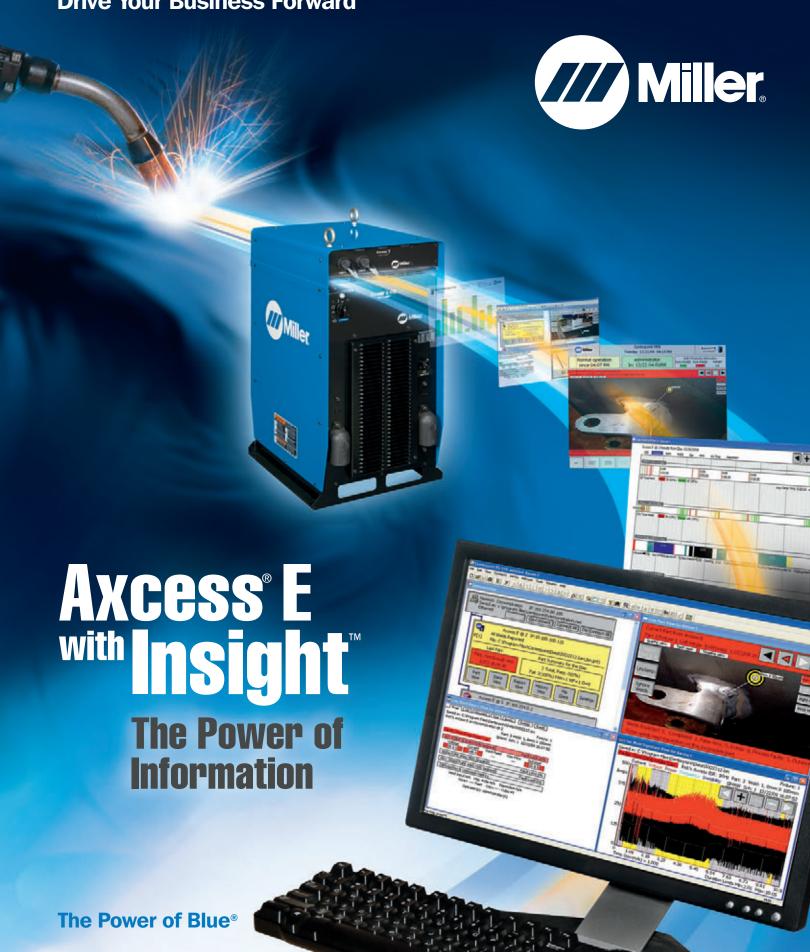
**Delivering the Knowledge to Drive Your Business Forward** 



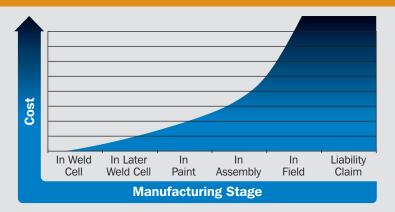
# **Axcess® E with Insight® Delivers What No Other Welding Power Source Can**

Don't just monitor production data, use Insight to provide the information that will create the knowledge you need to improve your welding operation on many levels. When combined with the power of Ethernet connectivity, Miller's Axcess E with Insight provides a comprehensive welding information system. Insight is embedded into the operating system of the Axcess E, eliminating the need for external monitoring devices.

Simply stated, the Axcess E with Insight provides valuable information that can be used to:

- Reduce cost
- Increase productivity
- Enhance quality

## **Cost of a Missed Weld or Defect**



The cost of missed or defective welds can be staggering if they result in a field failure or liability claim. Mistakes are going to happen. The earlier in the manufacturing process they can be detected, the less they cost to fix. Insight can help reduce costs by alerting you to potential welding mistakes.

# **Axcess E with Insight Equals Maximum Impact**

**Key Areas of Your Welding Operation Can Benefit** 



### Benefit from Part Tracking™\* and Set Point Analysis

- Shortens the training curve with step-by-step instructions
- Alerts the operator to missed welds, under/over welding, and incorrect sequences
- Alerts operators when welding results violate predetermined parameter limits



### **Benefit from Detailed Weld Information**

- · Identify recurring quality issues
- Evaluate Weld Signatures<sup>™</sup>\* for anomalies
- Improve weld process set-up and control
- Monitor machine configuration and performance information

<sup>\*</sup>Part Tracking™ and Weld Signature™ are registered trademarks of IMPACT Engineering.

# Streamlines operator training

# **Key System Benefits**

- Helps operator apply welds in the correct sequence
- Monitors system information and trends to prompt preventative maintenance
  - Detects missing or incomplete welds
  - Detects under and over welding
  - Identifies and addresses recurring quality issues
  - Monitors welding parameters to ensure conformance
  - Provides information on faults
    - Provides Weld Signatures<sup>™</sup> with detailed information on welds outside of predetermined parameters
    - Provides information on wire consumption and gas consumption
    - Provides information by time, by part, by work cell, by shift, by operator
      - Provides instant access to information from one machine to your entire fleet via factory network
      - Interfaces quickly and easily with each machine via web browser to change configurations, update code, monitor system performance, and more



### **Benefit from Productivity Information**

- Understand reasons for weld cell downtime
- Track parts, welds, and costs
- Be alerted to welds that exceed predetermined parameter limits
- Review productivity by operator, shift, cell, factory
- Evaluate consumable usage
- Use Insight information to feed continuous improvement system



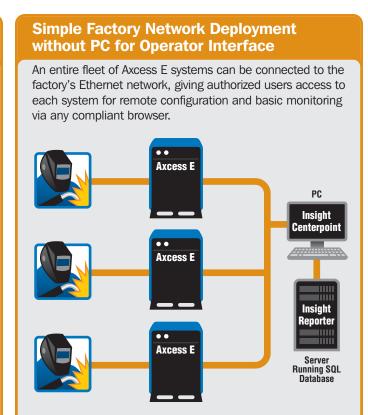
### **Access to Mission-Critical Information**

- · Productivity reports
- Quality reports
- Efficiency reports
- Historical information can be used to spot trends

# **Deployment Options Leverage the Power of Factory Networking**

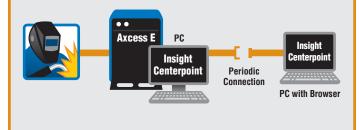
Axcess® E with Insight™ can be deployed in a number of ways, depending on user preference

# **Factory Network Deployment with Insight Centerpoint**<sup>™</sup> and **PC** for **Operator Interface** Maximize the benefit by having a graphical HMI in each station to provide instant feedback and assistance to the operator. Axcess E Insight Centerpoint Insight Reporter Axcess E Server Running SQL Database Centerpoint Axcess E Centerpoint



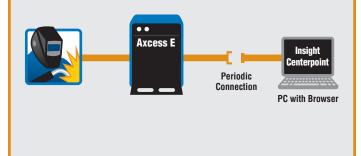
# Factory (Non-Network) Deployment with PC for Operator Interface

With the inclusion of a PC in the welding cell, the operator will benefit from a graphical user interface. Using a laptop or netbook with an Ethernet cable, a direct connection can be made to the Axcess E for either system set-up and configuration, or data extraction.



# **Standalone (Non-Network) Deployment without PC for Operator Interface**

The Axcess E welding system can be deployed without connecting it to an Ethernet network. Many of the benefits of Insight can be derived via periodic connection to each machine. Using a laptop or netbook, with an Ethernet cable, a direct connection can be made to the Axcess E for either system set-up and configuration, or data extraction.



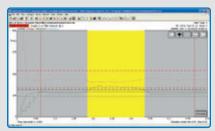
# **Powerful Software Applications**

# Transform Data into Information—Enhance Decision Making

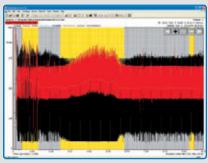
### **Examples**



**History View—Summary** 



Low Resolution Weld Signature™ with Faults Highlighted



High Resolution Weld Signature™ with Faults Highlighted



**HMI View for Operator** 



**Insight Reporter** 

Insight<sup>™</sup> is an application that is integrated into the Axcess® E operating system. The standard Axcess E comes equipped with Insight i100. For even more functionality, upgrade any Axcess E to Insight i1000 or i2000.

| Key Benefits/Features  | i100<br>Standard | i1000 | i2000 |
|--|------------------|-------|-------|
| Support for Insight Centerpoint™ and Insight Reporter™   | •                | •     | •     |
| Manual Weld Control<br>Interface Support   | •                | •     | •     |
| Current, Voltage, Wire, and<br>Gas Data Capture  | •                | •     | •     |
| Part Tracking™*<br>(maximum # of parts)  | 50               | 250   | 250   |
| Detects Missing Welds, Extra<br>Welds, and Incomplete Welds  | •                | •     | •     |
| Totalization of Arc Time,<br>Consumable Usage, Parts and<br>Welds (per hour/per shift since<br>last reset) | •                | •     | •     |
| Calculations of Overall Equipment Effectiveness (OEE)  | •                | •     | •     |
| Total Passed Parts   | •                | •     | •     |
| Total Failed Parts by Reason—<br>Missing Welds, Process Faults,<br>Other (clamp, arc, wire, gas)           | •                | •     | •     |
| Total Failed Welds by Reason—<br>With Duration and Process Faults  | •                | •     | •     |
| Process Control—<br>High/Low Setpoints   | •                | •     | •     |
| Weld History Extraction Support (non-network)  | •                | •     | •     |
| Weld Signature <sup>™</sup> —Low Resolution  | •                | •     | •     |
| Weld Signature <sup>™</sup> —High Resolution   |                  | •     | •     |
| Weld Process Mode Features<br>(MIG, Accu-Pulse®, etc.)   |                  |       | •     |
| Process Mode Feature Analysis  |                  |       | •     |
| Weld Process Production Manager  |                  |       | •     |
| Weld Number Driven Externally  |                  |       | •     |

\*Part Tracking™ and Weld Signature™ are registered trademarks of IMPACT Engineering.

# **Optional Software**

# **Insight Centerpoint**<sup>™</sup>

Insight Centerpoint is a feature-rich graphical user interface designed specifically for use with Axcess® E with Insight. It is an easy-to-use PC-based application that provides access to all welding data and system settings. It can also provide a powerful user interface for operators.

### **View Examples**



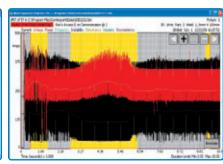
**Administrative View** 



History View—Parts, Welds, Downtime

# Insight Centerpoint is a vital piece of the Axcess E system that facilitates:

- Set-up and organization of your network of Axcess E power sources
- Monitoring system set-up and configuration
- Part Tracking<sup>™</sup>\* set-up, display, and storage
- Weld Signature<sup>™</sup>\* display and storage
- Weld production history display and reports
- Auto-learn of monitoring parameters
- System e-mail notifications
- Full HMI operator interface
- Complete system user security
- Insight Reporter database connectivity



High Resolution Weld Signature™ with Faults Highlighted

# **Insight Reporter**™

Insight Reporter provides the type of enterprise weld production information that can be used to drive your business forward. Insight Reporter provides information via a wide range of preconfigured process, production, and management charts and reports. This information is stored in a SQL server database which contains data from multiple Axcess E and Insight Centerpoint sources.

There are two primary components to Insight Reporter—database software and client software. Any Axcess E networked to a PC running Insight Centerpoint can feed weld production process data to the Insight Reporter SQL database software.

Insight Reporter client software is offered on a per-seat license and can be run from any PC on the network with access to the SQL Server. Examples of some of the standard reports include:

### **Weld Analysis Charts**

- Weld summary
- Welds per time
- Sensor averages
- Process features
- Fault types

### **Part Analysis Charts**

- Part summary
- Parts per time
- Part faults per time
- Faults on a single part
- Weld counts per partParts with missing welds
- Single part report

### **Productivity Charts**

- Arc efficiency
- Parts per hour
- Welds per hour
- Downtime analysis
- Cycle time

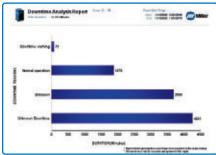
# **Costing Analysis Charts**

- Wire usage
- Gas usage
- Summary reports
- Available by shift, day, week, month, or year

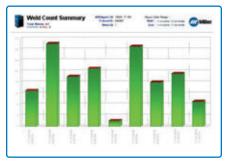
### **Report Examples**



**Weekly Summary Report** 



**Downtime Analysis Report** 



**Weld Count Summary by Hour Report** 

<sup>\*</sup>Part Tracking™ and Weld Signature™ are registered trademarks of IMPACT Engineering.

# **Interface with Axcess® E Via Your Factory Network**

With a browser and access to the company's factory network, authorized employees can interface with the Axcess E to change configurations, check settings, define programs, update firmware, monitor basic functions, troubleshoot the system, and much more. In addition, with external access to the corporate network, the monitoring can be accomplished from anywhere in the world. The use of web pages is easy and intuitive, which means the learning curve is short.

Connecting via a factory network is not the only way to interface with an Axcess E. Direct connection using a laptop or netbook is another way to interface with Axcess E.

### Web Page Examples

### Login Page

**Home Page** 

Provides multiple levels of security that limit access to only those employees with authorization. The login page also provides basic descriptive information about the power source.



Provides quick access to all Axcess E

information and set-up screens.

# **Process Set-Up Page**

Define each of the eight available Axcess programs.



### Weld Sequencer Page

Define each attribute of the weld sequence for each program.



# **Machine Lifetime Page**

Get data on arc time and wire usage over the life of the machine.



### **Short-Term Weld Data Page**

Get a quick reading of arc time and wire usage since last reset.



### **Advanced Monitoring Page**

Customized view of critical machine information.

# **Axcess® E**

# **Built on the Proven Axcess Power Source Platform**

Miller's Axcess family of multi-MIG welders is recognized for setting the standard for rugged reliability and a welding arc second to none. The Axcess E with Insight™ builds on that tradition by also providing information that can be used to reduce cost, increase productivity and enhance quality.

**Multi-MIG capability** including MIG, Pulse, Accu-Pulse®, Accu-Curve™, and Arc Control.

Multiple communication options include two industrial M-12 Ethernet connections, USB host, USB device, and DeviceNet (Auto-Axcess only). Optional connections for external gas flow and wire feed speed sensors, as well as a Manual Weld Control Interface (MWCI).

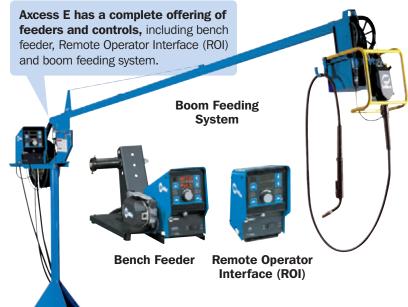
Miller's patented Auto-Line<sup>™</sup> technology allows the Axcess E to operate on any input voltage hook-up, ranging from 190 V to 630 V, 50 or 60 Hz.



**Simple user interface** shortens operator learning curve, making welders productive faster.

Wind Tunnel Technology™ circulates air over components that require cooling, not over electronic circuitry, which reduces contaminants pulled through the machine.

Fan-On-Demand™ cooling system operates only when needed. Reduces amount of electricity used as well as the amount of airborne contaminants pulled through the machine.



Leverage Your Investment in Standard Axcess Equipment



# **Axcess E Field Upgrade Module**

Standard Axcess power sources can be upgraded to Axcess E systems with the addition of the Axcess E Field Upgrade Module. This module comes with everything you need to complete the upgrade and start enjoying all the benefits of the Axcess E with Insight.

For detailed system specifications and ordering information, please refer to Axcess E Systems Literature No. DC/8.05.

