

Today's

January 2014

# Industrial Products & Solutions™

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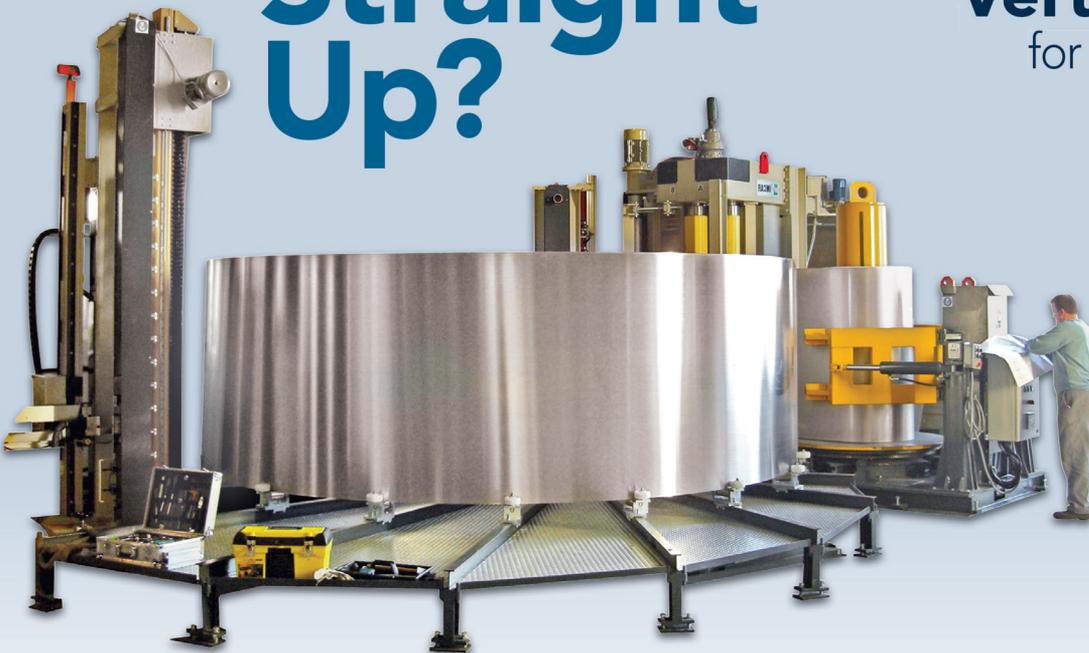


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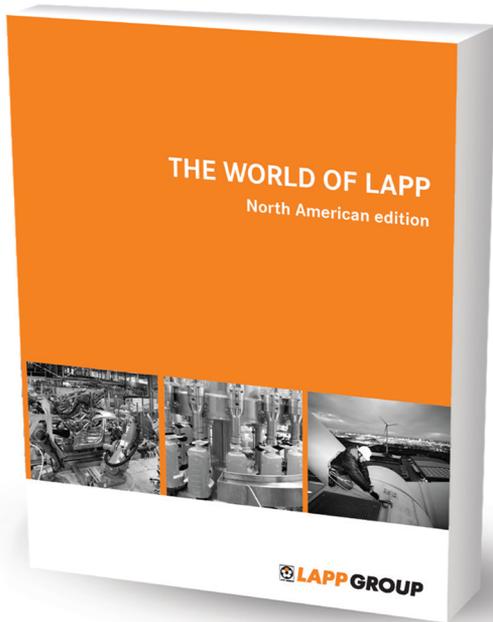
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**LAPP GROUP**

# It's a new year, and with it come high hopes and expectations for things to come.

# 2014

The economy seems to have begun a slow march toward recovery. There is a push from the White House for research, growth and development in the manufacturing sector. Technological innovations and breakthroughs are driving progress forward and speeds that are fascinating to watch.

Back in November, FABTECH showcased a lot of large, old names in the industry bringing renewed ingenuity to equipment that, for a long time, seemed to change little beyond the cosmetic. And it introduced a few newer, smaller companies doing revolutionary things that, if successful, could usher in big changes in the industry.

My hope for the new year is that we all continue to build strategically and carefully on the successes of last year, while remaining open to people and ideas that could catapult us to a whole new level. 2014 promises to be a year of optimism and steady growth... but I suspect it may also usher in some pretty audacious milestones and achievements as well. Hopefully you, our readers, will be on the receiving end of the latter.

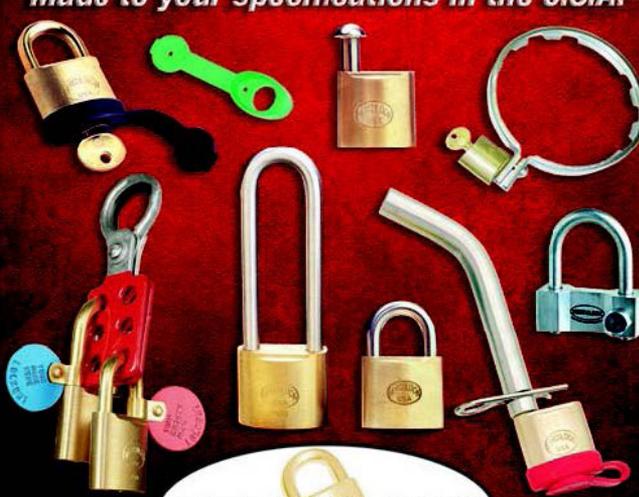
For our part, we will continue to expand our chorus of new voices in an effort to continuously improve this book. We will also branch out not only on the type of content we provide, but in the way we deliver it. This issue marks the completion of our transition to a 99.9% digital publication.

While we understand that some people prefer a physical copy in their hands—and we will still provide that for those who request it—the move to digital will allow us to bring richer, more varied and more interactive content, while at the same time making this more of a two-way conversation with you, our readers.

Like I said, it's a new year, and with it comes high hopes and expectations for things to come. For me that means a challenge to make each issue of The Utility Source is better than the one before. And I'm grateful to have you along for the ride.

Danny Thompson, Editor

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## Best of the WEB

Just some of the things we came across while surfing the web.

1. Industry Week – Healthiest Supply Chains in the U.S.  
<http://bit.ly/1jnDB8w>
2. Manufacturing.net – Cost of Electronics Failure Rising  
<http://bit.ly/1jnDTfN>
3. Shopfloor – Manufacturing Hiring Picked up In November  
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4. Manufacturing Transition – In Pursuit of The Transparent Mfg Plant  
<http://bit.ly/1jnFxOj>
5. Okuma America Instructional/Safety Video Series  
<http://bit.ly/1eZCqLC>
6. The AWS CRAW Competition at FABTECH 2013  
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# Indexable Insert Tools:

## A Solution to Rising Carbide Prices

By Marjorie Steele and Christopher Kyle

For the past decade, progressive manufacturers have been changing out their solid carbide tools for indexable carbide inserts, or drill tips. This has been done for a number of reasons, the first and foremost of which is to avoid the steeply rising costs of carbide and tungsten carbide materials. Manufacturers of carbide tools, specifically solid carbide drills and end mills, have noticed this significant shift in the market and have been adjusting their inventories to compensate.

2004 saw a significant rise in carbide prices, with solid carbide tool costs rising up to 70%. The cost of indexable carbide inserts, on the other hand, only rose slightly. While carbide and tungsten carbide prices dropped substantially in 2008 as a result of the global economic recession, these prices have since evened out to near 2008 highs. The different in cost between solid carbide tools and indexable carbide inserts can be attributed in part to cemented carbide inserts' lower ratio of tungsten carbide. Global supplies of tungsten are limited, with China currently holding over 60% of the world's tungsten reserves. According to the 2011 US Geological Survey, these reserves will be exhausted in 40 years at the current rate of tungsten consumption continues. To combat this, China has begun to restrict its tungsten

exports, driving the cost of tungsten up.

### Cost Savings of Switching to Indexable Carbide Inserts

Industry experts have estimated that North American manufacturers can save over \$300 million per year in tooling costs alone by making the switch from solid carbide tools to indexable inserts. In addition to these direct cost savings, relying on indexable inserts allows manufacturers to avoid the solid carbide drill reconditioning process, which is both costly and time consuming. Environmental concerns are an issue as well; with fewer resources tied up in reconditioning solid carbide drills and less tungsten materials being used to manufacture the indexable inserts, environmental waste and impact is lessened by the use of indexable inserts.



#### Eliminating Solid Carbide Tool Reconditioning

In order for carbide tooling and machining to remain precise, solid carbide drills must be frequently changed out for drills with fresh cutting edges, meaning that most manufacturers must keep many more drills on hand than are actually in use. Used drills are reconditioned constantly to create fresh cutting edges. Indexable carbide inserts, on the other hand, have multiple cutting edges which can be quickly rotated to provide a fresh cutting edge. Rather than switching out the entire solid drill, carbide inserts can be rotated and reused 4 to 16 times before being swapped out for fresh inserts. Carbide inserts function only as the drill tip rather than the entire drill, significantly reducing the amount of material needed to create fresh cutting edges.

By switching from solid drills to indexable inserts, manufacturers can eliminate the solid drill reconditioning process and keep far fewer drills on hand. Additionally, production downtime is significantly reduced, as the insert changing process is swift and, in some cases, automated. Indexable inserts also offer greater tooling flexibility without sacrificing precision or repeatability. One size carbide milling insert can create holes of nearly any size, eliminating the need for drills of various sizes.

#### Can Recycling Used Carbide Inserts Lower Production Costs?

While carbide inserts offer significant cost savings and improved production times over solid carbide drills, worn carbide inserts are difficult to recycle, and are often thrown away. Most manufacturers using carbide inserts throw the used tools

away, as there are few resources available for reclaiming these materials effectively - until recently. Several new carbide tool reclaiming service providers have emerged over the past decade, offering services for resharpener inserts to like-new quality.

Carbide recycling services have existed for several years, but traditional recycling resulted in inserts which were a different size from the originals. While still usable, these differently sized reclaimed inserts required manufacturers to use different tool holders and re-calibrate their CNC machining operations. New insert reclaiming services have emerged, however, which enable manufacturers to avoid this problem. Recycling companies such as R & J Tool Inc. are able to sharpen carbide tools without changing the the inscribed circle size, also known as clamping height. This results in newly sharpened tools which can be used in the same tool holders as were used previously, with few or no adjustments needed.

#### The Insert Sharpening Process

While traditional resharpener services have relied on grinding the entire insert, new reclaiming processes focus only on sharpening the insert's cutting edge. The full thickness of the insert isn't ground, leaving the inner circle size the same. By grinding only the top cutting edges, indexable insert recycling service providers produce re-ground inserts which fit into their original tool holders as if they were new.

In addition to regrinding the cutting edge, leading insert recycling facilities analyze each tool's application to hone the insert's capabilities to meet its specific application. After grinding the tool and modifying it in any other ways necessary, coatings are often applied to the insert to improve its hardness and performance. By working with the manufacturer to essentially re-engineer worn carbide inserts, recycling providers are able to provide reclaimed indexable inserts with performance ranging from 100 to 300% of the original new carbide tool.

This process typically costs far less than the cost of purchasing new carbide inserts; the reclamation process often costs as little as half as much as that of purchasing new. In addition to monetary cost savings, manufacturers who recycle instead of purchasing new are able to significantly cut back on

valuable material waste and the cost of waste disposal. In green and lean manufacturing environments, these environmental benefits are not lost on the end product user.

Christopher Kyle is president of Knight Carbide, a Michigan-based manufacturer of tungsten carbide inserts. Knight Carbide specializes in custom insert engineering and manufacturing. To learn more about carbide insert technology, visit <http://www.knightcarbide.com>.

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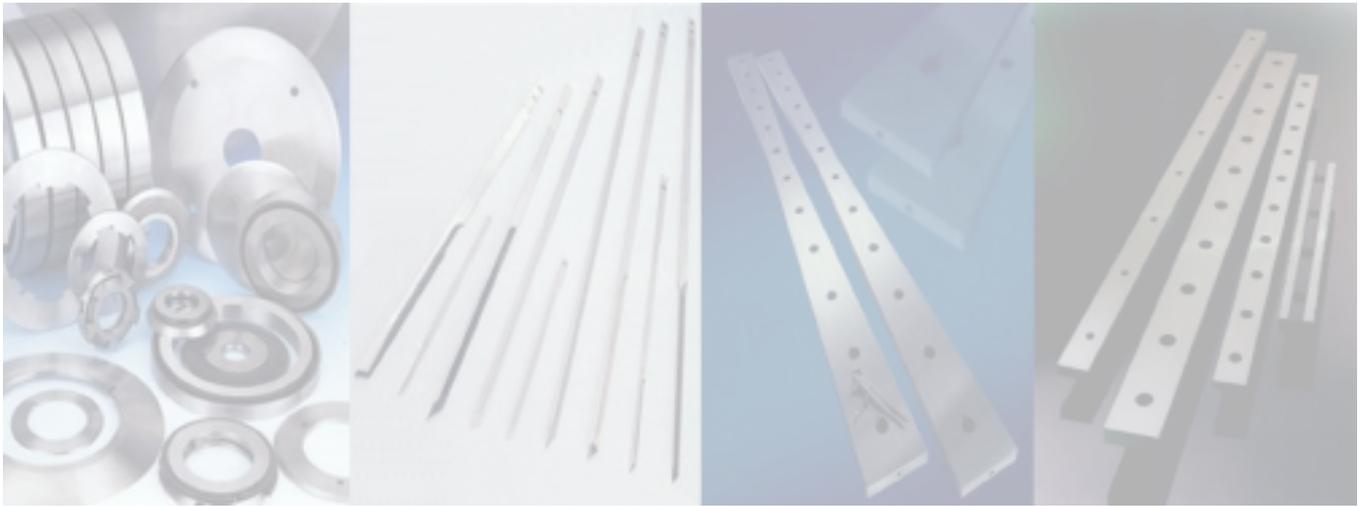


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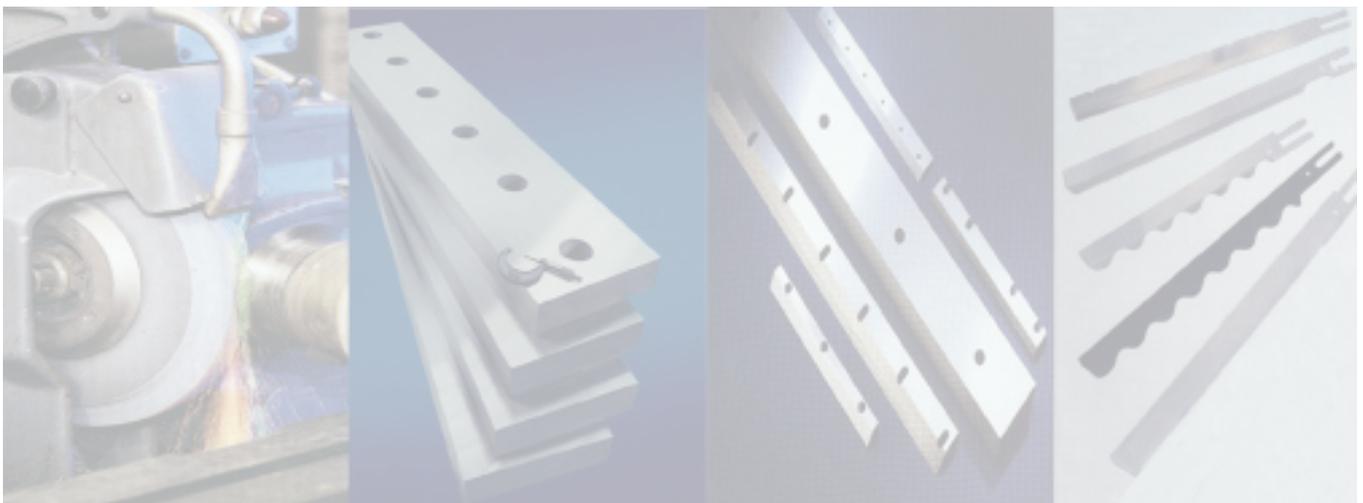
In that time, they've grown

into a trusted, recognized source for cutting tools, shipping their products to customers around the globe. These customers appreciate the quality, large inventory of a wide range of blades—straight or circular, toothed or keen-edged—and the kind of service that can only come from more than two and a half decades of experience. But not as many know that aside from selling new blades, Federal will also sharpen used blades,

restoring them to like-new condition, or that they can manufacture custom blades to just about any specifications.

“Federal Knife, Inc. cares about our customers’ needs, and we have a strong affinity for products made in the U.S.A.,” says Jim Vickers. “And as companies continue looking to save money by doing things faster, cleaner and less expensively, we see this as an opportunity to capture more of the world market.”

After 27 years in the business, there is almost no facet of the manufacturing sector that Federal Knife doesn't touch, from metal fabrication and steel production to paper and plastic. If there is a field where consistent, precision cutting is needed, Federal has at least one foot in the market. And they expect that footprint to only get bigger over the next 27 years.





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HAIMER Power Mill solid carbide endmills are the latest tools developed by HAIMER GmbH, the European market leader for toolhoding. They are made from high end fine grain carbide and are equipped with the HAIMER pull out protection system, Safe-Lock™, which has become a standard for HSC and HPC machining in the last years

The HAIMER developed endmill geometries are based on an unequal flute and helix design for chatter free high end machining. All tools are coated with latest PVD technology and have an extremely smooth surface for the best possible chip evacuation.

The new HAIMER Power Mill range, with cutting diameters available from 2 to 20mm, will be made available with 3, 4 and 5 cutting edges having multiple lengths of cut. To offer maximum flexibility in order to address the customers application requirements, different cutting edge solutions (sharp, chamfer and radius) will be offered. Also a roughing geometry with a cord profile will be part of the portfolio.

A typical HAIMER specialty is the high precision of the tools. All end mills are fine balanced and have a run-out of 5 µm. All shanks are based on the h5 tolerance.

With the launch of the new Power Mill range HAIMER has expanded the Safe-Lock™ offering. Resulting from the wide spread and multiple customer requests for different application areas, Safe-Lock™ will be available starting from shank diameter 6mm.

Andreas HAIMER summarizes: “As the inventor of Safe-Lock™, HAIMER steps up and offers this shank solution as a standard for all HAIMER Power Mill tools starting from shank diameter 6mm and intentionally gives up on plain round and Weldon shanks.”

Due to the inherently balanced design, the Safe-Lock™ shanks can be clamped in standard shrink fit and collet chucks without any problems. In comparison, it now doesn't make sense to clamp µm precision high performance geometries with weldon shanks and push them extremely out of center while introducing extreme unbalance. HAIMER target is to have high availability and replace the Weldon system in the next 10 years. Whereas Safe-Lock™ not only supports roughing applications, but becomes a new universal solution that continues to find more and more use during HSC applications with high helix endmills.

The new HAIMER Power Mill Portfolio, with cutting diameters available from 2 to 20mm, will be made available with 3, 4 and 5 cutting edges having multiple lengths of cut. Different cutting edge solutions will be offered, also a roughing geometry.



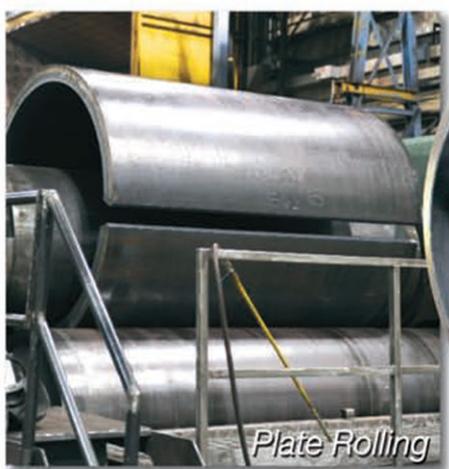


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# A Positive Year for Stainless Steel Pipe Suppliers?

By Lui Sam Philip

The stainless steel industry is seeing a slow recovery from the economic crisis. In December 2013, The American Iron and Steel Institute (AISI) published a report, elaborating on the growth of steel products shipping. The report described that in October 2013, steel mills and suppliers in USA shipped a total of 8,287,553 tons to customers. This is a 5.2% increase from the 7,879,747 tons shipped in September 2013.

This is in congruence to an announcement made by the World Steel Association in December as well. The international trade body announced that global steel production has risen to 127 million tons, providing a total increase of 3.6%. While this is good news for the steel industry in general, one has to ask the question, how will this benefit stainless steel producers and suppliers in the US?

There are many benefits that can be reaped by these events not only for stainless steel producers but investors and customers as well.

- **Reinvestment in US Companies:** For a while, there was a trend of value investors looking towards Latin America, China, and even India for investing in steel production companies. With an impending huge growth of the steel industry in the US once again, value

investors can now look back to our shores for investment opportunities. This can also make way for new customers and investors.

- **Opportunities for Better Service Offerings:** While an economic downturn is depressing to say the least, there is always an opportunity to go back to the research phase and create better service offerings. A number of steel conferences and expos around the country are seeing a number of new technologies being presented by stainless steel pipe suppliers and producers. Companies are introducing better flash welding techniques, new coil joining methods for automotive grade materials, improvements in machine controls, and new methods of creating high strength steel. These will help immensely in bringing in new customers from US and abroad.
- **New Foreign Customers:** The reliability of US steel is unprecedented. The overall quality of materials, new design and production techniques, and emphasis on excellent logistics and delivery is bringing many foreign clients. Today, you will find major companies from India, China, and Europe getting their steel requirements produced and delivered by US steel producers and suppliers.

- **Opportunities for Expansion:** The fact of the matter is The United States has over 75% of production materials within the country itself. The steel industry is known for its high levels of productivity as well as low off wage costs. With many foreign steel producers wanting to make an entry into the US market, the current growth makes it an ideal time for mergers and acquisitions. One can find a number of US companies either tying up with a foreign counterpart, acquiring steel mills in USA and abroad or even opening new factories in foreign countries.
- **Potential for more Jobs:** Perhaps the biggest advantage for US citizens, expansion can lead to more job opportunities in the US and abroad. There are many US companies who are concentrating more on supplying rather than producing stainless steel products. With every new stainless steel pipe supplier, there will probably be 2 to 3 new jobs being created.

While the bears and bulls may make an impact on the steel industry, sooner or later, there will always be new and better opportunities for growth and expansion.

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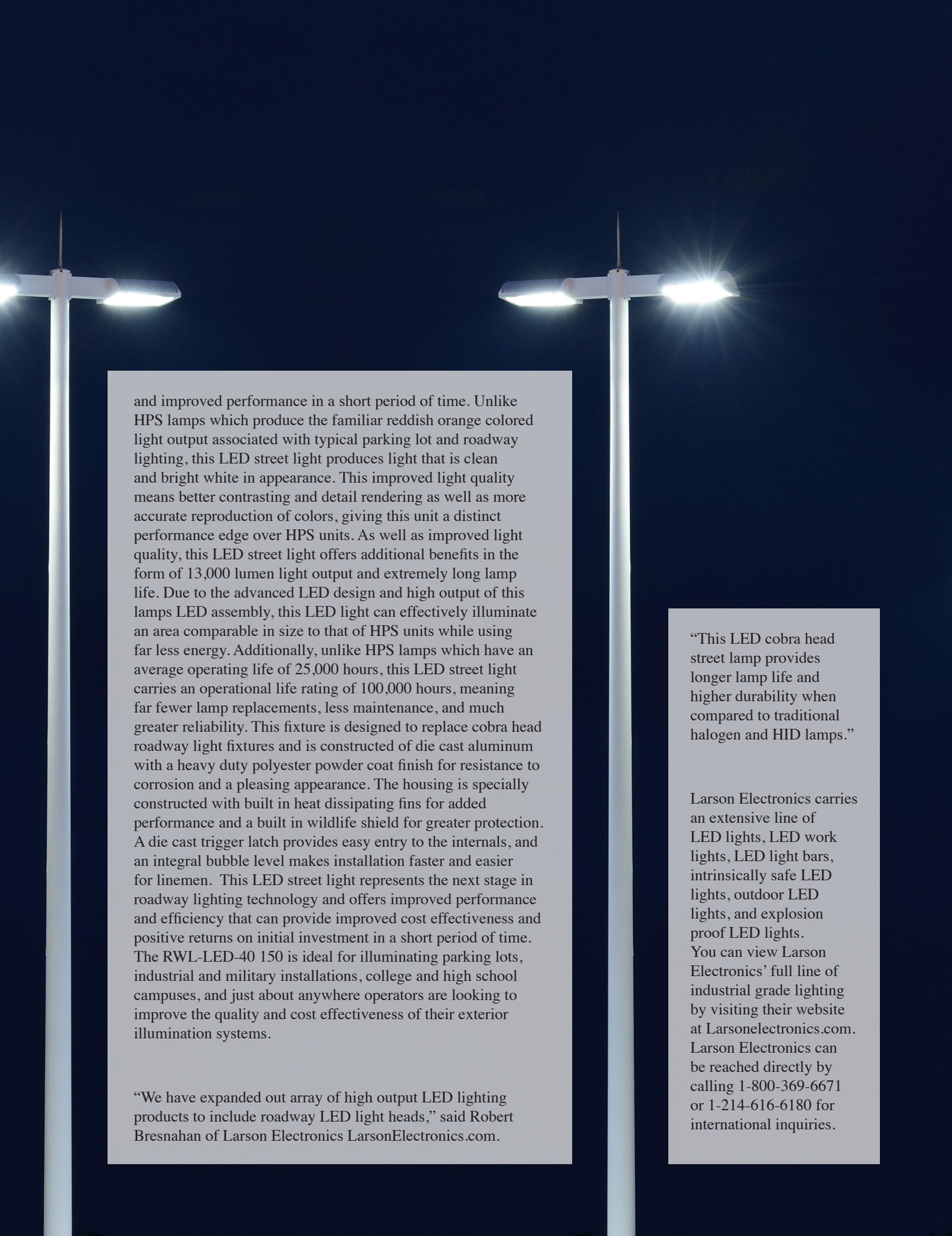
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# New High Output LED Roadway Light from Larson Electronics Replaces 400 Watt HPS



Leading supplier of industrial grade lighting equipment Larson Electronics has announced the release of a powerful new LED roadway light designed to provide performance and efficiency rivaling that of standard 400 watt high pressure sodium fixtures. The RWL-LED-40 150 Watt LED Street Light is designed as a direct replacement for cobra head HPS streetlights that offers improved light quality combined with greater efficiency and reliability.

The RWL-LED-40 150 watt LED street light from Larson Electronics is a powerful new alternative to standard HPS roadway lights that offers greater efficiency and light quality in a rugged cobra head style lamp design. Featuring solid state LED technology and an advanced housing design, this LED street light provides a highly effective answer to standard high pressure sodium street lights that can produce returns in cost reductions



and improved performance in a short period of time. Unlike HPS lamps which produce the familiar reddish orange colored light output associated with typical parking lot and roadway lighting, this LED street light produces light that is clean and bright white in appearance. This improved light quality means better contrasting and detail rendering as well as more accurate reproduction of colors, giving this unit a distinct performance edge over HPS units. As well as improved light quality, this LED street light offers additional benefits in the form of 13,000 lumen light output and extremely long lamp life. Due to the advanced LED design and high output of this lamps LED assembly, this LED light can effectively illuminate an area comparable in size to that of HPS units while using far less energy. Additionally, unlike HPS lamps which have an average operating life of 25,000 hours, this LED street light carries an operational life rating of 100,000 hours, meaning far fewer lamp replacements, less maintenance, and much greater reliability. This fixture is designed to replace cobra head roadway light fixtures and is constructed of die cast aluminum with a heavy duty polyester powder coat finish for resistance to corrosion and a pleasing appearance. The housing is specially constructed with built in heat dissipating fins for added performance and a built in wildlife shield for greater protection. A die cast trigger latch provides easy entry to the internals, and an integral bubble level makes installation faster and easier for linemen. This LED street light represents the next stage in roadway lighting technology and offers improved performance and efficiency that can provide improved cost effectiveness and positive returns on initial investment in a short period of time. The RWL-LED-40 150 is ideal for illuminating parking lots, industrial and military installations, college and high school campuses, and just about anywhere operators are looking to improve the quality and cost effectiveness of their exterior illumination systems.

“We have expanded our array of high output LED lighting products to include roadway LED light heads,” said Robert Bresnahan of Larson Electronics [LarsonElectronics.com](http://LarsonElectronics.com).

“This LED cobra head street lamp provides longer lamp life and higher durability when compared to traditional halogen and HID lamps.”

Larson Electronics carries an extensive line of LED lights, LED work lights, LED light bars, intrinsically safe LED lights, outdoor LED lights, and explosion proof LED lights. You can view Larson Electronics' full line of industrial grade lighting by visiting their website at [LarsonElectronics.com](http://LarsonElectronics.com). Larson Electronics can be reached directly by calling 1-800-369-6671 or 1-214-616-6180 for international inquiries.



# Flashback Arrestors for Hydrogen Gas

3 Li Lithium 6.941	4 Be Beryllium 9.012	5 B Boron 10.811	6 C Carbon 12.0107	7 N Nitrogen 14.0064	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.1797										
11 Na Sodium 22.9897	12 Mg Magnesium 24.305	13 Al Aluminum 26.9815	14 Si Silicon 28.0855	15 P Phosphorus 30.9738	16 S Sulfur 32.065	17 Cl Chlorine 35.453	18 Ar Argon 39.948										
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.9559	22 Ti Titanium 47.867	23 V Vanadium 50.9415	24 Cr Chromium 51.9961	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.9332	28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.409	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.9216	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.798
37 Rb Rubidium 85.4678	38 Sr Strontium 87.62	39 Y Yttrium 88.9059	40 Zr Zirconium 91.224	41 Nb Niobium 92.9064	42 Mo Molybdenum 95.94	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.9055	46 Pd Palladium 106.42	47 Ag Silver 107.8682	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.6	53 I Iodine 126.9045	54 Xe Xenon 131.293
55 Cs Cesium 132.9055	56 Ba Barium 137.327		72 Hf Hafnium 178.49	73 Ta Tantalum 180.9479	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217	78 Pt Platinum 195.078	79 Au Gold 196.9665	80 Hg Mercury 200.59	81 Tl Thallium 204.3833	82 Pb Lead 207.2	83 Bi Bismuth 208.9804	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)
87 Fr Francium (223)	88 Ra Radium (226)		104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (277)	109 Mt Meitnerium (268)	110 Ds Darmstadtium (271)	111 Rg Roentgenium (272)	112 Uub Ununbium (277)						
			57 La Lanthanum	58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium 164.9303	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium

For fuel gas applications, hydrogen is growing in popularity. Due to its specific characteristics, conventional flame arrestors are often insufficient. Therefore, the safety of men and materials cannot be guaranteed. Now, WITT offers its long-term approved flashback arrestors especially for hydrogen, according to EN 730-1/ISO 5175.

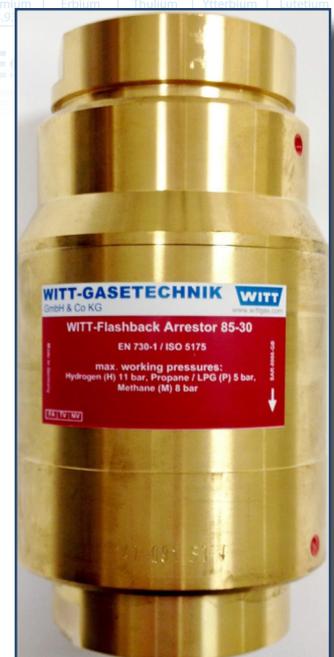
For reliable protection against dangerous reverse gas flow and flashbacks, the sealing material is critical, as this is often a weak spot and a source of danger. WITT uses sealing material that is optimal for hydrogen applications.

A large surface area flame arrestor of stainless steel construction extinguishes any dangerous flashback entering the device in any direction. This flame arrestor is the first way in which WITT's certified safety technology provides protection.

Next a temperature-sensitive cut-off valve extinguishes sustained flashbacks long before the internal temperature of the arrestor reaches a dangerous level. In addition, a spring-loaded non-return valve prevents slow or sudden reverse gas flow forming explosive mixtures in the gas supply.

As a final safety measure, each hydrogen flashback arrestor is tested individually prior to delivery. To extend the service life, a filter at the gas inlet protects the arrestor against dirt contamination.

With all models rated for a working pressure of 150 PSI, variations include ¾" and 1" NPT F RF 85-30 models for in-line applications and a 9/16-18 UNF LH RF 85-10 version for point-of-use and regulators-outlet applications.



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# OMRON Automation and Safety's New NX Safety Controller Promotes Seamless Integration of Safety and Other Automation Disciplines

*The NX series utilizes one network, one connection and one software to provide truly integrated automation and safety from a single platform.*

OMRON Automation and Safety introduces NX Series Safety Controllers. The NX series combines automation and safety on the same EtherCAT® network in a mixed I/O backplane to promote design flexibility and minimize wiring costs. A single intuitive software programming environment reduces machine and safety design time, while an auto configuration restart function eliminates the need for tools or software to exchange I/O hardware. The result is a seamlessly integrated solution that helps maximize machine flexibility, safety and productivity for the total machine lifecycle.

“The NX Safety Controller is a particularly exciting introduction because, in combination with our new NX I/O system and Sysmac NJ Controllers, it represents a decisive step towards the complete integration of safety, logic, motion and vision disciplines – and it does so in one software platform (Sysmac Studio), on one network (EtherCAT) and in one control system (Sysmac NJ Controller),” says Matt Dodds, Product Marketing Manager – Safety, OMRON Automation and Safety.

Their functionality and flexibility make these safety controllers ideally suited for applications such as automotive robotic work cells, larger flexible packaging machines and material handling work cells with multiple access points.

## FSoE - Safety over EtherCAT

The open protocol Safety over EtherCAT (FSoE) defines a safety related communication layer for EtherCAT. The NX Safety Controller and the distributed Safety I/O can be freely placed in the EtherCAT network, and their integration in the Sysmac Studio software environment simplifies initial system design, setup, and maintenance of the application. With this integrated system, machine builders can focus attention on improving machine performance and safety rather than system configuration.

“NX series safety controllers add ease and flexibility in programming the safety system with direct access, by the PLC, to all status and information about each safety inputs and outputs by simply assigning a variable,” explains Dodds. “As



a result, faster design and commissioning can be realized with this integrated solution.”

## Sysmac integrated safety

Sysmac integrated safety is suitable for satisfying the most demanding applications meeting Performance level (PLe) according to the ISO-13849-1 and SIL3 according to IEC61508. Sysmac integrated safety conforms to programming standard IEC-61131-3, and includes certified PLCopen Safety Function Blocks.

“Combining our integrated system, including safety components, from safety switches and safety sensors to motion devices with integrated safety functionality, provides significant benefits to machine builders who want to simplify and speed machine designs, and improve machine performance,” says Dodds. “Omron is a Global ‘one stop solution’ supplier that offers not just components, but integrated solutions and services that can help OEMs design and build a competitive advantage.”

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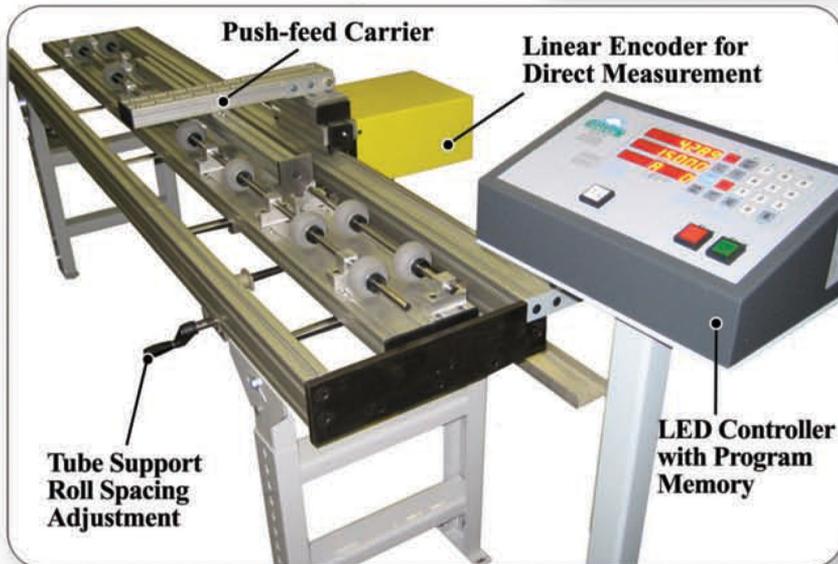
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# RSA-12A Remote Switch Actuator Operates All DS-DSL Circuit Breakers without Modification

The CBS ArcSafe® RSA-12A is a custom-built remote switch actuator that remotely operates all styles of Westinghouse/Cutler-Hammer DS/DSL power circuit breakers. The RSA-12A is designed to operate on equipment with either manual or electric charging mechanisms and is compatible with all manufacturers and sizes of DS breakers without any modification to the breaker.

When accompanied by an applicable CBS ArcSafe® Remote Switch Operator (RSO) control unit, the RSA-12A provides remote CHARGE, CLOSE, and OPEN operation from up to 300 feet away from the equipment, reducing

the need for bulky personal protective equipment (PPE) and virtually eliminating operator fatigue caused by manually operating the breaker while wearing heavy protective gear.

CBS ArcSafe® remote switch actuators are attached to the enclosure using strong magnets that ship with the unit and are specifically designed for the specific circuit breaker or switch. Each RSA-12A offers adjustable fittings and magnetic latching configurations that allow technicians to adapt to different configurations of the Westinghouse/Cutler-Hammer DS/DSL power circuit breakers without any modifications to the existing breaker or

switchgear.

The RSA-12A is lightweight, portable, and ideal for remote operation in hard-to-access areas. Option features for the RSA-12A include a radio remote with range of up to 150 feet, 24VDC LED light, wireless video camera system with LCD monitor for remote viewing, and Pelican case assembly. When combined together, these features make the RSA-12A easy to install and remove, allowing technicians to quickly and safely set up and operate different sets of the same electrical equipment.





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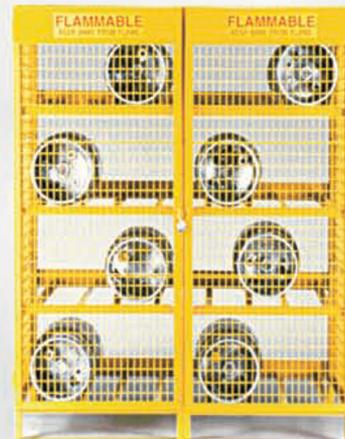
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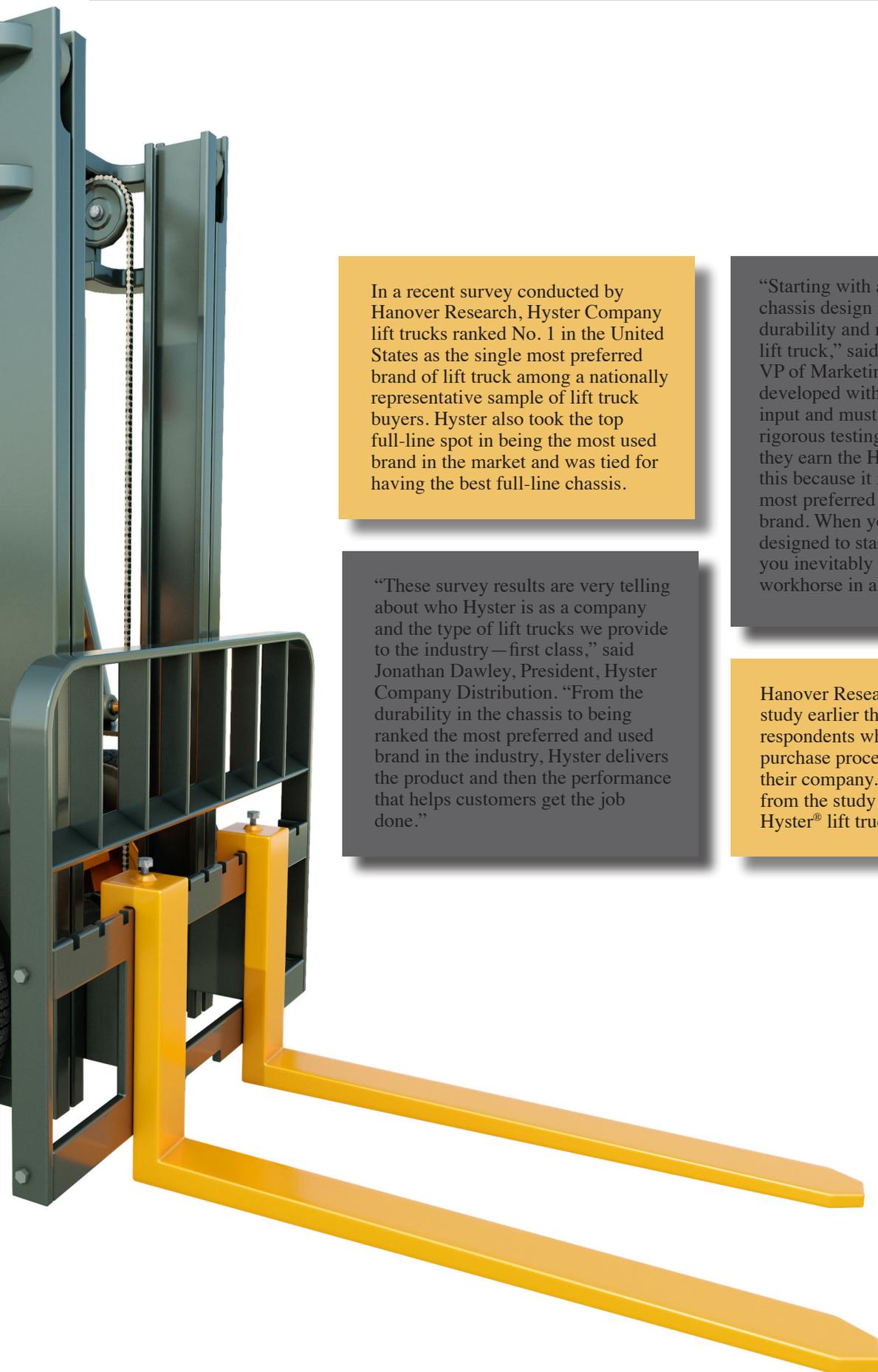
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# Hyster Most Preferred Brand



Independent, Third Party Research Company Finds Hyster Most Preferred Brand

*Hyster also tops in most commonly used, best full line chassis*



In a recent survey conducted by Hanover Research, Hyster Company lift trucks ranked No. 1 in the United States as the single most preferred brand of lift truck among a nationally representative sample of lift truck buyers. Hyster also took the top full-line spot in being the most used brand in the market and was tied for having the best full-line chassis.

“These survey results are very telling about who Hyster is as a company and the type of lift trucks we provide to the industry—first class,” said Jonathan Dawley, President, Hyster Company Distribution. “From the durability in the chassis to being ranked the most preferred and used brand in the industry, Hyster delivers the product and then the performance that helps customers get the job done.”

“Starting with a strong foundation, chassis design is the backbone of the durability and reliability of a Hyster® lift truck,” said Brett Schemerhorn, VP of Marketing. “Our products are developed with ongoing customer input and must pass multiple, rigorous testing processes before they earn the Hyster badge. We do this because it is our goal to be the most preferred full-line lift truck brand. When you build a product designed to stand the test of time, you inevitably become known as the workhorse in a fleet.”

Hanover Research conducted the study earlier this year from industry respondents who are involved in the purchase process of lift trucks for their company. More information from the study is available on the Hyster® lift truck website.

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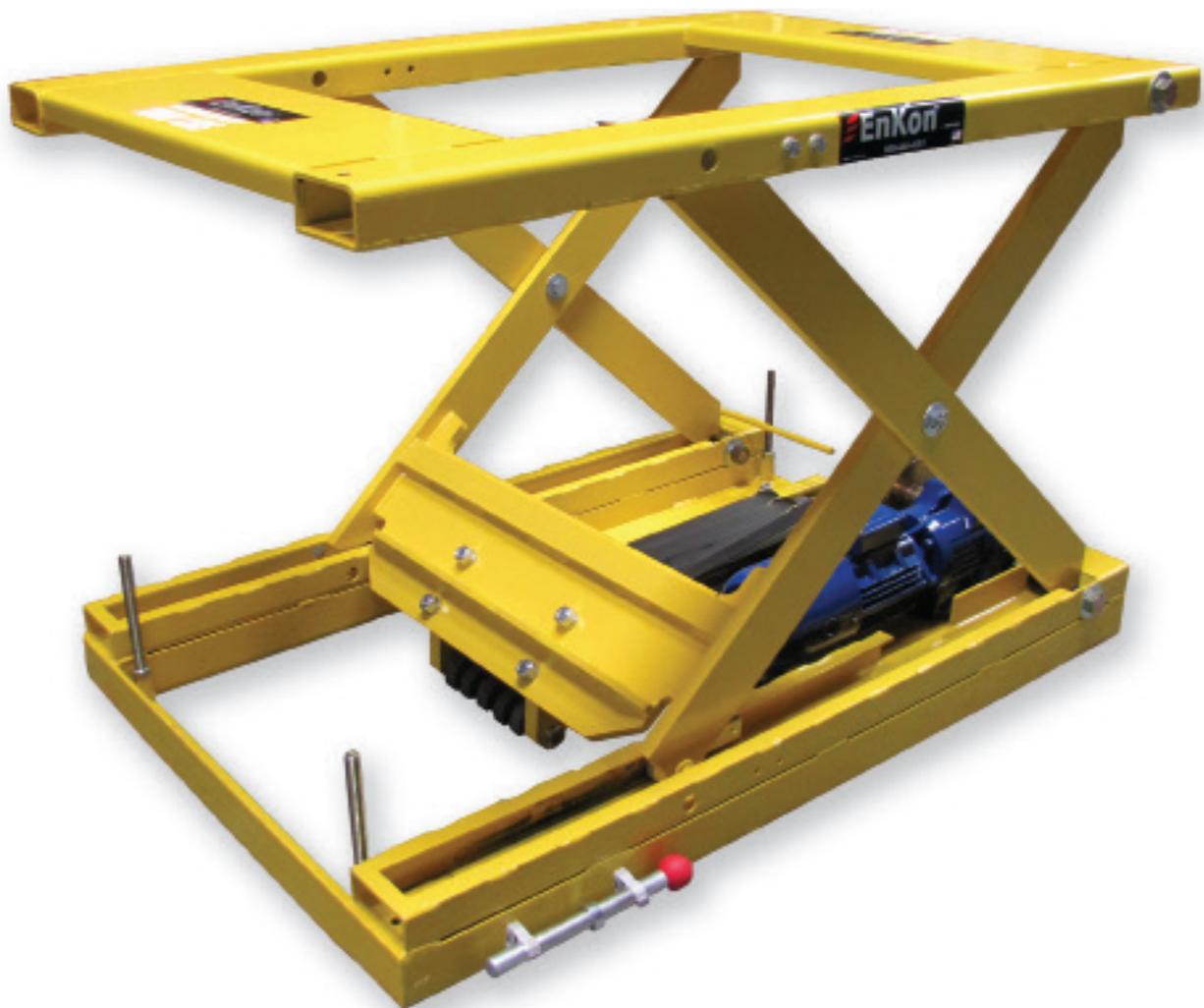
## EnKon will be Exhibiting the E-Series Electric Belt Drive Scissor Lift Table at Modex 2014

EnKon Systems, Herkules Equipment Corporation's brand name of lift systems, will be exhibiting the E-Series Electric Belt Drive Scissor Lift Table along with a number of other products in booth #9040 at the MODEX 2014 Trade Show. EnKon's lift model #LSBD04 provides a high duty cycle, static positioning, and repeatability. This patented and extremely versatile scissor lift utilizes the latest technology for advancing the efficiencies in manufacturing and automation applications, with an "off-the-shelf" delivery and cost.

Designed with a high safety factor, the LSBD04 is powered with a mechatronics drive system using a single belt, multi-pulley design, powered by a standard 480 volts 3 phase gear motor.

This innovative lift design holds a static position to +/- .06" indefinitely, can fulfill 120,000-plus duty cycles in a year, has a capacity of up to 2000 lbs, and is 40" wide x 59" long. It requires very little maintenance.

Easy to use, the LSBD04 integrates well with conveyors and robotics within advance manufacturing systems, and is ideal for clean room applications since there is no need for hydraulic fluid. As with any scissor lift table, EnKon's engineering team can customize the lift for a specific application to answer a customer's need.



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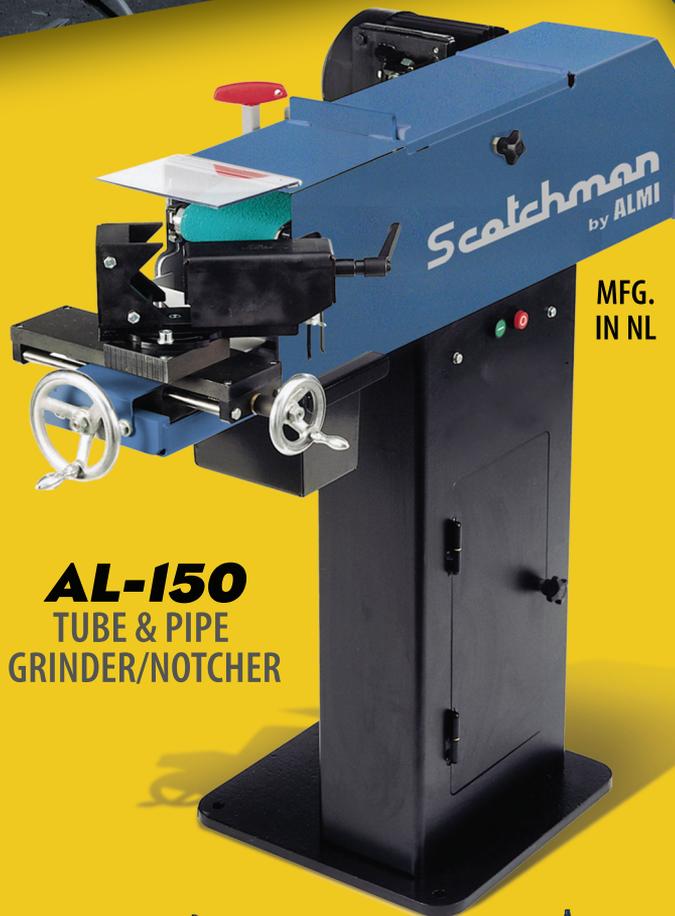
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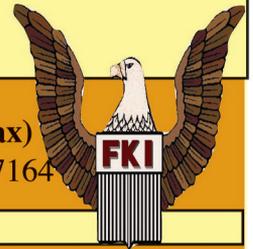
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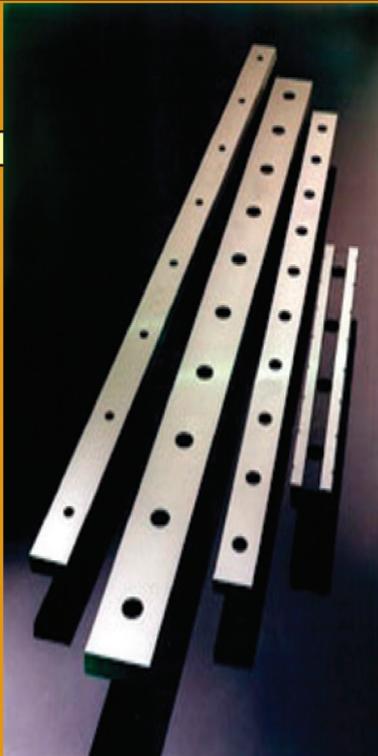
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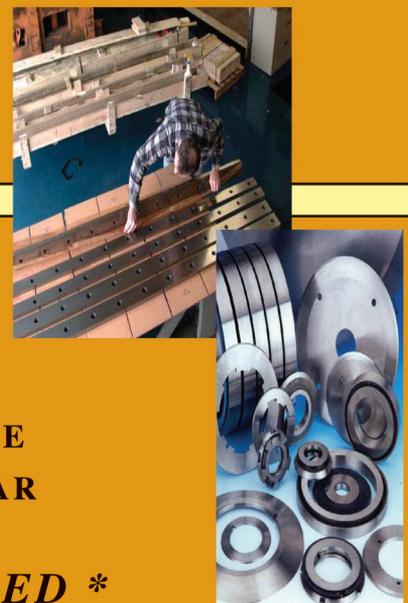
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