BURNDY® terminal or splice.



Burndy® Ergonomic Full Cycle Ratchet Hand Tools

The ratchet mechanism does not allow the handles to be opened until the full cycle is completed, unless the emergency

release lever is actuated, providing for a completed crimp before a connector can be removed from a tool. The MRE10-22 series tools produce a UL Listed and CSA Certified connection when used with the recommended BURNDY® terminals and splices. The MRE10-22 tools have a five year limited warranty.

For additional information, contact us at 47 E. Industrial Park Drive, Manchester, New Hampshire, 03109, call Customer Service at 1-800-346-4175, or visit our website at www.BURNDY.com.

New Deutsch DT Series Sealed Dust Caps

LADD Industries Inc. announces the addition of the DT Series dust cap accessories to the Deutsch Industrial DT product family. DT Series dust caps provide an environmentally sealed interface for DT Series plug connectors. They are specifically designed for environments where



DT Series Dust Caps

moisture, dirt and rough terrain can contaminate or damage electrical connections.

The DT Series dust caps are available for all DT Series plugs, cavity sizes 2 through 12, and also for the DT16 Series 15 and 18 cavity plugs. The high-performance thermoplastic caps feature an integrated mounting hole which can also be used

Continued on page 38

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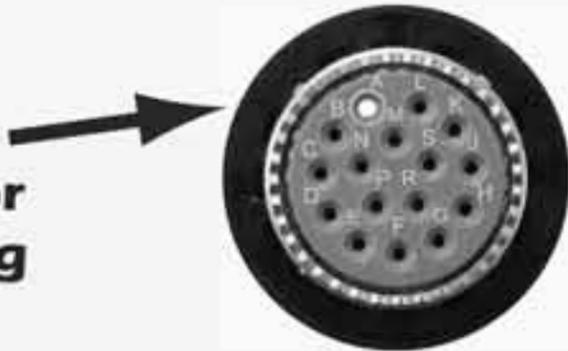
1

Touch wire.



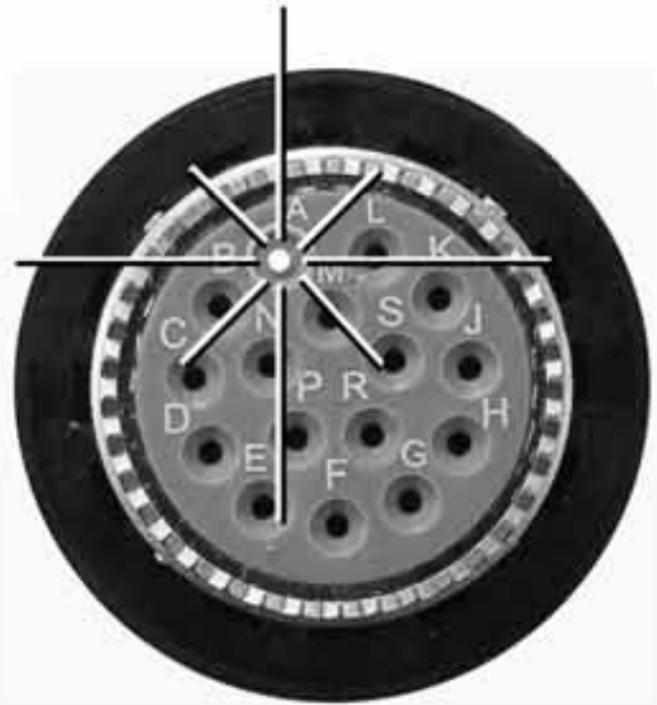
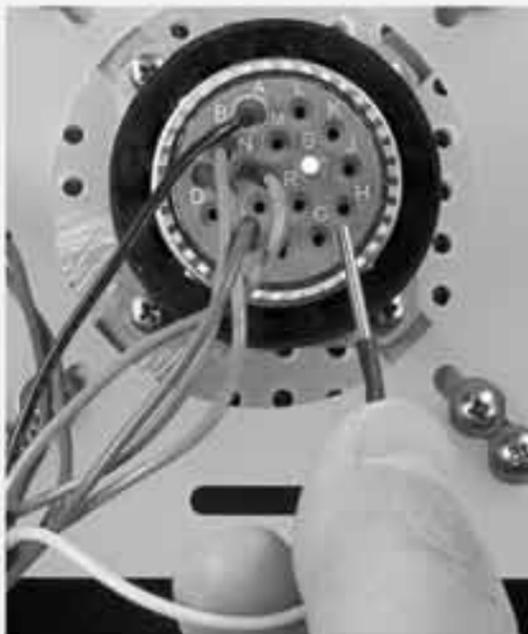
2

Look for Flashing Cavity.



3

Insert Pin.



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NEWS PLUGS *continued**Continued from page 36*

with a lanyard to keep the cap close when not in use. The DT Series dust caps meet all the standard specifications for the heavy-duty Deutsch product line including 3 feet submersion and 125°C temperature rating.

The Deutsch Industrial product line and the DT Series dust caps offer innovative connector solutions for harsh environments. LADD Industries, your exclusive authorized US Deutsch Industrial distributor, is pleased to offer the DT Series dust caps to meet your industrial connector requirements.

Please contact LADD at 1-800-923-1236 for more information on the new DT Series dust caps and all your Deutsch Industrial connector needs.

Green Truck Association Names 2011 Officers of the Board of Directors

The Green Truck Association (GTA) an affiliate division of the NTEA, recently announced the election of new Officers of the Board of Directors during the annual Board meeting held in Indianapolis, IN, March 8, 2011.

Todd Mouw, Vice President of Sales and Marketing for ROUSH CleanTech (Livonia, MI), was elected President; Joe Dalum, President of Odyne Systems LLC (Waukesha, WI), was elected Vice President; and David Bryant, Manager of Vocational

Sales of Freightliner Trucks (Fort Mill, SC), was elected Secretary. All three will serve a one-year term.

Also serving on the Board is Bill Burns, Fleet Operations Manager of City of Columbus, Ohio (Columbus, OH) and Darren Gosbee, Director of Electric Vehicle and Hybrid Powertrain Product Development for Navistar Corporation (Downers Grove, IL).

The goal of the GTA is to continue the progression of green work trucks through:

- Showcasing green trucks and technology developments
- Serving as the resource for legislative, regulatory and funding initiatives relevant to green truck development
- Supplying market data and technical resources relevant to green truck development
- Sharing timely news on green truck products and initiatives.

For further information on the GTA, visit www.greentruckassociation.com or call 1-800-441-6832.

Eraser Introduces DSP Stripping Pots

The DSP stripping pots are designed specifically for use with Dip Strip. The standard models DSP1 and DSP2 have an infinitely variable temperature control with a reference scale. The DSP3 has an advanced feedback temperature controller and has a 600 watt heating element to increase the throughput ten times. Dip Strip is used to chemically remove the insulation from virtually all magnet and enamel wires of all sizes and insulation types, without damage to the wire. When heated in the specially designed stripping pot, the Dip Strip melts and wires are immersed in the Dip Strip to strip the insulation. The stripped wires are then rinsed in water and Dip Clean Metal Cleaner to remove oxides and residue. Dip Strip does not corrode conductors as will acid strippers. Custom square and rectangular pots are available.

The Eraser Company, Inc., celebrating its 100th anniversary this year, manufactures a wide range of industrial products, including the aforementioned wire processing equipment. The company also manufactures cable and tubing cutters, cable strippers, wire brush wheels, dereelers, measuring tools, and FybRglass® erasers. The company is ISO 9001:2008 certified, and offers a serv-

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- Meets OSHA safety and noise requirements and is CE approved
- Two safety interlock switches attached to the guard prevent press from cycling if guard is open during operation

The **Tape-Terminal Crimp Module** efficiently crimps terminals to wires from 4 to 30 AWG with minimal setup adjustments and achieves optimal cycle rates for mid-to-high volume, semi-automatic operations.

Features and Benefits of the Tape Terminal Crimp Module Include:

- Quick-change modular tooling accepts all existing ATP-201 and ATP-301 die sets
- Used in Molex TM-3000™ and TM-4000™ presses, which accept Molex applicators and most industry standard applicators
- Independent adjustment of insulation crimp height provides flexibility for various wire insulation thicknesses
- Quick tool changeover from die set to die set for increased productivity



The **TM-4000™ Universal Crimp Press** is an industry-standard, bench-top press that terminates large lug products on Mylar tape up to 4 AWG insulated and some 2 AWG uninsulated, resulting in lower overall applied costs. The TM-4000™ has electrical requirements of 240 AC 50/60Hz.

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Electronic Flasher Now Available from Waytek, Inc.

Waytek, Inc., distributor of electrical supplies announces a new electronic flasher for operating LED and incandescent lights.

The new electronic flasher is a 3-pin configuration and is solid state, so it has no moving parts, making it more reliable and long lasting than mechanical flashers. Rated SAE J945, SAE J590 and SAE J1690, this new flasher meets all standards for turn-signals and flashers in transportation and off-road applications.



**DSP stripping pots from
The Eraser Company**

Visit www.waytekwire.com for an extensive line of flashers, lights and other electrical wiring supplies. Orders may also be placed by phone through a Waytek customer service representative at 800-

328-2724, Monday through Friday from 7:30am until 6:00pm central time.

Damien Polansky Appointed to TIA Board

Dow Wire & Cable is proud to announce that Damien Polansky, Global Telecommunications Platform Leader, has been appointed to the board of the Telecommunications Industry Association (TIA). TIA is the leading trade association representing the global information and communications technology industries through standards development, government affairs, business opportunities, market intelligence, certification and worldwide environmental regulatory compliance. Board members are selected from among member companies and are responsible for formulating policy.

"Damien's participation on the TIA board has two-fold benefit," said Tim Laughlin, General Manager, Dow Wire & Cable. "We'll be able to share the material science and technology expertise of The Dow Chemical Company in an industry that continues to demand technology and new innovation to meet the fast pace of the telecommunication industry for the transmission and distribution of voice, video, and data. Dow will have the ability to further enhance its Dow Inside brand identity in a marketplace strategic to our growth."

Dow Wire & Cable has been active in the telecommunications industry for nearly six decades, supplying a full line of jacketing and insulation materials for hard-wired equipment, wireless communications and RF, coaxial and fiber optic cables. Now, with the introduction of DOW ECOLIBRIUM™ bio-based plasticizers, Dow Wire & Cable can also address environmental considerations in telecommunications end products.

"TIA's member companies represent the entire supply chain of the information and communications technology industry," said Grant Seiffert, President, TIA. "We were attracted to both Dow's longevity in the marketplace and its reputation for putting science to work to find solutions ben-

efitting the industry and Damien's passion for challenging the status quo and delivering innovation."

Polansky has been with Dow since 1997 and joined Dow Wire & Cable in 2009. He holds a BS degree in Chemical Engineering from the University of Texas at Austin and an MBA from the University of Notre Dame. Polansky was nominated by Fred McDuffee, President of Sumitomo Electric Lightwave and current TIA board member.

Allied Wire & Cable Adds Industry Vet Bjorkman to New Vegas Team

Allied Wire & Cable's Las Vegas, NV facility is the new home of Sales Manager Skip Bjorkman, a wire and cable industry veteran with over thirty years of experience.

Allied Wire & Cable is pleased to announce that Skip Bjorkman will be the sales manager for its new Las Vegas facility, which opened in November. Bjorkman has been in the wire and cable industry for over thirty years and has an impressive resume to show for it. He has experience with industry leaders from Anixter to Priority Wire and Cable, for whom he opened branches in Duluth, MN and Las Vegas, NV, respectively.

Most of his family has been working in the industry since the early seventies, and Bjorkman is enthusiastic about continuing the tradition with Allied. Bjorkman said, "I am happy and excited to finish out my career with a great family owned company like Allied Wire & Cable."

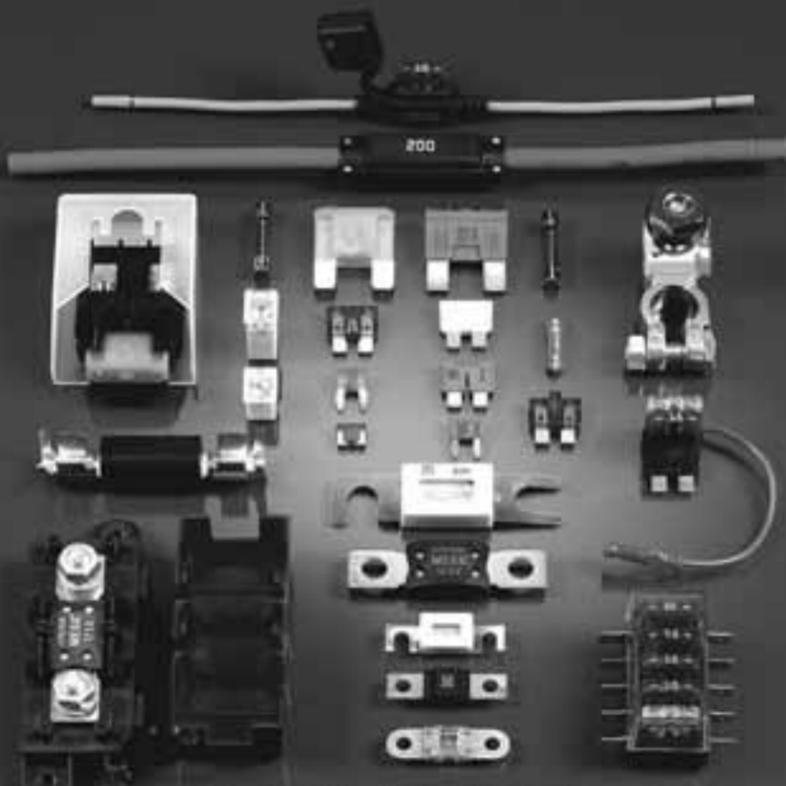
Allied Wire & Cable is a family owned and operated wire and cable distributor and value added manufacturer. Allied services many industries in the country, including the government military, as well as the aerospace, automotive and telecommunications industries. Allied offers customization services, including cut and strip, printing, dyeing, striping, twisting, and more. Headquartered in Collegeville, PA, Allied has offices in Florida, New Hampshire, South Carolina, Tennessee, Texas and Wisconsin, along with several warehouses across the country. In November 2010, Allied opened its newest stocking facility in Las Vegas, Nevada. For more information on Allied Wire & Cable, please visit www.awcwire.com.



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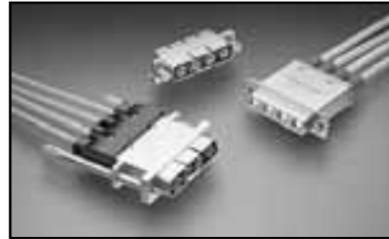
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NEWS PLUGS continued

New D-Sub Connector Provides Gigabit Ethernet Speeds with Superior Shielding Performance

TE Connectivity (TE) introduces the Quadrax D-Sub style connector for military and commercial aerospace environments. The new con-



Quadrax D-Sub Style Connectors

connector was designed to provide a gigabit Ethernet solution in an industry standard D-Sub platform, while offering superior shielding performance.

The Quadrax D-Sub style connector was created to meet the high-speed data rate needs in commercial avionics, aircraft data networks, in-flight entertainment systems and military communications applications. The rugged metal shell construction provides four Quadrax connections in a size 3 shell with a 0.5" x 2.0" window, and supports both cable-to-cable and cable-to-board configurations. It serves as a low-profile alternative to the Circular 38999 Style Connectors, providing the perfect solution for cable-to-PWB high-speed interconnect.

The easy-to-assemble connector features cable applied plug and

receptacle, along with Right Angle PCB Mount receptacle. It also meets the requirements of TIA/EIA-568-B.2 for insertion loss, return loss, as well as near end crosstalk (NEXT) and far end crosstalk (FEXT).

For more information on TE's Quadrax D-Sub style connector, contact the Product Information Center at (800) 522-6752. Follow us on Twitter for all the latest product news @TEConnectivity.

North American Business Conditions Improved for Sixth Straight Month in April

The results from NEMA's latest monthly survey of senior member company executives finds that business conditions improved for the sixth month in a row in April.

The Electroindustry Business Confidence Index (EBCI) for current North American conditions measured 57.1. While down slightly from the 60.9 mark recorded in March, a reading above 50 indicates more panelists reported better conditions compared to the previous month than reported worse conditions.

Nearly 30% of survey panelists reported improved conditions in April, down appreciably from almost 44% in March. At the same time, though, only about 14% of panelists reported conditions deteriorated, down from almost 22% previously. The balance of panelists—57%—reported conditions were unchanged in April.

The EBCI for future North American conditions increased in April, climbing to 85.7 from 82.6 in March.

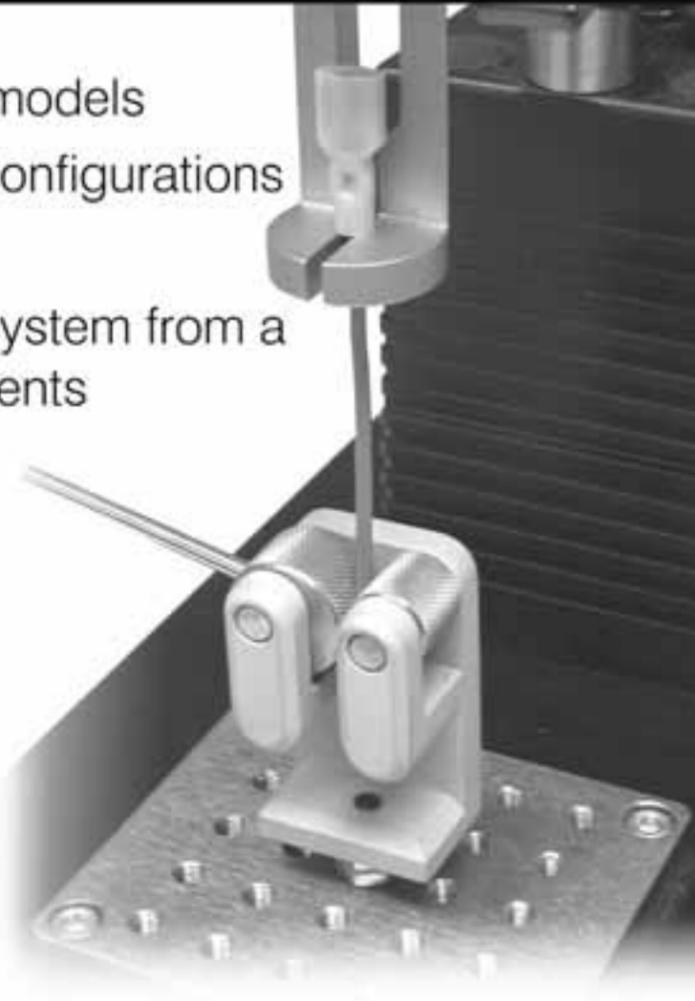
More than 71% of panelists expect to conditions will improve during the next six months, while none of the 21 respondents anticipate deterioration during that time period.

NEMA is the association of electrical and medical imaging equipment manufacturers. Founded in 1926 and headquartered near Washington, D.C., its approximately 450 member companies manufacture products used in the generation, transmission and distribution, control, and end use of electricity. These products are used in utility, industrial, commercial, institutional, and residential applications.

In addition to its headquarters in Rosslyn, Virginia, NEMA also has offices in Beijing and Mexico City.

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The Terminator with Power Drive

An Applicator for the Twenty First Century

By George Tillie
Odyssey Tool

As the journey into the twenty-first century is well underway, wire and cable shops are increasingly productive as a result of new and advanced technologies. Fully automated wire processing machines not only cut, strip and terminate wires, but can also double-terminate, twist, tin and plug! Some machines sense wire gauge and automatically adjust blades to achieve a perfect strip. Very sophisticated presses allow you to change press speed, monitor crimp integrity and automatically adjust crimp height. Wires can be labeled with jets of ink and stripped by beams of light.

Yes, the twenty-first century is indeed upon us... except when it comes to applicators. With few exceptions, applicators purchased or leased today rely on technologies developed decades ago. They're held captive in the last century. Terminals are still fed using mechanical or pneumatic systems. This makes it difficult and time consuming to adjust the

terminal position over the anvil and often forces operators to lower press speeds (and output) just to make the terminal feed properly. And given that only a handful of parts in a given applicator actually touch the terminal, why do you have to buy a complete applicator (body, ram, springs, etc.) for each new terminal? Why can't applicators feed mylar tape consistently and reliably? And, most importantly, why do applicator costs rise dramatically year after year when the same old problems persist and opportunities to incorporate advanced technologies are apparently ignored?

These are all good questions. Perhaps you have asked them yourself. Well, now there is an answer: The Terminator with Power Drive by Odyssey Tool. Terminator is a left-to-right side feed applicator. It is similar to traditional applicators in that it includes a die body, ram, crimping blades, cutter and anvil. And it mounts in a variety of presses used in cable shops across America and the world. However, that's where the similarities end. The Terminator with Power Drive is very easy to use. It embodies twenty-first century technologies, including swappable tooling, microprocessor-based electronics, stepper motors, optical sensors and electronic control over feeding parameters. And, most importantly, the Terminator with Power Drive saves you money. You get a better product at lower cost. To see



The Terminator with Power Drive from Odyssey Tool

how all of this is achieved, let's start with the patented "tool pack".

Tool Packs

To use the Terminator to crimp a specific terminal, a tool pack must be installed. One tool pack consists of two pieces: upper tooling and lower tooling. The upper tooling installs in the ram with a single bolt. Although the upper tooling itself consists of several parts, all of those parts are retained using an E-clip. The clip keeps all of the parts together and in the correct orientation. The operator handles the upper tooling as a single part.

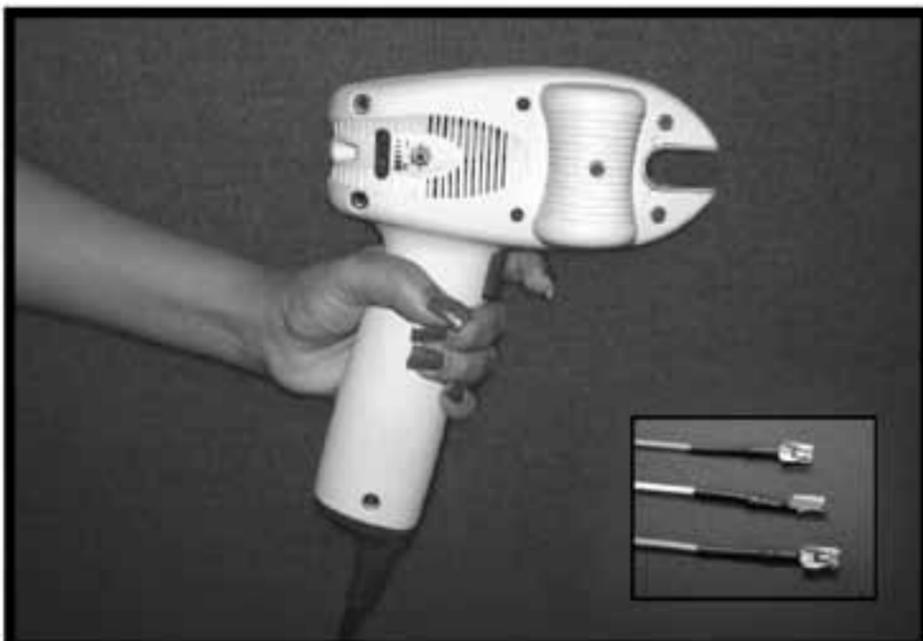
The lower tooling consists of the stock guide, terminal sensor, anvil and cutter. As is the case with the upper tooling, the lower tooling also consists of several parts. However, all of the parts are factory assembled on a plate, fully adjusted at the factory and handled as a single piece by an operator.

Swapping tool packs is easy and quick. Simply unbolt the upper tooling

to remove it from the ram. To remove the lower tooling, unplug one cable, pull and twist a release knob to latch the knob in the "release" position and then slide the lower tooling out. That's it. The "old" tool pack is now removed. To install the "new" tool pack, just reverse the process. With a little practice, tool packs can be swapped in less than a minute. Newly purchased tool packs are ready to go when you receive them because all adjustments are made at the factory. And because the Terminator has an open face design, tool packs can be swapped without removing the Terminator from the press.

The tool pack concept is an important advancement in applicator technology because TOOL PACKS SAVE YOU MONEY. You no longer need to purchase a complete applicator for each terminal or family of terminals. Instead, you need purchase only those parts and pieces that are unique to the terminal—not the complete applicator.

Given that the tool pack concept is a



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very effective way to lower tooling costs, why hasn't it been available sooner? Why haven't traditional applicators embraced the tool pack concept? It's because traditional applicators use traditional methods to feed terminals into position over the anvil. When a mechanical or pneumatic feeding system acts on the terminal pre-termination (that is, while the terminal is still attached to the carrier strip), it is very difficult to design tool packs that are easily and quickly swappable. The feeding system gets in the way. The Terminator solves the feeding problem using Power Drive.



Power Drive

Power Drive is a patented terminal feeding system that uses what other applicators throw away. During each crimp cycle, Terminator does not cut the carrier strip. Instead, it is left intact and captured between pinch rollers. The pinch rollers consist of one idler roller and one driven roller. The idler roller presses the carrier strip firmly against the driven roller. The driven roller is powered by a stepper motor through a transmission.

Each terminal feeding cycle positions the next terminal to be crimped in a graceful, smooth and precise manner. As the press raises the ram, a ram sensor generates a signal that triggers a feeding cycle. The stepper motor is activated to begin feeding the next terminal toward the anvil. An optical sensor on the lower tooling (terminal sensor) generates a signal as terminals pass through the sensor (or as holes in the carrier strip pass the sensor). The terminal sensor signal provides a reference that is used to precisely position the next terminal over the anvil.

Traditional applicators, using either mechanical or pneumatic means, feed terminals by engaging a feed pawl in a hole in the carrier strip or pressing a feed pawl directly against the terminal. As a result, the feeding system in each applicator must be adapted to accommodate the terminal or the carrier strip. This is one reason why you must purchase a complete applicator for each terminal. Power Drive is different. The size and shape of the terminal doesn't matter because, at the point feeding actually occurs, the terminal is gone! And because the pinch rollers rely on pressure contact on the carrier strip, it doesn't matter if the carrier strip is thick or thin... wide or narrow... plastic or metal... has holes or doesn't have holes. It just doesn't matter. Power Drive is the most universal terminal feeding system ever developed.

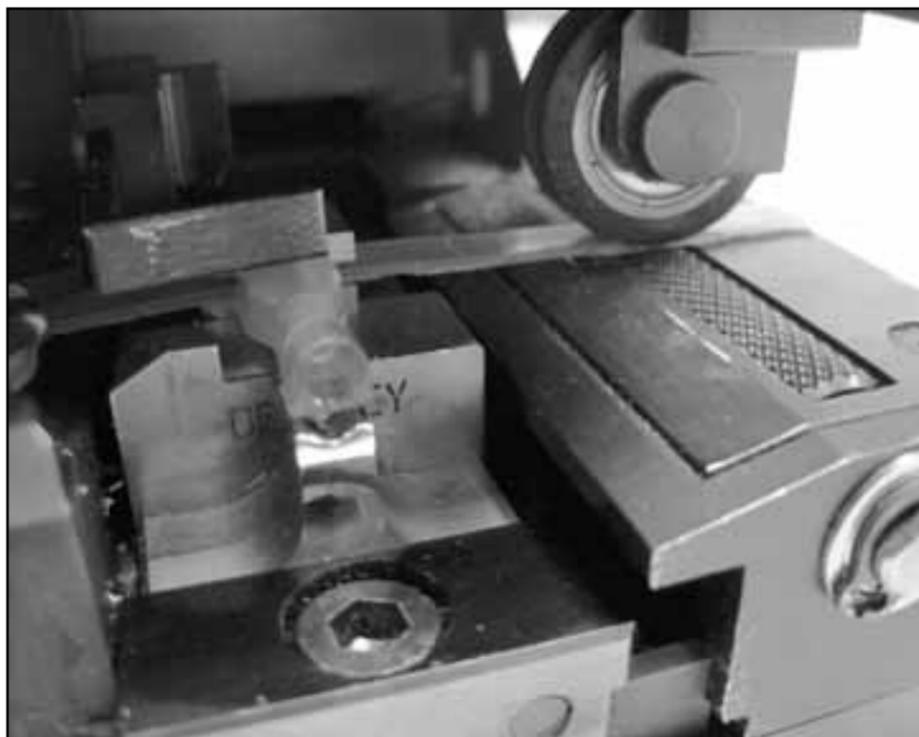
Power Drive is what makes the tool pack concept possible. Power Drive is highly universal. Are there other benefits? Read on.

The "brains" behind Power Drive is contained in a microprocessor embedded in the electronics contained in Terminator. Terminator does not need a data link to a "smarter" device to operate. Because Power Drive is controlled electronically, many benefits not found in traditional applicators are possible. A feed controller containing four control pushbuttons and a 3 digit display allow an operator to do the following:

Speed: One of nine terminal feeding speeds can be selected ranging from .25 inches/second to 3 inches/second.

Delay: Terminator initiates a feed cycle when the press raises the ram. If desired, feeding can begin immediately after the ram rises. However, in some cases, a delay is necessary to allow time for a machine or an operator to clear the just-crimped wire from the crimping area. Ten delay settings are available ranging from 0 seconds to 5 seconds.

Position: Terminal position can be



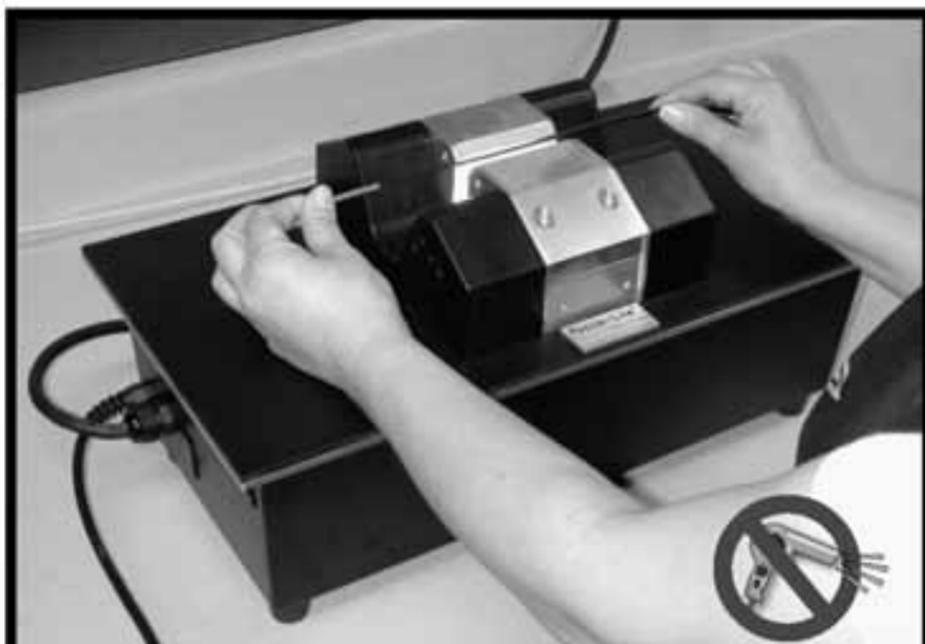
adjusted in steps of .001" over a range of +/- .050". Typically, no position adjustment is needed but is available to enable an operator to easily remove a roll in the crimp or to accommodate worn tooling.

Feed Count: The number of feed cycles is tallied and stored in a non-volatile memory that cannot be reset.

The feed count can be monitored using the feed controller to facilitate preventive maintenance.

You can see the Terminator with Power Drive by Odyssey Tool in action at www.terminatorpd.com or contact Odyssey Tool (sales@odysseytool.com 586-468-6696 (phone), 586-468-8422 (fax) for additional information.

For Classified Ads See Pages 54-57



Save up to 80% of your labor cost on heat shrink operations

The Focus-Lite™ by Judco Manufacturing, Inc., is the solution to all your heat-shrink operations. You can say goodbye to the high labor cost, excessive heat, and inefficiencies of other methods. The Focus-Lite™ reduces the time necessary to shrink most types of heat shrink tubing. It also improves the process control and overall quality of your shrink operation. The Focus-Lite™ can be used for high volume bench top applications as well as low volume prototypes and laboratory applications.

Focus-Lite™ technology uses radiant energy to shrink heat-shrink tubing in a fraction of the time of traditional methods.

Here's why it works: Dual Quartz Halogen bulbs are focused to direct all of the usable radiant energy to the cable/wire diameter covered by shrink tube. This allows for 10 times the average energy expended by the bulbs to be delivered to the target zone. What you will see is an amazing difference in shrink time!

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Mando Can Do.



When Armando Zacarias goes out on a Eubanks service call, unusual things happen.

“Once I helped round up a cow that got loose in a customer’s plant.

“Another time, while driving to a customer’s site, our rep’s car caught fire. We eventually arrived there that night and finished the job in time for the morning shift,” Mando reports.

Customers report something unusual too: Mando’s “can-do” attitude.

George Price, vice president of J&M Products, for example, writes how Mando takes time to answer questions, explain machine operation and even gave “tips on stripping some shielded cable that others said could not be done.”

“Can’t be done” is not in Mando’s vocabulary—either English or Spanish. On his own initiative, he solves problems, leads training classes, helps boost plant efficiencies, and makes lasting friendships while doing it.

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NEWS PLUGS continued**New Mini-MIL Connectors Deliver MIL-Standard Performance**

Spectrum Advanced Specialty Products introduces the Mini-MIL circular connector, a small, lightweight connector that offers space and weight savings with performance equivalent to MIL-DTL-38999. Mini-MIL connectors are available filtered and unfiltered with feed-through or Pi capacitance, and come in a durable package designed for rugged applications that require high performance EMI filtering.

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Now vertically integrated with 100% in-house design and manufacturing, Spectrum offers extremely reliable, high performance custom connectors to fit your mechanical, electrical and economic needs. All custom connectors are available for a variety of applications, including avionics, power supplies, mining and drilling, and a wide range of military applications.

**Mini-MIL connectors**

Spectrum Advanced Specialty Products produces coaxial filters & interconnects, advanced ceramics, antennas & assemblies, specialty connectors & harnessing and power filters & film modules.

Spectrum Control, an ISO 9001:2000 certified company, is comprised of four businesses: Advanced Specialty Products, Sensors and Controls, Power Management Systems, and Microwave Components and Systems.

For further information, contact Spectrum Advanced Specialty Products, 8061 Avonia Rd., Fairview, PA 16415. Phone (814) 474-0326 or Fax (814) 474-3110. Visit www.SpecEMC.com.

New Deutsch DRB Series Electrical Connector

LADD Industries Inc.

announces the addition of the DRB Series 128 cavity connector to the Deutsch Industrial DRB product family. DRB series connectors are high density pin count rectangular connectors specifically designed for environments where moisture, dirt and rough terrain can contaminate or damage electrical connections.

**Deutsch DRB Series Electrical Connector**

The DRB Series 128 cavity connector accepts 16 size 12 contacts rated

at 25 amps each, and 112 size 16 contacts rated at 13 amps each. The high-performance thermoplastic body utilizes a bulkhead mounted flange to create an environmental seal. With seals and grommets that will withstand high engine and transmission temperatures, the DRB 128 cavity connector is ideally suited for firewall mounted pass-through applications. The DRB 128 cavity connector is shock and vibration resistant, and meets all the standard specifications for the heavy-duty Deutsch product line.

The Deutsch Industrial product line and the DRB Series connectors offer innovative connector solutions for harsh environments. Please contact LADD at 1-800-223-1236 for more information on the new DRB 128 cavity connector and all your Deutsch Industrial connector needs.



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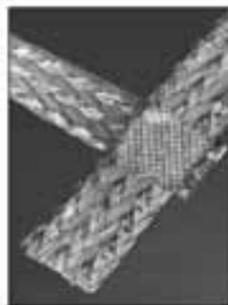
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Put Us to the Test

We are so confident that our welders can deliver a quick one-two punch to your toughest application that we encourage you to put us to the test.

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Evolution of Quick Connect, Low Insertion Force UP-TP Terminals

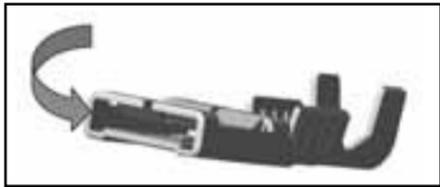
Continued from page 1

Creation of the Escubedo UP-TP Range of Low Insertion Force Push On Terminals

Escubedo began experimenting with the square UP-TP design quick connect terminals in the early '90's. Most European domestic appliance OEMs were manufacturing in Spain at the time. The damage being caused to electrical modules as well as the non-connection of the harness to the module due to the force required to secure these during assembly caused major service problems in the field. After extensive testing and cooperation with customers the UP-TP low insertion force terminals were brought to market.

Rectangular Design

The UP-TP concept is a more efficient rectangular design, it has an upper and lower contact area. The square shape of the mouth and an entry ramp allow for an easier and more exact entry of the tab into the terminal, by locating on the male terminal or tab properly.



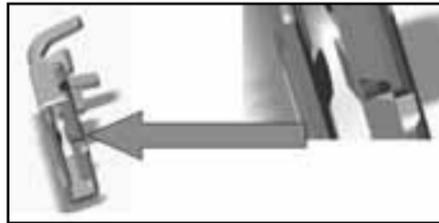
Two Dimple Design

Taking the rectangular UP-TP concept further by considering that the design offers two big contact areas between the male and the female, a second

dimple was incorporated into the terminal. By adding a second dimple we insure the stability of the terminal, independent of the surface of the male on which the dimple is acting.

On every male terminal or tab there is a locating hole, this hole has been created by stamping, the result is that on one side it is sharp and on the other smooth - this is where a receptacle engages the dimple. The consequence of this is that there is a considerable difference in the insertion and extraction forces as well as the repeatability of this process when considering the orientation of the receptacle relative to the male terminal or tab.

With the Escubedo UP-TP two dimple terminal we are able to eliminate this effect as there is a dimple working on each side of locating hole, this ensures the same connection values regardless of the orientation with which the terminal is inserted.



Great Adaptability of Receptacle to Male Terminal or Tab

Another benefit of the UP-TP design is that we incorporate a large flat area that acts as a spring, this helps to positively locate the terminal onto the male or tab.

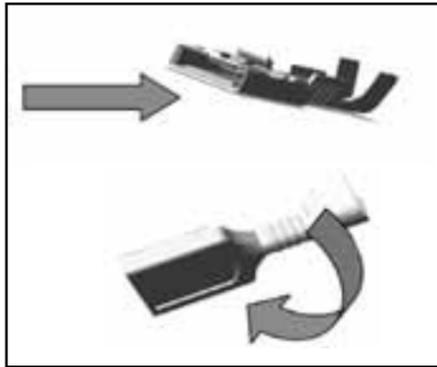


UP-TP SEK - Low Insertion Force, Locking Terminals

After the success of bringing the low insertion force to market in Europe the next step was for Escubedo to design a positive locking function into the UP-TP terminal.

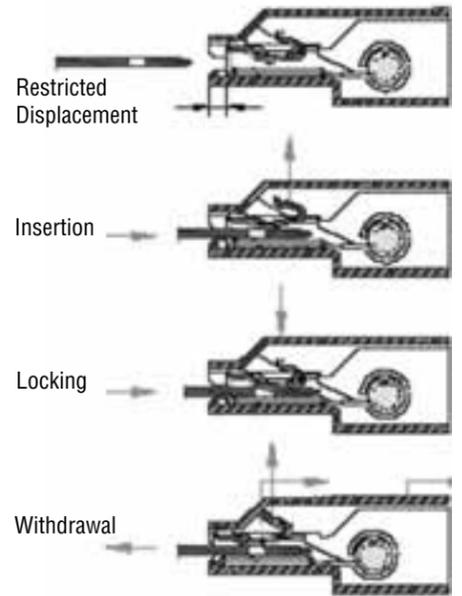


The same features as the original UP-TP design are found - easy entry of male terminal or tab and a great contact area.



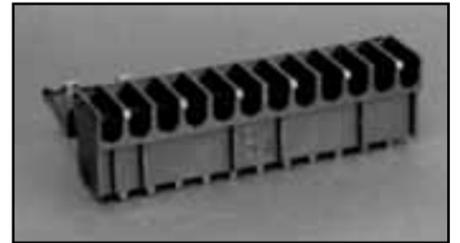
UP-TP SEK terminals are designed to be used with an insulator or in a connector to facilitate the removal of the crimped assembly.

How it Works



UP-TP TERMINALS FOR RAST5 APPLICATION

A key feature of the UP-TP SEK (.250" 6.3mm) family of terminals is that they are designed for Escubedo's propriety RAST5 (5mm pitch) connector systems. RAST5 is used extensively in European domestic appliances. It allows multiple connections to be made simultaneously.



Continued on page 48

Wire Terminal Pull Testers

Motorized WTTM-110/220



NEW

Automatic Simplicity... Set the adjustable pull speed, load the wire and close the protective cover. The test runs automatically with the peak "pull-off" force stored on the display at completion.

Two motorized models offer

- 7 selectable pull speeds from 1 inch per min (25 mm per min) to 10 inches per min (250 mm per min).
- 2 capacities: 100 lb/50 Kg/500 N for wire sizes AWG 12 to 28 and 220 lb/100Kg/1000N for wire sizes AWG 8 to 28.

Manual WTT-110



The WTT-110 is easy to use: Simply insert the wire into the appropriate slot in the terminal fixture (12 slots accommodate a wide range of sizes). Select the Peak-Hold or Continuous Measurement mode via the keypad. Then rotate the easy-glide lever clockwise, clamping the wire and creating a consistent, repeatable pull force with minimal effort.

Fast, Accurate, Repeatable and Very Easy To Use

CHECK-LINE'S® WTT Wire Terminal Pull Testers accurately measure the pull-off force on soldered and solderless wire terminals. These all in one solutions don't require additional grips, fixtures or accessories.

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- Conforms to all international test standards: MIL, UL, SAE, DIN, IEC, BS and EN.
- Operates on AC power or built-in rechargeable battery (adapter/charger supplied).
- RS-232 and analog outputs available for data transfer.



Rotating fixture has slots of different widths to hold various materials.

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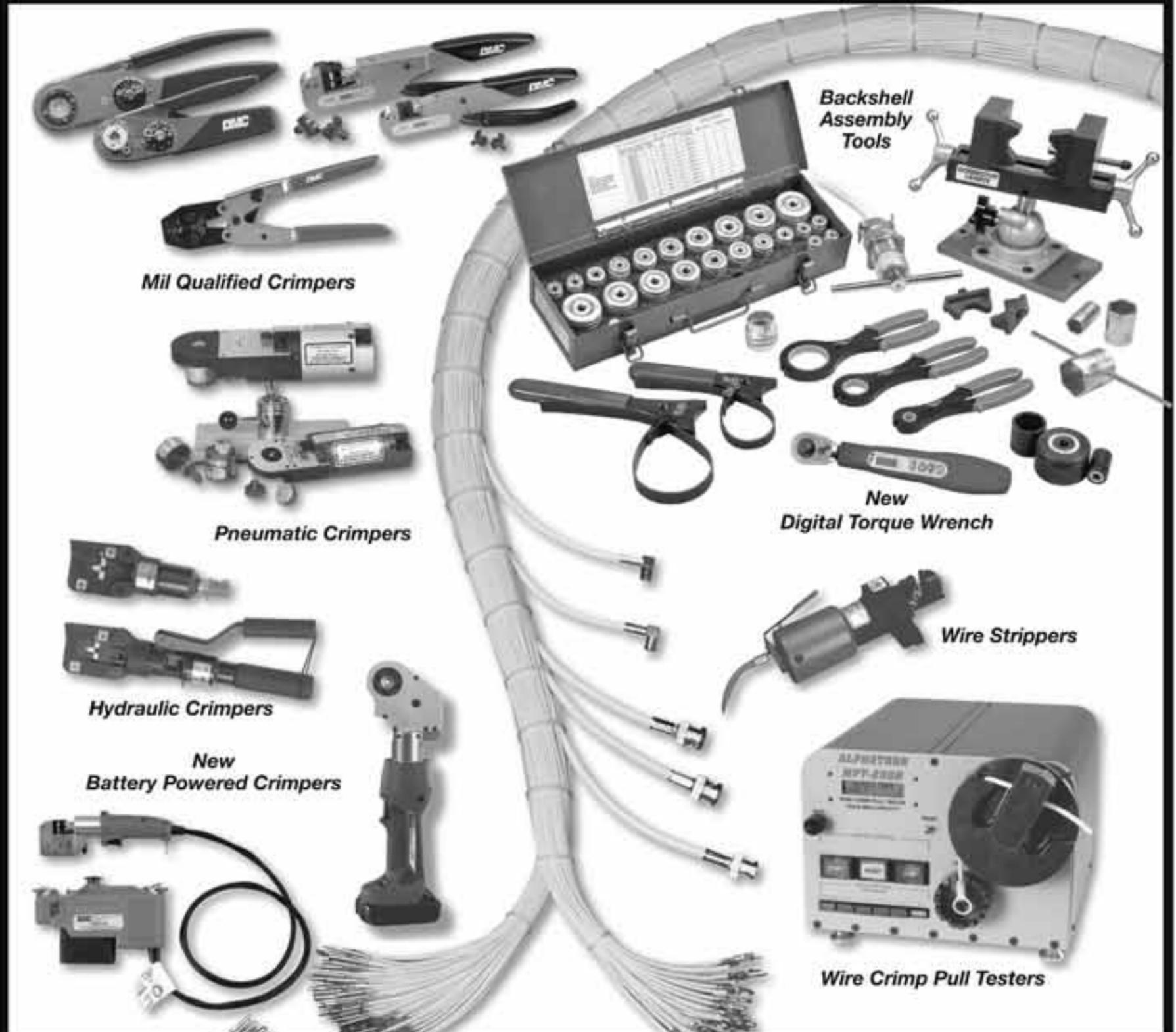
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Evolution of Quick Connect

Continued from page 46

UP-TP LOCK - LOW INSERTION FORCE, LOCKING TERMINALS

This family of the UP-TP low insertion force locking terminals were designed to be used without insulator or connector, for use in high temperature applications such as stoves or hot plates. Or where insulation of a contact is not an issue. They are manufactured in alloys that give them very high current ratings in very high ambient temperature environments. UP-TP LOCK terminals have two dimples to insure consistent engagement with a tab or male terminal.



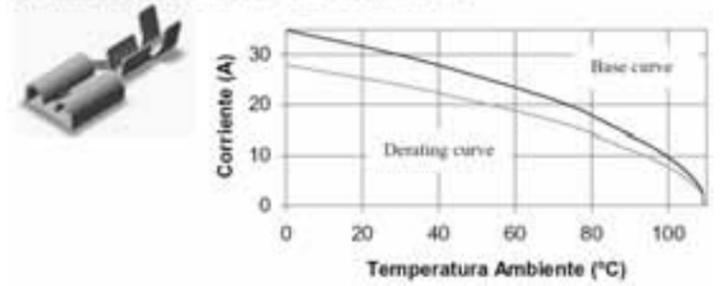
UP-TP RANGE - FLAG TERMINALS 187" (4.8mm) and .250" (6.3mm)

An important feature of the UP-TP flag terminal range is they are designed with a 'B' style wire crimp section, further improving the integrity of the connection to be made.

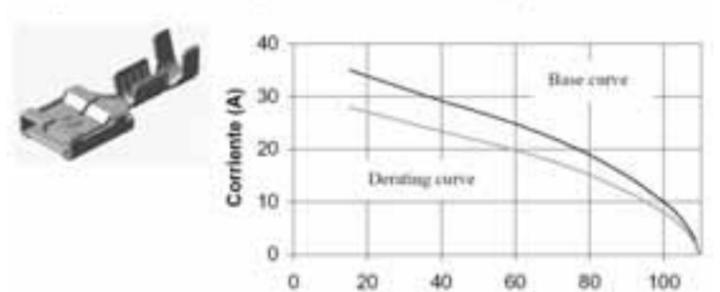


DERATING CURVE COMPARISONS

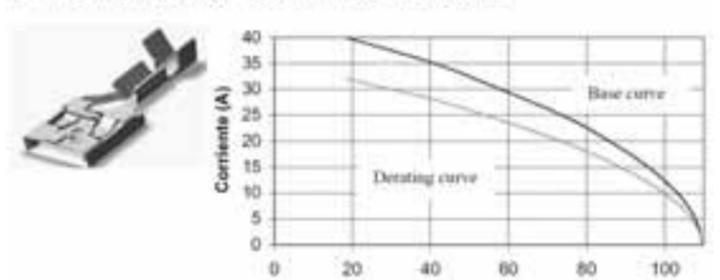
STANDARD QUICK CONNECT TO DIN SPECIFICATION.



UP-TP, LOW INSERTION FORCE, ELECTRICAL PERFORMANCE EQUAL TO DIN STANDARD.



UP-TP SEK, LOW INSERTION FORCE WITH LOCKING FEATURE



Escubedo UP-TP terminals are available in the sizes .110" (2.8mm), .187" (4.8mm) and .250" (6.3mm) in both straight and flag format in a large variety of alloys.

For more information please visit www.escubedo.com

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NEWS PLUGS continued



Alpha Wire Unveils Chinese-language Website

Alpha Wire has launched a Chinese-language version of its website designed to make AlphaWire.com available to an increasingly diversified customer base. Chinese-speaking customers are now able to access all existing website functions, including product filters, data sheet searches, sample requests, and product brochure downloads, in their native language.

"The Chinese marketplace is of utmost importance to further our fast growth in this region," said David Min, Director of Sales in Asia-Pacific for Alpha Wire. "Having Alpha Wire.com and all its functions in their native language will be invaluable in helping us better reach our Chinese customers. Plus, this allows us to further support our growing network of distributors in the Asia-Pacific region." Alpha Wire's Shanghai office supports the wire and cable needs of many industries throughout the entire Asia-Pacific region including packaging, material handling, wind power, solar power, medical devices, and pharmaceutical equipment.

AlphaWire.com contains multiple product filter and search capabilities for unparalleled ease-of-use. Once

you identify the type of wire or cable you are looking for, simply use the multiple filter options on the page to narrow down the results to the product that meets your specific needs. Combined with its "Online Tools" functions and "Engineer's Room," AlphaWire.com is a full-service website that supports all Alpha products. The Chinese-language site joins existing English- and Spanish-language versions, with expectations to launch French- and German-language versions in the near future.

To access the Chinese-language version of Alpha Wire's website, simply visit www.alphawire.com and select "Chinese" from the language drop-down box in the top right corner of the page.



ner of the page.

For over 80 years, Alpha Wire has designed and manufactured industry-leading wire, cable, and tubing products for industrial, medical, defense, alternative energy, and other technically advanced applications. Beyond giving our customers the cables they trust for quality and reliable high performance, we give them the committed service they deserve with offices in the United States, the United Kingdom, and China. We help customers find the best possible solutions to production and manufacturing challenges with small put-ups, logistical excellence, and broad inventory for dependable, same-day shipment.

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The CT4 Coastelmatic hand tool holder is a device that uses air to activate spring retracted hand tools. The CT4 Coastelmatic is a great low cost alternative to automatic crimping, stripping, and cutting machines. The CT4 Coastelmatic can be set up to work crimpers, strippers and cutters. The patent pending tool holder in the applicator securely holds all tools in place, allowing the operator to use his hands freely. This new and improved cylinder delivers 10% more power through dual activation for tough jobs. Each unit is pre-assembled, tested and ready for use.

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NEWS PLUGS continued



IPC Releases PCB Industry Results for March 2011

IPC — Association Connecting Electronics Industries® announced the March findings from its monthly North American Printed Circuit Board (PCB) Statistical Program.

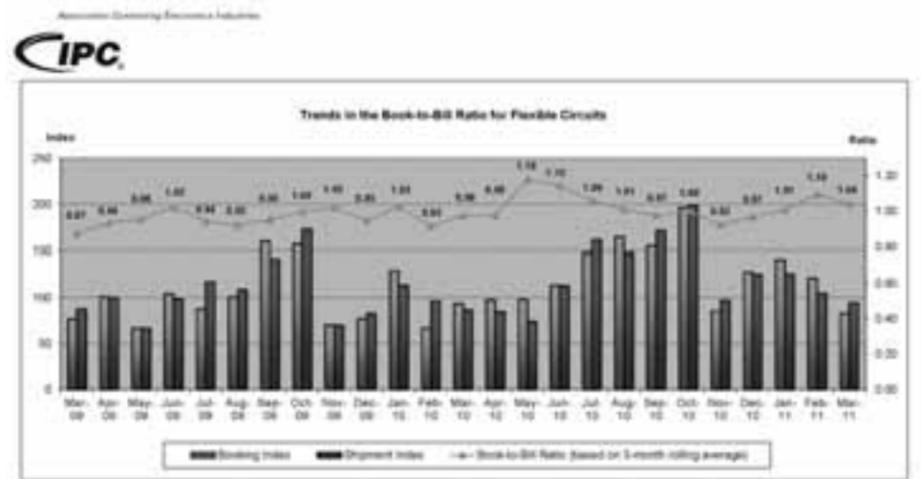
PCB Industry Growth Rates and Book-to-Bill Ratios Announced

Rigid PCB shipments were up 5.1 percent and bookings decreased 10.1 percent in March 2011 from March 2010. Year to date, rigid PCB shipments were up 6.7 percent and bookings declined 8.5 percent. Compared to the previous month,

rigid PCB shipments increased 14.9 percent and rigid bookings increased 26.0 percent. The book-to-bill ratio for the North American rigid PCB industry in March 2011 remained at 0.94.

Flexible circuit shipments in March 2011 were up 9.1 percent and bookings declined 7.4 percent compared to March 2010. Year to date, flexible circuit shipments increased 9.3 percent and bookings were up 9.6 percent. Compared to the previous month, flexible circuit shipments increased 15.0 percent and flex bookings decreased 13.2 percent. The North American flexible circuit book-to-bill ratio in March 2011 moderated to 1.04.

For rigid PCBs and flexible circuits combined, industry shipments in March 2011 increased 5.4 percent from March 2010, as orders booked decreased 9.9 percent



from March 2010. Year to date, combined industry shipments were up 6.9 percent and bookings were down 7.1 percent. Compared to the previous month, combined industry shipments for March 2011 increased 14.9 percent and bookings increased 21.9 percent. The combined (rigid and flex) industry book-to-bill ratio in March 2011 held steady at 0.95.

demand is ahead of supply, which is a positive indicator for sales growth over the next two to three months.

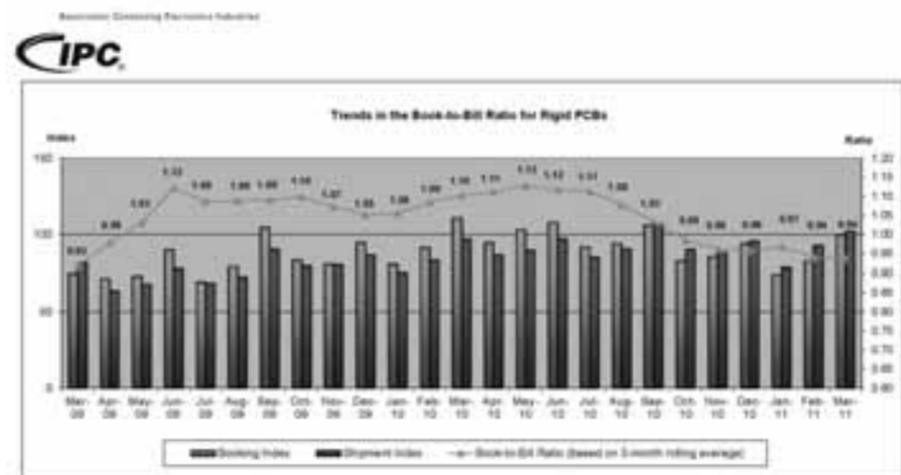
Book-to-bill ratios and growth rates for rigid PCBs and flexible circuits combined are heavily affected by the rigid PCB segment. Rigid PCBs represent an estimated 89 percent of the current PCB industry in North America, according to IPC's World PCB Production Report.

"North American PCB sales in March were strong, following normal seasonal patterns, and sales of both rigid PCBs and flexible circuits are still ahead of last year," said IPC President & CEO Denny McGuirk. "Stronger sales than orders is the dynamic keeping the book-to-bill ratio holding slightly below parity, which indicates slowing growth over the next quarter."

The book-to-bill ratios are calculated by dividing the value of orders booked over the past three months by the value of sales billed during the same period from companies in IPC's survey sample. A ratio of more than 1.00 suggests that current

The Role of Domestic Production

IPC's monthly survey of the North American PCB industry tracks bookings and shipments from U.S. and Canadian facilities, which provide indicators of regional demand. These numbers do not measure U.S. and Canadian PCB production. To track regional production trends, IPC asks survey participants for the percent of their reported shipments that were produced domestically (i.e., in the USA or Canada). In March 2011, 83 percent of total PCB shipments reported were domestically produced. Domestic production



Note: The index is based on year-over-year growth rates to reflect long-term trends. It may not always appear consistent with the month-to-month changes in the data.

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accounted for 83 percent of rigid PCB and 85 percent of flexible circuit shipments in March by IPC's survey participants. These numbers are significantly affected by the mix of companies in IPC's survey sample, which change slightly in January, but are kept constant through the remainder of the year.

Bare Circuits versus Assembly

Flexible circuit sales typically include value-added services such as assembly, in addition to the bare flex circuits. In March, the flexible circuit manufacturers in IPC's survey sample indicated that bare circuits accounted for about 49 percent of their shipment value reported for the month.

Assembly and other services make up a large and growing segment of flexible circuit producers' businesses. This figure is also sensitive to changes in the survey sample, which may occur at the beginning of each calendar year.

Interpreting the Data

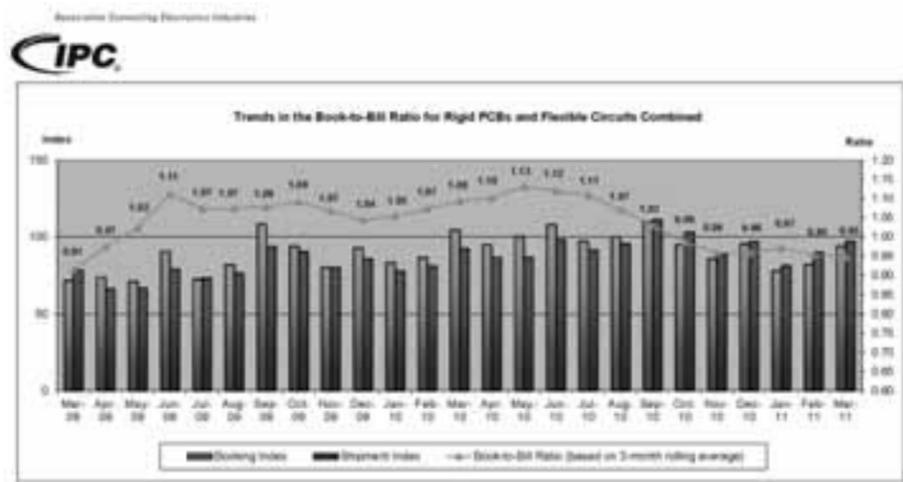
Year-on-year and year-to-date growth rates provide the most meaningful view of industry growth. Month-to-month comparisons should be made with caution as they may reflect cyclical effects. Because bookings tend to be more volatile than shipments, changes in the book-to-bill ratios from month to month may not be significant unless a trend of more than three consecutive months is apparent. It is also important to consider changes in bookings and shipments to understand what is driving changes in the book-to-bill ratio.

The information in IPC's monthly PCB industry statistics is based on data provided by a representative sample of both

rigid and flexible PCB manufacturers in the USA and Canada. IPC publishes the PCB Book-to-Bill Ratio and the PCB Statistical Program Report each month. Statistics for the previous month are not available until the last week of the following month.

IPC (www.IPC.org) is a global trade association based in Bannockburn, Ill., dedicated to the competitive excellence and financial success of its 2,900 member companies which represent all facets of the electronics industry, including design, printed board manufacturing, electronics assembly and test.

As a member-driven organization and leading source for industry standards, training, market research and public policy advocacy, IPC supports programs to meet the needs of an estimated \$1.85 trillion global electronics industry. IPC maintains additional offices in Taos, N.M.; Arlington, Va.; Garden Grove, Calif.; Stockholm, Sweden; Moscow, Russia; Bangalore, India; and Shanghai, Shenzhen and Beijing, China.



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NEWS PLUGS continued**Amphenol's New Panel Mount PV Connector With RADSOK Technology**

Amphenol Industrial, a global leader in interconnect systems, now offers the Helios H4 Panel Connector, a panel mount photovoltaic (PV) connector featuring RADSOK technology. This new connector offers higher current ratings and lower contact resistance resulting in lower power losses and is compatible with standard industry connectors, including Amphenol's Helios H4 line, for easy integration.

Amphenol's new H4 Panel Connector, developed to help feed power from a solar panel into an inverter or combiner box, features quick snap lock mating for easy panel mount installation and termination to either box.

**Helios H4 Panel Connector**

Designed for applications that use solar inverters, combiner boxes and installers, the H4 Panel Connector is dual-rated for UL and TUV. The connector meets NEC 2008 requirements without the need for

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This new RoHS compliant H4 Panel Connector is ready for field assembly and is UV and ozone resistant.

Pricing for the H4 Panel Connector starts at \$3.35 per mated set. Delivery is 4-6 weeks ARO.

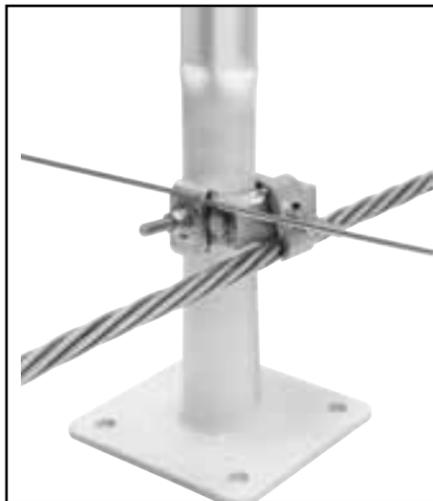
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BURNDY® Introduces the Super-Clamp™ GXP1828RF

BURNDY®, a leading manufacturer and provider of connector solutions to the industrial, energy, construction, telecommunication, petrochemical, data center, and transportation industries, introduces the SUPER-CLAMP™, its newest Raised Floor Pedestal Ground Connector. The GXP1828RF is a multi-functional, easy to install, range taking ground connector. This grounding clamp accepts an extensive range of pedestal types as well as conductors. The accepted pedestal range is 3/4" through 2", for use with either round and square styles (7/8" – 2" round; 3/4" – 1-1/2" square). The wire range is #6 solid to 4/0 stranded. The wires can be arranged in parallel or in a cross grid configuration and can accept 1 or 2 wires.

The GXP style clamp is easy to install using 1/2" socket type tools, including a nut driver, drill (cordless/corded), traditional socket set, and open ended or adjustable wrenches. The "open face" design makes this connector very easy to

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The clamp is cULus Listed, meeting the requirement of UL and CSA. A high copper alloy body ensures excellent conductivity and the hardware is made of stainless steel. This connector is also rated for Direct Burial. The versatile nature of this connector makes it an excellent choice for applications that require multiple conductor sizes and configurations. As the newest addition to The Grounding Super-Store™, the GXP1828RF is another example of the strong BURNDY® commitment to provide the next generation of grounding products.

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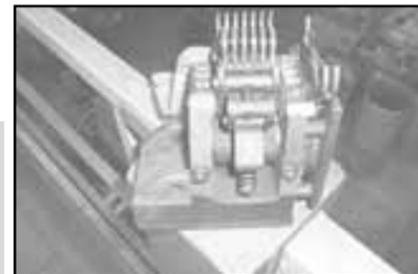
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Introducing the New Applicator Series from TE Connectivity



We've Done It Again!

The new TE Connectivity Applicators offer modular feed packages, the ability to upgrade in the field, and unparalleled manufacturing tolerances which deliver quality like never before.

Why a New TE Connectivity Applicator Design?

We listened to our customers, who told us they wanted a simplified modular design with increased flexibility. With this information and years of development, our engineers designed a state of the art applicator with easy adjustments, design consistency and global standardization, which in turn provides you with the benefits and quality you've come to expect from TE Connectivity.

The new applicators are designed to be backward compatible to run all common terminator and leadmakers. It can also be upgraded to run on the new System III compatible machines.

Call your TE Connectivity sales professional at 888-777-5917 or 1-717-810-2080 for a demonstration of the new TE Connectivity Applicator Series and see how your manufacturing can improve with its use.

www.tooling.te.com
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Servo Applicator



Pneumatic Applicator



Mechanical Applicator



TE
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You don't have to be BIG to act S.M.A.R.T.



S.M.A.R.T. as in:

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Affordable,
Reliable and
Top Quality**

*Add the new touch screen for fast and **simple** setup and operation.*

Choose roller or belt drives on the same machine.



Introducing the very S.M.A.R.T. Gamma 263.

Like other Komax crimp-to-crimp machines, the new Gamma 263 offers well-know, **reliable** processes... but in a much smaller footprint.

Designed for one and two-sided crimping and one-sided seal loading, the new Gamma 263 is compact in size only, offering big features like:

- integrated **quality** monitoring systems and optional crimp force analysis (CFA/CFA+)
- a second integrated encoder for maximum accuracy of stripping and wire lengths
- an optional WPCS (Wire Processing Communication Standard) interface allowing Komax machines to be networked and easily integrated into existing production processes.

The new Gamma 263 is very **affordable** when it comes to delivering high output for the money.

Meet the S.M.A.R.T. Gamma 263 at the Electrical Wire Processing Expo, Milwaukee, May 18-19, Booth 1119.

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