NEW PRODUCT PREVIEW
A SAMPLE OF NEW PRODUCTS SET TO DEBUT AT FABTECH 2019

CHICAGO
NOV 11-14
REGISTER TODAY
FABTECHEXPO.COM
AMADA’s ENSIS fiber laser technology utilizes a proprietary and highly-innovative resonator to automatically change the beam mode to accommodate whatever material and thickness being processed. Now, the latest evolution adds another dimension with an innovative collimation system to automatically control beam diameter and beam configuration for unprecedented productivity.

To keep pace with the unmatched power and productivity of the ENSIS Series, it’s essential to pair it with automated material handling such as the AMS 3015 CL (Cycle Loader). Designed and built in Brea, California, the AMS CL’s modular design allows fabricators to easily expand their automation capabilities as future needs evolve.

Key Evolution Factors:
- Now available in 6kW and 9kW
- Addition of collimation system expands ENSIS cut quality and capabilities
- Collimation mechanism does not limit access to cutting lens or head maintenance
- Infinite mode and diameter control combination is an industry first
- 1-second clean pierce in 1” plate
- Up to a 66% reduction in process time when compared to conventional fiber lasers at the same wattage

To learn more about how you can leverage ENSIS technology to achieve unprecedented productivity, contact AMADA today.

AMADA AMERICA, INC.
180 Amada Court • Schaumburg, IL 60173
www.amada.com/america
877-262-3287

To learn more about how you can leverage ENSIS technology to achieve unprecedented productivity, contact AMADA today.

Stay In Touch With What's Next.
TECHNOLOGY & INNOVATION TO TRANSFORM YOUR BUSINESS

See, touch and discover the latest technology and innovation you need to transform your business at FABTECH 2019. Explore aisle after aisle of new product launches and equipment demonstrations. Network with peers, learn from the pros, and gain insights that will change the game for your career and business.

REGISTER TO ATTEND TODAY AT FABTECHEXPO.COM

LEARN Gain valuable, can’t-miss insights from best-in-class education and training programs that target technical, lean, operational, and managerial segments.

CONNECT Visionary keynotes, expert panels, and other special events allow attendees to network with peers, exchange best practices, and learn about the latest industry advancements.

COMPARE Discover advanced technologies that improve quality and productivity and compare innovative solutions from more than 1,700 exhibitors side-by-side.

FABTECH 2019 FEATURES

■ 1,700+ EXHIBITORS
■ KEYNOTE SPEAKERS
■ 170+ EDUCATIONAL PROGRAMS AND WORKSHOPS
■ PRODUCT DEMONSTRATIONS
■ 500+ NEW PRODUCTS
■ EXPERT-LED DISCUSSIONS

McCORMICK PLACE

Lakeside Center (East Building)

 NORTH BUILDING

SOUTH BUILDING

 METALFORM Tube/Pipe

AWS Education Programs

Welding Finishing

3D/Additive Manufacturing Forming & Fabricating Robotics & Industrial Automation

FABTECH Education Programs

New Product Preview | Volume 8, Issue 1 | September 2019
The New Product Preview is published annually on behalf of FABTECH® by The Fabricators and Manufacturers Association International® 2135 Point Blvd | Elgin, IL 60123 USA | 815-399-8700 | fabtechexpo.com | fmanet.org
DESTINATION CHICAGO

Chicago has something for everyone. From world-class museums, parks, and amazing architecture to shopping on the Magnificent Mile, a wide range of dining options, and much more!

GET THE BEST HOTEL SELECTION AND SAVINGS

Book your stay through onPeak, FABTECH’s Official Hotel Provider, for guaranteed lowest rates and big benefits — including complimentary shuttle service, hotel parking and no booking or service fees! Reserve your rooms early for the best selection and price — hotels sell out quickly. Visit fabtechexpo.com/hotels.

DOWNLOAD THE FABTECH MOBILE APP

Download the FABTECH app to access show info on the go — exhibitor lists, a floor plan, sessions, agenda planner and more at fabtechexpo.com/mobile-app.

Sponsored By:  

SHOW ADMISSION

Exhibit-only attendance is FREE if you register by November 8, 2019. Beginning November 9, the cost to attend the exhibits is $50. AWS, FMA, SME, PMA and CCAI members may always attend the exhibits for FREE with a valid member card.

HOW TO REGISTER

Register today at fabtechexpo.com.

SHOW HOURS

Monday, Nov. 11  
10:00 AM*–6:00 PM

Tuesday, Nov. 12  
9:00 AM–5:00 PM

Wednesday, Nov. 13  
9:00 AM–5:00 PM

Thursday, Nov. 14  
9:00 AM–3:00 PM

*EAST BUILDING (LAKESIDE CENTER) OPENS AT 9 AM
For High Productivity Bending of Small and Medium Size Parts

Put Your Confidence in TRUMPF

The new TruBend 7050

The fastest just got bigger. The new TruBend 7050 from TRUMPF integrates the ergonomic and performance features of the well-known TruBend 7036 onto a platform with 55 tons of bending force and 60 inches of bed length. Now precision production bending reaches an even wider range of parts. And it doesn’t stop there - just some of the additional enhancements include doubling of the ram acceleration, integration of ACB and the award-winning touchpoint control. Don’t just bend, bend more. Put your confidence in TRUMPF – Together we can build your success.

See the TruBend 7050 at FABTECH Booth A2904 / www.trumpf.com
## EXHIBITOR LIST (as of 8/22/19)

<table>
<thead>
<tr>
<th>3D/ADDITIONAL MANUFACTURING</th>
<th>FINISHING</th>
<th>FORMING &amp; FABRICATING</th>
<th>FORMING &amp; FABRICATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>3D Metal Printing Magazine</td>
<td>Dubois Chemicals Inc</td>
<td>Nordic Air Filtration</td>
<td>360 Direct</td>
</tr>
<tr>
<td>3DXtech</td>
<td>Accuray Technologies Inc</td>
<td>Norsond Corp</td>
<td>3Am - Roscam Division of Eurolink, Inc.</td>
</tr>
<tr>
<td>Additip Ltd</td>
<td>Duraair Technologies Inc</td>
<td>Northern Coatings &amp; Chemicals</td>
<td>3D Fab Light Ltd</td>
</tr>
<tr>
<td>Alpha Laser US</td>
<td>Durr Systems Inc</td>
<td>Omnitronic</td>
<td>889 Global Solutions</td>
</tr>
<tr>
<td>Altair Engineering Inc</td>
<td>DARUS USA</td>
<td>Parker Engineering of America</td>
<td>ABIS Inc</td>
</tr>
<tr>
<td>ASM International</td>
<td>Dynabrade Inc</td>
<td>Patent Metal Finishing Systems</td>
<td>Accurpress</td>
</tr>
<tr>
<td>Baker Industries</td>
<td>Echo Engineering</td>
<td>PEM Inc</td>
<td>Acrotech Inc</td>
</tr>
<tr>
<td>Bigfoot America Inc</td>
<td>Egyptian Coatings</td>
<td>PKG Equipment Inc</td>
<td>ACTY SYSTEM AMERICA INC</td>
</tr>
<tr>
<td>Bluestreak i Bright AM</td>
<td>Egypt Coatings</td>
<td>Pneu-Mech Systems Mfg</td>
<td>Advanced Cutting Solutions</td>
</tr>
<tr>
<td>BMP Material Technology Inc</td>
<td>Egyptian Coatings</td>
<td>Pollution Control Products</td>
<td>Advanced Robotics Technology</td>
</tr>
<tr>
<td>CIDEAS Inc</td>
<td>Elcometer Inc</td>
<td>Polymer Molding Ink</td>
<td>Advanced Spiral Technology</td>
</tr>
<tr>
<td>Cigneut Inc</td>
<td>Emited Energy</td>
<td>Porcelain Enamel Ink</td>
<td>AFPI Inc</td>
</tr>
<tr>
<td>Cincinnati Inc</td>
<td>Engineered Paint Applications</td>
<td>Powder Coated Tough</td>
<td>Air Products and Chemicals</td>
</tr>
<tr>
<td>Creatormax</td>
<td>Enhancement Technologies</td>
<td>Powder Coating Institute</td>
<td>Ajan Elektronik Servis</td>
</tr>
<tr>
<td>DeskTop Metal</td>
<td>Inc / Sublex</td>
<td>Powder Parts Inc</td>
<td>Sanaray Ve Ticaret Ltd St.</td>
</tr>
<tr>
<td>Envision3D Technology Inc</td>
<td>EPSI</td>
<td>PPG</td>
<td>ASIS Systems Inc</td>
</tr>
<tr>
<td>EWI</td>
<td>Evin Industries</td>
<td>PrestiVac Inc</td>
<td>Ayakap Uluslararası Dış</td>
</tr>
<tr>
<td>Formlabs</td>
<td>ESMA Incorporated</td>
<td>Proceco Ltd</td>
<td>Ticaret Mak San Tic A.</td>
</tr>
<tr>
<td>Fraunhofer USA Center for Laser Applications</td>
<td>Euroimpianti Sri</td>
<td>Products Finishing Magazine</td>
<td>ALA Industries Limited - Yukan &amp; GHY Hydraulics</td>
</tr>
<tr>
<td>FreePoint Technologies Inc</td>
<td>Euroimpianti Sri</td>
<td>Quaker Houghton</td>
<td>ALCOS Machinery Inc</td>
</tr>
<tr>
<td>Fusion 3</td>
<td>Euroimpianti Sri</td>
<td>Quality Finishing Systems</td>
<td>Alliance For American Manufacturing</td>
</tr>
<tr>
<td>Geneva Capital LLC</td>
<td>Euroimpianti Sri</td>
<td>Rapid Coating Solutions LLC</td>
<td>Alliance Steel LLC</td>
</tr>
<tr>
<td>Gentec Electro-Optics Inc</td>
<td>Euroimpianti Sri</td>
<td>Richards-Wilcox Conveyor</td>
<td>Allied Machine &amp; Engineering</td>
</tr>
<tr>
<td>GN Additive</td>
<td>Euroimpianti Sri</td>
<td>Rohner</td>
<td>American Manufacturing Inc.</td>
</tr>
<tr>
<td>Globle Metal</td>
<td>Euroimpianti Sri</td>
<td>RollSeal Inc</td>
<td>American Manufacturing Inc.</td>
</tr>
<tr>
<td>Graphicast</td>
<td>Euroimpianti Sri</td>
<td>RPBI Safety LLC</td>
<td>American Photonics</td>
</tr>
<tr>
<td>Han’s Laser Smart Equipment Group</td>
<td>Euroimpianti Sri</td>
<td>Ruwac</td>
<td>American Precision Co.</td>
</tr>
<tr>
<td>HP</td>
<td>Euroimpianti Sri</td>
<td>Sames Kremlin</td>
<td>American Sweeping Solutions</td>
</tr>
<tr>
<td>InnovMetric Software Inc</td>
<td>Euroimpianti Sri</td>
<td>Sata Spray Equipment</td>
<td>AMS Controls Inc</td>
</tr>
<tr>
<td>Laserline Inc</td>
<td>Euroimpianti Sri</td>
<td>Scientific Control</td>
<td>ANDRITZ Soutec &amp; FWI Inc</td>
</tr>
<tr>
<td>LilyWorks Inc</td>
<td>Euroimpianti Sri</td>
<td>Laboratories</td>
<td>Apex Machine Group</td>
</tr>
<tr>
<td>MakerBot 3D Printers</td>
<td>Euroimpianti Sri</td>
<td>Selas Heat Technology</td>
<td>ARKU Inc</td>
</tr>
<tr>
<td>Markforged</td>
<td>Euroimpianti Sri</td>
<td>Sherwin-Williams</td>
<td>Armstrong Kower Kwick Inc</td>
</tr>
<tr>
<td>Maf – FL-To Inc</td>
<td>Euroimpianti Sri</td>
<td>Singer Safety Co</td>
<td>ARNZT Inc</td>
</tr>
<tr>
<td>MicroCare Corporation</td>
<td>Euroimpianti Sri</td>
<td>Southern Systems</td>
<td>ARNZT Mark Co LLC</td>
</tr>
<tr>
<td>Microtek Finishing LLC</td>
<td>Euroimpianti Sri</td>
<td>Southern Systems International</td>
<td>Arnoahvederhead &amp; Fabrication Associ</td>
</tr>
<tr>
<td>New Imaging Technologies</td>
<td>Euroimpianti Sri</td>
<td>Spray Systems Inc</td>
<td>Arvos Ljungstrom GmbH</td>
</tr>
<tr>
<td>Oak Ridge National Laboratory</td>
<td>Euroimpianti Sri</td>
<td>Spray Tech/Junair</td>
<td>ASC Machine Tools</td>
</tr>
<tr>
<td>Paperless Parts Inc</td>
<td>Euroimpianti Sri</td>
<td>Sprimg Inc</td>
<td>Ascential Capital</td>
</tr>
<tr>
<td>ProManage</td>
<td>Euroimpianti Sri</td>
<td>Sunkists USA</td>
<td>ASCO Carbon Dioxide Inc</td>
</tr>
<tr>
<td>Protolabs</td>
<td>Euroimpianti Sri</td>
<td>Surface Engineering</td>
<td>ASKO Inc</td>
</tr>
<tr>
<td>Raise3D</td>
<td>Euroimpianti Sri</td>
<td>Alloy Co.</td>
<td>Ata Lazer</td>
</tr>
<tr>
<td>Sanken Industry Co. Ltd.</td>
<td>Euroimpianti Sri</td>
<td>AllSteel</td>
<td>Atlahder Neutral SDL</td>
</tr>
<tr>
<td>Sanken Industrial Man</td>
<td>Euroimpianti Sri</td>
<td>Ambrose Inc</td>
<td>Atlanta Drive Systems Inc</td>
</tr>
<tr>
<td>Rapid Prototyping &amp; Manufacturing Co</td>
<td>Euroimpianti Sri</td>
<td>Ashley Inc</td>
<td>Appalachian Systems</td>
</tr>
<tr>
<td>Shining 3D</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Siemens Industry Inc</td>
<td>Euroimpianti Sri</td>
<td>Automated Machine</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Smart Manufacturing Hub</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Stackler LLC</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Starnas</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Surfpe Prototype</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Tetion 3D</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>The Additive Report</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Trak Machine Tools</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Ultimaker</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Vertex</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Xact Metall</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
<tr>
<td>Xometry</td>
<td>Euroimpianti Sri</td>
<td>Automated Equipment</td>
<td>Automated Machine Inc</td>
</tr>
</tbody>
</table>

### Other Categories

- 3D Printers
- 3D Scanners
- 3D Software
- 3D Printer Accessories
- 3D Printer Filaments

---

Interested in Exhibiting? Visit [fabtechexpo.com/Exhibit](http://fabtechexpo.com/Exhibit) to learn more.
Explore equipment and services from leading companies in the metal forming, fabricating, welding and finishing industries. Go to fabtechexpo.com for the most up-to-date exhibitor list.

<table>
<thead>
<tr>
<th>FORMING &amp; FABRICATING</th>
<th>FORMING &amp; FABRICATING</th>
<th>FORMING &amp; FABRICATING</th>
<th>FORMING &amp; FABRICATING</th>
<th>FORMING &amp; FABRICATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Business USA</td>
<td>FARO Technologies Inc</td>
<td>FASPAR SpA</td>
<td>Fehr Warehouse Solutions Inc</td>
<td>Ferrato Davide SAS</td>
</tr>
<tr>
<td>rust announced</td>
<td>FFJ Journal/Modern Metals</td>
<td>Ficep Corporation</td>
<td>Fladder-Hansen &amp; Hundebol Inc</td>
<td>FlashCut CNC</td>
</tr>
<tr>
<td>Forge USA</td>
<td>FormDrill USA Inc</td>
<td>Fortemek Inc</td>
<td>Fishman Beyond Laser Technology Co Ltd</td>
<td>FlowForm Inc</td>
</tr>
<tr>
<td>Formtek Inc</td>
<td>Foshan Metal SpA</td>
<td>Friedrich August Picard GmbH &amp; Co KG</td>
<td>Formax Packaging Systems G15 Mfg. Inc</td>
<td>FMW Electrical</td>
</tr>
<tr>
<td>Foshan Huanan Laser Technology Co Ltd</td>
<td>Geason Wintertech</td>
<td>GSI Magnetics Inc</td>
<td>Gripnail - Fastening Products</td>
<td>Franklin Mfg Inc</td>
</tr>
<tr>
<td>GSI Magnetics Inc</td>
<td>Glenn Dimplex Thermal Solutions</td>
<td>Gripnail - Fastening Products</td>
<td>Global Shop Solutions</td>
<td>Fromm Packaging Systems</td>
</tr>
<tr>
<td>GSI Magnetics Inc</td>
<td>Grotnes Inc</td>
<td>Gorbell Inc</td>
<td>Glen Dimplex Thermal Solutions</td>
<td>Gasparini SpA</td>
</tr>
<tr>
<td>Genius ERP</td>
<td>Grotnes Inc</td>
<td>FMP Europe SpA</td>
<td>Franklin Mfg Inc</td>
<td>FMT</td>
</tr>
<tr>
<td>Glen Dimplex Thermal Solutions</td>
<td>GMP</td>
<td>Flowers Manufacturing</td>
<td>FMT</td>
<td>Fladder-Hansen &amp; Hundebol Inc</td>
</tr>
<tr>
<td>Global Shop Solutions</td>
<td>Graphics and Visualization</td>
<td>Ficep Corporation</td>
<td>FMP Europe SpA</td>
<td>Fladder-Hansen &amp; Hundebol Inc</td>
</tr>
<tr>
<td>Global Shop Solutions</td>
<td>Graphics and Visualization</td>
<td>Ficep Corporation</td>
<td>FMP Europe SpA</td>
<td>Fladder-Hansen &amp; Hundebol Inc</td>
</tr>
</tbody>
</table>

Register at fabtechexpo.com for the most up-to-date exhibitor list.
<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>COMPANY NAME</th>
<th>COMPANY NAME</th>
<th>COMPANY NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electron Beam Technologies</td>
<td>Elderfield &amp; Hall / Pro-Fusion eldec LLC</td>
<td>EASYKleen Pty Ltd</td>
<td>Easom Automation - A E.H. Wachs / Orbitalum Dynatorch Inc</td>
</tr>
<tr>
<td>DURUM Verschleiss-Schutz</td>
<td>Diversitech Dinse Inc</td>
<td>Dino-Lite Scopes (BigC) Diamond Ground Products</td>
<td>Diamond Ground Products</td>
</tr>
</tbody>
</table>
EXPLORE NEW PRODUCTS AT FABTECH

The following pages in this New Product Preview offer a glimpse of what’s in store at FABTECH. Find descriptions and images of new machinery, new materials and new processes listed by technology and company name. To view a complete list of all new products offered, click on the Exhibitor Search tab at fabtechexpo.com.

Additive Mfg

AddUp Inc
Booth ............... A4141
FormUp+ 350

An industrial metal additive manufacturing machine using multi-laser beam melting technology to produce mass production components or prototyping.

Bluestreak | Bright AM
Booth ............... A3945
Advanced Part Build Tracking Capabilities

With an electronic (or paper) traveler allowing the ability to track operating steps including out-of-sequence as well as advanced dispositioning of non-conformances.

CIDEAS Inc
Booth ............... A3745
EOS P770

Powder Bed Fusion laser sintering machines.

Desktop Metal
Booth ............... A3752
Studio System

Three-part solution that automates metal 3D printing. Tightly integrated through Desktop Metal’s cloud-based software, it delivers a seamless workflow for printing complex metal parts in-house—from digital file to sintered part.

Laser Mechanisms Inc
Booth ............... A3364
Direct Deposition Head

FiberWELD® DH is a high-power direct deposition head for processing macro-scale industrial and aerospace components. Delivers multi-axis laser energy to a center fed process wire for directional independence. For additive manufacturing, cladding and HLAW.

Protolabs
Booth ............... A4350
Metal 3D Printing for Production

Metal 3D printing service offering several secondary processes like post-process machining, tapping, reaming, and heat treatment and also offering powder analysis, material traceability, process validation, and inspection reporting.

Tethon 3D
Booth ............... A4241
Bison 1000

Ceramic DLP desktop printer.

Xometry
Booth ............... A4343
Carbon DLS Capabilities

Xometry connects customers with manufacturing solutions through proprietary AI algorithms offering CNC Machining, Sheet Metal, Injection Molding, and 3D Printing.

Arc Welding

Miller Electric Mfg LLC
Booths ....... B19054, B23054
Deltaweld® System with Intellx™ Feeders

Deltaweld Systems deliver pulsed MIG capabilities to help operations reduce welder training time, minimize spatter and rework, and improve weld quality. The Intellx Pro dual wire feeder option provides even greater flexibility.
**Multimatic® 255 Multiprocess Welder**

Reduce downtime and increase productivity with this multiprocess welder that delivers MIG, stick, DC Lift-Arc™ TIG and pulsed MIG capabilities — making it ideal for professionals in the light manufacturing, fabrication and MRO segments.

**Millermatic® 255 MIG Welder**

Built for professionals in the light manufacturing or fabrication segments, this smaller, more versatile machine is capable of welding metals up to 1/2-inch thick with an output rating of 230 amps and 25.5 volts at a 60 percent duty cycle.

**Multimatic® 220 AC/DC Multiprocess Welder**

Delivers all-in-one capabilities for MIG, flux-cored, DC TIG and DC stick welding, plus the addition of AC TIG. Welders can tackle more projects and more materials — now offering AC/DC TIG from 24-gauge to 1/4-inch thick aluminum and steel.

**Weld Engineering Co**

Booth ............ B18035

**AS-4 - Electric Flux Recovery**

The AS-4 is the Mighty-Might standard duty submerged arc flux recovery system with patented self-cleaning filter technology. Mounts onto most sub arc welding equipment.

**HFH-100-E/P - Heated Auto Flux Hopper/Separator**

The HFH-100-E/P is a heated 150 pound (or larger) low-mount flux hopper and separator that automatically transfers recovered flux to the welding torch for continuous welding and flux recovery operation. Used with the Mighty-Mac Super Duty Vacuums.

**VIRO WSI SEES MORE**

Instead of Recalls: Automatic Weld Seam Inspection with VIRO WSI

Defective weld seams in automotive manufacturing often have serious consequences. The solution? The VIRO WSI optical inspection system from VITRONIC. The new generation of sensors is even more compact, faster, and more powerful and inspects all types of weld seams. Thanks to in-line, direct inspection, VIRO WSI also enables rapid intervention in the upstream welding process. This sustainably reduces defects, optimizes processes and ensures fewer downtimes, rework and rejects.

Weld seam inspection from the technology leader. [www.vitronic.com](http://www.vitronic.com)
NEW PRODUCTS

**Arc Welding**

**Weld Engineering Co**
Booth B18035
LAFV-32 & MAFV-32 - OEM Replacement Hopper Valves

The LAFV-32 and MAFV-32 valves give complete valve closure and prevent problems associated with OEM hopper valves, especially using pressure feed (PT-100, HPT-100, PR-3000, HPR-3000, HPFR-HAMX-3000) or flux recovery (XP-3, XP-4T) systems.

**Assembly**

**Multipress Inc**
Booth D45054
MSP Bench Top Press

A model MSP bench top press with dual anti-tie-down start buttons including pressure shift speed change and pressure reversal.

**PFERD INC**
Booth B31017
INOX-TOTAL Brushes

A line of brushes with all components: wire, face plate and stem built out of 302 stainless steel. The line features both cramped and knot wire wheel and bevel brushes.

**Automation**

**Amada America Inc**
Booth A2103
AMS 3015 CL Automation

The AMS 3015 CL was engineered to provide a flexible automation solution that reduces unnecessary machine downtime due to manual material loading.

**MC Machinery Systems Inc**
Booth A2923
ASTES4 Laser Automation

Fully integrated system provides seamless communication between the laser and the sorting mechanism.

**Murata Machinery USA Inc**
Booth A4901
Motorum M2044TS with RL1212

This 22-ton, punch press, uses a servo-electric drive system for simple and reliable processing. A large turret provides flexibility and a small table for limited space. Paired with the RL1212 load/unload system, the punch can work for hours unattended.

**Pemamek LLC**
Booth B35050
PEMA WeldControl

PEMA WeldControl streamlines the communication between operator and machinery during welding operations. Production data monitoring, diagnostics, tracking, and robot programming can be performed by one operator on a one-panel control system.

**Shop Floor Automations Inc**
Booth A5174
DataXchange ODI - Operator Data Interface

The ODI replaces the previous Data Entry window for the machine monitoring system. More user-friendly and visually appealing.

**Bending/Forming**

**BLM Group**
Booth A2153, D46532
3 RUNNER End-Forming Machine

Straightening, end forming, cutting. The 3-RUNNER is a complete tube production process starting from a coil which, straightens, forms (up to six stations), faces, cuts and unloads the finished part. All in one continuous operation.

**Elect All-Electric CNC Tube Bender**

All electric CNC tube bending machines for tubes up to 150 mm (6”). Configurable for right- or left-hand bending.

**E-TURN All-Electric CNC Tube Bender**

CNC mandrel tube bender for pipes and profiles up to 50.8 mm in diameter. In-process right-hand/left-hand bending.

**Carell Corporation**
Booth A5743
Plate Rolls

Carell Corp. has partnered with PARMIGIANI, builder of high-quality plate rolls to offer 4Roll, 3Roll and Translating Geometry Rolls.
Durma North America Inc/Durmazlar/DURMA
Booth ........................ A2934
Blue Bend Panel Bender

Increases piece production efficiency using advance technology and provides full capacity automatic tool changing with minimal adjustment timing.

Herber Engineering AB
Booth ........................ D4659
2400S All Electric 4” Boosted CNC Bender

The Herber 2400S is capable of bending up to and including 4” Stainless Steel tubes and was designed for the rigors of high production while offering a unique design for contract manufacturers where seconds and flexibility count.

Mate Precision Tooling
Booth ........................ A3168
Wila Trumpf Style Press Brake Tooling

Expanded Wila Trumpf Style press brake tooling with over 30 punch and die profiles. Additions include punches with acute, sash, gooseneck and blade profiles. 55mm height dies have a wide range of V-openings and angles at 30°, 80° and 86°.

Eagle Bending Machines Inc
Booth ........................ A5743
CPS-20 H/V Roll Bending Machine

“CPS-20 H/V” Universal Section Roll

Hydraulic Roll Bender designed to operate in both horizontal and vertical positions. This universal roll is complete with programmable controls and universal tooling.

HAEUSLER AG Duggingen
Booth ........................ A5319
HAEUSLER EVO CNC 4-Roll Plate Bending Machines

EVO four-roll plate bending machine includes as standard the latest graphically supported CNC Control BENDtronic®, the VSA® variable side rolls swing arm technology and the HAEUSLER Hybrid Drive System HHDS®.

Visit Caplugs at FABTECH 2019.

We will be exhibiting a variety of new masking components, including blind weld nut plugs, at FABTECH 2019. This series is ideal for threading a mask through a weld nut. Made from our Ultrabake™ material, these reusable plugs are ideal for use in high temperature finishing processes such as:

- Powder coating
- E-coating
- Anodizing
- Plating

Caplugs Masking Specialist Chris Malone will be speaking on “Masking, the Key to Quick Cost Savings” on Monday, November 11 from 2:30 – 3:00 p.m.

Product Protection | Masking Solutions | Custom Molded Components
- Injection Molding
- Extrusion
- Rubber Molding
- Vinyl Dip-Molding
- Vinyl Coating
- Die-Cutting
- Die-Casting

www.caplugs.com/masking
1.888.CAPLUGS | sales@caplugs.com

Stop by to see Caplugs at Booth B16055.
Bending/Forming

MetalForming Inc
Booth ............... A2162
Schröder MAK4 EVO 40/5 UD
ATC AHS

The Advanced Handling System features the dynamic combination of automatic tool change, up and down bending, and automated part manipulation fully automating the entire bending process.

Schwarze-Robitec GmbH
Booth ............... D46541
CNC 25 E TB MR
Fully electric tube bending machine for smaller tube diameters with intelligent NxG control system. Almost all CNC axes can be operated simultaneously during bending - reducing production times enormously.

Star Bend - Star Technology SrL
Booth ............... D46559
Star 450 - 1.75/2” 3-Stack
4-Axis CNC Bender

The re-envisioned Starbend electric CNC bending machine features include an electric bend head, slim line bend head, independent bend die return, carriage boost and more.

Steelmax Tools
Booth ............... B33050
ABMSO Double Side Plate Beveling Machine
A digital display provides precise control of bevel geometry and full digital control of milling head and travel speed. Lay the foundation for high quality welds with precise, consistent bevels.

TRUMPF Inc
Booth ............... A2904
TruBend 7050

The TruBend Series 7000 is known for speed and ergonomics, and increasing the size and tonnage brings the high level of productivity to a wider range of parts.

Work Rolls

Work Rolls from 0.75” - 12.00” in diameter meet the highest standards for material, finish, tolerance, strength and reliability to keep production moving for leveling equipment. Available in “inch” and “Metric” diameters.

The Bradbury Group
Booth ............... A4375
Athader Double Eccentric Slitter Heads

Athader’s double eccentric slitter head produces a clean strip edge with minimal penetration, enhancing the edge quality of cut strips and reducing wear on the slitter knives and motor.

Hydramatic®

HYMSON
Booth ............... A4396
HF H Series
High power smart laser cutting machine with outstanding power up to 15kW, a multiple of extension choices and great design for automatic production line.

HF LU Series

All-in-one laser cutting machine with an automatic loading and unloading system, parallel kinematic technology, superior performance in thin materials and assembly with retractable grippers to ensure remarkable precise cutting.

HP D Series

Durma North America Inc/Durma/DURMA
Booth ............... A2934
Fiber Laser Tube Cutting Machine

High quality components, great efficiency and includes a complete automatic loading and unloading system requiring less effort, while saving time.

KANO D Series

Park Industries
Booth ............... A5342
KANO HD CNC Plasma Cutting Machine

The KANO™ is available in six machine sizes and is configured with a Hypertherm EDGE® Connect CNC, a Hypertherm® high definition plasma system, optional oxy-fuel cutting torch and choice of cutting table style.
The KANO™ HD features a design that will thrive through years and years of high production volumes. No shims or jack screws are ever used to adjust the components straight – that’s accuracy!

Since 1953, Park Industries® has proudly brought American manufacturing ingenuity and world-class machinery to fabricators across North America. Their state-of-the art manufacturing facilities are tooled with highly sophisticated 5-Axis mills that produce some of the highest precision machines on the market today.

Available in six machine sizes, the KANO™ HD is configured with a Hypertherm EDGE® Connect CNC, a Hypertherm® high definition plasma system, an optional oxy-fuel cutting torch and your choice of cutting table style.

Come see the KANO™ HD in action at FABTECH #A5342

- True Unitized Machine Frame
- Independent Cutting Table
- 6, 8, & 10 Ft Wide
- 12 & 24 Ft Long
- Plasma & Oxy-Fuel
- 3 Cutting Table Styles
- Built to ISO-230-2 Machine Tool Accuracy and Laser Verified

Contact us today to learn how the KANO™ HD can help increase your productivity.

800.328.2309 // parkindustries.com/kano
**Cutting**

**Piranha \ MegaFab**
Booth ................. A4924
PIRANHA B-Series Plasma Table

The B-Series plasma table is perfect for hobby to light industrial cutting needs. Available in 4’x4’, 4’x8’ and 5’x10’ models with power ranges up to 125 amps.

**Thermacut Inc**
Booth ................. B19062
EX-TRACK Portable Cutting Machine

The EX-TRACK unit is a lightweight and highly portable CNC cutting system that can be easily transported and assembled.

**Products for HPR®400XD**
A suitable replacement series of consumables, torches and accessories for the HPR®130XD, HPR®260XD or HPR®400XD HyperPerformance® cutting systems.

**Finishing**

**ARKU Inc**
Booth ................. A3162
EdgeBreaker® 3000

Deburring machine in ARKU’s deburring and edge rounding portfolio offering fast and efficient double-sided deburring and rounding of laser cut parts.

**Caplugs**
Booth ................. B16055
BWNP-SH Series of Blind Weld Nut Plugs

The reusable BWNP-SH Series plugs are designed to mask blind weld nuts where it is not possible to thread a mask through the weld nut. They are also ideal for use when it’s easier to install a mask into the weld nut from one side.

**EcoPump Packages**

Fully assembled, portable, ready to use modules.

**EcoRP 10 R1100**

The TBE-440 is optimized to include the latest advances in TIG Brush™ technology and streamlined to deliver quality.

**EcoDose 2K**

Electronic dosing system suitable for high and low pressure applications. It can be used in manual and automatic processes. Optimized for quick color changes and easy flushing.

**Durr Systems Inc**
Booth ................. B13066
EcoAUC

The ready2spray robot is a high performance, compact, paint robot for industrial applications.

**EcoGun Control Unit.** PLC and valve technology allows operating color change systems from the EcoMCC family with up to 10 colors.

**EcoBell2 SL**

Applications by rotary atomizers. Optimal integrated 2k – Unit.

**Ensitech Inc**
Booth ................. B37043
TBE-440

The TBE-550 utilizes a specifically focused adaptation of the 700 series design, to align its performance with Ensitech’s latest technological advance, the PRO-PEL™ Torch.

**TBE-550**

Powerful, reliable, electrochemical weld cleaner at 90amps @ 100% duty cycle.

**TBE-700**

The TBE-700 is optimized to include the latest advances in TIG Brush™ technology and streamlined to deliver quality.

**Gema USA Inc**
Booth ................. B13034
Dynamic Contour Detection

The Dynamic Contour Detection laser scanner offers a higher level of automation for powder coating. The innovative design detects object geometries, aligning each gun to the correct position to coat the most complex components.
**NEW PRODUCTS**

Register at fabtechexpo.com

---

**MagicControl® 4.0 Control Unit**

MagicControl® 4.0 provides full control for all automation aspects such as guns, reciprocators and booths for powder coating systems. This allows complete operation of the coating line and consistent process reliability.

---

**OptiFlex® Pro Spray Series**

OptiFlex® Pro Spray powder coating series provides superior application performance and quality for operations with frequent color changes that require a stable powder output over extended time and long distances.

---

**OptiCenter® All-in-One Powder Center**

OptiCenter® All-in-One Powder Center combines powder feeding, control and electrostatics. This space-saving design provides fast color changes, stable coating results, clean working conditions and trouble-free maintenance.

---

**OptiFlex® Pro Series**

OptiFlex® Pro series brings high performance to manual powder coating. PowerBoost® technology delivers 110,000 volts of power for quick and efficient powder coating.

---

**Lesta USA-Self Learning Painting Robots**

Lesta USA Self Learning Painting Robots

A simple self-learning robotic painting technology mirroring intricate human movements without the need for programming.

---

**OptiStar All-in-One® Control Unit**

OptiStar All-in-One® control unit combines electrostatics and powder feed in one compact device. This design eliminates all pneumatic lines between injector and control unit and enables space-saving system integration.

---

**Graco Inc**

Graco Inc

Booth ............... B13030
Pro Xp Electrostatic Spray Guns
Over 50 out-of-the-box models.

---

**PFERD INC**

PFERD’s POLIVLIES® ceramic oxide CO-COOL flap disc is an addition to the POLIVLIES® flap, and hook and loop discs.

---

**OptiStar All-in-One® Control Unit**

OptiStar All-in-One® control unit combines electrostatics and powder feed in one compact device. This design eliminates all pneumatic lines between injector and control unit and enables space-saving system integration.

---

**Lesta USA-Self Learning Painting Robots**

Lesta USA Self Learning Painting Robots

A simple self-learning robotic painting technology mirroring intricate human movements without the need for programming.

---

**Graco Inc**

Graco Inc

Booth ............... B13030
Pro Xp Electrostatic Spray Guns
Over 50 out-of-the-box models.

---

**PFERD INC**

PFERD’s POLIVLIES® ceramic oxide CO-COOL flap disc is an addition to the POLIVLIES® flap, and hook and loop discs.

---

**PFERD INC**

PFERD’s POLIVLIES® ceramic oxide CO-COOL flap disc is an addition to the POLIVLIES® flap, and hook and loop discs.

---

**Inspection & Testing**

**Accurate Technology Inc**

ProTable-GA

Large format measuring table capable of locating any point in X, Y space for Quality Control checks. Accuracy within +/-0.005 inches for non-contact systems. Ranges up to 35x120 inches. Ideal for all part formats up to 4 inches thickness.

---

**Aquasol Corp**

Aquasol Corp

Booth ................ B17012
PRO OX®-100 Kit

Programmable handheld digital oxygen monitor with a 2-Point Calibration procedure designed to give operators the most precise oxygen level readings.

---

**Fischer Technology Inc.**

FISCHERSCOPE® X-RAY XAN® 500

FISCHERSCOPE® X-RAY XAN® 500

The XAN®500 X-ray fluorescence instrument can be used as a handheld device, as a fully enclosed desktop unit or integrated directly into production lines. Coating thickness measurements with WinFTM® software is based on the fundamental parameter analysis.
**Inspection & Testing**

**Accurate Technology Inc**

Booth ............... D46450

**MMS® INSPECTION**

A handheld dry film thickness gauge for coating thickness measurement on steel and non-ferrous metals. Measuring ranges: 0-2500 µm on FE and 0-2000 µm on NF (DFT).

**PHASCOPE® PAINT**

With newly developed sensors, the automated weld seam inspection is even faster and more compact and has been optimized for MIG/MAG and for laser seams.

**Lasers**

**Amada America Inc**

Booth ............... A2103

**EML 2515 AJ (3kW) Fiber Laser/Punch Combination**

Amada’s most popular combination machine pairs the multi-purpose turret with the unlimited shape cutting flexibility of a fiber laser. This grants fabricators the flexibility to work with their customers to create better part designs.

**ENSIS 3015 AJ (9kW) Fiber Laser Cutting System**

9kW ENSIS fiber laser technology utilizes a collimation system so fabricators can process both thin and thick materials without a cutting lens change or manual setup.

**FOL 3015 AJ (9kW) Fiber Laser Cutting System**

Engineered to include an innovative Rotary Index with the power and speed to efficiently transition from flat sheet to tube or pipe cutting in as little as two minutes.

**Vitronic Machine Vision**

Booth ............... B31104

**Weld Seam Inspection VIRO WSI with New Sensors**

Engineered to include an innovative Rotary Index with the power and speed to efficiently transition from flat sheet to tube or pipe cutting in as little as two minutes.

**VTL 3015 (4kW) Fiber Laser Cutting System**

Now available in 9kW and engineered to produce the highest quality parts at unmatched speed while reducing operating costs and environmental waste.

**FOL 3015 AJ (9kW) Fiber Laser Cutting System**

The Ventis 3015 AJ Fiber Laser Cutting System uses Locus Beam Control (LBC) technology to control the kerf width of the laser beam when processing stainless steel and aluminum.

**Bystronic Inc**

Booth ............... A2122

**ByStar Fiber 12kW Laser Cutting System**

ByStar Fiber with 12kW laser has an expanded spectrum of cutting applications, a unique cutting head for exceptional speed and cutting quality from thin sheet material to thick plate.

**Dallan America Corp**

Booth ............... A5952

**Dallan LXN**

Lean machine for metal fiber laser with revolutionary technology that provides the freedom and flexibility to work starting from coil or standard sheet, up to 40 ft long with the maximum precision.
ALTRAC CRANE SYSTEMS

at FABTECH for the first time

- JIB CRANES
- GANTRY CRANES
- MONORAIL CRANES
- MOBILE CRANES

Custom designed to get the most efficiency out of your manufacturing facilities

- MODULAR
- STRONG
- VERSATILE
- LIGHTWEIGHT

With a 30 year history of improving manufacturing, an Altrac crane system is a proven way to increase throughput

Visit us at FABTECH Booth A6368
or contact us for more information

- 844 902 5278
- www.AltracUSA.com
Lasers

**Durma North America Inc/Durmazlar/DURMA**

Fiber Laser Machine with Ten Table Tower

Fast cutting and energy efficiency capabilities. Easy to use and easy to maintain and service.

**KNUTH Machine Tools USA Inc**

ACE Laser

The KNUTH ACE Laser 3015 2.0 has a 5’ x 10’ cutting table, 2 kW IPG fiber laser source, Precitec cutting head, CypCut CNC control software with nesting function and automatic shuttle table.

**Lasermet Inc**

Falcon Active Speed Door with Active Laser Guards

A fast, industrial, laser safe, roller shutter door fitted with “Laser Jailer” Active Laser Guarding. The interlocked laser is enabled only when the door is closed. Any laser strike on the door is immediately stopped.

**Mazak Optonics**

OPTIPLEX FIBER III 10kW

This laser can cut ferrous and non-ferrous materials alike. The LS3015GC features a small footprint, upgraded drive system and the power of an 8.0kW fiber.

**Piranha \ MegaFab**

PIRANHA M-Series Fiber Laser

Piranha M-Series laser cutting machines are designed to run a wide range of material types and thicknesses. Available in 4 kW or 6 kW cutting heads, the M-Series fiber laser is a highly productive tool for a variety of applications.

**Thermacut Inc**

EX-TRABEAM® PRO

Fiber laser cutting head with low-drift regulation and auto focus features for optimal cutting results.

**TRUMPF Inc**

TruLaser 5030 Fiber

The new evolution in the Vulcan cutting systems featuring a premier fiber laser cutting system, the Laser-Max 1.5 creates a clean, quality cut with minimal heat affected zone on the cut edge.
Lubrication

Unist Inc
Booth ............... D46339

Unist SmartFlow™ Controller

Easy-to-use controller allows for simple setup, advanced control integration, fluid usage tracking, process monitoring, diagnostic and maintenance tools. Pair with Unist applicator for an intelligent lubrication system.

Machining/EDM

Uelner Precision Tools & Dies
Booth ............... D46273

OKK MCV 1260 Cat 50 35HP CNC Mill

With the addition of the OKK CNC mill, Uelner is now able to machine almost all die sets in-house in one setup.

Maintenance & Repair

Hydraulico AS
Booth ............... D45664

Hydraulic Press Upgrade/Refurbishment

Complete or partial press upgrades, within just three weeks on virtually any kind of hydraulic press.

HydraulicoLink
A digitalized solution allowing best-in-class maintenance and placing Hydraulico as a potential service partner, no matter the brand of hydraulic presses.

PFERD INC
Booth ............... B31017

VICTOGRAIN®

VICTOGRAIN® precision-formed abrasive grain is used to make grinding products.

Programmable Fiber Lasers 3-15kW

FABTECH Booth A3550
www.nligh.net
Altrac USA
Booth A6368
Altrac Gantry Crane
A modular, lightweight system that adapts to any environment. No need to upgrade existing structures to achieve handling loads up to 1 ton and the extendable systems can grow with business.

Blue Water Engineering Pty Ltd
Booth A5033
Forklift Vaclift FVL500PT
Vacuum lifter to enhance safety when lifting or moving material. Design features, significant modifications and advancements to the vacuum system include an internal self diagnostic vacuum checking and component identification system.

InfoSight Corporation
Booth A3555
KettleTag®PLUS
Galvanizing tags with text and bar codes that survive the entire galvanizing process.

LabeLase® 1000
Laser-powered metal tag printer that is durable, reliable, versatile and easy to use.

LabeLase® 30XX Tag Printer
Prints more tags in less time. Its speed makes it especially valuable when production lines increase speeds, or more data is needed on tags.

LabeLase® 4000 Tag Printer
High speed desktop metal tag printer with sharp, clear text, bar codes, logos, graphics, and user selectable fonts.

ShotTag™
Acid rinse then bead blast with one tag for the entire process. ShotTag is designed to withstand bead and steel shot blasting applications.

Mestek Machinery Inc
Booth A3975
Iowa Precision Coil Feed
A highly integrated Coil Feed system with wireless capabilities to eliminate the need to load material by hand for the upload and reloading of coil production for either a plasma or laser-cutting tables.

MetalForming Inc
Booth A2162
Böckelt Flexible Storage and Logistics System
The intelligent storage, inventory, and production management system offers customers reduced set-up times, increased productivity and machine uptime, and lower operating costs.

FENN
Booth D46456
Fully Automated Turn-Key Swaging Solution
Fully integrated turn-key rotary swaging solution complete with robotics, a sound enclosure, a hydraulic feeder table, and a FENN 3F swager. Benefits include improved equipment safety, reduced set up time and reduced operating costs.

Premium Metal-Guard® VCI Bubble Bags
Flexible, adhesive-top bubble bags that protect metal parts from physical damage and corrosion during storage and shipment.

Safecote® CLV
Rust preventive liquid protects internal threads on machinery stored outdoors. Low VOC, does not require removal. Ideal for rental equipment and heavy duty construction machines where long-term corrosion prevention is critical.
Hydraulico AS
Booth ............ D45664
Electronic Shimming Plate System

Patented Electronic Shimming Plate™ offers extreme blankhold control and short start-up time in monoblock deep drawing. With deep drawing, material flow changes significantly during drawing, often causing problems with wrinkles and cracks.

Midwest Automation
Booth .......... A3179
Niagara Wet Dust Collectors

Niagara Wet Dust Collectors from Midwest Automation designed to efficiently clean or filter contaminated air in a variety of operations that create metal dust and other abrasive media residue. Available in three new series and fifteen different models.

Newcastle Systems Inc
Booth ............ A3178
QC Series Mobile Powered Workstation

QC Series Mobile Powered Workstations designed for mobile quality testing, measurement and inspection as well as other processes requiring vast storage capabilities.

TAB Industries LLC
Booth ............. A3384
TAB Wrapper Tornado Smart Controls

The Smart Control package uses a position encoding system to automatically set the dispensing unit at its home location in the wrapping ring, apply the plastic film, then cut it, holding onto the stretch-wrap for the next pallet load.

"LOOK FORWARD TO SEEING YOU IN CHICAGO"

Lisa Johnson
COLE-TUVE, Inc.
Owner

AFFORDABLE PRODUCTIVITY
We offer a complete line of Metal Fabricating Machines. Our professional sales team can help you find the right machine at the right price. You’ll enjoy working with us!

LARGE, IN-STOCK INVENTORY
(877) 989-0700
sales@coletuve.com
coletuve.com

Sheet & Plate Bending Rolls · Angle & Shape Bending Rolls · Flanging Machines · Press Brakes · Presses · Trim/Bead Machines

Exclusively North American Distributor for 23 Years
With Walter on the job, nothing else cuts it.

Zip Wheel™
THE INDUSTRY’S LEADING AND MOST TRUSTED CUT-OFF WHEEL

Some might be satisfied with good. And some might settle for better. But when the only option is the best, it’s got to be the Zip Wheel™ from Walter Surface Technologies. The Zip Wheel™ is engineered to deliver the most cuts in the industry. And only Zip Wheel™ features a patented rib design that cools the surface and reduces friction. That means no cut-off wheel cuts straighter, sharper, smoother, faster — or safer.

For more information, visit walter.com/zipwheel  1-800-522-0321
With Walter on the job, nothing else cuts it.

Zip Wheel™
THE INDUSTRY’S LEADING AND MOST TRUSTED CUT-OFF WHEEL

Some might be satisfied with good. And some might settle for better. But when the only option is the best, it’s got to be the Zip Wheel™ from Walter Surface Technologies. The Zip Wheel™ is engineered to deliver the most cuts in the industry. And only Zip Wheel™ features a patented rib design that cools the surface and reduces friction.

That means no cut-off wheel cuts straighter, sharper, smoother, faster — or safer.

For more information, visit walter.com/zipwheel  1-800-522-0321

Visit us at booth B35035
Other Machinery/Equipment/Parts/Products

**UltraLox**
Booth ............... D45868

**ULTRALOX INTERLOCKING™ TECHNOLOGY**

ULTRALOX INTERLOCKING™ TECHNOLOGY produces durable, cost effective, attractive pre-assembled aluminum railing and fence products within minutes.

Amada America Inc
Booth ............... A2103

**EG 4010 All-Electric Press Brake**

The EG 4010 is a compact press brake solution to produce small sheet metal components that demand a high degree of precision.

**Amada America Inc/Durmaazlar/DURMA**

**Electric Press Brake Series**

The drive system is simplified yet stronger and does not require oil to generate press power, works for a long time on the same calibration, and provides high-energy usage savings solutions while keeping the fast speed, efficient production, and quality.

**Press Brake Machine**

Very latest press brake technology to be built in High Point, NC.

**HRB 1003 ATC**

Specially designed to operate in excellence and built with high quality components making them fast, reliable, and precise Press Brakes.

**ErmakUSA/Ermaksan**

**ERMAKSAN FX Series Servo Electric Press Brake**

Press brake offering fast and green bending solutions. Belt technology eliminates the need for crowning on the bed and comes with 3D graphical touchscreen controller and offline software.

**MC Machinery Systems Inc**

Booth ............... A2934

**Diamond BB Series Electric Press Brake with AC Servo motor and ball screw mechanism for high-speed productivity and repeatability (±0.001mm).**

**BB6020 with Videre**

Very latest press brake technology with automatic tool changer to be built in High Point, NC.

**BB13530 with Automatic Tool Changer**

Diamond BH Series Hybrid Press Brake features Dual Drive system controls high-speed up and down movement with a ball screw and bending movement by hydraulic piston.

**Press Brakes**

**Accurpress**
Booth ............... A2980
Accurpress Heavy Duty Press Brake

The Accurpress Heavy Duty Press Brake line offers solutions for jobs requiring maximum flex-

**VOORTMAN USA**
Booth ............... A2169
Voortman V807

Voortman V807 robotic thermal profile processor brings the versatility and capabilities of robotic plasma and oxy-fuel processing into a footprint reduced by more than 50%.

**HRB 1003**

Very latest press brake technology to be built in High Point, NC.

**Durma North America Inc/Durmaazlar/DURMA**

**Electric Press Brake Series**

Very latest press brake technology to be built in High Point, NC.

**HRB 1003 ATC**

Very latest press brake technology with automatic tool changer to be built in High Point, NC.
MVD Makina Sanayi A.S.  
Booth .............. A5350  
Servo Electrical Press Brake

Press brake featuring up to 50% less energy consumption, up to 30% more productivity, noise-less, accurate positioning, clean environment without hydraulic oil, a recall and save bendings with barcode scanning system and ergonomic design.

Pacific Press Technologies  
Booth .............. A3979  
Pacific Blaise 175-ton Press Brake

The competitively priced Blaise press brake includes intuitive software, a heavy-duty frame, and .0004” precision accuracy. Part programming is a breeze with the user-friendly interface and on-screen help buttons of the Delem HMI Machine Controller.

PiranhaMegaFab  
Booth .............. A4924  
PIRANHA T-Series Press Brake

The T-Series Press Brake is a machine that fits well in applications that do not need sophisticated control or back gauge options. Available in models ranging from 35-280 tons, this machine comes with standard X-Axis back gauge and a simple CNC control.

Wilson Tool International  
Booth .............. A3114  
Brake Partner™

Brake Partner™ lets shops use punch press tooling to make forms in the press brake. This innovative solution can help lower costs and reduce lead times, thanks to the streamlining of equipment and machine flexibility it offers fabricators.

Xtreme Lift

With its easy-glide rollers and hand-pump hydraulics, the Xtreme Lift is one of the safest and least strenuous options to help operators load tools into a press brake.
## Punching

**Durma North America Inc/Durmazlar/DURMA**
Booth .......... A2934

**TP Punch Press Series**

Provides high quality, precise forming, fast turret, upgraded hydraulics, and three automatic indexing stations, a movable table, unloading hopper, automatic clamps, cad-cam software, and a main control system.

## Robotics

**Abicor Binzel**
Booth .......... B19062

**TH6D-GF**

Optical seam tracking sensor using a combination of laser lines and cameras allowing the course of the welding seam to be tracked and corrected in real-time on the Y and Z axis.

**Mate Precision Tooling**
Booth .......... A3168

**Mate QCT™ Quick Change Tooling Line**

Mate QCT™ tool-less punch retention system now includes Metric QCT™, AMX QCT™ for Amada air blow systems and MXT QCT™ for Wilson Series 90 systems.

**TRUMPF Inc**
Booth .......... A2904

**TruMatic 1000 Fiber with SortMaster**

The TruMatic 1000 fiber increases the range of automated production with the SortMaster Compact. The SortMaster Compact removes, sorts and stacks individual parts up to 24” x 16” and up to 33 lbs.

**Lasermet Inc**
Booth .......... A1247

**Laser Castle V8**

The Laser Castle V8 is the latest version of the modular, rapid-build laser safety cabin designed and certified to prevent the escape of high energy laser radiation.

**Peddinghaus Corporation**
Booth .......... A2147

**PeddiAssembler**

The PeddiAssembler is a robotic steel beam assembly and welding machine which can achieve up to 15,000 tons of completed members per year.

## Safety & Environmental

**Keller USA Inc**
Booth .......... A5127

**DustOff Gust**

DustOff Gust is manufacturing’s clean-air partner; a cabin for employees to safely “DustOff” at breaks without sending hazardous particles into the air.

## Saws & Cut-off Machines

**Universal Tube & Rollform Equipment Corp**
Booth .......... D46963

**3.5” (89 mm) High-Speed Flying Cold Saw**

High-Speed Flying Cold Saw equipped with motion controls, length control system, hydraulic clamp system, 325 FPM maximum speed, 160” (4 mm) maximum wall thickness.

**Yaskawa America Inc**
Booth .......... B27056

**Yaskawa Motoman AR-Series Arc Welding Robots**

AR-series 6-axis arc welding robots offer optimized acceleration/deceleration control for all robot axes, resulting in overall improved productivity. Five models are available with 8-25 kg payload capacity to support a wide variety of sensors and torches.
Debuting at FABTECH 2019

Loewer BeltMaster

Best of both worlds with small part finishing and large part graining in one machine.

The innovative K4TD BeltMaster allows the utility of multiple machines with a single unit.

Flexibility to process small parts
Lower operation costs
Touch screen interface
German built quality

Booth A3126

Territories Available

www.ammachinerysales.com

AM MACHINERY SALES, Inc.

Solutions for Deburring, Belt Grinding, Polishing, Buffing & Micro-Finishing
ITEC - Innovative Tube Equipment Corporation
Booth ............... D46559
TubeWorks 3D Tube Process Development Software

The TubeWorks plug-in for SolidWorks and powerful stand alone tool is designed to reduce the pre-production design time to only a matter of minutes.

ITEC - Innovative Tube Equipment Corporation
Booth ............... D46559
TubeWorks 3D Tube Process Development Software

ITEC - Innovative Tube Equipment Corporation
Booth ............... D46559
TubeWorks 3D Tube Process Development Software

The TubeWorks plug-in for SolidWorks and powerful stand alone tool is designed to reduce the pre-production design time to only a matter of minutes.

Kyntronics
Booth ............... D45249
Single Cylinder HSHF Next Generation Actuator

An ‘all-in-one’ solution (controller and programming included), in a scaleable, modular, ‘power-on-demand’ machine platform. The design is self-contained with no hoses.

Kyntronics
Booth ............... D45249
Single Cylinder HSHF Next Generation Actuator

Kyntronics
Booth ............... D45249
Single Cylinder HSHF Next Generation Actuator

An ‘all-in-one’ solution (controller and programming included), in a scaleable, modular, ‘power-on-demand’ machine platform. The design is self-contained with no hoses.

Lantek Systems Inc
Booth ............. A3521
Lantek 360

Lantek 360 is a suite of cloud-based manufacturing applications that give users access to incredible capabilities enabling visibility and processing of large amounts of real-time and historical data for better decision making with greater efficiency.

Lantek Systems Inc
Booth ............. A3521
Lantek 360

Lantek Systems Inc
Booth ............. A3521
Lantek 360

Lantek 360 is a suite of cloud-based manufacturing applications that give users access to incredible capabilities enabling visibility and processing of large amounts of real-time and historical data for better decision making with greater efficiency.

MachineMetrics
Booth ............... A5060
MachineMetrics - Cloud Application for Production

MachineMetrics is the industry’s AI-driven machine monitoring and predictive analytics platform for discrete manufacturers and machine builders.

MachineMetrics Health - Maintenance Software
A predictive analytics application on the MachineMetrics Industrial IoT platform that allows maintenance teams to monitor and manage equipment health in real-time.

MachineMetrics Production
MachineMetrics Production features simple “self-install” IoT connectivity, fully automated cloud machine monitoring and OEE software connects to all machine types to provide visualizations of real-time manufacturing production data.

ProManage IIoT based MES/MOM System

MES/MOM system fully integrated with Artificial Intelligence (AI) and Augmented Reality (AR) technologies. ProManage helps to improve business results of a manufacturer automatically.

ProManage Predictive Maintenance Management

ProManage Predictive Maintenance Management

ProManage Predictive Maintenance Management

Something cares for your factory just as much as you do!

ProManage Predictive Quality Management

ProManage Predictive Quality Management

ProManage Predictive Quality Management

Manage quality to increase competitiveness by preventing losses before they occur, accessing interactions instantly and tracking results and analyses regularly.

ShopFloorConnect® Version 6.0

ShopFloorConnect® Version 6.0 has several enhancements including a fresh design format for fast, easy access to all data, offering more robust, user-friendly reporting and dashboard customization, flexible scheduling capabilities and much more.

Alma Machinery Co
Booth ............... D46331
Alma Machinery Used Press Warehouse

60,000 SF of additional space to total 170,000 SF of used presses and press room equipment in MI and TN.

AMADA ORII AMERICA INC
Booth ............... D45533
AMADA ORII SDE-GORIKI

Advanced direct drive servo press offering a highly rigid solid-column frame and full length center-gib with a wide slide. Ranges in size from 150 - 300 mt.
Carell Corporation
Booth ............... A5743
T100 DIGI Dual Axis Horizontal Press

"Dig1-T100"
Horizontal Press

with "SIMplylogik" NC Dual Axis Programmable Controls

T100 Dual axis horizontal press with digital programming has a powered back gauge. This hydraulic press will bend, fold, crimp, punch and form a variety of materials in flat, square, round, tubular and special shapes.

Tool & Die
Quality Wire EDM Inc
Booth ............... D45252
1 & 2 Day Emergency Tool Repair Service

1 and 2-day emergency tool and die repair service with hardened certified materials on hand and around the clock operation.

Precision Cut Shims

Shim sets start at .005” and go to 1/16” thick.

Say Goodbye to Press Down Time

Keep those mission critical jobs running. All wear and consumable tool parts are fabricated and stocked at the facility.

STEINEL Normalien AG
Booth ............... D45266
Smart Nitrogen Cylinder

The patented nitrogen cylinder features integrated pressure and temperature sensors and wireless or cable data interface. This allows continuous monitoring, increase in productivity and product lifetime prediction.

Uelner Precision Tools & Dies
Booth ............... D46273
Makino PS-95 High Speed CNC Mill

High-speed machining with PS-95 Makino for the tool room.

Tooling
Michigan Pneumatic Tool Inc
Booth ............... B19092
MP-2312 Angle Grinder

The MP-2312 is a powerful and rugged, 2.3 hp governed grinder designed for the demanding applications in foundries, and metal fabrication. It features durable beveled gearing, a spindle lock, and is also available in 20 grinder and sander models.

Tube & Pipe Fabricating or Welding
Abicor Binzel
Booth ............... B19062
Spool Welding Robot SWR

A collaborative welding machine designed specifically for pipe, small pressure vessel, and other types of roll welding. It is capable of welding flanges, tees, elbows, reducers, and more.

Alpine Bender Machinery
Booth ............... D46768
ETM-90HD Digital Heavy Duty 3” Pipe Bender

All-electric, rotary-draw and 3D freeform bending machine for bending and rolling of tubes and profiles, offers through its unique design an extremely large amount of freedom around the bending head.

AMOB SA
Booth ............... D46559
AMOB - eMob 150 - 6”

All electric 10-axis multistack boosted CNC bending machine with an extremely large variety of included options.

AMOB - eMob 150 - 6”
**Tube & Pipe Fabricating or Welding**

**ITEC - Innovative Tube Equipment Corporation**
Booth ................. D46559

**MTS Tube Punching and Forming Tools and Machines**

The MTS tube punching and forming units, work plates and machines when combined in work cells can utilize the combination of standard machinery for an almost endless variety of applications such as cutting, single or twinhead bending, punching, forming, flattening, coping, milling and drilling.

**Universal Tool & Engineering**
Booth ................. D46568
**CNC Tube Bending Work Cell and Servo PDA Boost**

Demonstrates automatic loading, robot unloading, and complex shape inspection and will feature programmable Servo Pressure Die Assist, which will reduce set-up time and operator skill level, as well as control wall thinning and deformation of bend.

**BLM Group**
Booth ................. A2153, D46532
**LT7 Lasertube**

Fiber laser processing machine for tubes and profiles that assure the best cut accuracy at the highest productivity.

**Trilogy Machinery Inc**
Booth ................. A4968
**BSP Tube Punching Systems**

Customized BSP Systems tube punching machines with a wide range of tube, pipe and profile punching possibilities including automatic loading and unloading features.

**Universal Tube & Rollform Equipment Corp**
Booth ................. D46963
**3.125" (80 mm) Complete Tube Mill Line**

Complete Tube Mill Line equipped with (all new): Kent Corporation Entry Equipment, 300 KW Solid State High Frequency Welder, SFM Forming and Sizing Mills, UCG High-Speed Flying Cold Saw and 3 Motor Drive System.
NEW PRODUCTS

Register at fabtechexpo.com

Waterjet
OMAX Corp
Booth .......... A5731
GlobalMAX

A value-focused waterjet starting at $54,950.

Welding Consumables
voestalpine Bohler
Welding USA Inc
Booth .......... B27068

Avesta ER308Si/308LSi
Solid wire, high-alloyed, austenitic stainless. Very good wetting and feeding characteristics with excellent weld metal toughness down to -320°F. Application temperature max. 660°F.

Avesta ER309Si/309LSi
Solid wire, high-alloyed, austenitic stainless. Ideal for special applications joining unalloyed and low-alloyed steels, cast steel grades, stainless heat resistant Cr-steels and cast steel grades to austenitic steels and cast steel grades.

FOXcore 46 MC
Metal-cored high-efficiency wire for semi-automatic and fully automatic joint welding of unalloyed and fine-grained constructional steels and service temperatures from -4 °F to +840 °F.

FOXcore 52 RC
All position rutile flux-cored wire with fast freezing slag system. Excellent mechanical properties, low spatter loss, smooth, finely rippled bead surface, X-ray quality.

diamondspark 46 MC
Seamless all positional metal cored wire for semi-automatic and fully automatic joint welding of unalloyed and fine-grained constructional steels. High resistance to porosity, good wetting behavior as well as low hydrogen contents.

diamondspark 52 RC
Seamless rutile flux cored wire especially suitable for ship building, structural steel work or wherever good bead appearance is required. Excellent weldability, high performance weld speed, very low spatter.

Welding Machines/
Equipment

Abicor Binzel
Booth .......... B19062
xFUME VAC ADVANCED

Powerful fume extraction technology made for high-vacuum fume extraction welding needs. Two 0.8 KW motors and high fume extraction capacity with more than 20,000 PA vacuum.

Cut, clamp, fixture, and weld accurately with the RHINO CART® MOBILE FIXTURING STATION.

NEW Folding PLASMA CUTTING TRAY now available!
Folds down when not in use.

FABTECH
Booth# B35038

StrongHandTools®
Toll Free: 800.989.5244
www.stronghandtools.com
**Abicor Binzel**

Booth ............... B19062

xFUME VAC FLEX

Welding fume extraction solution ideally suited for mobile use at changing individual welding stations.

**Lincoln Electric Co**

Booth ............... B19030

POWER MIG® 140 MP®

A lightweight, portable multi-process welder that connects to 120 volt power. This machine is capable of MIG, Stick and Flux-Cored welding out of the box, and with the addition of a TIG Torch and Foot Pedal, you can add DC TIG to its list of capabilities.

**RANGER® 330MPX™ Welder/Generator**

The Ranger® 330MPX™ welder generator is equipped with a 25 horsepower Kohler® engine to supply incredible power for every job. A digital user interface makes set-up easy while offering 10kW of clean AC continuous power. Use CrossLinc® Technology to adjust settings remotely.

**Strong Hand Tools**

Booth ............... B35038

**Deluxe Magnetic Grasshopper**

The Deluxe Magnetic Grasshopper locates and holds steel stock in the vertical position for tack welding. The spring-loaded Grasshopper arm delivers positive, self-adjusting holding pressure with a copper spindle for grounding contact.

**Deluxe MIG Pliers**

Deluxe MIG Pliers have both fine and coarse files for welding gun maintenance, rounded and flat hammer faces, and a side pull v-notch for grasping wire or nuts. A retention chain helps prevent loss and attaches to the ReadyRest™ MIG Rests.

**Plasma Cutting Tray Attachment for Rhino Cart®**

Cut, clamp, fixture and weld on one convenient work surface by adding the Plasma Cutting Tray attachment to the Rhino Cart® Mobile Fixturing Station.

**Ready Rest™ Adjustable TIG, MIG Torch Rests**

The ReadyRest™ line of adjustable, fully articulated TIG, MIG Torch Rests are height and angle adjustable for setting at the ideal position for easy access. Increase efficiency and productivity, and prevent torch damage.

**Ready Rest™ Articulated Arm Rest**

Maximize comfort, productivity and safety in welding with the ReadyRest™ line of Wrist and Arm Rests. The articulated Arm Rest supports the extended arm for greater weld control and complete freedom in positioning.

**Ready Rest™ Grinder Rest**

ReadyRest™ Grinder Rest holds 6” or 7” grinders. Store a grinder on this rest to prevent damage, maximize valuable space and create an organized work area.

**Taylor-Winfield Technologies Inc**

Booth ............... B28098

**Capacitive Discharge Welder**

Capacitive Discharge (CD) power supplies equipped with Multi-Capacitor Source (MCS) system.

KNOWLEDGE
INNOVATION
EXPERIENCE

AT WILSON TOOL INTERNATIONAL
we make the tools that make the parts that make the things that matter. And it starts with a box addressed to our customers. It’s what’s in the box that counts.
FABTECH® 2019 NEW PRODUCT PREVIEW

FABTECH is not just an event, it’s a year-round experience. Connect and engage with other industry professionals and show attendees on FABTECH’s social media sites — during and after the event! Be sure to use #FABTECHexpo or #FABTECH19 in your posts!

FABTECH Bistro

Reserve a seat at the FABTECH Bistro and you will always have a convenient place to eat, meet and network.

The Bistro offers assorted menu options including fresh and healthy lunch options, all at a reasonable price. Pre-purchase your individual lunch tickets to avoid the lines. Find the daily menu, pricing and order tickets at fabtechbistro.com.

TUESDAY, NOVEMBER 12 | 5:30 PM – 7:30 PM
Lakeside Center, McCormick Place

Advance tickets for FABTECH attendees available now! Register today at fabtechexpo.com/industrynight.
THE BENDING EVOLUTION...

50% Running Costs
60% Faster Bending
0% Scrap
85% More Bending Power
100% Smart Control

...begins on evo-haeusler.com
Meet us at FABTECH
There are a lot of great events happening this year at FABTECH. You won’t want to miss the keynotes, expert panel discussions, Smart Manufacturing Hub and much more.

*All events are free and open to all attendees unless otherwise noted.*

**MONDAY, NOVEMBER 11**

**KEYNOTE PRESENTATION**

8:30 AM – 9:45 AM

**FABx TECH TALKS**

In honor of Veterans Day, this year’s FABx will feature a powerful lineup of visionary veterans. These are heroes with incredible stories who have gone on to excel in leadership, business, advanced manufacturing, and workforce development. Drawing on their unique experiences, speakers will captivate and inspire audiences with their frontline stories focused on motivation, team building, innovation, and how to achieve excellence in the business battlefield.

**FEATURED SPEAKER:**

**CHAD HENNINGS**

Through a nine-year NFL career and three Super Bowl Championships, 45 successful combat missions with the Air Force, and as one of the most decorated college football players in NCAA history, Chad represents the philosophy that he lives by — that excellence is not a destination, but an identity.

**FABx SPEAKERS:**

- **Hernán Luis y Prado,** Founder and CEO, Workshops for Warriors
- **Jason T. Ray,** Co-Founder and CEO, Paperless Parts Inc.
- **Shelly C. Rood,** Educational Consultant, Mission Ambition LLC
- **Michael Walton,** Industry Solution Executive (Manufacturing), Microsoft

**LEADERSHIP EXCHANGE**

12:30 PM – 1:30 PM

**EMERGING & ADVANCED TECHNOLOGIES FOR MANUFACTURING 2020**

Advanced manufacturing is transforming the economy and jobs, using cutting-edge technology and new manufacturing processes to accelerate innovation. Learn how companies are using advanced technologies to stay at the forefront of manufacturing.

**MODERATOR:** **Dave O’Neil,** Vice President, SME Media

**PANELISTS:**

- **Chandra Brown,** CEO, MxD
- **Jason T. Ray,** Co-Founder and CEO, Paperless Parts Inc.
- **Michael Walton,** Industry Solution Executive (Manufacturing), Microsoft
TUESDAY, NOVEMBER 12

KEYNOTE PRESENTATION
8:30 AM – 10:00 AM

FRANK ABAGNALE, Cybersecurity Expert, Best-selling Author and Subject of *Catch Me If You Can*

Renowned international cybersecurity and fraud-prevention expert Frank Abagnale — known as one of the world’s most famous con men — will present a two-part keynote. During the first part of his speech, appropriately titled *Catch Me If You Can*, Abagnale will provide entertaining insight into his life as the notorious imposter of the 1960s. He will then instruct attendees on how to protect themselves and their businesses from fraud during the second part titled the *Art of the Steal*.

LEADERSHIP EXCHANGE
12:30 PM - 1:30 PM

STATE OF THE INDUSTRY: AUTOMATION IN MANUFACTURING

Innovations in robotics and automation have catalyzed the fourth industrial revolution. This panel will explore how automation is changing the manufacturing landscape and cover both the role of technology and people in the future of manufacturing. Experts will share their perspective on the impact of robotics on human workers and the facts vs. fiction of worker replacement. They will discuss identifying key challenges to implementing automation and developing a pipeline to de-risking technology and implementing it on the factory floor.

NETWORKING EVENT
5:30 PM – 7:30 PM Lakeside Center, McCormick Place

INDUSTRY NIGHT

Enjoy a fun-filled evening of food, drinks, and networking during our Industry Night Party! The *Chicago Blues & Brews* themed event will include live blues music, local craft beer tasting, and much more. We expect this to be a sold-out event so be sure to register early. Advance ticket price: $50

MONDAY, NOVEMBER 11 & TUESDAY, NOVEMBER 12

AWS WELDING COMPETITION

Participants will go head-to-head as they complete and clean a single-pass fillet weld in just 5 minutes. Speed and accuracy count, and weldments will be evaluated to the current AWS D1.1 standard by a panel of Certified Welding Inspectors. Those interested in competing must be 18 years or older and weld for a living. Learn more about how to participate in the competition at [aws.org/events/detail/aws-welding-competition](http://aws.org/events/detail/aws-welding-competition).
WEDNESDAY, NOVEMBER 13

7:45 AM – 10:00 AM

WOMEN OF FABTECH BREAKFAST

Join us for a networking breakfast celebrating the importance of women in the manufacturing sector. This event aims to foster relationships and dialogue between supporters and practitioners in the field. A breakfast buffet is included. Price: $25

PRESENTATIONS

KEEPING UP WITH TECHNOLOGY

MODERATOR:  
Dan Davis, Editor-in-Chief, The FABRICATOR®

SPEAKERS:  
Susanne Lauda, Director, Global Advanced Manufacturing Technology, AGCO Corporation  
Gretchen Zierick, President, Zierick Manufacturing

STARTING A WOMEN’S INITIATIVE WITHIN YOUR ORGANIZATION

SPEAKERS:  
Monica Silliman, Manufacturing Engineering Manager, Combine Final Assembly, John Deere Harvester Works  
Erin Welken, Manager, Business Process Improvement, Global Agriculture and Turf Supply Management Organization, John Deere

KEYNOTE PRESENTATION

8:30 AM – 9:30 AM

GRANT IMAHARA, Former Host on Discovery’s “Mythbusters” and Animatronics Engineering Expert

On stage, Grant provides a behind-the-scenes look at his work on various sets and productions while also touching on the importance of advancing the engineering/manufacturing industry. Grant has credits on numerous blockbusters including The Matrix sequels, A.I., Galaxy Quest, Terminator 3, Van Helsing, and Star Wars: Episodes 1-3.

LEADERSHIP EXCHANGE

12:30 PM – 1:30 PM

THE IMPACT OF DISRUPTIVE TECHNOLOGY AND THE FUTURE OF MANUFACTURING

The pace of innovation is incredibly fast and new things are being discovered daily. As technology has advanced and becomes embedded in plants, warehouses, and throughout the supply chain, businesses have needed to adapt to stay competitive. Many already have, but the path toward digital transformation is different for every company. Come hear our panel of experts cover disruptive technologies from 5G and IoT to AI and robotics and automation, share case studies, and help manufacturers understand and explore the challenges and benefits that implementing these technologies entails.

MODERATOR:  
John R. Brandt, CEO and Founder, The MPI Group

PANELISTS:  
Mohamed (Mo) Abuali, Ph.D. Managing Partner, IoTco  
Dave Beck, Founder and Managing Partner, Foundry 45  
Greg Mark, CEO and Founder, Markforged  
Tim Weber, Global Head of 3D Metals, HP 3D Printing
THURSDAY, NOVEMBER 14
LEADERSHIP EXCHANGE
11:00 AM - 12:00 PM

21ST CENTURY WORKFORCE: BUILDING TOMORROW’S WORKFORCE

Manufacturers in the 21st century must make it a precedence to have a workforce that is educated, diverse, and motivated. Organizations need to produce a more globally competitive workforce that can meet the demands of an evolving digital economy and adapt to the trends and challenges of managing a multi-generational workforce. Come hear our experts share their strategies and some actions to address the challenges for the future.

MODERATOR:
Kord Kozma, Global Director of HR, Nidec Press & Automation

PANELISTS:
Hernán Luis y Prado, Founder and CEO, Workshops for Warriors
Rob Tessier, National Director of Advanced Fabrication Technologies, Airgas
Dean Steadman, CNC Education Program Manager, FANUC America

MONDAY, NOVEMBER 11 - THURSDAY, NOVEMBER 14

SMART MANUFACTURING HUB

The Smart Manufacturing Hub will feature several advanced manufacturing technologies, including automation, advanced materials, 3D printing, the Industrial Internet of Things (IIoT), 3D scanning, and more. Technical presentations from industry-leading smart technology providers will provide insight on recent developments in this rapidly evolving field.

Sponsored by:
**2019 PRICING CHART**

### EXHIBITS ONLY

Registration is FREE through November 8.
Beginning November 9, the cost to attend the exhibits is $50. AWS, FMA, SME, PMA, and CCAI members may always attend the exhibits for FREE with proof of membership.

### SPECIAL EVENTS

**TUESDAY, NOVEMBER 12 • INDUSTRY NIGHT AT McCORMICK PLACE**
Advance ticket price for attendees is $50 and includes food and drinks, networking, entertainment, and more.

**WEDNESDAY, NOVEMBER 13 • WOMEN OF FABTECH BREAKFAST**
Price for FABTECH Attendees is $25 and includes a breakfast buffet.

### EDUCATION PROGRAMS

3D/Additive Manufacturing, Automation, Cutting, Finishing, Forming & Fabricating, Laser, Lean, Management, Marketing & Sales, Smart Manufacturing, Stamping, Welding Fabrication, Workforce Development Tracks

<table>
<thead>
<tr>
<th>Packages (Buy More and SAVE!)</th>
<th>Member</th>
<th>Non-member</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Session</td>
<td>$195</td>
<td>$220</td>
</tr>
<tr>
<td>2 Sessions</td>
<td>$330</td>
<td>$385</td>
</tr>
<tr>
<td>3 Sessions</td>
<td>$450</td>
<td>$540</td>
</tr>
<tr>
<td>4 Sessions</td>
<td>$550</td>
<td>$660</td>
</tr>
<tr>
<td><strong>Full Conference: (5 or more sessions) BEST VALUE!</strong></td>
<td>$750</td>
<td>$900</td>
</tr>
</tbody>
</table>

**NOTE:** The rate for the 1/2-Day Laser Welding Workshop (Session AWF100) and Leadership Skills & Development Workshop (Session F216) is $365 for Members and $465 for Non-members.

### WELDING TRACK

<table>
<thead>
<tr>
<th></th>
<th>Member</th>
<th>Non-member*</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWS Educational Sessions</td>
<td>$25</td>
<td>$50</td>
</tr>
<tr>
<td>1/2-Day Seminar</td>
<td>$345</td>
<td>$430</td>
</tr>
<tr>
<td>1-Day Seminar</td>
<td>$565</td>
<td>$665</td>
</tr>
<tr>
<td>2-Day Seminar, Conference or RWMA School</td>
<td>$795</td>
<td>$895</td>
</tr>
<tr>
<td>Career Path Workshops</td>
<td>$50</td>
<td>$75</td>
</tr>
<tr>
<td>1-Day Professional Program</td>
<td>$175</td>
<td>$225</td>
</tr>
<tr>
<td>4-Day Professional Program</td>
<td>$395</td>
<td>$495</td>
</tr>
<tr>
<td>Student Professional Program</td>
<td>$85</td>
<td>$110b</td>
</tr>
<tr>
<td>AWS Awards Luncheon</td>
<td>$30</td>
<td>$30</td>
</tr>
<tr>
<td>AWS Prayer Breakfast</td>
<td>$15</td>
<td>$25</td>
</tr>
</tbody>
</table>

* Non-member price for AWS Sessions only includes a one-year AWS Individual Membership.

b Non-member Student Professional Program price includes a one-year AWS Student Membership.

**CONFERENCE CANCELLATION POLICY:**
Cancellations and refund requests (for paid conference registrations) must be made in writing to Attn: Betsy Bonnell: FABTECH Conference Cancellation or sent to bbonnell@sme.org no later than October 28, 2019, to receive a full refund minus a $50 administrative fee. Cancellations received after this date are non-refundable. Substitutions allowed.
## MONDAY, NOVEMBER 11

<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th>8:00 AM - 9:30 AM</th>
<th>10:00 AM - 11:30 AM</th>
<th>12:00 PM - 1:30 PM</th>
<th>2:00 PM - 3:30 PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUTTING</td>
<td>■ NEW! F22: Cutting for Advanced Materials</td>
<td></td>
<td>■ NEW! F42: Automated Processes in Hybrid Induction &amp; Oxy-Fuel Cutting</td>
<td></td>
</tr>
<tr>
<td>FINISHING</td>
<td></td>
<td>■ C20: ABCs of Infrared</td>
<td>■ NEW! C40: It’s Your Money - Control Your Costs</td>
<td></td>
</tr>
<tr>
<td>WELDING FABRICATION</td>
<td>■ NEW! S21: Lubricants-1</td>
<td></td>
<td>■ NEW! S41: Lubricants-2</td>
<td></td>
</tr>
<tr>
<td>WELDING CAREER PATH WORKSHOPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAREER PATH WORKSHOPS</td>
<td>W17: Getting Started in Underwater Welding</td>
<td>1:00 PM</td>
<td>3:00 PM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W18: Creating a WPS in 60 Seconds</td>
<td>1:00 PM</td>
<td>3:00 PM</td>
<td></td>
</tr>
<tr>
<td>PROFESSIONAL PROGRAM</td>
<td>W23: SESSION 1: Additive Manufacturing I</td>
<td>1:40 PM</td>
<td>5:00 PM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SESSION 2: Modeling</td>
<td>1:40 PM</td>
<td>5:00 PM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SESSION 3: Arc Welding</td>
<td>1:40 PM</td>
<td>5:00 PM</td>
<td></td>
</tr>
<tr>
<td>SPECIAL PROGRAMS</td>
<td>W30: AWS Prayer Breakfast</td>
<td>7:00 AM</td>
<td>8:30 AM</td>
<td></td>
</tr>
</tbody>
</table>

Detailed Education Program session descriptions, speakers, pricing, room locations and more can be found at fabtechexpo.com/edu.

= Basic  = Intermediate  = Advanced
**TUESDAY, NOVEMBER 12**

### Schedule-at-a-Glance

<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th>8:00 AM - 9:30 AM</th>
<th>10:00 AM - 11:30 AM</th>
<th>12:00 PM - 1:30 PM</th>
<th>2:00 PM - 3:30 PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>3D/ADDITIVE MANUFACTURING</td>
<td><img src="image" alt="F60" /> Fundamentals of Additive Manufacturing</td>
<td><img src="image" alt="NEW! F70" /> Small &amp; Large Format Printers for Additive Manufacturing</td>
<td><img src="image" alt="NEW! F80" /> How Additive Manufacturing Can Accelerate and Advance Your Design</td>
<td></td>
</tr>
<tr>
<td>AUTOMATION</td>
<td><img src="image" alt="NEW! F65" /> Estimating and Job Costing for Industry 4.0 - The Science of Costing and the Art of Pricing</td>
<td><img src="image" alt="NEW! F71" /> The Full Potential of Automation and Lights-Out!</td>
<td><img src="image" alt="F81" /> IoT Solutions to Better Manage Your Assets</td>
<td><img src="image" alt="F82" /> Comparative Cutting Innovations with Tech Tour</td>
</tr>
<tr>
<td>CUTTING</td>
<td><img src="image" alt="F62" /> Optimization of Cutting Metals with Fiber and Plasma Machining</td>
<td><img src="image" alt="NEW! F73" /> Dust Collection for Fabrication Processes</td>
<td><img src="image" alt="F83" /> Sheet Metal Design and Press Brake Automation</td>
<td></td>
</tr>
<tr>
<td>FINISHING</td>
<td><img src="image" alt="NEW! C50" /> Lean and Green Cleaning</td>
<td><img src="image" alt="NEW! C60" /> Mother Earth Still Needs Our Help</td>
<td><img src="image" alt="C80" /> Identifying and Solving Finishing Defects - See It, Touch It, Fix It</td>
<td></td>
</tr>
<tr>
<td>MANUFACTURING &amp; DESIGN</td>
<td><img src="image" alt="NEW! C51" /> Powder System Design for Success</td>
<td><img src="image" alt="NEW! C68" /> How It’s Made: Knowing Where Your Powder and Equipment Come From</td>
<td><img src="image" alt="C81" /> Lean and Mean - Making Powder Systems Work</td>
<td></td>
</tr>
<tr>
<td>STAMPING</td>
<td><img src="image" alt="NEW! C52" /> 1K, 2K, New K and Fluid Delivery Methods</td>
<td><img src="image" alt="NEW! C62" /> Oven Selection Solved</td>
<td><img src="image" alt="C82" /> Make Safety a Priority</td>
<td></td>
</tr>
<tr>
<td>FORMING &amp; FABRICATING</td>
<td><img src="image" alt="F63" /> Effective Safeguarding Risk Assessment</td>
<td><img src="image" alt="NEW! F73" /> Dust Collection for Fabrication Processes</td>
<td><img src="image" alt="F83" /> Sheet Metal Design and Press Brake Automation</td>
<td></td>
</tr>
<tr>
<td>LASER</td>
<td><img src="image" alt="NEW! F58" /> Quality &amp; Control for Laser Joining Systems</td>
<td><img src="image" alt="NEW! F73" /> Roll Forming: Design and Welding Techniques</td>
<td><img src="image" alt="F84" /> Roll Forming: Justification and In-Line Punching, Cutoff Dies</td>
<td></td>
</tr>
<tr>
<td>Lean</td>
<td><img src="image" alt="NEW! F60" /> Lean Principle: Leadership and the Lean Journey</td>
<td><img src="image" alt="F66" /> Lean Tools: VSM Addressing Differences Between the Office and Shop Floor</td>
<td><img src="image" alt="F86" /> Lean Tools: Standard Work for Quality and Improvement</td>
<td></td>
</tr>
<tr>
<td>MANAGEMENT</td>
<td><img src="image" alt="F57" /> Building a Competitive Advantage: Know What Your Business is Worth and Tax Credit Advantages</td>
<td><img src="image" alt="NEW! F67" /> The Dark Cloud Behind the Silver Lining: Economy in 2020</td>
<td><img src="image" alt="NEW! F77" /> Planning for the Future: The New Dawn of Manufacturing and Technology</td>
<td><img src="image" alt="NEW! F87" /> ERP Systems: Selection &amp; Avoiding the ERP Technology Grim Reaper</td>
</tr>
<tr>
<td>MARKETING &amp; SALES</td>
<td><img src="image" alt="NEW! F58" /> Customer Experience for Manufacturers to Create Digitally-Powered Journeys That Help People Grow</td>
<td><img src="image" alt="NEW! F68" /> Sustainable Social Media Strategies</td>
<td><img src="image" alt="NEW! F78" /> Strengthen Your Marketing Through The Power of Story &amp; Grow Your Revenue &amp; Grow Your Team</td>
<td><img src="image" alt="NEW! F88" /> Artificial Intelligence for Machine Learning &amp; Streamlining Quoting Process</td>
</tr>
<tr>
<td>SMART MANUFACTURING</td>
<td><img src="image" alt="NEW! F59" /> Productivity, Performance &amp; Quality Management for Smart Manufacturing</td>
<td><img src="image" alt="NEW! F69" /> Quit Making Excuses and Close the Loop - Now is the Time to Digitize</td>
<td><img src="image" alt="NEW! F79" /> From Rust-Belt to High-Tech: Transform, Ignite and Disrupt</td>
<td><img src="image" alt="NEW! F89" /> Artificial Intelligence for Machine Learning &amp; Streamlining Quoting Process</td>
</tr>
<tr>
<td>STAMPING</td>
<td><img src="image" alt="NEW! S50" /> Materials-1</td>
<td><img src="image" alt="NEW! S60" /> Materials-2</td>
<td><img src="image" alt="NEW! S70" /> Materials-3</td>
<td></td>
</tr>
<tr>
<td>WELDING FABRICATION</td>
<td><img src="image" alt="NEW! S51" /> Connectivity-1</td>
<td><img src="image" alt="NEW! S61" /> Connectivity-2</td>
<td><img src="image" alt="NEW! S71" /> Connectivity-3</td>
<td></td>
</tr>
<tr>
<td>WORKFORCE DEVELOPMENT</td>
<td><img src="image" alt="NEW! F214" /> Engaging Manufacturing's Next Generation Through Full Contact Innovation</td>
<td><img src="image" alt="NEW! F215" /> Conflict &amp; Communication For Strong Leadership</td>
<td><img src="image" alt="NEW! F216" /> Leadership Skills &amp; Development Workshop (12:00 PM - 4:30 PM)</td>
<td></td>
</tr>
<tr>
<td>WELDING</td>
<td><img src="image" alt="W11" /> AWS Educational Overview of Welding Codes and Standards - Day 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEMINARS</td>
<td><img src="image" alt="W12" /> Applied Welding Metallurgy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="W13" /> WPS’s for Weld Inspection and Test-Taking Tips</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONFERENCES</td>
<td><img src="image" alt="W16" /> 5th International Electron Beam Conference - Day 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFESSIONAL PROGRAM</td>
<td><img src="image" alt="W24" /> SESSION 4: Solid-State Processes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="SESSION 5" /> Surfacing &amp; Dissimilar Joining</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="SESSION 6" /> Welding Metallurgy I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="SESSION 7" /> Neural Networks &amp; Machine Learning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="SESSION 8" /> Additive Manufacturing II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="SESSION 9" /> Welding Metallurgy II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWMA SCHOOL</td>
<td><img src="image" alt="W22" /> RWMA Resistance Welding School - Day 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU. SESSIONS</td>
<td><img src="image" alt="W23" /> AWS/Weld-Ed Education Conference - Using Advanced Waveforms in Welding Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPECIAL PROGRAMS</td>
<td><img src="image" alt="W31" /> AWS Awards/AWS Foundation Luncheon</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Detailed Education Program session descriptions, speakers, pricing, room locations and more can be found at fabtechexpo.com/edu.
## WEDNESDAY, NOVEMBER 13

<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th>8:00 AM - 9:30 AM</th>
<th>10:00 AM - 11:30 AM</th>
<th>12:00 PM - 1:30 PM</th>
<th>2:00 PM - 3:30 PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>3D/ADDITIVE MANUFACTURING</td>
<td><strong>NEW! F90:</strong> The ROI of 3D Printing: Analyze the Cost of Implementing 3D Printing for Your Business</td>
<td><strong>NEW! F100:</strong> Impact and Quality Considerations for Additive Manufacturing</td>
<td><strong>F110:</strong> Lasers and Additive Manufacturing Processes</td>
<td><strong>NEW! F120:</strong> Safely Adopting Additive Manufacturing on The Production Floor</td>
</tr>
<tr>
<td>AUTOMATION</td>
<td><strong>NEW! F91:</strong> Effective Automation for Joining in Emerging Technologies</td>
<td><strong>NEW! F101:</strong> Integrating Robotic Automation into Your Process</td>
<td><strong>NEW! F111:</strong> Which Robot Application is Right for Your Needs?</td>
<td><strong>NEW! F121:</strong> Automating the Material Handling Process - Why Now is the Time</td>
</tr>
<tr>
<td>CUTTING</td>
<td></td>
<td><strong>F102:</strong> Advantages of Waterjet Cutting Machining Technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FINISHING</td>
<td><strong>C90:</strong> Architectural Coatings - Today and Future</td>
<td><strong>NEW! C100:</strong> Conveying Effectively</td>
<td><strong>NEW! C120:</strong> Quality Still Counts</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>C91:</strong> Optimizing Powder Operations</td>
<td><strong>NEW! C101:</strong> Mastering Batch Powder Coating Operations</td>
<td><strong>NEW! C121:</strong> Powder Coating Troubleshooting</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>NEW! C92:</strong> Creative Finishing Solutions</td>
<td><strong>NEW! C102:</strong> Choose Your Weapon - Finding the Right Liquid Applicator</td>
<td><strong>NEW! C122:</strong> Automation Roadmap for Liquid Finishing Operations</td>
<td></td>
</tr>
<tr>
<td>FORMING &amp; FABRICATING</td>
<td><strong>NEW! F93:</strong> A Modular Approach to Turning Non-Value-Added Time on a Press Brake into Productive Time</td>
<td><strong>F103:</strong> Press Brake Safety</td>
<td><strong>NEW! F113:</strong> Alternative Forming Processes</td>
<td><strong>NEW! F123:</strong> Press Brake Hurdles</td>
</tr>
<tr>
<td></td>
<td><strong>F94:</strong> Roll Forming: Press Tonnage Rating and Welding Systems</td>
<td><strong>F104:</strong> Tube &amp; Pipe Lubricants, Bending and Case Studies in Tube Field Failures</td>
<td><strong>NEW! F114:</strong> Alternative Techniques for Annealing, Testing and Grinding Abrasives</td>
<td><strong>F124:</strong> Coil Processing: Slitting Thin Materials, Leveling &amp; Deburring</td>
</tr>
<tr>
<td>LASER</td>
<td><strong>AWF100:</strong> Laser Welding Workshop (8:00 AM - 12:30 PM)</td>
<td></td>
<td></td>
<td><strong>NEW! F115:</strong> The Use of Additive and Subtractive Lasers in Applications</td>
</tr>
<tr>
<td>LEAN</td>
<td><strong>NEW! F96:</strong> Lean Principle: Go to Gemba</td>
<td><strong>NEW! F106:</strong> Lean Tools: Lean Production Shop to a Job Shop</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MANAGEMENT</td>
<td><strong>F97:</strong> Ensuring Tomorrow: How to Effectively Choose and Prepare Your Successor</td>
<td><strong>NEW! F107:</strong> Win the Inner Game: Free Yourself of Overwhelm and See Your Highest Potential Come True</td>
<td><strong>NEW! F112:</strong> Diagnose Your Business: How to Free Yourself from Budget Limitations by Finding and Unlocking Hidden Money in Your Operations</td>
<td></td>
</tr>
<tr>
<td>MARKETING &amp; SALES</td>
<td><strong>NEW! F98:</strong> Digital Recruiting Strategies &amp; Data for Continuous Improvement</td>
<td><strong>F108:</strong> Business Builders: Make Business Development a Competitive Advantage</td>
<td><strong>F118:</strong> Protecting Original Design: The Importance of IP in Metal Forming</td>
<td><strong>NEW! F127:</strong> Enable the Transition to Next Gen - Family Business</td>
</tr>
<tr>
<td>SMART MANUFACTURING</td>
<td><strong>NEW! F99:</strong> The Smart Factory &amp; Feasibility with Case Studies</td>
<td><strong>NEW! F108:</strong> A.I. for Predictive Manufacturing: Zero-Downtime, Zero-Defects</td>
<td><strong>NEW! F119:</strong> Prevent Digital Failure and Benchmark Your Performance</td>
<td><strong>NEW! F129:</strong> Smart Manufacturing on Predictable ROI</td>
</tr>
<tr>
<td>STAMPING</td>
<td><strong>NEW! S90:</strong> Stamping-1</td>
<td><strong>NEW! S100:</strong> Stamping-2</td>
<td></td>
<td><strong>NEW! S120:</strong> Stamping-3</td>
</tr>
<tr>
<td>WELDING FABRICATION</td>
<td><strong>NEW! S91:</strong> Sensors-1</td>
<td><strong>NEW! S101:</strong> Sensors-2</td>
<td><strong>NEW! S121:</strong> Quality &amp; Tooling</td>
<td></td>
</tr>
<tr>
<td>WORKFORCE DEVELOPMENT</td>
<td><strong>NEW! F217:</strong> Operational Excellence for Significant and Sustained Performance With Incentive Pay</td>
<td></td>
<td><strong>NEW! F219:</strong> Leading Innovation &amp; Change Initiatives in Your Organization</td>
<td></td>
</tr>
<tr>
<td>WELDING</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEMINARS</td>
<td><strong>W13:</strong> AWS Educational Overview of Welding Codes and Standards - Day 2</td>
<td>8:00 AM 5:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>W14:</strong> “Welding” Don’t Be Afraid to Ask</td>
<td>8:00 AM 4:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>W15:</strong> Stainless Steel Welding D1.6 Structure</td>
<td>8:00 AM 4:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONFERENCES</td>
<td><strong>W16:</strong> 5th International Electron Beam Conference - Day 2</td>
<td>8:00 AM 5:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAREER PATH WORKSHOPS</td>
<td><strong>W19:</strong> Development of a New Standard for Metal Additive Manufacturing: AWS D20.1/D20.1M, Specification for Fabrication of Metal Components Using Additive Manufacturing</td>
<td>9:00 AM 11:00 AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFESSIONAL PROGRAM</td>
<td><strong>W23:</strong> SESSION 10: Plenary Session</td>
<td>8:00 AM 9:30 AM</td>
<td>9:40 AM 12:00 PM</td>
<td>1:40 PM 5:00 PM</td>
</tr>
<tr>
<td></td>
<td><strong>SESSION 11:</strong> In-Situ Measurement Techniques</td>
<td>9:40 AM 12:00 PM</td>
<td>9:40 AM 12:00 PM</td>
<td>1:40 PM 5:00 PM</td>
</tr>
<tr>
<td></td>
<td><strong>SESSION 12:</strong> Honorary Symposium for Prof. D. Olson I</td>
<td>9:40 AM 12:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>SESSION 13:</strong> Industrial Technology I</td>
<td></td>
<td>1:40 PM 5:00 PM</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>SESSION 14:</strong> Process Sensing &amp; Control</td>
<td></td>
<td></td>
<td>1:40 PM 5:00 PM</td>
</tr>
<tr>
<td></td>
<td><strong>SESSION 15:</strong> Honorary Symposium for Prof. D. Olson II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>SESSION 16:</strong> Weldability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RWMA SCHOOL</td>
<td><strong>W22:</strong> RWMA Resistance Welding School - Day 2</td>
<td>8:00 AM 5:00 PM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THURSDAY, NOVEMBER 14

**SCHEDULE-AT-A-GLANCE**

<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th>8:00 AM - 9:30 AM</th>
<th>10:00 AM - 11:30 AM</th>
<th>12:00 PM - 1:30 PM</th>
<th>2:00 PM - 3:30 PM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3D/ADDITIVE MANUFACTURING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW! F130: How MES Transfers Data Efficiently Through The Additive Manufacturing Value Chain &amp; Business Case Method</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AUTOMATION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW! F131: Sensors, Maintenance and Platforms for Leveraging Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FINISHING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW! C130: Power Up and Hang On for Efficiency and Savings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW! C131: Using the Dirty Dozen to Optimize Your Powder Coating</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C132: Test for the Best - Best Practices and Measurement Methods for Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LEAN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW! F136: Lean Principle: Science of Lean Culture and Case Studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MANAGEMENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F137: Making Better Decisions as a Business Leader &amp; Tools for Management Success</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW! F147: Financing to Enable Growth &amp; Achieve Project Improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SMART MANUFACTURING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW! F139: Smart Manufacturing to Successfully Implement the Trifecta; All in Real Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WORKFORCE DEVELOPMENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW! F221: How to Win With Personalities &amp; Team Engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WELDING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CAREER PATH WORKSHOPS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W20: Starting a Welding Inspection Business</td>
<td>8:00 AM</td>
<td>10:00 AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W21: Becoming a Certified Welding Accredited Test Facility for Testing Certified Welders</td>
<td>8:00 AM</td>
<td>11:00 AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PROFESSIONAL PROGRAM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W26: SESSION 17: High-Energy Density Processes</td>
<td>8:00 AM</td>
<td>12:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SESSION 18: Industrial Technology II</td>
<td></td>
<td></td>
<td>8:00 AM</td>
<td>12:00 PM</td>
</tr>
</tbody>
</table>

Detailed Education Program session descriptions, speakers, pricing, room locations and more can be found at fabtechexpo.com/edu.

**EXPERIENCE LEVELS**

Use this key along with the Schedule-at-a-Glance to find the education level that meets your needs.

- **Basic** .......................... Recommended for the attendee who is new to the industry or needs a refresher on the topic.
- **Intermediate** .... Designed for the attendee who already has a basic understanding of the subject matter.
- **Advanced** ................. For the attendee with several years of experience who is seeking more in-depth information.
NEW! AUTOMATED SCRAP REMOVAL

#SeeToBelieve
FABTECH BOOTH A2923
CHICAGO
NOV 11-14

SAVE $50
Register Today at fabtechexpo.com

Use the Promo Code next to your address when registering online.

DON’T MISS THESE FABTECH EVENTS IN 2020