

December 2018

Today's

# Industrial Products & Solutions™

*The Complete Purchasing Guide for Today's Industrial Market*

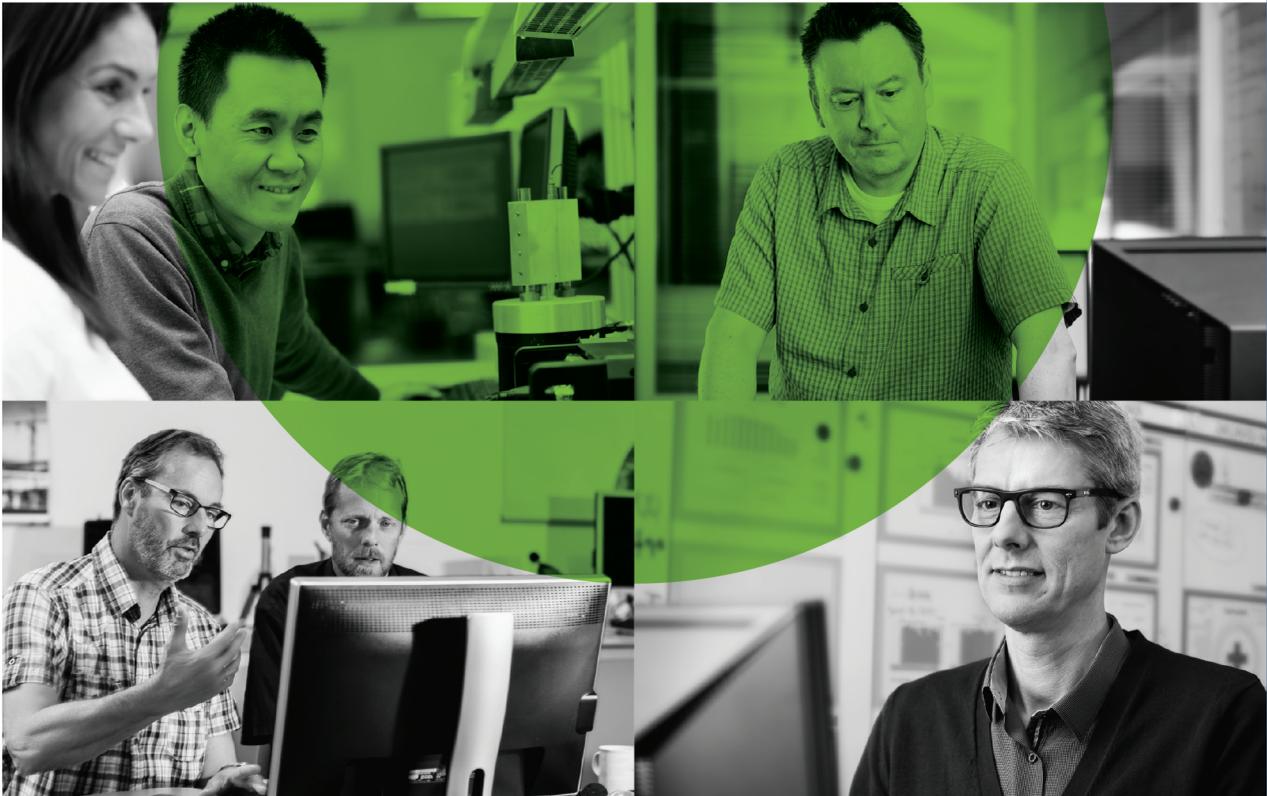
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## TIPS CONTENTS

- PG 4 BURNDY® Announces Clear Cold Shrink Tubing Where You Can See the Difference!
- PG 6 Outsourcing Critical Aspects of Processing Systems
- PG 12 Layers of Safety Strategy Detects Dangerous Gas Leaks With Multiple Sensing Technologies
- PG 20 New Products from TSISSG
- PG 24 Klein Tools® Expands Infrared Measurement Range for Use in Versatile Applications
- PG 26 Amada Miyachi America Announces MM-400A Desktop Resistance Weld Checker
- PG 28 Company Profile: Safety Through Engineering
- PG 30 Company Profile: Jesco
- PG 32 Ad Index

# Today's Industrial Products & Solutions™

The Complete Purchasing Guide for Today's Industrial Market

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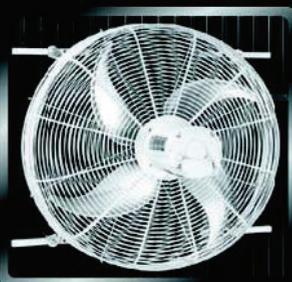
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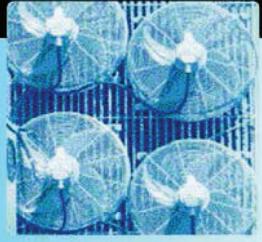
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## BURNDY® Announces Clear Cold Shrink Tubing Where You Can See the Difference!

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# Outsourcing Critical Aspects of Processing Systems

*Leading OEMs turn to contract manufacturers that can combine engineering, manufacturing and supply chain expertise to deliver complete systems that lower costs*

For equipment designers in processing industries, there are aspects of any system that are more functional in nature, yet still critical. This includes gas, fluid and chemical handling systems that play an integral role in equipment that extracts, dispenses, blends, controls temperature or some other aspect of control.

For these aspects of the system, OEMs face a critical business decision: whether to fully engage as a manufacturer, or to outsource certain or all aspects to trusted, qualified contract manufacturers. By doing so, they expect to control and even lower production costs.

However, even within the category of contract manufacturing there can be a broad range of capabilities. Some shops focus solely on build-to-print projects, often in niche categories such as piping or sheet metal work. On the other end of the spectrum are companies that offer a more diverse range of capabilities, complete supply chain management and engineering services.

According to Jason Medhurst of Aztech Controls, even companies that decide to outsource may not have the in-house expertise to assemble and, in some cases, complete the drawings for a system or execute the required change control. For this reason, there are benefits to more of a full-service approach that includes engineering.

“The truth is OEMs don’t always know how much engineering and design support they actually need,” says Medhurst. “They’ll ask us to build a system and say, ‘we’ve engineered it for you’ and when we get in there we discover the design is in its infancy.”

“In other cases, we receive well-developed drawings and the engineering requirements are minor. Then, we might help them with supply chain management,” Medhurst adds, explaining that this can include sourcing, purchasing and holding in inventory all the individual component parts of the system.

With this type of support, OEMs are truly free to focus on



higher revenue, proprietary aspects of their system.

“The moment the OEM starts retaining pieces of the project, they are not fully utilizing everything a contract manufacturer can do for them,” says Medhurst. “Then they end up still being part of the project they are trying to offload.”

## Supply Chain Management at Kurita America

For large OEMs, outsourcing frees up a valuable resource: time and attention. The ability to offload some of the “detail work” allows key personnel to concentrate on more important functions such as client relations, scheduling and managing the budget.

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## APPLICATIONS

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- Pharmaceutical
- Tooling manufacturers
- Elevator maintenance

“Outsourcing opens up a lot more time for me to focus on other areas of the project instead of having to worry about some of the minor details that eat up valuable time,” says Tony Harlan of Kurita America, one of the world’s largest suppliers of industrial water treatment systems.

Kurita America’s industrial water treatment solutions include everything from chemicals to custom designed and constructed water treatment, re-use and reclamation systems. The company also offers operation and maintenance services as well.

Given the nature of water treatment systems, no two completed systems are exactly alike. As a result, every system must be engineered to meet the requirements of the individual client.

However, to create these systems it is standard practice for companies like Kurita America to outsource aspects of the mechanical, electrical and control system to subcontractors.

“Typically, we would purchase all the valves, pumps – whatever was going on that skid – and only ask the fabrication shop to do the assembly,” says Harlan.

There were several motivations for this approach, including the belief that purchasing the parts would ensure the best price without the usual mark-ups.

However, this logistical work came with additional costs that often were not considered. This included the time and effort to create each purchase order, deal with invoices, manage and store parts inventory, ensure it was shipped properly and arrived as scheduled at the fabrication shop, and deal with any necessary returns.

So when Aztech Controls pitched Kurita on the concept of building the entire system for them, including sourcing all the components, they were intrigued.



Aztech Controls was originally founded in 1986 as a distribution and rep company for products used for wastewater and other processing industries. Today, the company offers full engineering and manufacturing capabilities to build-to-print or design and build complete systems from scratch.

Kurita felt that the company’s long history as a distributor in the industry gave them confidence Aztech Controls could source the parts at a reasonable cost.

“It was an extremely smooth and thorough process,” says Harlan. “The quality of the system was excellent, there were no issues whatsoever, which is why we were interested in working with them again.”

Based on the success of the project, Harlan says that in the past year, Kurita America has worked with Aztech Controls to produce six or seven additional skid-mounted subsystems.

### **Advanced chemical blending**

David Radnich, retired engineer, recounts a project for something that he says is a bit of a rarity in the industry – a just-in-time chemical blending and delivery system. The project was part of a cost-cutting initiative to eliminate the need to purchase a very expensive chemical blend for a large semiconductor chip manufacturer. The company had determined it could save a lot of money by blending the chemicals on site, since the 3 constituent chemicals were not expensive.

Radnich was asked to participate on the team that would design and build a prototype system from scratch. “They didn’t have the bandwidth to build advanced systems like that completely in house,” explains Radnich. “They certainly could do it, but they want to run more of a streamlined operation, so for a one-off like that, better to go to a trusted source.”



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After working up an initial design concept, he contacted Aztech Controls. Working together, the two groups quickly completed the design and the contract manufacturer then proceeded to build the entire system at its facility in Arizona.

Radnich was impressed that the prototype was completed in only a few weeks.

“They built an extremely cost-effective prototype unit and were able to integrate it into our system very quickly; I’m talking a few weeks, not months,” says Radnich.

Radnich says the prototype was tested over six months and “it worked flawlessly.”

The next step was a full scale version of the system. Aztech Controls delivered it in six weeks, as opposed to the typical lead time of six months to a year from other vendors.

“Many of the vendors of large scale systems are proven, but extremely expensive and have long lead times,” says Radnich. “Also, the operational costs of the systems can be quite high and a lot of these systems have capacity constraints.

“The system from Aztech Controls literally had no capacity constraints, no scheduled invasive PMs and the cost of owner-

ship once it was running was almost nothing,” adds Radnich. Radnich says the system that Aztech Controls designed and built not only fit the application requirements, but went well beyond technological expectations.

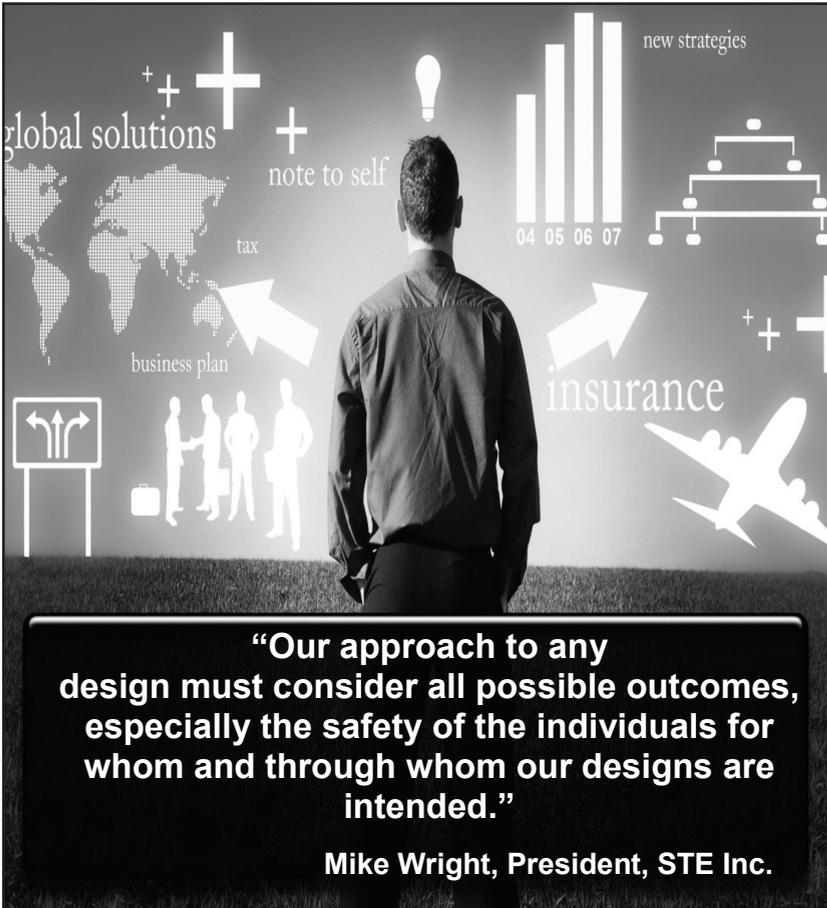
“The chemical blending system was truly state-of-the-art, next generation,” says Radnich. “Actually it skipped a couple generations it was so advanced, compared to what we had been using. We couldn’t have done it ourselves.”

To date, the system has been working for 6-7 years without any issues, which he calls “astonishing” for that type of equipment. The project was also a success in terms of the cost savings the company was hoping to achieve.

“It was a cost savings, from an equipment standpoint, installation standpoint and operational standpoint,” says Radnich.

For more information, contact Aztech Controls at (480) 782-6000, visit [www.aztechcontrols.com](http://www.aztechcontrols.com), e-mail: [sales@aztechcontrols.com](mailto:sales@aztechcontrols.com), or write 324 S Bracken Lane, Chandler, AZ 85224.

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The advertisement features a central image of a man in a dark jacket standing with his back to the camera, looking at a large, semi-transparent screen. The screen displays various icons and text related to business and engineering, including a world map, a lightbulb, a bar chart, a flowchart, a tax icon, a business plan icon, an insurance icon, and an airplane. The text on the screen includes "global solutions", "note to self", "tax", "business plan", "insurance", and "new strategies".

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By Martin T. Olesen

International Business Development Manager- FGFD

MSA



## Layers of Safety Strategy Detects Dangerous Gas Leaks With Multiple Sensing Technologies

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Compared to only 20 to 30 years ago, the most recent advances in gas sensing technologies have led to more reliable and efficient gas and flame detection systems. The latest generation of fixed point gas sensors are now being joined by newer technologies including ultrasonic gas leak detection (UGLD) and enhanced laser diode spectroscopy (ELDS) to maximize effectiveness and mitigate risk.

As effective as conventional fixed point gas sensors are, they still have one limitation: there is always the real possibility that leaking gas can fail to reach them in sufficient concentration and in enough time to prevent a serious incident or accident.

This reality is leading to a new “layered” gas detection strategy for safety. This strategy begins with conventional point fixed gas detectors and adds another layer of newer gas sensing technologies such as UGLD and ELDS to provide more comprehensive protection.

### Fixed Point Gas Detection

With the next-generation of MSA ULTIMA® X5000 and S5000 Gas Detectors (Fig 1), conventional fixed point gas detection takes a giant step forward. This new platform integrates cutting-edge gas detection technologies with non-intrusive touch button operation, dual sensor capability, extended calibration cycles and Bluetooth® wireless communication.

These gas detectors offer several distinct improvements in gas detection starting with their sensor technologies. Their unique XCell® gas sensors with TruCal® technology offer calibration cycles up to 18 months (local calibration respected). Every six hours, TruCal sends an electrical pulse through the sensor to measure the sensors capacity. As humidity, temperature, and pressure change the sensor’s capacity, it is detected and corrected for by TruCal. TruCal also notifies users if and when a manual calibration is required, or if the sensor is no longer capable of detecting gas due to loss of sensitivity.

Due to tight plant equipment layouts, gas detectors are often placed in difficult to reach high locations or crowded equipment areas near piping, valves and other installed equipment where gas leaks can potentially occur. Plant technicians can now securely connect wirelessly to these gas detectors from up to 75 feet (23 meters) away using their Bluetooth enabled smart-phone or tablet. The real-time availability of this data helps

workers rapidly set-up, operate and maintain the detectors for better efficiency and use of their time.

This platform's capability to connect two gas detection sensor inputs into one transmitter also reduces the cost of wiring, conduit and installation time to make safety even more affordable. During routine maintenance or scheduled retrofit projects, these detectors have been designed for simple swap-out with their predecessors. They share the exact same mounting footprint, making installation simple using the existing conduit and wiring. All of these innovations lead to lower maintenance and a higher level of safety.

### Ultrasonic Gas Leak Detection

In outdoor industrial facilities, conventional gas detectors have to be installed so the leaking gas will most likely reach the detector. If there is just a small amount of wind, the gas can be carried away from the gas detector. A dangerous gas leak can go undetected for a very long time under these conditions.

This also means the gas detector can falsely detect a low concentration of wind-blown gas elsewhere far from the leak source and be evaluated as not dangerous. In reality,

such concentrations can be much higher at the actual leak point and can be very hazardous, but go unreported or alarmed due to the wind and result in an accident.

Ultrasonic Gas Leak Detectors (UGLDs), in comparison, are a non-physical contact sensing technology that is nearly impervious to windy conditions (Fig 2). UGLD sensors "listen" for a specific acoustic noise signature from a leaking gas source and issue an alarm when leaking gases are detected from pressurized pipes or tanks. UGLDs react instantly when the leak starts so that the plant safety system can adjust operations to reduce the flow of the gas within a fast response time--essential in all effective safety systems.

In comparison to UGLDs, point gas detectors rely on gas concentration measurement, which is measured as ppm for toxic gases and LEL (Lower Explosive Limit) for flammable gases. Point gas detectors report a gas concentration value to control the safety system, which is equal to the gas concentration at the physical location of the gas detector.

As described before, this concentration will be dependent on the distance and dilution factor between the gas leak and the detector. In most cases, this is unpredictable. How

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fast a gas cloud can accumulate into a dangerous ppm or LEL level depends on environmental conditions such as wind velocity and the gas leak rate.

In an outdoor windy environment, the leak rate (measured as kilograms per second [kg/sec]) will determine if a potential gas leak can accumulate and ultimately be picked up by conventional gas detectors (Fig 3). The UGLD relies on the acoustic sound level generated by the pressurized gas directly proportional with the leak rate at a fixed distance.

By detecting the leak rate from the gas leak, the UGLD will therefore not need to wait for gas to accumulate. It will detect and produce an alarm instantly when the leak hits a pre-defined leak rate. From oil/gas industry studies\*, the following gas leak rate classification has been developed based on how much damage a gas leak will cause if ignited:

- Minor gas leak: 0 – 0.1 kg/sec
- Significant gas leak: 0.1 – 1 kg/sec
- Major gas leak: < 1 kg/sec

The acoustic frequency range of a UGLD is typically from 20 kHz to 75 kHz. This range indicates the sound frequency range at which the detectors are “listening” for the acoustic sound. The detection range for UGLD is also directly proportional with the leak rate. Some manufacturers claim very impressive detection ranges (40 meters in radius) without mentioning at what leak rate this detection range is valid.

MSA’s UGLDs are designed with highly sensitive and intelligent microphones that are trained with artificial neural network (ANN) intelligence to detect gas leaks at 0.1 kg/sec. They reliably distinguish between actual gas leaks and other sources of background noise interference to prevent false alarms.

### Laser-Based Gas Detection Technology (ELDS)

The gas sensing technology behind the Senscient Enhanced Laser Diode Spectroscopy Gas Detectors (ELDS) is an open-path non-contacting method to detect specific toxic or flammable gases. In the event of a gas leak, the sensor’s laser optical technology recognizes and analyzes a gas’s specific harmonic fingerprint. During operation some of the detector’s laser light is reflected continuously through a sample of the target gas in a hermetically-sealed reference cell. This design ensures the laser remains locked on the selected target gas’s unique wavelength. The detector’s harmonic fingerprint technology (Fig 4) helps ensure precise gas recognition, eliminating the potential for false alarms, even during adverse environmental conditions.

False alarms caused by interference gases, which are experienced with other detection technologies, are no longer a problem. Unlike electrochemical cells, Senscient ELDS sensors are also immune to sensor poisoning and interferent gases, due to their gas specific harmonic fingerprint detection method.

Senscient ELDS detectors are designed with Class 1 eye safe lasers that penetrate thick fog, heavy rain and snow beyond the capability of traditional open path infrared (OPIR) detectors. With their automated SimuGas™ safety integrity self-check, there is no need for the typical OPIR sensor gas checks and recalibrations requiring field technician time to address.

Senscient ELDS detectors are also virtually maintenance-free in terms of their construction. They have no consumable parts or gas cells to replace. Their harmonic fingerprint detection method eliminates calibration drift, which eliminates technician manual checks and

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## Sun X SPF 30 Broad Spectrum Multi-Pack w/Dry Towelette

A new, innovative and FDA compliant single-dose foil package design. This packaging offers a convenient way to apply sunscreen; the dry towelette is intended to absorb sweat, dirt, sunscreen and other substances.

## Bug X 30 Insect Repellent

With 30% DEET it is effective up to 7+ hours of protection against mosquitoes, ticks and other insects carrying diseases like Zika virus, West Nile virus and Lyme disease.

## Bug X FREE

A natural, DEET-FREE Insect Repellent providing protection against biting insects. Safe to use while wearing Fire Retardant (FR) clothing.

## Ivy X Pre-Contact Skin Solution

Acts as an invisible barrier to help protect against outdoor irritants.

## Ivy X Post-Contact Skin Cleanser

Effective in assisting in the removal of poisonous plant oils (Urushiol) commonly found in Poison Ivy, Poison Oak & Poison Sumac.



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## COMPANY SPOTLIGHT

HELPING CONSTRUCTION COMPANIES STAY DAVIS-BACON COMPLIANT



Woody Chamberlain, President

### eMARS INC

Profile: eMars / Compliant Client is an easy to use web based software that makes it easy for construction companies' payroll to be compliant with the Davis - Bacon Act of 1931.

This unique paperless system encrypts all employee information, offering an 80% time and labor savings over hand preparation. Weekly payroll can be run in 7 minutes.



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Email: **Woody.Chamberlain@emarsinc.com**

Area Served: **United States**



adjustments, offering significantly lower lifecycle costs.

### Conclusions

The future of gas detection is a layered strategy that takes advantages of multiple sensing technologies: catalytic bead, electrochemical cell, point infrared, ultrasonic and laser optical detection. Point fixed gas detectors are the first line of defense placed near potential leak sources such as pipes, valves, pumps, compressors, tanks and other equipment. Adding UGLD and/or ELDS detectors provides additional layers of protection for improved safety to protect people, equipment and facilities.

*Notes: \* Health & Safety Executive Report Offshore Hydrocarbon Releases Statistics and Analysis 2002*

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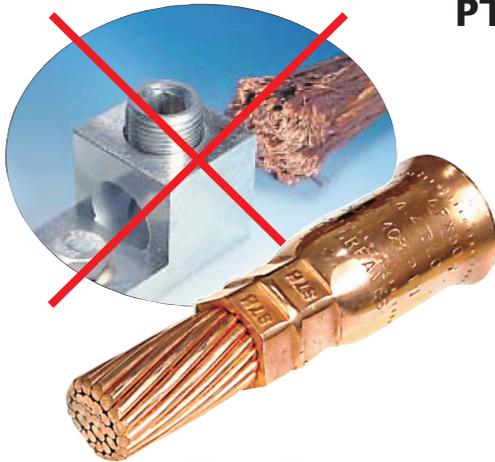
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## PT-FX Shoo-Pin™ Compression Adapters

- All-copper compression adapters
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- Fits into mechanical set-screw type connectors in panels, transformers and machinery
- Features revolutionary Shoo-in™ barrel-opening design for easy cable insertion
- Fabricated of wrought copper with pin of Class B copper conductor
- Insulating covers are provided



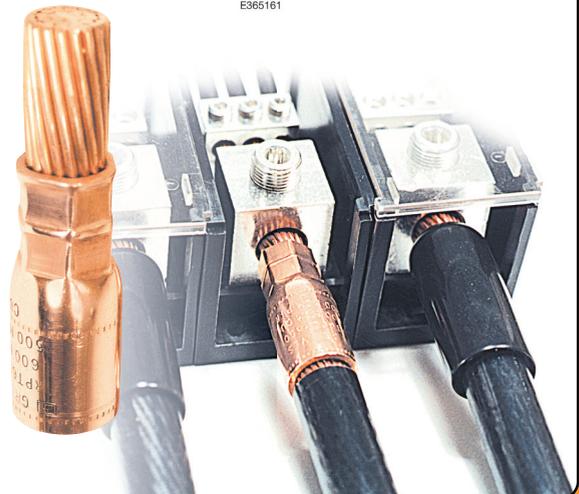
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## PT-R Reducer™ Cable Reducing Adapters

- All-copper compression adapters
- Use where cable is oversized to reduce voltage drop on long runs
- Use fit existing C/B, transformer, or other gear lugs
- For Class B 'building wire' cable stranding only
- Fits into mechanical set-screw type connectors in panels, transformers and machinery
- Fabricated of wrought copper barrel with pin of Class B copper conductor
- Insulating covers provided



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# New Products from TS/SSG



## **WS-05 Mobile Wheel Workstation**

The WS-05 Mobile Work Wheel Station designed for faster and more efficient commercial truck tire and wheel changing operations.

- Supports the weight of an impact wrench
- WS-05 moves in all directions and locks the impact wrench into a horizontal plane to prevent rounding of wheel nuts
- Provides significant reduction in impact wrench damage
- Relieves operator fatigue and helps reduce comp claims by preventing back injury.

*Impact Wrench Not included.*

## **350B Back Buddy II™**

The 350B Back Buddy II™ will make brake jobs easier and more profitable. This versatile tool was designed to prevent injuries from awkward lifting and keep workers' comp rates down. The Back Buddy II™ rolls under and bolts onto heavy drum and hub assembly, then handily rolls the assembly out and lays it over for servicing. Re-assembly is quick and precise because the Back Buddy II™ angles for perfect hub alignment, eliminating seal damage and costly fixes. The Back Buddy II™ handles all hub and drum assemblies with Universal Receiver and Adapter Sets. A simple change of adapters transforms the tool in seconds from inboard to outboard application.

*Adapters 6069 and 6073 10-hole inboard and outboard application are included. Other wheel adapters sold separately.*



## **6346 Complete PakPress®**

The 6346 Complete PakPress® Kit is a must if you're in the Fleet Maintenance industry. Don't be without this tool that brings the power of a 10-ton shop press right to the truck. Most impressive, the PakPress® lets you remove and install studs without removing the hub. A two-hour job is done in twenty minutes, with no risk of damaging seals or bearings.

The 6346 Complete PakPress® Kit includes:

- 1-PPK PakPress®
- 6247 PakPress® Cart
- Adapters ( 6261,6235, 6236, 6361)



## WHY IS IT OKAY WHEN IT'S ONE OF YOUR WORKERS?

**Don't fall victim to inadequate fall protection.**

Not following industry standards? One fall can have disastrous consequences for your workers, their families and your business. You can't afford to wait to change the way you look at workplace fall protection.



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**TI-95 Tire Inspector**

The TI-95 Tire Inspector is designed to inspect non mounted passenger car and light truck tires from 13” to 24.5”. The TI-95 Tire Inspector allows the operator to inspect tires for sidewall, tread and bead leakage on non mounted tires. Quick and easy inspection is accomplished by using an expandable hub and expandable rim assemblies. The mounted tire and hub assembly rotate easily for quick and easy inspection and the convenient control panel is designed for ease of operation. The TI-95 has a rigid base and stand that supports all available rim sizes mounted on the hub assembly. A standard 1/4”, 90 PSI air line operates the unit and no electricity is required. We recommend the use of a good quality dual stage compressor for optimum results.

- Includes the standard 14” – 17” expandable rim assembly
- Other expandable rims are available to accommodate larger tire sizes



**CH-10 Cheetah Bead Seater**

The CH-10 Cheetah® Bead Seater will seat the bead on all truck and small tractor tires. A 2” tank opening allows use of the optional Magnum II barrel giving added “spread” of the discharge. This extends the power of the CH-10 for seating even the most difficult beads on larger diameter wheels. The CH-10 Cheetah® Bead Seater has a 10 gallon ASME certified steel tank.

*Also available in aluminum.*



# PIRANHA LITES



## *KNOW when you are in the ZONE*

The **PIRANHA LITES**® are a simple safety accessory that can easily attach to almost any scissor or boom lift. The lights are a great way to highlight the surrounding perimeter of a scissor or boom lift that is in operation, helping the operator and the workers on the ground stay safe.

- Kit includes a set of 4 lights and wiring harness
- Lights are durable and built to withstand the harsh job site environments
- Installs using clamps. No drilling required



PIRANHA LITES are approved for use by major OEM's of mobile work platforms

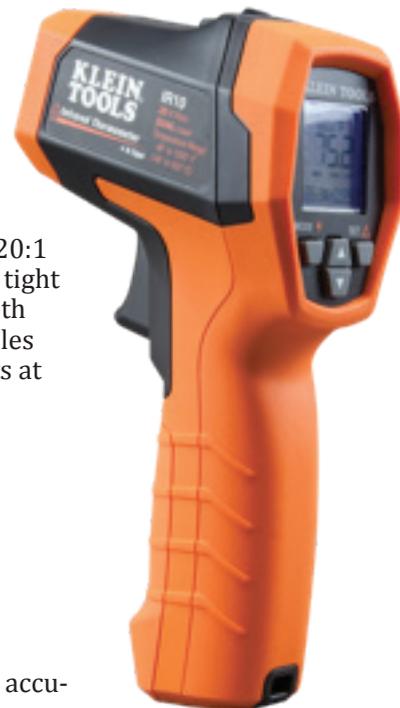


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# Klein Tools® Expands Infrared Measurement Range for Use in Versatile Applications



Klein Tools ([www.kleintools.com](http://www.kleintools.com)), for professionals since 1857, introduces a 20:1 Dual-Laser Infrared Thermometer, which offers a wide measurement range, a tight distance-to-spot ratio, dual targeting lasers and several calculation modes. With the reliability needed to get the job done right, this new jobsite essential enables accurate temperature measurements on inconvenient-to-reach smaller objects at distance.

## Dual-Laser Infrared Thermometer, 20:1 (Cat. No. IR10)

- Measures temperatures ranging from -40 to 1200°F (-40 to 650°C)
  - Measures surface temperature when using IR emission, or
  - Measures bulk temperatures of air, gas or liquids when using a standard K-Type probe
- Dual-laser targeting and 20:1 optical resolution (distance-to-spot) enable accurate measurements of smaller objects at farther distances
- Adjustable emissivity from 0.1-1.0 provides flexibility for use across multiple applications
- Bright backlit display provides easy viewing in low light
- Statistical parameters are calculated for measurement events - Max/Min/Avg/Diff
- User definable high/low limits with audible and visual alerts when breached
- Powered by one 9V alkaline battery, which has an eight-hour runtime with continuous use of laser and back-light
- Rugged design (U.S. patent D791,624) stands up to harsh jobsite conditions
  - Soft-touch, over-mold housing
  - 9.9-foot (3m) drop protection
  - IP54 ingress protections for dust- and water-resistance
- Includes custom carrying pouch, K-Type temperature probe and battery

“When professionals rely on a durable, dependable, rugged instrument to deliver accurate temperature measurements as part of their day-to-day responsibilities, it is crucial that they are equipped with the right tools for the job,” says Sean O’ Flaherty, director of product management at Klein Tools. “Klein Tools’ new 20:1 Dual-Laser Infrared Thermometer enables accurate IR measurements of surface temperatures, and bulk temperatures of air, gas or liquids with standard K-Type probe, with a wide measurement range that makes it the perfect tool for use across various jobsites day-in and day-out.

For more information, visit [www.kleintools.com/new-products](http://www.kleintools.com/new-products) or search for #NewKleins on social media. •

### About Klein Tools

*Since 1857 Klein Tools, a family-owned and operated company, has been designing, developing and manufacturing premium-quality, professional-grade hand tools. The majority of Klein tools are manufactured in plants throughout the United States and are the No. 1 choice among professional electricians and other tradespeople. For more information, visit [www.kleintools.com](http://www.kleintools.com).*

*Klein is a registered trademark of Klein Tools, Inc.*



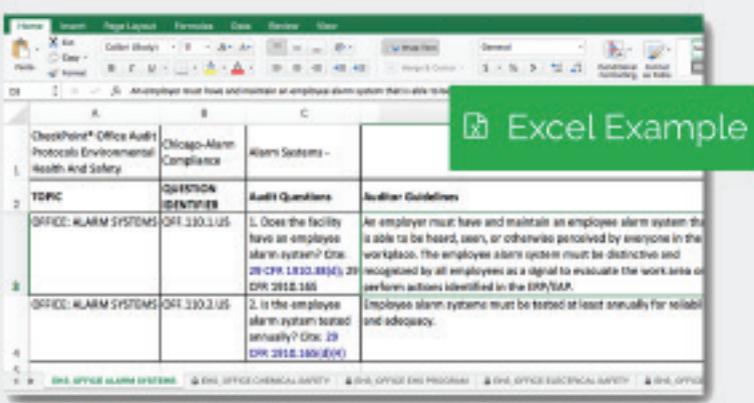
# i-Comply CHECKLISTS™

Office & Data Centers

## Got Sales Offices and Data Centers Around the Globe?

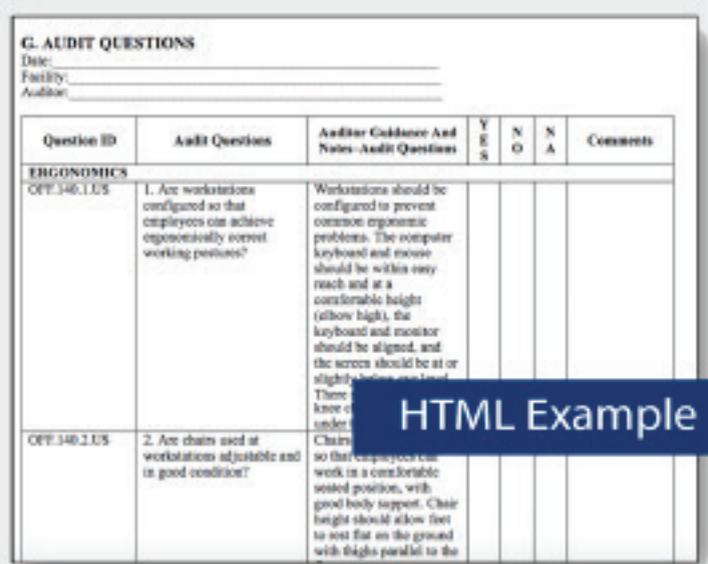
Too **many** sites? Too **hard** to coordinate? Too **costly** to send auditors?  
Having **difficulty comparing results** across the locations you have inspected?

If you said **yes** to any of these questions, how can you be sure that those sites are in compliance with your Global EHS compliance and risk programs?



**Excel Example**

TOPIC	QUESTION IDENTIFIER	Audit Questions	Auditor Guidelines
OFFICE ALARM SYSTEMS	OFF-130.1.US	1. Does the facility have an employee alarm system? Cit: 29 CFR 1910.395(d); 29 CFR 2912.155	An employer must have and maintain an employee alarm system that is able to be heard, seen, or otherwise perceived by everyone in the workplace. The employee alarm system must be distinctive and recognized by all employees as a signal to evacuate the work area or perform actions identified in the ERP/EAP.
OFFICE ALARM SYSTEMS	OFF-130.2.US	2. Is the employee alarm system tested annually? Cit: 29 CFR 2912.155(d)(4)	Employee alarm systems must be tested at least annually for reliability and adequacy.



**HTML Example**

**G. AUDIT QUESTIONS**  
Date: \_\_\_\_\_  
Facility: \_\_\_\_\_  
Auditor: \_\_\_\_\_

Question ID	Audit Questions	Auditor Guidance And Notes - Audit Questions	Y E S	N O	N A	Comments
ERGONOMICS OFF-146.1.US	1. Are workstations configured so that employees can achieve ergonomically correct working postures?	Workstations should be configured to prevent common ergonomic problems. The computer keyboard and mouse should be within easy reach and at a comfortable height (elbow high), the keyboard and monitor should be aligned, and the screen should be at or slightly below eye level. There is no one-size-fits-all solution.				
OFF-146.2.US	2. Are chairs used at workstations adjustable and in good condition?	Chairs should be adjusted so that employees can work in a comfortable seated position, with good body support. Chair height should allow feet to rest flat on the ground with thighs parallel to the ground.				

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# Amada Miyachi America Announces MM-400A Desktop Resistance Weld Checker

*Ideal for monitoring and managing key welding variables in process development and production environments*

Amada Miyachi America, a leading manufacturer of resistance welding, laser welding, marking, cutting, and micromachining equipment and systems, announces the new MM-400A desktop resistance weld checker. With the MM-400A, operators can easily monitor and manage key welding variables that result in changes in weld heat, including current, voltage, time, force and displacement. The compact unit supports AC, DC inverter, AC inverter, transistor and capacitive discharge resistance welding technologies.

The MM-400A is ideal for use in process development, where it can be used to correlate waveform and numeric data with process results and provide detailed weld data for process optimization and validation. In a production environment, it reduces scrap by detecting drifts in the weld process and alerting operators before process failure. The MM-400A also reduces the frequency of destructive testing and provides an independent way of monitoring the welding power supply.

The MM-400A features a simple and intuitive user interface and color touch panel display. An envelope function allows the operator to set upper and lower segmented or continuous limits around the entire waveform. The unique seam welding mode monitors AC current and voltage or DC voltage for up to 5 minutes. The unit provides ISO17657-compliant measurement for current (when used with available ISO-compliant toroidal coil) and offers Ethernet (TCP/IP), and RS-232/485 communication. Pre-weld displacement measures workpiece thickness prior to welding. Multi-language support includes English, Spanish, Japanese, Chinese, Korean, German, and French.

Available accessories include shunt resistor force sensors, a built-in force sensor, displacement sensors, and weld thru sensors that offer simultaneous measurement of applied force.

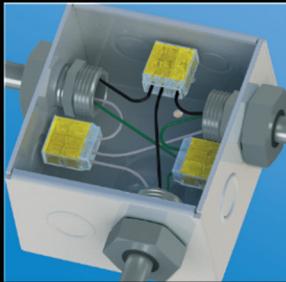
For more information, visit the Amada Miyachi America website at [www.amadamiyachi.com](http://www.amadamiyachi.com) •



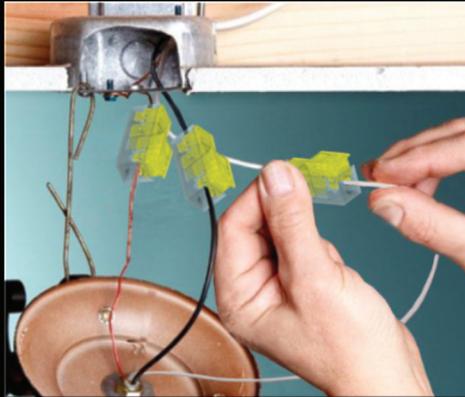
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At STE, we incorporate new concepts and technology throughout our projects with 3D BIM, finite element analysis, fabrication drawings and a plethora of services. Fueled by a forward thinking team, STE serves a superior client base with innovative industry solutions.

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*Mike Wright  
President, STE Inc.*



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Wire Mesh Partitions: 2"x1" rectangular mesh 10 gauge wire welded into an angle frame system is easy to use and easy to install. Ideal for around your automation enclosures, prevent your valuable tools from walking away from the tool crib, and quality control on non-conforming material, computer rooms, high security storage and so many more uses. JescoPalletGards® are wire containment backs for the pallet racks with stand-off clips (1.25, 4, 6 or 8 inch) design to fit most standard drilled pallet racks spaced two inch on center. Double hinge doors or double slide doors is an excellent way to secure high value products on the shelves.

1-1/2" Diamond mesh 10 gauge wire partition system are engineered for easy installation allowing unrestricted visibility and total air circulation. Inventory of standard height panels of 7, 8 or 10 high are available; but don't stop there because many industries require partitions to reach the trusses or building joists and that certainly can be accomplished. If you are installing partition on a raised platform (mezzanine) remember this requires zero or "no" sweep to keep everyone safe walking below. This is to prevent tools from dropping from the edge of the platform. (OSHA 1910.23(e)(4) Either partition system will work well but the more project information you are able to supply, the more knowledgeable we all become and it is truly amazing how that works!

The JESCOGARD® industrial guard rail 3-rib corrugation system will act as both a visual and physical barrier around your facility. The Economy Rail System is a 2-rib system and has been tested to withstand an impact of 10,000# traveling 4-mph. Should the need arise you can count on its strength without compromising quality at a price you can afford. Each system has available a self-closing single hinge gate with a sound dampening gasket on the gate.

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JESCOHUSKYDUMPERS®, wire partition systems, industrial guard rail systems, wire tenant storage lockers, industrial shelf carts, LP cylinder cabinets, machine guarding just to name a small portion of the products we offer to our customers. Our products are built to be the best in the industry and it is the reason customers keep coming back. Your satisfaction for a project well done is what really counts when the day comes to a close. We look forward for an opportunity to be able to assist your next industrial guarding or material handling requirements. Check out the full product line shown on the website at [www.jescoOnline.com](http://www.jescoOnline.com)

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Federal Knife	BC	www.federalknife.com
Gorbel	21	www.gorbel.com
Greaves	19	www.greaves-usa.com
Guard Safe Guarding	5, 18	www.guardsafeguarding.com
Herculock	14	www.herculock.com
Jesco	3	www.jescoonline.com
Keystone Electronics	27	www.keyelco.com
Krenz Vent	2	www.krenzvent.com
Piranha Safety	7, 23	www.piranha-safety.com
RegScan	25	www.regscan.com
Safety Rail Co	11	www.safetyrailcompany.com
Safety Through Engineering	10, 29	www.ste4u.com
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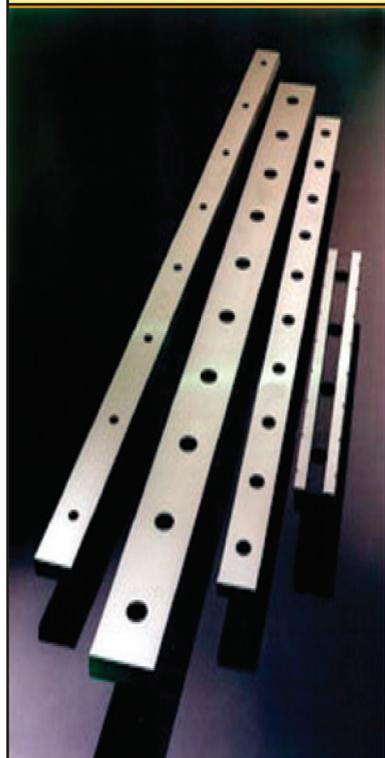
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