



# THE OFFICIAL SHOW DAILY



NORTH AMERICA'S LARGEST METAL FORMING, FABRICATING, WELDING AND FINISHING EVENT



OFFICIAL SHOW NEWS | TUESDAY, NOVEMBER 10, 2015

## Racing Legend Shares Winning Secrets

Covering topics ranging from teamwork and innovation to the importance of mentors, NASCAR racing legend Rusty Wallace opened FABTECH 2015 Monday morning with a keynote address focused on running a winning organization.



Rusty Wallace shares experiences and lessons

“It’s a cliché term, but one thing I learned a long time ago in racing is that there is no ‘I’ in a team,” he began. “I used to go out there thinking that I’m the driver. I’m the guy that everybody is always talking about.”

Acknowledging “some big heads back in the early days” among

drivers, crew chiefs and engine builders, Wallace said, “We thought we were the special guys getting it done and were the most important people on that team. But man, did I learn that was wrong.”

“What you start learning is that there really is no ‘I’ in a team,” he

repeated. “It is an entire team that you have to have to make this work. If you have people on a team who think they are more important than others, I will tell you that attitude will make a team sink in five seconds. There’s just no doubt about that.”

In addition to the reality of winning or losing as a team, Wallace emphasized the importance of innovation, reinforcing the message with some of his experiences with the application of tools and equipment during his career.

“Nowadays, I look through FABTECH and I look through

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### DON'T MISS TODAY!

**Presidential Candidate Rick Santorum Town Hall**  
8:30 - 9:00 a.m., FABTECH Theater

**Panel Presentation: Enterprise Security Risks: Is Your Company Protected?**  
12:30 - 1:30 p.m., FABTECH Theater, Grand Concourse

**FABTECH Industry Night: Lucky Strike**  
5:30 - 7:30 p.m., Downtown Chicago  
Purchase Tickets in Registration

**Professional Welding Competition**  
Location: Hall C, Booth C1844

**Robotic Welding Competition**  
Location: Hall C, Booth C1835

**Spin To Win**  
During Show Hours  
Hall C, Booth C1344  
Chance to Win Prizes!

## Panel Shares Additive Manufacturing/3-D Printing Experiences

Monday’s expert panel, “What Additive Manufacturing/3-D Printing Means for the Metal Fabrication Industry,” separated fact from hype and provided FABTECH attendees with a wealth of real-world information about the growing field from a panel with cumulative decades of broad manufacturing experience.

Panel members included: Carl Dekker, President of Met-L-Flo, Inc; Bob Markley, CEO of 3rd Dimension Industrial Printing; Rick Neff, Manager of Market

Development for Cincinnati, Inc; and Bryan Crutchfield, Managing Director for Materialise USA.

Dave Flynn, Senior Business Development Manager for Materialise USA, moderated the panel and opened the event by assessing that approximately one third of the audience members had some level of experience with the technology.

Against that backdrop, Flynn asked panel members to identify their own specific experiences and the impact of the technology on their businesses.

The event then moved into more general questions, beginning with issues like how additive manufacturing /3-D printing can improve a metal fabricator’s business.

“We’re not necessarily seeing this as a replacement for the metal fabricators,” offered Markley. “Rather, it’s complementary. What it can do is help shorten some of your lead times; get Internet parts; and then do production of parts where you cannot get a tool in there to cut away that material.”

“You have to find those opportunities where it becomes



Panel Members (L to R): Dave Flynn, Carl Dekker, Bob Markley, Rick Neff and Bryan Crutchfield.

very complementary to the subtractive processes or traditional machining,” he observed.

Neff concurred with the characterization as a complementary process, stating that parts already being fabricated

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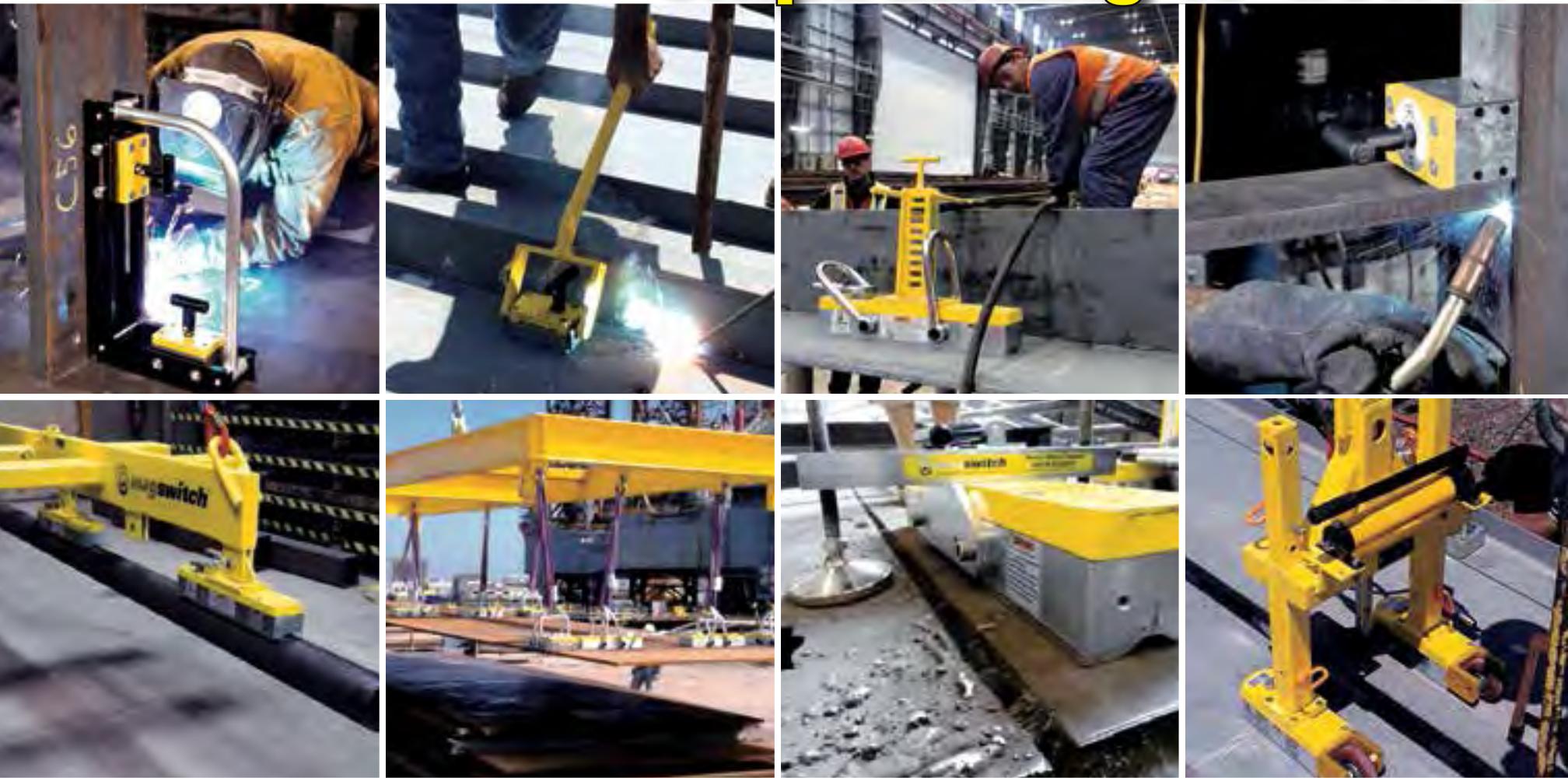
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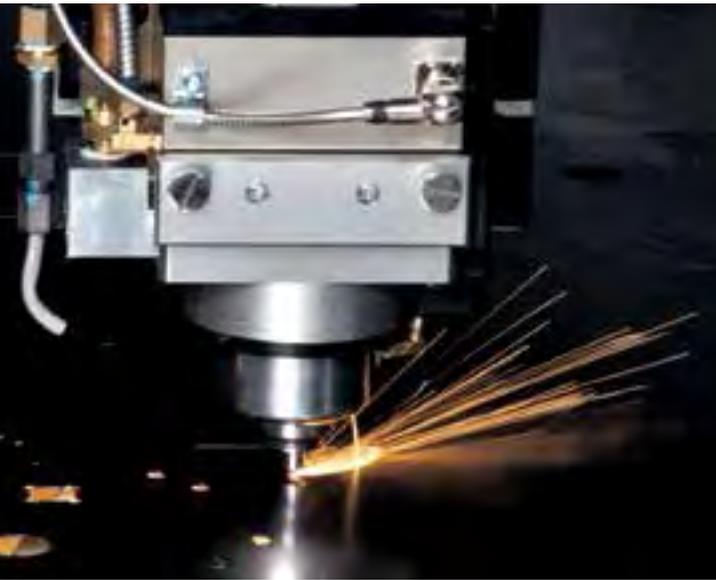
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# ESAB's New Online Data Management Platform Allows Continuous Improvement

WeldCloud™ is a secure, robust and scalable welding data management platform designed to improve productivity, quality and machine efficiency.

ESAB introduces WeldCloud, a software platform that captures and analyzes data so users can maximize asset utilization, improve documentation and QA processes, and monitor and drive machine/operator productivity. Secure, robust and scalable, WeldCloud operates within a user's firewalls, automatically transmitting and storing data from power sources via Wi-Fi or cellular network.

See WeldCloud in action at FABTECH booth N6074 and learn what makes this online data management platform unique:

## Local Security

WeldCloud captures welding and system data from welding systems concurrently and stores it securely in one comprehensive database, which is located within the customer's firewalls. Customers can then access a suite of applications from the customer intranet using a secure logon procedure, with optional welder logon to control parameter settings and procedures.

## Robust System

All WeldCloud components and protocols meet tough industry standards. Built on leading MQTT (small messaging) protocol, and the latest machine-to-machine (M2M) applications, the platform is "future proof," offering such features as unlimited memory and flexible communication cards. Installation is quick and easy: deploy the software package to a laptop or

server, configure the network on the communications module and the welding system automatically links to the WeldCloud platform. Near-real-time data transfer occurs with wireless or wired transmission.

## Flexible and Scalable

Not only can data be shared and analyzed by teams across multiple data collection sites from any computer, but also applications and data can be accessed from any device linked to the company intranet, such as a PC, tablet or smartphone. Applications can be tailored to meet user needs, such as those of operations managers, service technicians, welding engineers, quality control staff and training supervisors. These applications provide great insight into machine performance, error conditions, arc time per machine, repair information and type of equipment, among many more analytics.

## Productivity and Quality

Where once customers battled to ensure high quality or increased productivity, now, due to the transparency achieved with WeldCloud, they are able to finely "see" – and therefore improve – both factors, a tremendous benefit to managing welding operations. Further, the traceability that WeldCloud delivers, by time and serial number of product, makes it easy to find the parameters of any given weld instance.

## WeldCloud at FABTECH

WeldCloud can be customized to fit application needs and integrates with ESAB's DataLeap solution for end-



to-end traceability from cutting to welding. Experience the WeldCloud solution at booth N6074. ■

For more information about ESAB welding and cutting products and processes, visit [esab.com](http://esab.com).

## Bunting Offers FREE 10-Day Trial on MagLift™

Regardless of the type of material that needs to be moved, Bunting conveyors and magnetic lifting equipment can handle it. Bunting offers the most complete line of permanent magnetic conveyors and magnetic components. With over 50 years of experience handling ferrous or partially ferrous products or scrap, even plastic assemblies with minimal ferrous components. In addition to conveyors Bunting offers a complete line of Neodymium plugs, rings, magnetic holding tools floor sweepers and much more. The MagLift™ permanent magnetic lifters can save time and labor, plus added safety when moving ferrous sheets or round stock throughout a facility.

Bunting is so confident in its MagLift™ product that they are offering a FREE 10-day trial. The customer only has to pay the freight to and from their facility. (This offer is only available in the U.S.A.). Stop by booth S4135, visit with a Bunting professional, and see a variety of conveyors and magnetic lifting equipment in action. ■



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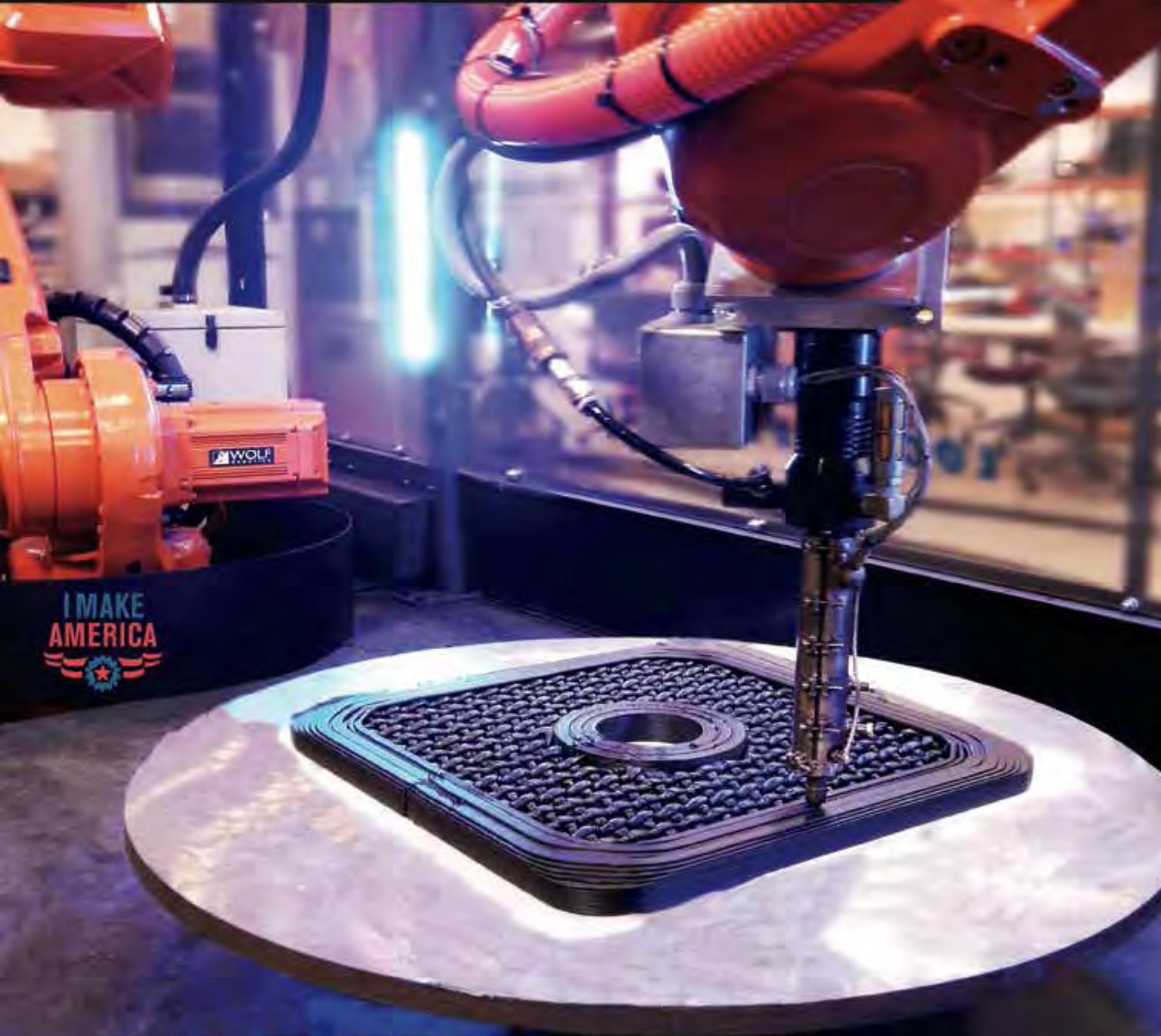
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Wolf Robotics Booth: #N11055  
Aigas Booth: #N18031  
CRAW Competition: #N15000

# COE Press Equipment Scores Double Eagle at FABTECH

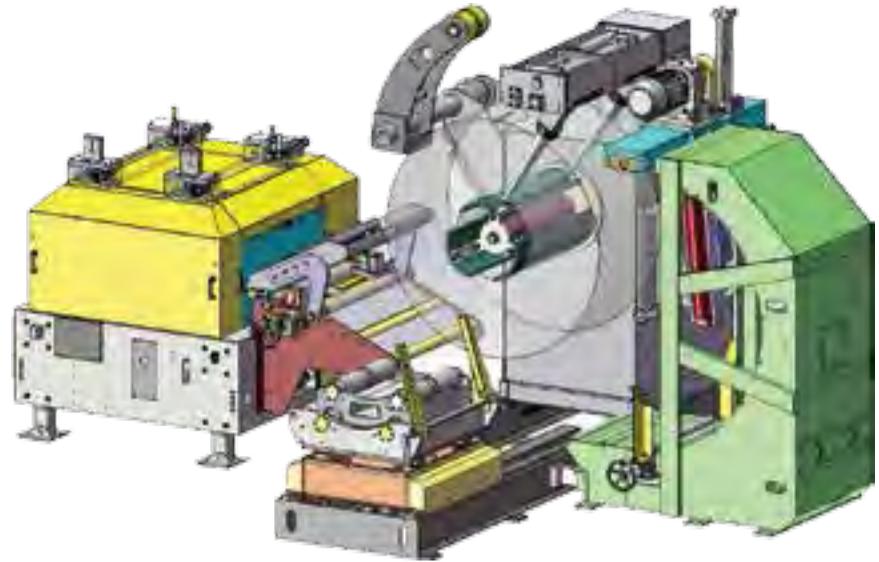
Check out COE's two booth locations this year – S4734 and S4722. Just look for the eagle to learn about the company's new offerings and how, in this instance, a double eagle means an above par experience in your coil processing operations.

## Equipment designed to process today's materials

**W**ith the increasing use of lightweight, high-strength materials in automotive and other industries, COE has been addressing the difficulties in processing these new advanced high strength steels with its equipment designs. This year COE is launching its new patent-pending SpaceMaster® Series 4 compact coil line capable of processing today's higher yield materials -- while doing so within space-constrained areas. The SpaceMaster Series 4 fits within a mere 22-ft. of floor space as compared to the 40-ft. to 50-ft. footprint of a conventional line.

Importantly, the Series 4 equipment features a new servo-actuated pilot release of the upper straightener rolls. This provides more accurate piloting timing, faster pilot release, and higher SPM's than hydraulic and pneumatic designs, enabling these systems to achieve press feeding speeds of up to 70 SPM as compared to 40 to 50 SPM in traditional compact coil lines – resulting in quick ROI.

The systems also feature powered pull-off rolls to maintain tension on heavy-gauge and high-strength materials. The SpaceMaster Series 4 can



In booths S4734 and S4722, COE Press Equipment is launching its new SpaceMaster Series 4 compact coil line and other equipment designed to tackle high-yield materials.

handle CRS, HRS, AHSS, stainless and aluminum from .020-in to .40-in. thick, 12-in. to 72-in. wide, and 10,000-lb. to 60,000-lb. coil weights.

Introduced last year, COE is also highlighting its HD Series straighteners designed to process AHSS and other high yield strength steels. The HD Series features improved work roller design, higher strength of materials, tighter straightener roll spacing, and increased roll depth penetration. Additionally, the HD Series provides increased roll force delivery, stronger gears and bearings, and an improved straightener roller backup mechanism

to provide both the rigidity to effectively process AHSS materials. Available in three sizes, these straighteners can process material at widths from 1.0-in. to 84.0-in., thickness from .010-in. to .620-in., and coil weights up to 60,000-lbs.

## COE in Action

In booth S4722, COE has a full 36-in. coil processing line feeding an AIDA Model DSF-M2-4000 Servo Press. The line features a Series 4 roll feed, 350 power straightener, 15,000-lb. capacity reel and an Allen Bradley controls package with COE's exclusive Work Roll Advisor capability. Work Roll Advisor is designed to take the guesswork out of setting up a straightener. Roll depth setting is automatically calculated and, depending on the machine configuration, automatically set. Users simply enter their material specifications – thickness, width and yield strength into the controls, and the recommended straightener roll depth settings are automatically calculated. The settings are easily saved to the Job Recipe Manager for retrieval. COE's Work Roll Compensation feature automatically adjusts the straightener roll depth settings as the coil OD depletes to compensate for changes in the amount of coil set in the material. ■

For information on any of the COE Press Equipment product line, visit the booths or [www.cpec.com](http://www.cpec.com).



Don't settle for less than **EVERYTHING**

At COE Press Equipment, our heritage is built on delivering more than a machine. Behind each coil processing solution we deliver is a team dedicated to continually improving your operations. From R&D through preventative maintenance, COE provides the solution you need and the personal attention you deserve.

Visit us at S4722 to see COE in action and S4734 to find out about our newest solutions, including a compact line and a straightener both suited for handling today's AHSS.

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# The Windy City Welcomes FABTECH

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*Make sure to take advantage of all the city has to offer by making plans after the show! Go to [choosechicago.com/FABTECH](http://choosechicago.com/FABTECH) to find details on all there is to do while you're in Chicago.*



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## Attendees Arrive with Goals in Mind

Energy levels were high as attendees arrived in great volume at FABTECH Monday. Organizers expected in excess of 1,500 exhibiting companies and more than 40,000 show visitors eager to explore those exhibits, talk with vendors, hear expert speakers, participate in education sessions as well as network and learn about new advances in all aspects of metal manufacturing.

First-day attendees expressed a variety of goals and reasons for attending FABTECH this week.

**JEFFREY HOGUE**, Project Manager for T. Bruce Sales, Inc. in West Middlesex, Pennsylvania, has attended FABTECH multiple times in Chicago and Atlanta. “We have a fabrication job shop and I’m always looking to see what’s new out there



Jeffrey Hogue

that might help us do our job better and make us more competitive in the field,” he said. “We’ve bought a lot of new equipment in the last 10 years because I found it here.” Hogue plans to spend two days at the show, and while he’s not looking for anything specific this time, he plans to “just keep an open view,” mainly exploring around the show floor but also maintaining the option to participate in an education session if something attracts his attention.

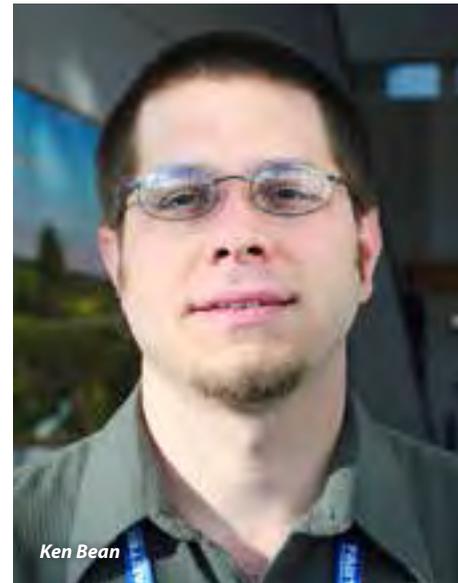
**KEN BEAN** is a welding engineer at BWX Technologies in Lynchburg,

Virginia, a company that sends a representative to FABTECH every year. “We’re basically a manufacturing plant so we do a lot of welding and a lot of machining of parts,” he explained.

Bean said he has multiple purposes for attending

FABTECH. “As a welding engineer, I’m doing continuing education so I’m going to several of the classes,” he said, “as well as just to see what other technology is out there. My company is potentially interested in getting some additional equipment in the next few years, so I’m looking at equipment and talking with and making connections with vendors of some laser welding machines, and other things like that.” He has already identified companies he plans to establish contact with to find out what their capabilities are, and ascertain if their company is a fit for his organization’s needs.

Bean also expressed that he has a keen interest in the vast technology that is so prominent at FABTECH because it is in his field of expertise. While he’s here specifically for welding-related information and



Ken Bean

exhibits, he plans to explore the other areas on display, including forming, finishing and stamping, he said, because they are all of interest to him.

He plans to attend the show all four days. “We’re coming from far away so if I’m going to come, I might as well be here for all four,” he said. He’s had success in past FABTECH events when he explored options

for video welding systems and plans to investigate similar technologies this year. He’s also excited about the great opportunity for networking, he said, continuing relationships with vendors and people they already have relationships with. “That’s what I’m hoping to do,” he added.

Bean received his welding engineering degree from LeTourneau University, so he is also looking forward to an alumni event this week at FABTECH that is being hosted by that institution.



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BOOTH S3552





Jordan Bishop

**JORDAN BISHOP** is Engineering Manager at Florence Manufacturing in Manhattan, Kansas. He and a colleague are attending FABTECH for the first time, planning to be here all four days, and are extremely impressed even after only a few

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# Tooling U-SME Introduces New Online Welding Training Classes to Keep Up With Demand for Skilled Welders

**W**elding is among several sectors in the manufacturing industry dealing with a shortage of skilled talent able to keep up with the rapidly changing pace of technology. An aging population of current welders coupled with a skills gap of qualified employees are just two reasons why the welding industry will face a shortage of 290,000 operators by 2020 — that is, of course, if companies and the industry as a whole don't move quickly to close the skills gap.

Economic progress in the manufacturing industry can occur when companies capitalize on new technologies and people, and one way to avoid a potentially significant shortage of skilled workers — which will inevitably result in the loss of annual earnings — is to invest in employee training and workforce development.

To further expand the capabilities of current and future workforce, Tooling U-SME — a leader in manufacturing learning and development — has expanded its online welding training classes to prepare and equip workers to meet the rising demand for skilled welders. The organization is building upon



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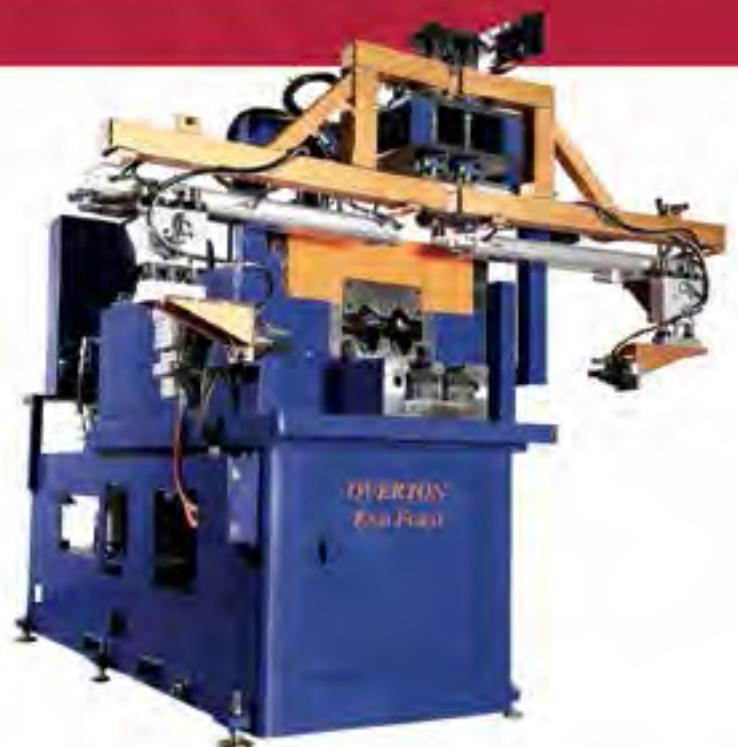
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# Amada's EG 6013 AR — Robotic Bending Cell



The EG 6013 AR combines the power and precision of a servo electric press brake with an advanced bending robot. It's the ideal high-speed solution for small, complex parts — providing for unmanned processing of difficult-to-handle small parts.

Equipped with the world's first twin servo electric drive system, the EG 6013 AR ensures high-speed and high-accuracy bending with lower power usage. Features such as automatic angle measuring, offline programming, multiple part load/unload stations and an automatic tool changer all add to the system's impressive list of production capabilities while maintaining a compact footprint.

## Highly Efficient Robotic System

The automated robotic system used in the EG 6013 AR is extremely versatile. The 6-axis robot travels along the ground in front of the press brake. Loading can be performed from a variety of positions — allowing for a large capacity for raw materials. To further enhance versatility, several unloading options are also available. Completed parts can be stacked by the robot, placed in boxes, or placed on a synchronized conveyor belt. The robot is capable of much more than just load and unload functions. It changes both bending tools and grippers automatically and performs workpiece handling throughout the entire bending process — across all of the tool stations. It also performs all tracking movements and carries out process steps that cannot be achieved if the press brake is operated manually. For example, the mechanical grippers can also be guided around the tools in the press brake's working area in order to ensure optimum assistance during operation tracking.

## Innovative Sensors

The backbone of the EG 6013 AR is equipped with tactile sensors. These are unique in their ability to detect the position of the workpiece in both the X and Y directions prior to bending and initiate corrective measures if departures from tolerances are identified.

## Additional Features

- Precision Bending Robot – Single robot for quick loading/unloading, bending and tool change. Dedicated bending grip tools are specifically designed for small components and can be changed automatically at the Automatic Hand Changing station.
- Auto Tool Changer/Hand Changer – Equipped with Automatic Hand Changing station for switching between tool changing and bending operations. Continuous automated operation is possible due to the ATC.
- Thickness Detection System (TDS) – TDS reads the variance in material thicknesses and compensates depth position automatically for stable and correct bending.
- High Rigidity and Larger Open Height – The highly rigid frame allows for a larger open height and stroke.

High-precision servo electric press brakes demonstrate their productivity benefits particularly well when they are used in combination with a bending cell that possesses an equally efficient automation system. Amada's new EG 6013 AR is a powerful reflection of that fact. ■

*Stop by booth #5901 to find out more about the EG 6013 AR and the full range of innovation offered by Amada.*

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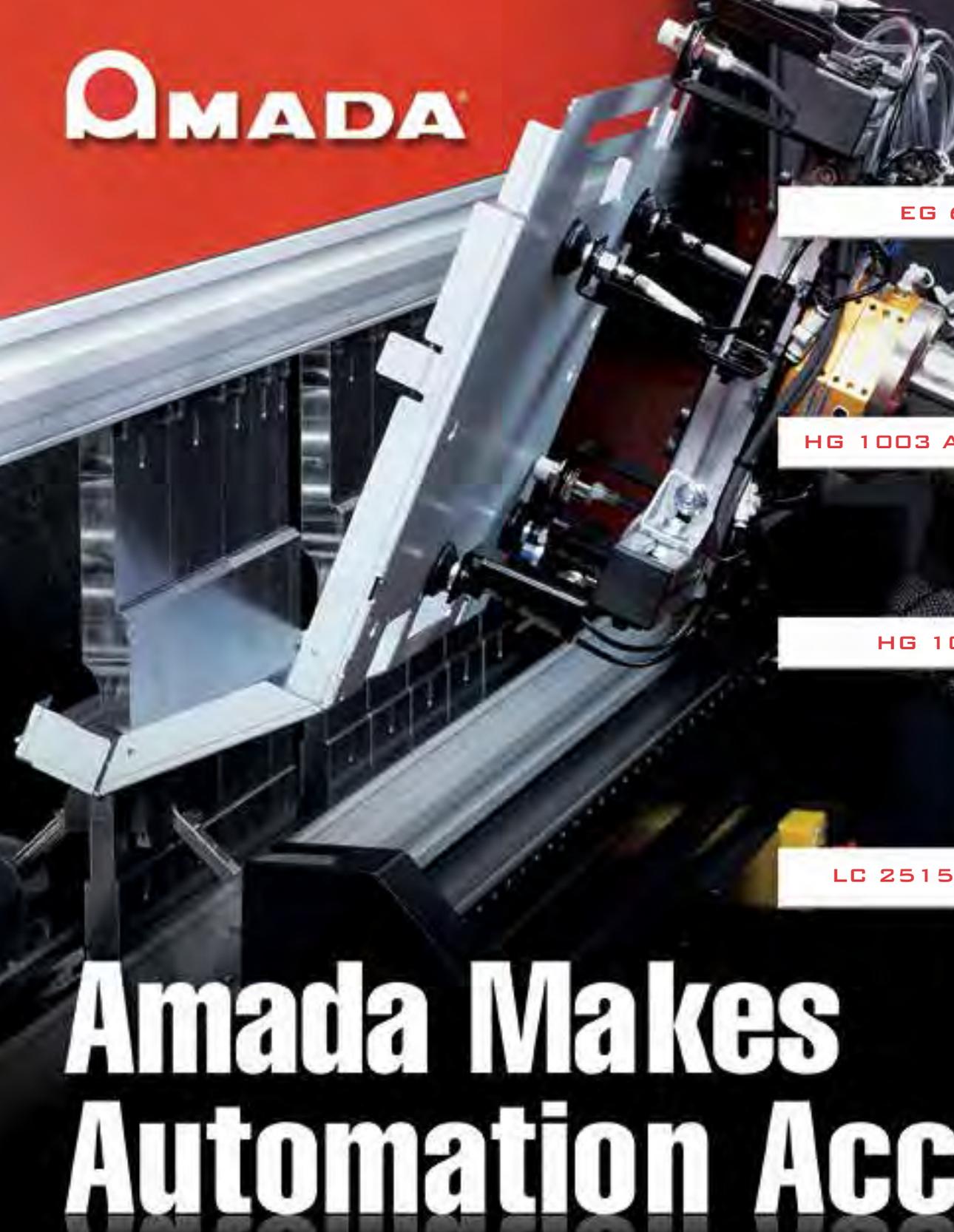
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# Automec Debuts the CNC 600 Control

Automec's CNC 600 Control is a brand new control that will be used for upgrading existing Automec backgauge systems, or brand new complete Automec backgauge systems. It has many features that pressbrake operators will find appealing, but not overwhelming. The user interface of this touch screen control is intuitive with

icons prompting the user through the steps necessary to program a typical job. The control allows you to download photos of your work piece to give operators a visual representation of each bend. The CNC 600 will be a great transition from all previous Automec controls. Customers will be able to utilize existing Automec



backgauges, by upgrading their control and electronics. The release date for this control has not yet been determined, but it is expected to be available January 2016.

## The Prominent features of the CNC 600 are:

- 15" High Res. Color Touch Screen
- USB Program Storage
- Offline Programming
- Import Photographs to Bend Programs
- Virtually Unlimited Storage
- Full Tool Library
- "Angle Mode" or "Depth Mode"
- Upgradeable to All Existing Automec Backgauge Systems ■

Stop by booth S2045 to find out more about the CNC 600 Control and other innovative Automec products.

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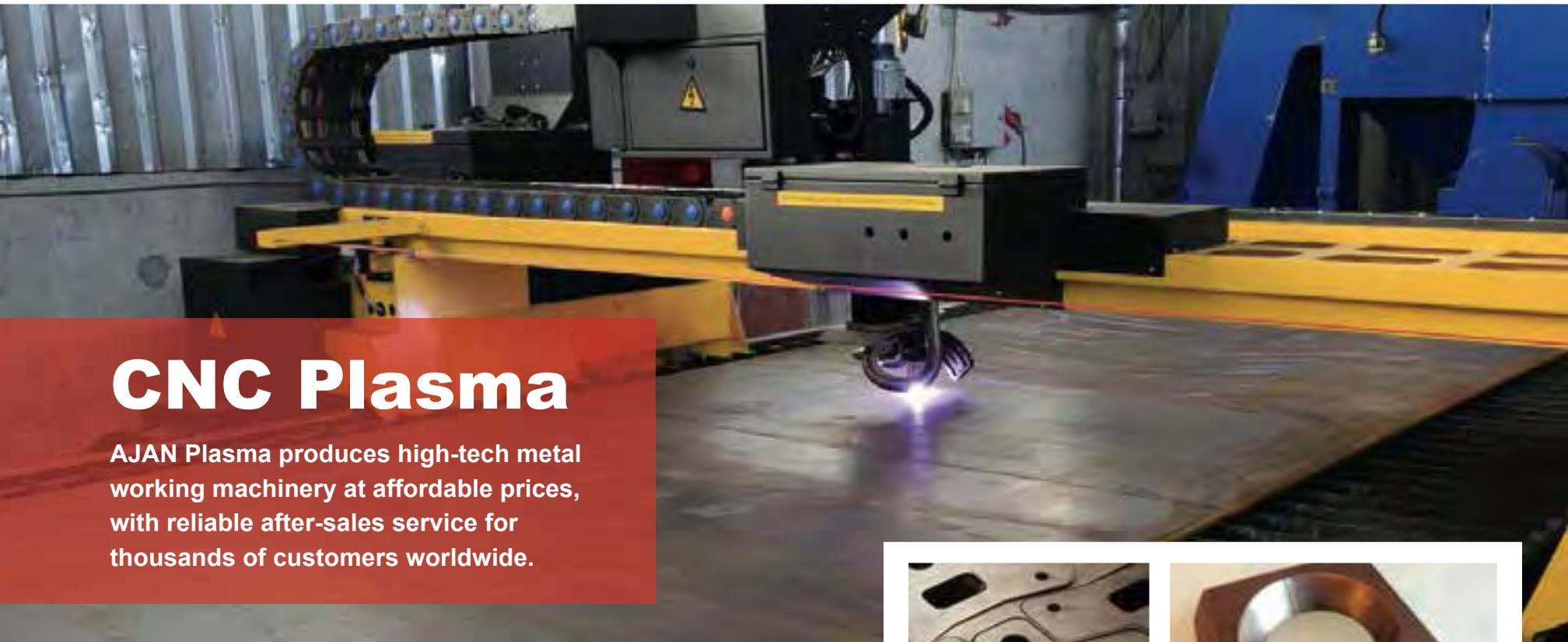
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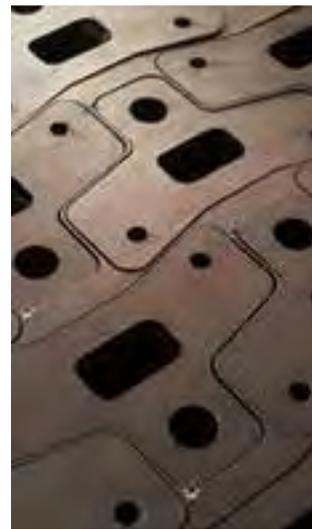


## CNC Plasma

AJAN Plasma produces high-tech metal working machinery at affordable prices, with reliable after-sales service for thousands of customers worldwide.

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**Pipe-cutting:** The optional CNC pipe cutting attachment gives you full pipe processing capabilities on pipes up to 24" in diameter.



### Watch our AJAN plasma cutting demo:

- **FABTECH Canada**  
Toronto, ON — March 22-24, 2016
- **IMTS 2016**  
Chicago, IL — September 12-17, 2016
- **FABTECH 2016**  
Las Vegas, NV — November 16-18, 2016

**Stop by our booth today!**

**Booth S1774**  
[www.ajanusa.com](http://www.ajanusa.com)

## 3D/ADDITIVE MANUFACTURING PAVILION IN THE GRAND CONCOURSE

Don't miss the exciting 3D/Additive Manufacturing Pavilion in the Grand Concourse. Attendees can see live equipment and products on display from a host of exhibitors and check out the FABTECH Lion Project. This unique project was a collaboration between the Art Institute of Chicago, Exact Metrology, Met L Flo and Linear Mold & Engineering, Inc. to produce miniature replicas of the iconic lions that flank the museum using 3D/Additive technology.

An array of additive-made parts will be also be on display from these FABTECH exhibitors:

Cincinnati Inc., Booth N9000

Stratasys, Booth N6000

GPI Prototype & Manufacturing Services, Booth N5000

3rd Dimension Industrial 3D Printing, Booth N4000



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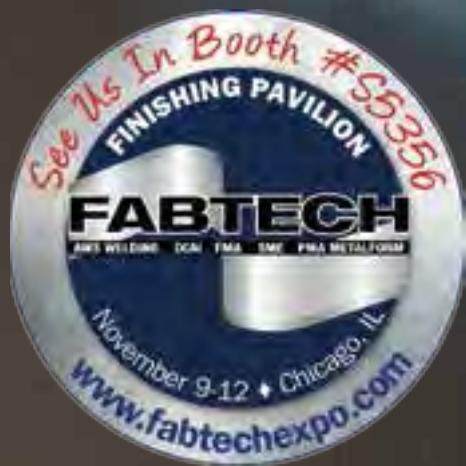
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# Amada's HG 1003 ATC — With Automatic Tool Changer

Triple or quadruple the amount of bending setups performed each day and introduce rush jobs seamlessly.



Increasingly, fabricators are confronted with the demand for a wide variety of parts and the associated short runs. Amada provides the ideal solution to meet this challenge with the HG 1003 press brake equipped with an Automatic Tool Changer (ATC).

The HG 1003 press brake is an ultra-precise, high-speed bending solution. An innovative hybrid drive system achieves extremely fast approach, bending and return speeds — resulting in faster cycle times and more parts per hour. The ATC combines outstanding versatility with enormous capacity by providing 18 magazines for dies and 15 for punches. Each magazine can accommodate tool lengths up to 31.5 inches (800 mm). Tool changes are performed quickly and precisely eliminating costly delays associated with manual tool changes.

Equipped with a newly-developed AMNC 3i (intelligent, interactive, integrated) control, the HG series achieves high-speed and high-accuracy with unprecedented ease of use. An 18.5" multi-touch LCD panel ensures simplified operation. The user-friendly screen is designed for intuitive operation allowing for fast and efficient entry even if an operator lacks experience. Enhanced database network features ensure better

communication between the CAM program and the AMNC 3i — resulting in less manual interaction and faster processing.

## Advanced Servo Drive System

The HG series features an advanced Dual Servo Power (DSP) drive system that's engineered to increase approach, bend and return speeds (approach: 8.7" per second, bend: .79" per second, return: .98" per second) yielding unmatched bending control and accuracy. This innovative system provides a cost-efficient and high-performance bending solution for thin-to-thick materials. The HG's hybrid drive system is engineered for low energy consumption and requires less hydraulic fluid than conventional machines. In addition to being eco-friendly, Amada's hybrid drive system delivers uncompromising repeatability of  $\pm 0.00004$ " while ensuring smooth operation and reduced noise levels.

## Rigid Frame Design

The stability and accuracy of the HG series is further enhanced by a new, highly rigid frame design that features a larger open height

than other machines in its class. The increased distance between tooling and greater stroke length produces a larger processing area — providing process range expansion by enabling deep box bending while making part extraction faster and easier.

## New High-Speed Backgauge with Configuration Options

The HG series features a 6-axis backgauge system — providing L-Shift functionality for gauging of complex part geometries. The left and right backgauge stoppers move independently (back, forward, right and left) at high speed. High-speed movement on all axes ensures that the gauge fingers are in place as quickly as the operator positions the part. Independent servo drives for "L" axis as well as an optional "L-shift" feature allow for tapered and offset gauging. Also available is a heavy backgauge option that delivers twice the force of the standard configuration.

A Thickness Detection System (TDS) maintains bending accuracy while processing materials that vary in type, thickness and grain direction. TDS reads variance of material thickness and compensates depth position automatically to ensure precise bending results. Amada's HG series can also be equipped with optional BI (Bend Indicator) sensors that utilize probe and laser technology. BI-S (probe type) or BI-L (laser type) result in trial-free bending. BI technology also boosts bending repeatability and reduces QA inspection and rework.

The HG 1003 ATC is another example of Amada's commitment to the ongoing development of new machine technologies that meet the ever-changing needs of today's fabricators. The HG 1003 ATC is an advanced system that achieves precise and economical bending results even in lot sizes of less than ten. ■

Stop by booth #S901 to find out more about the HG 1003 ATC and the full range of innovation offered by Amada.



## Make spotting risk part of your manufacturing process.

We understand that your success rests on flawless production. That means it also depends on anticipating risk and getting ahead of it. That's where we can help. With Travelers, you'll have an ally with the expertise to spot risks others might miss. And, we can help you turn that into a business advantage.

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# FABTECH Specials

Wide range of machinery at **Booth S1777** for immediate shipping



~~\$88,740~~

**\$79,900**

or \$1,147/mo

## HPB 3100/175

10' x 190 ton, 4 axis, crowning

8.5' x 110 ton, 4 axis - \$69,900

3' x 44 ton - \$36,950



~~\$28,900~~

**\$24,900**

or \$497/mo

## PBH 80 NC

3" angle with NC control

Hydraulic: 2.4" - \$19,200 • 2" - \$11,770

Mechanical: 2" - \$5,760 • 1" - \$4,990



~~\$28,900~~

**\$19,900**

or \$397/mo

## HBS 460 C

18" capacity - Semi automatic

Auto: 15" - \$21,900 • 9" - \$10,400

Semi auto: 13" - \$15,900 • 12.5" - \$10,900

Semi auto: 11" - \$9,940 • 9" - \$8,500



~~\$23,800~~

**\$19,800**

or \$395/mo

## RBD-3M 15/7 H

5' x 1/4" hydraulic

5' x 1/8" - \$13,640 • 3' x 3/16" - \$12,590

6' x 16 Ga - \$8,400 • 4' x 12 Ga - \$8,150



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**\$104,900**

or \$1,506/mo

## KSP 160

176 ton, Eccentric press

88 ton - \$69,900



~~\$8,400~~

**\$6,900**

or \$137/mo

## HPA 60

60 ton workshop press

100 ton - \$9,900 • 30 ton - \$6,700

Prices valid November 9-12, 2015. Subject to prior sale.

# EDUCATION PROGRAM

TUESDAY, NOVEMBER 10		SCHEDULE-AT-A-GLANCE	
TECHNOLOGY	8 AM - 10 AM	10:30 AM - 12:30 PM	1:30 PM - 3:30 PM
FINISHING	C40: <b>NEW!</b> Getting Your Part Across  Room S404A	C50: <b>NEW!</b> Preventive Maintenance & Troubleshooting Your Powder Coating System  Room S404A	C60: FINISHING Spray Painting Workshop  <b>1:00 PM - 5:00 PM</b> \$299 for members and \$349 for non-members Room S404A
	C41: <b>NEW!</b> The Future of Liquid Industrial Finishing  Room S404BC	C51: Testing: Why It's Important & How to Do It Effectively  Room S404BC	
	C42: <b>NEW!</b> The Secrets of Purchasing a Finishing System  Room S404D	C52: <b>NEW!</b> Old vs. New! Are You Ready for a Pretreatment Change  Room S404D	
STAMPING	S40: Software Solutions for Sheet Metal Forming II  Room S405A	S50: <b>NEW!</b> Advanced High-Strength Steel (AHSS) Technology I  Room S405A	S60: Advanced High-Strength Steel (AHSS) Technology II  Room S405A
	S41: Error Proofing I  Room S405B	S51: Error Proofing II  Room S404B	S61: <b>NEW!</b> Error Proofing III  Room S405B
LASERS & CUTTING	F40: <b>NEW!</b> Industrial Laser Beam Technology  Room S403A	F50: <b>NEW!</b> Cutting Best Practices  Room S403 A	F60: Comparative Cutting with Tech Tour  Room S403A
LEAN	F41: Lean Tools: Value Stream Mapping  Room S403B	F51: Lean Principle: Building 3D Supply Chains for Lean Management  Room S403B	F61: Lean Tools: Quick Changeover and TPM  Room S403B
MANAGEMENT			
	F43: <b>NEW!</b> Risk and Asset Management: What You Need to Know!  Room S401BC	F53: <b>NEW!</b> Managing for Value: Extraordinary Enterprise  Room S401BC	F63: <b>NEW!</b> Growth by Making Strategic Acquisitions  Room S401BC
ADDITIVE MANUFACTURING	F48: <b>NEW!</b> Additive Manufacturing Overview for Fabricators  Room S401A	F58: <b>NEW!</b> Additive Tooling Manufacturing Aids  Room S401A	
JOB SHOP SOLUTIONS	F44: <b>NEW!</b> Structural Fabrication 101  Room S503A	F54: Designing Parts for Sheet Metal  Room S503A	F64: <b>NEW!</b> Product Tracking for the Job Shop  Room S503A
FORMING & FABRICATING	F46: Press Brakes for Engineers  Room S402BC	F56: Advancements in Coil Slitting  Room S402BC	F66: Bending Optimization Solutions  Room S402BC
WELDING			
SEMINARS	W16: Crash Course of WIT • Room N230B .....		8:30 AM - 4:30 PM
	W17: Welding Symbols • Room N227A.....		8:30 AM - 4:30 PM
	W18: ASME Section IX, B31.1 & B31.3 Code Clinic – Day 1 • Room N131 .....		8:30 AM - 4:30 PM
CONFERENCES	W26: So You're the New Welding Engineer – Day 1 • Room N230A .....		8:00 AM - 5:00 PM
	W27: Electron Beam Welding Conference – Day 1 • Room N227B .....		9:00 AM - 5:00 PM
	W28 Thermal Spray Basics – FREE • Room N128.....		1:00 PM - 4:30 PM
PROFESSIONAL PROGRAM	W31: <b>Session 4:</b> Dissimilar Joining • Room N138 .....		8:00 AM - 12:00 PM
	<b>Session 5:</b> Advancements in Arc Welding • Room N139 .....		8:00 AM - 12:00 PM
	<b>Session 6:</b> Testing and Characterization (Professor John C. Lippold Symposium) • Room N140 .....		8:00 AM - 11:30 PM
	<b>Session 7:</b> Metallurgy and Weldability • Room N138 .....		2:00 PM - 5:30 PM
	<b>Session 8:</b> Advanced Sensing and Control • Room N139 .....		2:00 PM - 5:30 PM
<b>Session 9:</b> Modeling (Professor John C. Lippold Symposium) • Room N140 .....		2:00 PM - 5:00 PM	
EDUCATIONAL SESSIONS	W37: AWS Education Sessions • Room N137 .....		8:00 AM - 4:00 PM
SPECIAL PROGRAMS	W39: AWS Awards Luncheon • Room N228 .....		12:00 PM - 2:00 PM
	Robotic Arc Welding Competition – Day 2.....		9:00 AM - 5:00 PM
	AWS Professional Welders Competition – Day 2 .....		9:00 AM - 5:00 PM
	Welding Wars Competition – Day 2 .....		9:00 AM - 5:00 PM
	Thermal Spray Wire Arc Demonstration (Hourly) – Day .....		9:00 AM - 5:00 PM

AWS Headquarters, Room N229

FABTECH Headquarters (FMA, SME, PMA, CCAI), Room S402A

## Don't Miss The Special Events Scheduled for FABTECH 2015

### MONDAY, NOVEMBER 9

**9:00 – 10:00 AM** **Keynote Presentation:** Running a Winning Organization  
LOCATION: Grand Ballroom

**12:30 – 1:30 PM** **Featured Panel Session:** What Additive Manufacturing/3-D Printing Means for the Metal Fabrication Industry, FABTECH Theater | LOCATION: FABTECH Theater, Grand Concourse

Media Sponsor: **AMazing**  
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### TUESDAY, NOVEMBER 10

**12:30 – 1:30 PM** **Featured Panel Session:** Enterprise Security Risks: Is Your Company Protected?  
LOCATION: FABTECH Theater, Grand Concourse

**5:30 – 7:30 PM** **FABTECH Industry Night**  
LOCATION: Lucky Strike, Downtown Chicago  
Advance Ticket Price: \$50  
Special Appearance by Jeanette Lee, famous "Black Widow" Professional Pool Player



### WEDNESDAY, NOVEMBER 11

**7:30 – 10:30 AM** **Women of FABTECH Breakfast with Tech Tour**  
LOCATION: Grand Concourse Lobby

**8:30 – 9:30 AM** **Keynote Presentation:** Innovation in the Future of Work in Advanced Manufacturing  
LOCATION: FABTECH Theater, Grand Concourse

**12:30 – 1:30 PM** **Featured Panel Session:** State of the Industry Executive Outlook: Advanced Manufacturing  
LOCATION: FABTECH Theater, Grand Concourse



### MONDAY, NOVEMBER 9 - WEDNESDAY, NOVEMBER 11

**Professional Welding Competition:** Competition runs during show hours Nov. 9-10, Winners announced on Nov. 11 at 11:00 AM  
LOCATION: Hall C1, Booth C1844

**Robotic Welding Competition:** Competition runs during show hours Nov. 9-11  
LOCATION: Hall C1, Booth C1835

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NOVEMBER  
**10<sup>TH</sup>**  
5:30 PM

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Tickets for FABTECH attendees available now in Registration.  
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## Welding and Cutting Products Set New Standards for Productivity, Performance

ESAB welding and cutting products and system solutions set new standards for productivity, reliability, durability, portability, and flexibility. With one of the most diverse offerings in the industry, ESAB can address any welding and cutting requirement. At FABTECH booth N6074, ESAB showcases a broad scope of products and solutions – all designed to improve performance and lower the cost of operation.

### New Game-changing Multi-process Welder

The Rebel™ EMP 215ic is a welding system that offers true multi-process arc performance, 120V/230V primary input power flexibility, lightweight portability, a groundbreaking operator interface and exclusive sMIG (“smart MIG”) technology that learns and adapts to the operator’s technique. Rebel’s breakthrough design was inspired by professional welders and combines versatility, performance and ease of use in the best go-anywhere, weld-anything machine on the market today. Dare to rebel – experience Rebel at FABTECH!

### New WeldCloud™ Data Management Platform Allows Continuous Improvement

The WeldCloud software platform captures and analyzes data so users can maximize asset utilization, improve documentation and QA processes, and monitor and drive machine/operator productivity. Secure, robust and scalable, WeldCloud operates within a user’s firewalls, automatically transmitting and storing data from power sources via Wi-Fi or cellular network. WeldCloud can be customized to fit application needs and integrates with ESAB’s DataLeap solution for end-to-end traceability from cutting to welding. See WeldCloud in action at FABTECH.

### Complete, High Productivity Automated Welding Systems

ESAB welding automation solutions put high quality, high capacity, and much higher productivity within reach. At FABTECH, see a complete state-of-the-arc robotic cell featuring the new Aristo® power source combined with ESAB’s unique tandem Swift Arc Transfer (SAT™) MIG welding process for travel speeds well beyond the limits of normal spray arc welding. Also on display, an automated Column & Boom system featuring the innovative ICE™ process for SAW. ICE exploits the excess heat from the Twin SAW process to melt an additional non-powered welding electrode, doubling the productivity of most SAW applications.

### Manual Plasma Cutters Offer True Performance, True Cut Capacity

Master the art of manual cutting with the Thermal Dynamics® Cutmaster® TRUE™ series of hand-held plasma cutters. With the TRUE series, the recommended cut capacity is the true cut capacity, so there’s no need to “buy up” to a larger system. A recommended cut has a smooth

cut face with little or no dross and requires little or no rework or grinding – all of which improve productivity and quality.

### Cutting Automation Solutions for Every Shop

ESAB has a cutting automation solution for every process: plasma, oxy-fuel, waterjet and laser cutting. The Crossbow is the perfect entry point into automated plasma or oxy-fuel cutting, featuring a fully-integrated CNC in a compact, portable system. SGX is a plasma/oxy-fuel system designed for performance, speed and accuracy and engineered for easy operation. Experience these systems and Columbus® CAD/CAM programming/nesting software and advanced DataLeap production management software at FABTECH.

### Premium-quality Filler Metals Optimize Performance

ESAB continues to set the standard in filler metals with premium-quality wires and rods for everyday welding, as well as solutions that increase productivity, meet stringent code requirements and deliver specialized properties for specific applications. Learn how ESAB filler metals can help increase productivity, lower total cost of ownership and improve the welding experience. On display at FABTECH, new Stoody® nickel-based tungsten carbide hardfacing wires, new Stoody all-position CO<sup>2</sup> Flux-Cored nickel super alloy wire, and more.

Visit ESAB at FABTECH booth N6074 or learn more at [esab.com/fabtech2015](http://esab.com/fabtech2015).





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# Are You Spotting the Risks in Your Manufacturing Process?

**L**ast year, we asked you if you were spotting the risks in your manufacturing process and shared how you can address your risks.

From sourcing raw materials to manufacturing finished goods to delivering products to customers and satisfying warranty commitments, successful manufacturers need to look at their supply chain holistically. At every step of this supply chain paradigm, there are opportunities to improve, efficiencies to capture, and risks to manage.

There are multiple aspects of a supply chain that can break down and disrupt operations, especially when working with international suppliers. Questions to consider include:

- Will the supplies get to you when needed?
- Will your specifications be met?
- How can your reputation be affected by the products or activities of your suppliers?

These supply chain risks are well-recognized, but many others lurk within a manufacturing operation. The failure of equipment and human error can put an operation at risk. While in most cases a broken machine can be repaired or errors can be corrected, the real risk comes from that single point of failure that can make it difficult for a company to meet their commitments to customers. These are examples of the bottlenecks that must be identified and addressed for effective risk management.

This year, we are focusing on managing workers compensation risks in manufacturing:

- Is your manufacturing facility growing and are you adding new employees?
- Are you concerned with rising healthcare costs?

The increasing cost of medical expenses as a portion of a workers compensation claim is a key concern for business owners, HR directors, and production managers in the manufacturing industry.

Proactively managing your claim costs starts with developing a culture of safety as soon as you begin to attract qualified candidates and continues through the onboarding and assimilation process. Research shows that 28% of injuries occur within the first year of employment (Travelers study 2014). Given today's labor force spends 36 percent of their waking lives at work (Washington State Department of Health), companies play an influential role in the safety and health of their employees. When this is done successfully, the impact is not only to workers compensation costs, but also to the health and productivity of your workforce.

Travelers is a national insurance carrier with more than 100 years of experience insuring manufacturers. Our IndustryEdge® line of products and services include tailored coverages – including global exposures, risk management resources, and responsive claim handling.

Coverage for all claims or losses depends on actual policy or bond provisions. Availability of coverage can depend on our underwriting qualifications and state regulations.

Travelers will be presenting on November 11, 2015, register for Session F82 titled “Workforce: Managing Labor Risk and Cost” today. We are also a proud sponsor of the VIP Lounge. ■

Stop by booth #S4973 to learn more.

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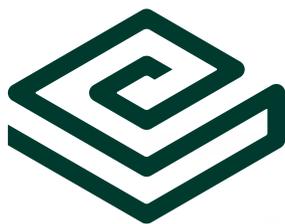


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# Metamation Showcases Nesting Software at Booth S2314

Metamation is launching the latest version of MetaNEST its flag ship nesting software for free shape geometry nesting. The latest version will have new advanced algorithms that take advantage of software and hardware platforms to deliver the highest material utilization in the shortest time. The MetaNEST software ties directly into MetaCAM software modules for laser, punch, plasma, waterjet and combination machines. To learn more, visit [www.metamation.com](http://www.metamation.com) or stop by booth S2314. ■



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Visit **Booth S4584** to learn more

# Hypertherm Unveils Waterjet Abrasive Management System, New CNCs, and More at FABTECH 2015

**H**ypertherm, a U.S. based manufacturer of plasma, laser, and waterjet cutting systems, plans to unveil several new products while continuing its focus on helping FABTECH attendees choose from among the various cutting processes and automated offerings available today.

New products include an abrasive management system that delivers marked labor and consumable savings for companies operating waterjet machines. The abrasive management system is comprised of two products: an abrasive recovery unit and an abrasive recycling unit. The recovery unit eliminates time and labor-intensive tank clean outs by automatically collecting abrasive into a reusable bag for disposal or reuse. The abrasive recycling unit recovers the up to 60 percent abrasive not impacted by the initial cutting process for reuse. Because this abrasive contains the same characteristics as brand new abrasive, it can be reused without any discernable difference in cut quality or speed.

In addition, Hypertherm will preview new technology designed to simplify CNC and robotic cutting through the automatic inclusion of process parameters in support of a wide range of applications. This new technology is showcased on a new line-up of Hypertherm CNCs, also being unveiled at this year's show.



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continued on page 38

# COLE-TUVE Introduces Combination Flanging Machine and Circle Shear



SDK 8

The COLE-TUVE by Sahinler Combination Flanging Machine and Circle Shear is offered in two sizes. Model SDK-6 has capacities of 1/4" in mild steel and 5/32" in stainless steel. The Model SDK-8 is for 5/16" mild steel and 3/16" stainless steel. Both the cutting and the flanging operations are done on the same head. These are ideal machines to manufacture tank heads. When coupled with a plate bending roll, a facility would have the ability to fabricate complete tanks.

COLE-TUVE is the exclusive North American distributor for Sahinler and sells a complete line of fabricating machinery. Visit COLE-TUVE at FABTECH in Booth S2976. ■

## Did You Know?



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Flange Wizard® is always working to improve our product line to meet the demanding needs of the welders and fitters it serves. Product packaging has been updated, including a new LOGO, to make Flange Wizard®'s tools easier to recognize on the shelf, in print, and online. VISIT BOOTH N9030 and see tools now offered with the newest OFF/ON magnet technology – see the Miter Marker #MMS505, Master Marker #MML510, Multi-Hole Imager, #MH1515, Angle Burning Guide #ABG750, Magnetic Torch Guide #MSG230, and Magnetic Blocks (set of 2) #MSB202.

The MAIN OFF/ON Magnetic Body #MMB500 is the foundation part for our Miter Marker, Master Marker, and Multi-Hole Imager. Accessory arms for each product are available to purchase individually.



Flange Wizard®'s website will also have a new face by the end of the year. You will be able to access detailed tutorials and informational charts like the Flange Wizard® Pipe Saddle Chart, along with company calendar and news.

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Walther Pilot specializes in manual and automatic spray systems, non-contact marking spray systems, single/dual component adhesive spray systems, and material supply such as pressure/mixing tanks, pumps, and more. Many of the spray guns are available with our "HVLP Plus" technology which provides great atomization and up to 88% transfer efficiency.

Walther Pilot also features a host of low pressure nozzle extensions that allow for 45, 90, and 360 spray patterns. These are available in sizes from 200mm to 1000mm in length and as small as 8mm in diameter.

Versatility, durability, and precision are the foundation of its automatic guns. The company can provide an array of products including standard automatic guns, manifold

mount guns, extremely compact spray guns (some that are under 2 inches in width). They can supply everything from a single gun to an entire spray system with hosing, tanks, pumps, mounts and controls.

Featuring some of the most precise and accurate spray guns on the market, the Walther Pilot spray marking systems really stand out. They can be used in many different industries, in applications such as:

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- Marking blow holes during glass production
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- Paint marking to aid in assembly
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quality as all of its high end spray equipment, the Terra comes with an unbeatable cost/benefit ratio. It features a stainless steel needle/nozzle combination as well as a high precision nozzle/air cap system. The PILOT Terra is available in both gravity feed and material feed versions as well as Conventional and LVLP models. The LVLP model allows you to achieve a transfer efficiency of over 65%. There are 3 nozzle sizes available for the Terra, 1.0mm, 1.4mm, and 1.8mm.

The company also features a full range of pressure tanks, mixing tanks, hoses, and pumps. The modular pressure tanks are fully ported and ready for just about any accessory you may need. They feature bolt-on agitators, casters, level sensors, regulators, top feed kits, bottom feed kits, and more. In addition, the company offers a wide range of galvanized or stainless pressure and mixing tanks that range from as small as 1 liter to as large as 500 liters and above. ■

Stop by Walther Pilot, booth S5342 for more information and to see an array of high-quality spray equipment.

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## TOOLING U-SME INTRODUCES NEW ONLINE WELDING TRAINING CLASSES TO KEEP UP WITH DEMAND FOR SKILLED WELDERS

continued from page 9

its existing depth of manufacturing training resources, providing welding professionals with the knowledge and skills required to operate advanced tools and technologies, while keeping up with current industry criteria.

Since 2005, Tooling U-SME has offered welding

training sought by manufacturing companies, community colleges and high schools. To date, more than 150,000 Tooling U-SME welding classes have been delivered to nearly 30,000 students. The new series of classes are designed to address the changing needs and evolving requirements of welders in today's manufacturing industry. The classes offer additional multimedia enhancements and engagement to deliver a rich learning experience to users. Several of the classes are now available online and Tooling U-SME intends to increase

the number of offerings by 32 classes before the end of this year.

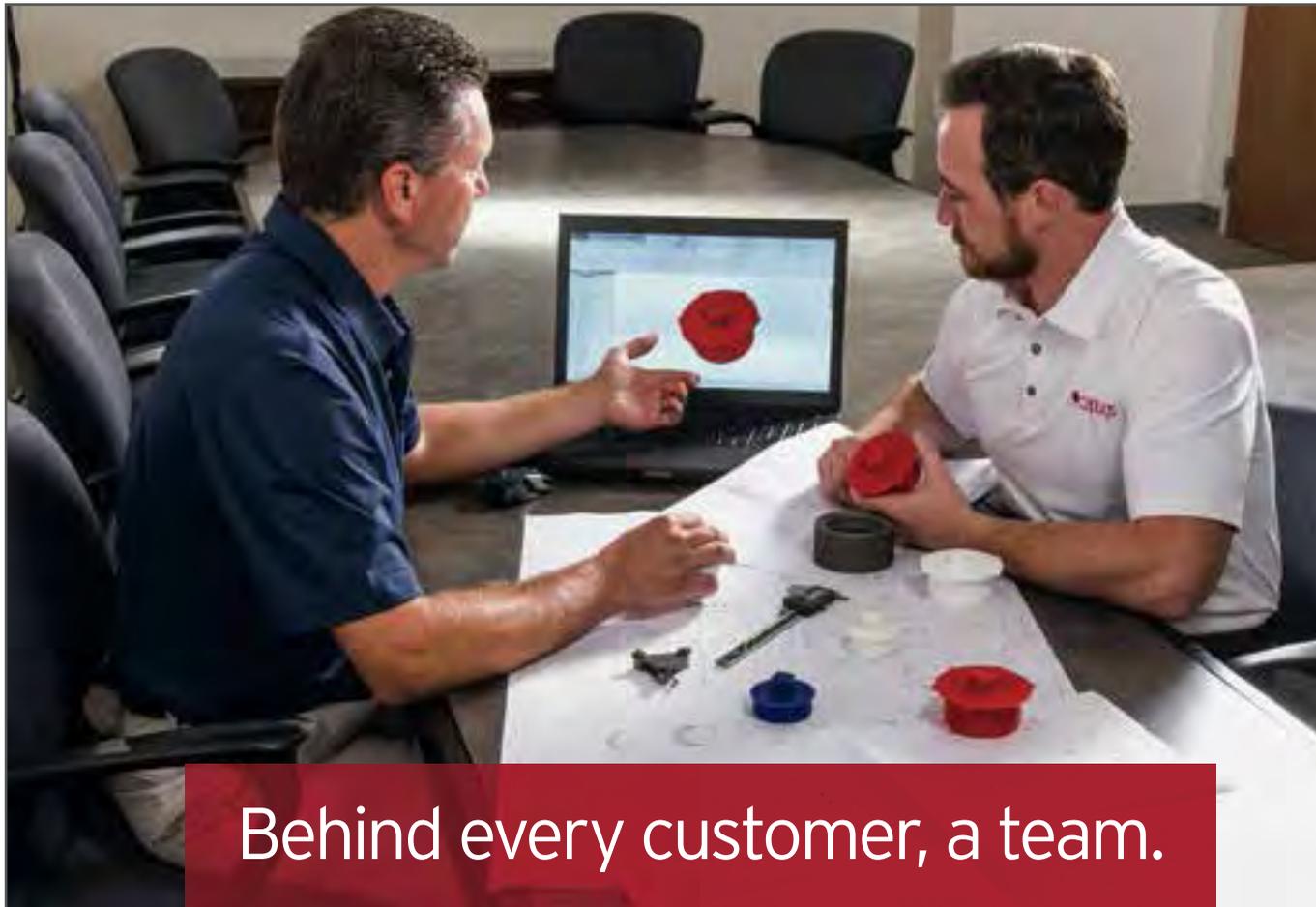
“We answered the call from the welding community to provide state-of-the-art training that aligns with today's industry standards, specifically American Welding Society SENSE guidelines,” said Chad Schron, division manager, Tooling U-SME. “We've introduced these training classes to give welding professionals a competitive edge in this market, as well as to ensure companies have the workforce needed to help them succeed.”

Tooling U-SME partnered with Lincoln Electric – a leader in the design, development and manufacture of welding products – on class programming to ensure students are learning from a curriculum based on the latest industry criteria.

For more than 80 years, Tooling U-SME has been an authority in training and workforce development for the manufacturing industry. In addition to competency-based learning for all levels of manufacturing employees, educators use Tooling U-SME products and services to augment their learning plans, which allows instructors to devote more time to hands-on instruction. The organization's suite of products and services include more than 450 online classes, 60 instructor-led courses, hundreds of books and videos, certification, learning and development consultation, and custom content.

More than 3.5 million Tooling U-SME classes have been delivered to nearly 250,000 students. Over half of the Fortune 500 manufacturing companies and over 600 educational institutions are using Tooling U-SME for workforce development. ■

*Learn how Tooling U-SME can help develop your workforce by stopping by the SME booth N11000, visiting [toolingu.com](http://toolingu.com), or emailing [info@toolingu.com](mailto:info@toolingu.com).*



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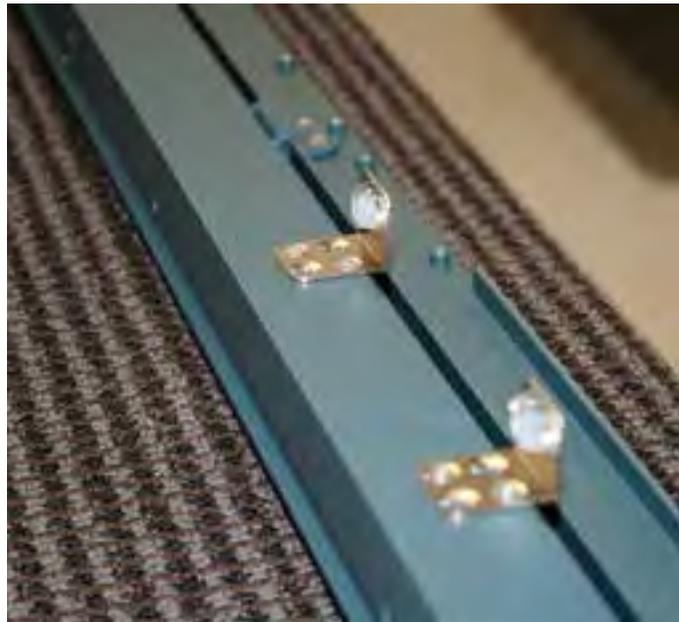
# Five Simple Strategies to Do More for Your Customers

Fabricators used to be able to compete with single-service specialization providers by excelling at providing good service and delivering top-quality products. However, the tide has turned, and OEMs now prioritize fabricator-consolidation initiatives in an effort to reduce administrative, quality-audit and product-audit costs that come standard when working with multiple suppliers. Their metrics to evaluate fabricators are more holistic than simply the cost of parts.



Chemical finishing offers easy-to-care-for surface finishing and non-corrosive material properties, giving customers the component wear resistance and durability they require.

OEMs evaluate total-cost-of-purchasing criteria and seek single-source fabricator suppliers that can help them efficiently design, manufacture, finish and assemble better products and get those products to market faster. Fabricators need to be vertically integrated to compete in today's dynamic economy.



OEMs no longer need to conform to the conventional idea of using multiple suppliers. A single-source supplier that can extrude, machine, bend, stretch-form, finish, weld and assemble brings additional value to such a customer's fabrication needs.

Transitioning from a single-service supplier to a single-source supplier is simple in theory but complicated in practice. Here are five simple strategies fabricators can follow to do more for their OEM customers.

## 1) Focus first on your people

Often overlooked, a successful transition from a single-specialty manufacturer to a single-source supplier is really a labor of effort of the supplier's people. Machines and other equipment can produce, but only the employees' unique abilities, expertise and desire to push the limits will determine what becomes of the company.

A fundamental strategy for success requires an ongoing commitment to workforce development by placing special emphasis on hiring and training employees to be true leaders leveraging technical expertise and market aptitude. Certified skills programs and workshops, such as training on process control and interpersonal skills, also will contribute to an employee's professional development and growth.

A productive workforce that is as content as it is competent begins with the trust that your company has an unwavering commitment to core values such as integrity, mutual respect, commitment to excellence and employee well-being. Employees who have faith in their employer feel they're an important part of something bigger. They believe that their opinions are considered and that their hard work is appreciated, especially when evolving from the status quo, and will positively impact their company's bottom line.

## 2) Listen to your customers

Change needs to be deliberately focused on what is best for your customers, and that requires a commitment to listening and understanding their needs. Instead of waiting for customer feedback, seek it. Create processes to gather customer perspectives and then respond. Then repeat the process. Continuous improvement for vertically integrated metalformers demands a customer-focused iterative approach to listening, learning and doing.

Techniques to gain customer perspectives and insights can include formal customer-feedback forms delivered with the first shipment of a new part, or an in-person meeting conducted by a member of the leadership team, such as a CEO or company president. These meetings should include requests for direct feedback from customers, such as, "What's working or not working? What services would you like to see us offer? What pressures do you experience at your company?"



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**FIVE SIMPLE STRATEGIES TO DO MORE FOR YOUR CUSTOMERS**

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Insights from customers can prompt expansions beyond just metal stamping or fabricating, for example, and into related fabrication techniques such as stretch-forming and bending. These insights also prompt expansion into complementary services such as precision machining, finishing, welding and complex assembly.

**3) Understand your vision and have a plan**

There's a difference between a company on a journey and one that is drifting. Journeys require a direction and—when done with others—a plan. Becoming a vertically integrated, single-source fabricator does not mean responding with a “Yes” to every customer request and opportunity. Hard decisions must be made, and a vision and plan are crucial to guiding those decisions.

While developing a business plan annually is a standard operating procedure, a strategic, long-term vision with measurable objectives enables managers to see beyond what's in front of them today. A vision plan should detail the journey your company will take to become the company you envision in five years. Sharing this vision with customers shows them that in addition to meeting their manufacturing needs today, you can anticipate and plan for their future needs.

This vision includes doing more for customers, and requires fabricators to commit to growth through capital investments and acquisitions. By listening to what your customers want, consider opportunities to grow into new markets. Faced with opportunities every day, fabricators need discipline to identify the right opportunities to pursue instead of haphazardly and counter-productively leaping at each one. A central vision and plan serves as the foundation for that discipline.

**4) Share expertise with customers**

While fabricators are experts in the most effective and efficient ways to manufacture customers' designs, vertically integrated suppliers offer application expertise in addition to high-quality products. This type of supplier offers expert engineering resources that improve overall manufacturability. Such a

supplier provides education on selecting the right raw material given the product's end use, or shows customers ways to account for secondary processes such as material finishing and coating. Oftentimes, vertically integrated suppliers help in implementing geometrical dimensioning and tolerancing—all of which can help fix potential problems in the design phase. From the perspective of customers, when fabricators

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## FIVE SIMPLE STRATEGIES TO DO MORE FOR YOUR CUSTOMERS

continued from page 32

share this kind of design-assist expertise, it elevates them from component supplier to business partner.

### 5) Market to customers how you manage risk

While OEMs aggressively seek supplier consolidations, they remain wary of which fabricators will actually deliver. Fabricators must minimize the perceived

risk customers feel when moving their business from one supplier to another with elevated capabilities. To lower risk and make your company more attractive to potential customers:

- Acquire third-party certifications, such as ISO and market-specific certifications, to demonstrate quality design and manufacturing processes.
- Use statistical measurement and process control to support data-driven predictions.
- Focus on quick-response manufacturing, inventory

management and cost-reduction initiatives to improve product manufacturing and quick-turn production capabilities.

Then, market why a customer moving its business to yours makes sense. A single-source supplier offers these and other advantages to the customer:

- Higher-level understanding of the importance of form, fit and function with mating components;
- Communicating one expectation or future direction to a single supplier versus multiple channels;
- The elimination of transit damage caused by multiple suppliers handling products; and
- Duplicate production services to mitigate risk for disaster recovery.

Doing and being more for customers requires commitment from fabricators to critically assess how they're responding to customer needs and react accordingly. These five strategies can help, thus making your company more attractive as a single-source supplier. ■

*This article was adapted from Steve Schabel, Metalforming Magazine, Oct. 2015. Steve Schabel is chief sales and marketing officer, Alexandria Industries, Alexandria, MN: 800/568-6601; www.alexandriaindustries.com*



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# Wolf Robotics LLC Robotic Welding and Cutting Systems

Wolf Robotics Standard Cells and Custom Engineered System for Arc Wolf Robotics is a robotic metalworking integrator offering standard cells and custom engineered systems for arc welding and cutting, machine tending, and material removal applications. The company installed more than 8,400 robots over the last 30+ years and provides quality 24/7 customer service, operation and process training (authorized CRAW ATC site), and a complete consumables and spare parts department.

Wolf Robotics has been integrating robotic welding and cutting systems since 1978.

A team of automation professionals implements solutions for the toughest metal working projects around. When "peace of mind", quality workmanship and current

technology are important, you can trust Wolf Robotics. ■

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## New Breakthrough Flexwave Welder Technology Booth #N18025

### Combines Both CDW & MFC Welder Capabilities

The Flexwave Welder is a combination of an advanced Capacitor Discharge Welder (CDW) and a 1500Hz Bipolar Medium Frequency Converter (MFC), comprised of four IGBTs.

### Provides Better Quality Parts

The feature of CDW that provides less thermal distortion with its large current in a shorter weld time is combined with the stability of MFC supported by its constant current feedback.

### Makes It Easy To Set Weld Parameters

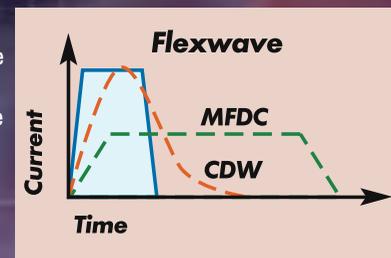
While the weld current for CDW is configured by increasing or decreasing the charging voltage, which makes it more difficult for operators to understand the welding parameter setting, the Flexwave allows direct configuration of weld current values.

### Provides Energy Savings And Shortens Cycle Times

A typical CDW wasted the end portion of the weld current wave without any use. The Flexwave technology has the ability to manage the current flow to just what is required for the optimum weld, thereby achieving a shorter charge time for the next spot weld and generating energy savings as a by-product.

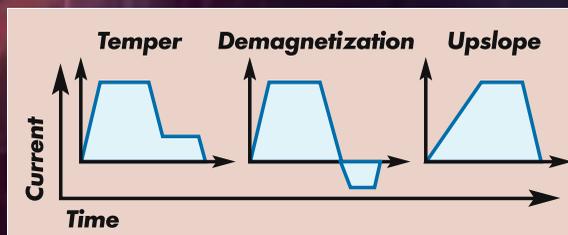
### Optimizes Weld Nugget Quality

As for weldability, a large current in a shorter weld time allows welding with less thermal distortion or indentation, even for materials such as aluminum that have high thermal conductivity as well as a thermal diffusion tendency. Additionally, the constant current feedback of the MFC function provides stable welding without fluctuations of weld current. This even includes the conditions of projection welding, which tends to display load variations because of protrusion changes, or even for high tensile materials, which tends to cause fit-up gaps because of its hardness. As another benefit, the capacitor is always fully charged, providing the fastest current start-up required by projection welding every time.



### Maximizes Waveform Flexibility

Waveform of current can be freely programmed in polarity at every 1 ms, allowing necessary welding parameter settings such as tempering, demagnetization, upslope, etc. Also, if the controller unit of your single-phase AC welder is replaced with the controller unit of Flexwave, it can be used as a Flexwave welder as well.



Flexwave series includes N1CP-050, N1CP-100, and N1CP-150 with the maximum weld current of 50,000, 100,000, and 150,000 amps respectively.



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Rusty Wallace

continued from page 1

all the pieces and parts that are out there – all the 3-D printing and digitizing – and we never had that,” he observed.

He related the experience of “working all night long porting a cylinder head” with no time to work on a second one before a race.

“Today you can port that cylinder head on a CAD/CAM machine,” he said. “You digitize it. You cut it. You’ve got that whole cylinder head cut in literally 30 minutes and you’re spitting them out like crazy. We never had that capability before.”

He noted that today’s processes are not only faster, but also allow for “duplication of power” to provide two engines with nearly identical horsepower, as compared to a 25 horsepower variance that he said was standard in his early racing career.

“Today everything is so exact on a NASCAR Cup engine that’s making 900 horsepower and turning 9500 RPMs, that you can ‘dyno’ two motors and they are within two horsepower of each other. They are that close,” he said.

Wallace also highlighted

the importance of today’s machinery in reducing weight of selected vehicle components.

“We’ve also tried hard to hire the very top people that we possibly can,” he continued, emphasizing the importance of people who possess “the right attitude” in helping an organization achieve success.

Wallace said that another critical contributor to organizational success

**“...I know that without great mentors in my career I would not be near where I am right now...”**

involves the power of mentors.

“I know that without great mentors in my career, I would not be near where I am right now,” he said, highlighting the positive impacts on his own career from mentorship, first by his father and later by Roger Penske.

Briefly reviewing Penske’s business success, he related frequent mentorship discussions when

Penske pointed to one motto, “Effort = Results,” he always used.

The motto was so ingrained in the organization that he said his mentor had it engraved on motivational coins that he would toss to individuals at race tracks.

“He had us working. He had us paying attention. And he would not tolerate anything but teamwork. He made us work together as a team. Just about the time we got frustrated, he wouldn’t allow it. Teamwork is everything in the world to that man,” Wallace said.

Returning to the opportunities at FABTECH, he concluded, “Oh my gosh. If I had had a team who had these tools available back then, that would have been fun. What I am seeing here is just amazing. I am amazed at what you have been able to do and this show is going to be just fantastic.”

Wallace finished his own remarks with extensive question and answer opportunities that provided the FABTECH audience with insight into issues ranging from how to maintain a winning team year after year to his thoughts on inspiring students towards technical manufacturing careers.

Additive Manufacturing/3-D Printing continued from page 1

with sheet steel should probably continue to be made that way.

“But 3-D printing does give you the opportunity to be able to design things that are outside of the constraints that you think about if you were just forming or welding steel plate. So it gives you a completely different design capability,” he said, inviting audience members to visit his company booth to see examples of 3-D printed furniture “that would be very difficult to make using more traditional metal fabricating techniques.”

Crutchfield offered examples where some customers were directing the new technology toward an end part use while others were using it as an enabler on the process side.

Dekker’s broad technology experience is also supporting his extensive participation in efforts to develop “standards” for the technology, with that critical standards process surfacing at several different points during the hour-long discussion.

Other general questions solicited panel members’ advice on subjects like how a company should invest in additive manufacturing, whether the technology will change the way business is done, and whether they viewed the technology as “a democratizing tool” with broad applicability outside of manufacturing.

One area of exploration that drew passionate responses involved the impact and implications of the technology for education.

“The whole idea of getting kids to make things is incredibly important to manufacturing in the United States,” Neff asserted.

Crutchfield expanded on the educational impacts, noting that the 3-D elements of working with additive manufacturing meant that the growing emphasis on science, technology, engineering and mathematics (STEM) education should actually be expanded to include art (STEAM).

Flynn closed the formal panel by asking members for their vision on the future of manufacturing in general and the impact of additive manufacturing on that future, as well as any cautions they would offer for companies with no experience in the field.

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Attendees

continued from page 8

hours. “We are here to investigate new technology – anything that we can find to minimize production and processing costs. That’s our main focus. We’re trying to find solutions to current problems through innovative technology.”

Bishop explained that their company manufactures centralized community mailboxes like you see in apartment buildings. “Some of the challenges we have are in our processes,” he said, “so we’re looking for technologies out there that can process parts faster, more consistently and more repeatably. We use traditional manufacturing methods such as machining, cutting, stamping, things like that, so we’re looking for technologies like lasers and other similar solutions that process faster, more efficiently and at lower cost.”

“In the short time that we’ve been here, about three hours, we’ve already had a lot of good conversations with people,” he said. So far we’ve got three people that are going to be visiting our facility to get more acquainted with it and come up with more specific solutions.” Their goal is to obtain more individualized, focused expertise to address their unique manufacturing challenges in areas such as powder coating and welding processes, and they’re also starting to become more involved with robots and automation.

“We’ve had a lot of good conversations,” Bishop reiterated. “FABTECH has been really impressive. We didn’t realize how big it was. We’re also seeing things that we didn’t know existed in the short time we’ve been here. It’s just good to have that dialog with people that can bring new ideas or solutions to the table. It was definitely worth the trip.”



Workshops for Warriors is a 501(c)(3) nonprofit that trains, certifies and places veterans and wounded warriors into advanced manufacturing careers. Please stop by booth S518, sponsored by Amanda America, Inc., to meet Hernán Luis y Prado, founder and president, as well as veterans who have been through this program and faculty members from the welding school.

The mission of Workshops for Warriors school is to provide quality training, educational programs, and opportunities to earn third party nationally recognized credentials to enable veterans, transitioning service members, and other students to be successfully trained and placed in their chosen advanced manufacturing career field.

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## HYPERTHERM UNVEILS WATERJET ABRASIVE MANAGEMENT SYSTEM, NEW CNCs, AND MORE AT FABTECH 2015

continued from page 24

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a 30 amp plasma system and air compressor in one compact unit for ultimate portability.

"Today's rapid evolution of cutting technology and automated intelligence means job shops, service centers, and fabricators are faced with an ever changing product landscape," said Anibal Sepulveda, head of marketing for Hypertherm North America. "As a manufacturer specializing in cutting processes and CAD/CAM software for both CNC and robotic processes, we believe we are in a unique position to support businesses as they work to evolve and remain competitive."





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Hypertherm is exhibiting from the center's South Hall in booth S3340. In addition, Hypertherm partners will conduct live demonstrations from more than a dozen booth locations. Finally, Hypertherm experts in the areas of plasma, waterjet, automation, and CAM software will present presentations as part of FABTECH's official educational program.

Hypertherm designs and manufactures advanced cutting products for use in a variety of industries such as shipbuilding, manufacturing, and automotive repair. Its product line includes plasma, laser and waterjet cutting systems, in addition to CNC motion and height controls, CAM nesting software, robotic software and consumables. Hypertherm systems are trusted for performance and reliability that result in increased productivity and profitability for hundreds of thousands of businesses. The New Hampshire based company's reputation for cutting innovation dates back nearly 50 years to 1968, with Hypertherm's invention of water injection plasma cutting. The 100 percent associate owned company, consistently named a best place to work, has more than 1,400 associates along with operations and partner representation worldwide. ■

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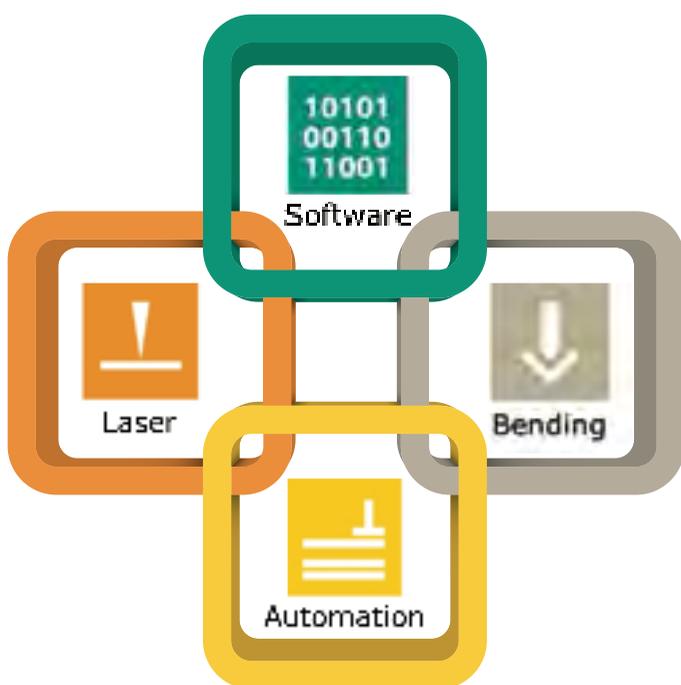
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