



Insight Centerpoint™

Knowledge to drive your
business forward

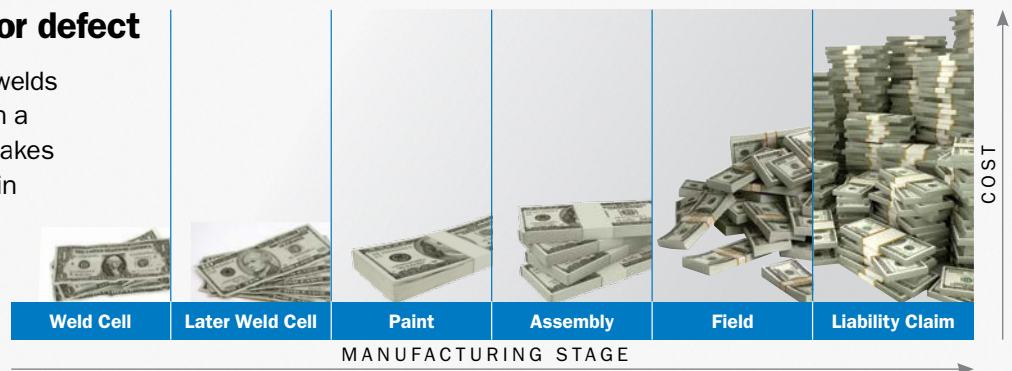
Take Control of Your Welding and Fabrication Process

Insight Centerpoint is an advanced system that provides real-time weld operator feedback to help control all aspects of the welding and fabrication process.

Insight Centerpoint drives both quality and productivity by identifying potential problems before a component leaves the weld cell, improving first-time weld 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.



How can Insight Centerpoint help you?



Improve weld quality

- Do you know if a component is missing any welds?
- Do you know which welds fall within acceptable process limits — and which don't?
- Are weld mistakes escaping detection?
- Could a weld mistake expose your business to a product liability claim?



Increase productivity

- Are all welds present? Have they been applied in the most efficient sequence?
- Do you know which weld operators are most and least productive?
- Are new operators gaining efficiency as quickly as you would like?
- Can you measure the impact of your continuous improvement initiatives?



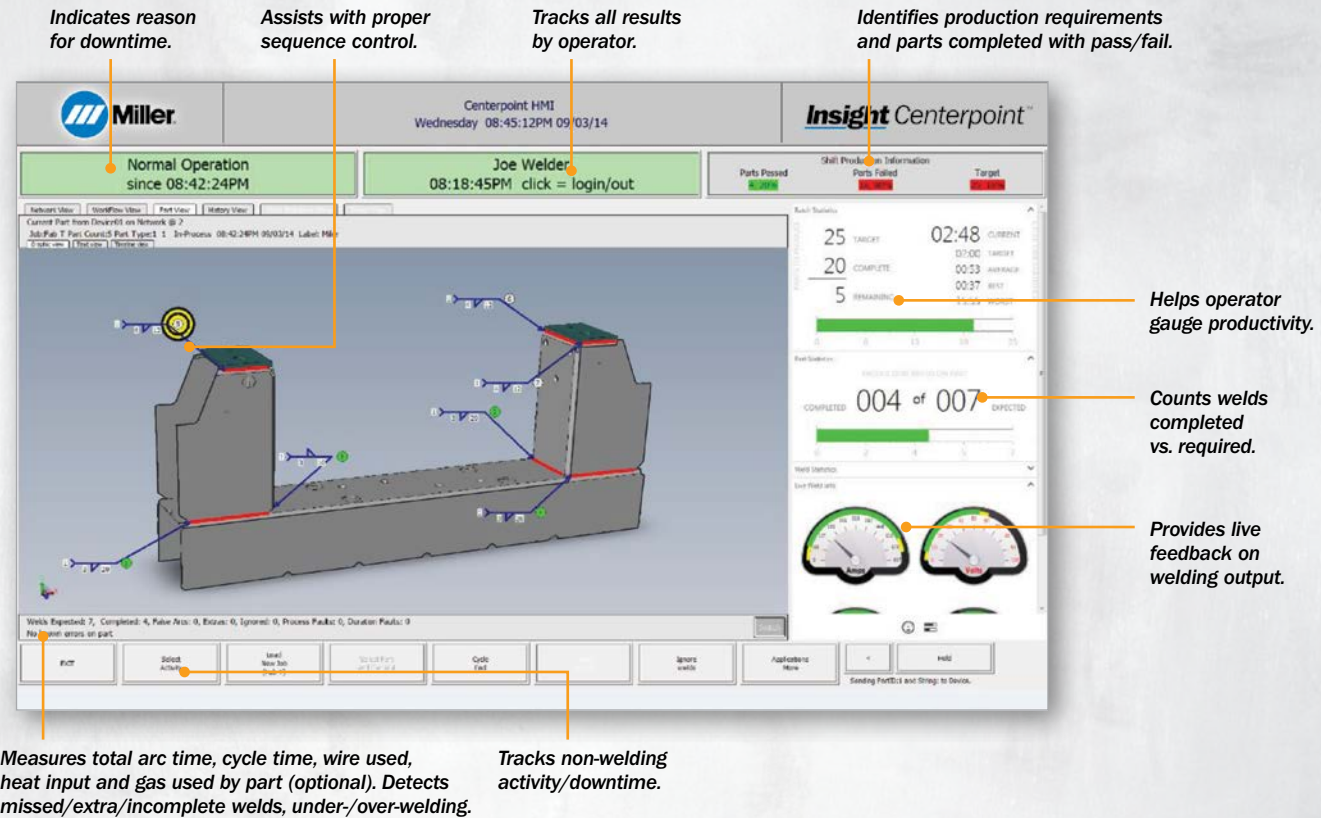
Manage costs

- Can you measure and track the real cost of fabricating a component?
- Is money being wasted due to over-welding?
- Do you have accurate information on wire/gas consumption?

Part Tracking™

Provides complete governance of the welding process, including a visual human-machine interface (HMI) that can guide an operator through a predetermined sequence of welds.

Insight Centerpoint™



Workflow™

Builds on the capability of Part Tracking and dramatically shortens training time by adding non-welding instructions via images, audio and video.

Can be set up to require acknowledgement from weld operator on critical operations before work can continue.

Navigate between available views. Operator can preview the steps in the process.

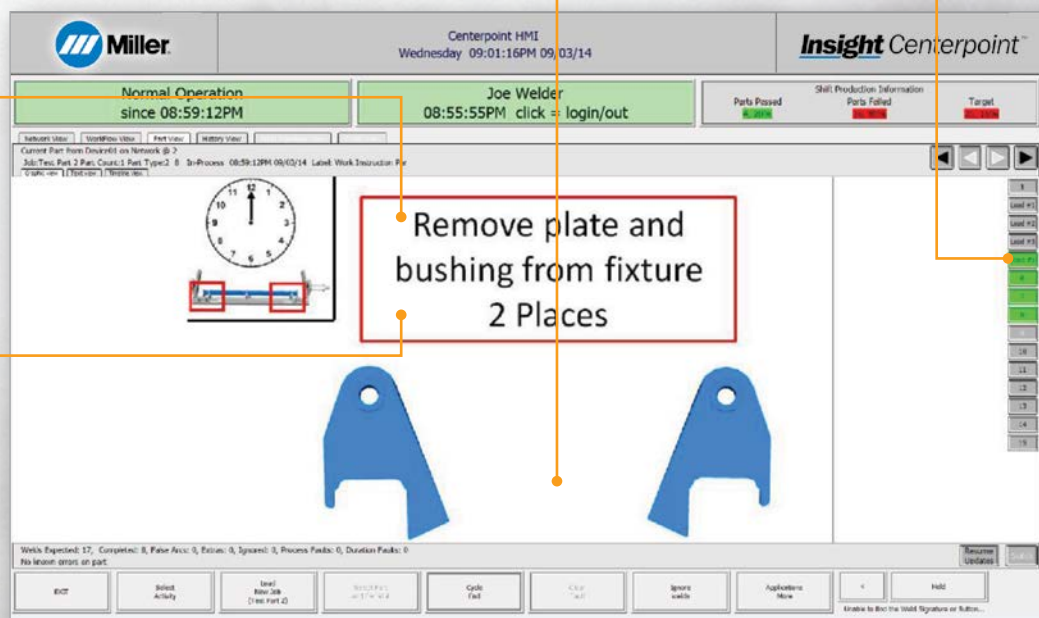
Virtually any type of non-welding information can be presented to the weld operator in a wide variety of formats to provide explanation and guidance.



Complete, step-by-step sequence for welding and assembly of components.

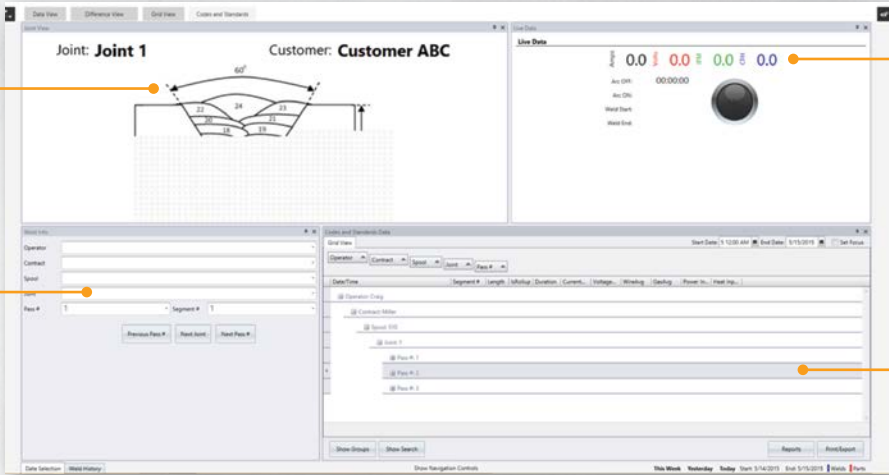
Examples:

- Safety warnings
- Reminders
- How to load the fixture
- How to pack the parts
- Company announcements



Codes and Standards

Captures required information relating actual welding parameters to the specific operator, contract, joint and weld pass to ensure productivity and quality requirements are met — an ideal solution for pipe welding applications.



Shows uploaded images of spool drawings and joint configurations to identify the proper weld procedure.

Displays real-time amperage, voltage and wire-feed speed, providing valuable feedback to the weld operator.

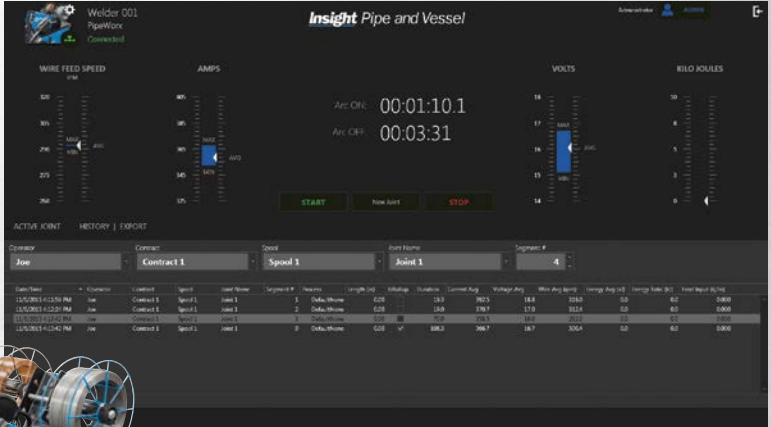
Identifies each weld joint's weld operator, contract, spool, joint number, pass number and segment number.

Summarizes data for all recorded joints in the system.

Insight Pipe and Vessel

Optimized for use with the PipeWorx 400 welding system

- Allows pipe fabricators to record welding parameters for a specific joint
- Real-time data collection efficiently tracks productivity and quality metrics
- Flexible design offers ERP integration so fabricators can import and export jobs in a generic file format, and easily integrate with current business software programs
- The result is reduced data entry time and reduced errors associated with manual weld data collection



Welder 001
PipeWorx 400

WIRE FEED SPEED
100
200
300
400
500

AMPS
100
200
300
400
500

VOLTS
10
20
30
40
50

KILO JOULES
10
20
30
40
50

START **Now Start** **STOP**

ACTIVE JOINT **HISTORY** **EXPORT**

Contract	Spool	Joint Name	Segment #	Operator	Contract	Spool	Joint Name	Segment #	Operator	Contract	Spool	Joint Name	Segment #	Operator	Contract	Spool	Joint Name	Segment #	Operator
Contract 1	Spool 1	Joint 1	1	Operator 1	Contract 1	Spool 1	Joint 1	2	Operator 1	Contract 1	Spool 1	Joint 1	3	Operator 1	Contract 1	Spool 1	Joint 1	4	Operator 1

Insight Centerpoint Benefits:



Weld operators

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



Welding engineers

- Improves weld process setup and control
- Reveals anomalies by providing weld trace signatures

How Insight Centerpoint Works for You

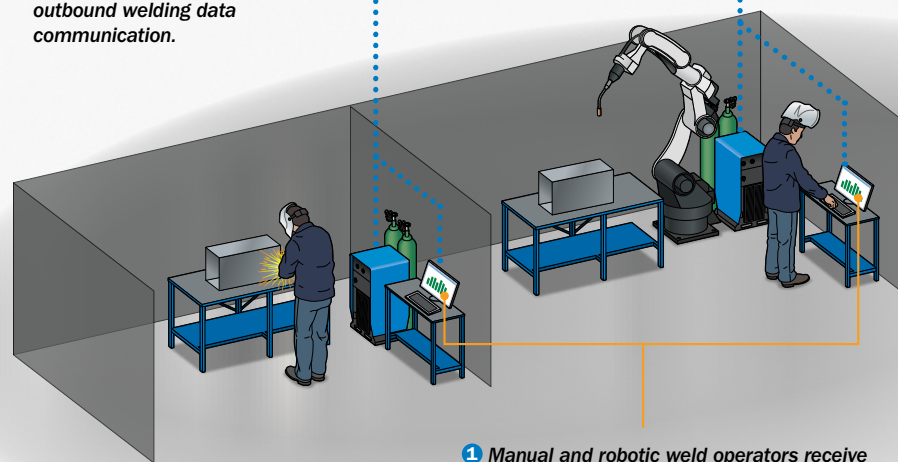
Both semi-automatic and robotic factory network deployments can be supported by Insight Centerpoint. Multiple configurations are available to support individual user preferences, allowing system designs that meet specific needs.

Insight Centerpoint offers benefits for everyone in your operation:

- **Faster training** – operators can become more productive more quickly with instant feedback within the weld cell
- **Saves time** – supervisors can spend less time manually monitoring weld activity, making them more productive
- **On-demand reporting** – management team members can get the information they need when they need it to make important business decisions
- **Historical records** – data can be recorded for every weld, providing proof of critical welding activity and analysis for areas of improvement

2 Power sources are connected via Ethernet to enable both inbound configurations and outbound welding data communication.

3 Production management data is stored on a local server for fast, convenient access.



1 Manual and robotic weld operators receive instant feedback on quality and productivity through a graphical HMI within the weld cell.

4 Insight Reporter™ offers a variety of pre-configured reports for management to monitor productivity and quality.



Quality managers and production managers

- Delivers information that can feed continuous improvement systems
- Shows reasons for weld cell downtime
- Tracks parts, welds and costs
- Shows productivity by operator, shift, cell, factory



Plant management

- Drives profitability to improve the bottom line
- Delivers accurate, decision-ready information
- Shows historical information that can be used to spot trends

Powerful Software Applications

Insight Centerpoint includes numerous features and tools that increase your control over weld processes and provide higher levels of information about your welding operation — resulting in more productivity and profitability.

	Standard	Advanced
Insight Centerpoint Features		
Data capture for current, voltage, wire-feed speed and gas (optional)	●	●
Process Control — high/low set points	●	●
Jobs — central repository for all Part Tracking™ info	●	●
Detects missing, extra and incomplete welds	●	●
Totals arc time, wire/gas usage, parts and welds/time period	●	●
Calculates overall equipment effectiveness	●	●
Weld history extraction	●	●
Codes and Standards	●	●
Auto Learn — automatically determines parameter thresholds	●	●
Weld Signature™ — low resolution (averages)	●	●
Weld Signature — high resolution (1 KHz)*		●
WorkFlow™ — non-welding work instructions		●
Cost Calculator — understand cost to fabricate a part		●
Signature Analysis (peak/background voltage and current, pulse width/frequency and more)*		●
Weld Process Production Manager (WPPM) — track and alarm a variety of basic preventive maintenance tasks		●

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

*Not available on Dynasty models.

Insight Centerpoint Reporter

Provides information via a wide range of preconfigured charts and reports.

Weld analysis charts

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

Part analysis charts

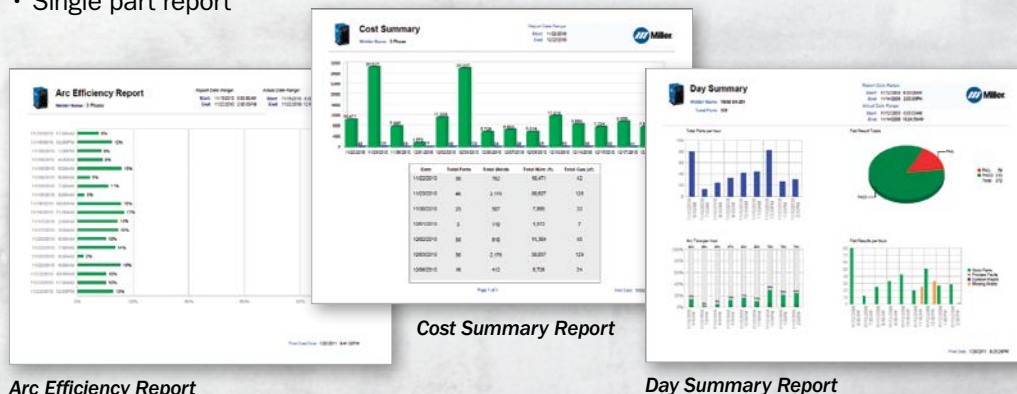
- Part summary
- Parts per time
- Part faults per time
- Faults on a single part
- Weld counts per part
- Parts with missing welds
- Single part report

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



More Options for More Applications

Insight Centerpoint™

Insight Core™

Every welding operation has unique needs for information about its processes — which is why Miller offers a wide range of Welding Intelligence™ capabilities.

Insight Centerpoint brings advanced process control information into the actual weld cell to help manage the welding and fabrication process. **Insight Core** is focused on monitoring outputs of the welding process and providing management information on productivity and quality.

Which system is right for you?

Some customers benefit from a combination of both **Insight Centerpoint** and **Insight Core**, pairing each system with the welder and process it best supports. See below for a comparison of selected key features that can benefit your business.

	Insight Centerpoint	Insight Core
Installation		
Integrates with Axxess® and Auto-Axxess™ power sources		●
Integrates with Axxess E and Auto-Axxess E power sources	●	
Integrates with Continuum™ and Dynasty® 280 DX	●	●
Integrates with 14-pin-compliant Miller® power sources		●
Web-browser based: No software required		●
Key Performance Indicators (KPIs)		
Weld detail: Amps, volts, weld duration	●	●
Productivity: Arc-on time, weld deposition*	●	●
Quality: Evaluates every weld compared to predefined threshold limits	●	●
Goals: Set definable targets to improve arc-on time, weld deposition* and arc starts		●
All information reported by date/time, work cell, shift and power source	●	●
Business Intelligence Tools/Reports		
Real-time notifications of key events	●	●
Comparison reports available for any combination of power sources and weld cells	●	●
All reports capable of exporting to Microsoft Excel-compatible format	●	●
Advanced reports to analyze welds, parts, productivity and more	●	
Capable of reporting OEE (overall equipment effectiveness)	●	
Cost calculator: Total cost for wire, gas, electricity, and labor per weld and part	●	
Multilingual user interface and reporting	●	●
Advanced Real-Time Process Control		
Part Tracking: Visually and sequentially guides operator through weld process; monitors each weld for current, voltage, wire-feed speed, duration and gas flow (optional)	●	
WorkFlow: Flexible system that governs the entire welding and fabrication process by providing visual non-welding work instructions in addition to the benefits of Part Tracking	●	
Codes and Standards: Captures required information relating actual welding parameters to the specific operator, contract, joint and weld pass to ensure productivity and quality requirements are met	●	
Monitors pulse width/frequency, short circuit frequency, peak/background current/voltage	●	
Energy/heat input calculation for total welded/assembled parts	●	
Real-time operator alerts of activities such as over-/under-welding, missing/incomplete welds and sequencing errors; provides sequential weld guidance for the operator	●	
Data Storage		
Internet-based data storage		●
On-site data storage	●	

*Weld deposition data available with Axxess, Auto-Axxess and Continuum power sources and MPa wire feeders only.



Insight Centerpoint

Insight Welding Intelligence™ solutions deliver actionable information that can be used to boost productivity, improve quality, manage cost and drive your business forward.



	Axxess® E / Auto-Axxess™ E	Continuum™	Dynasty® 280 DX with Insight	PipeWorx 400
License				
Single (license for a single unit)	●	●	●	● ¹
Site (licenses for one physical facility)	●	●	●	
Software Options (see page 6 for full feature listing)				
Standard Part Tracking Codes and Standards Weld Signature™ (low resolution)	Factory installed	●	●	Codes and standards only. ¹ Uniquely designed for pipe and vessel.
Advanced (optional) Workflow Weld Signature™ (high resolution) ²	●	●	●	
Package (optional) Standard and Advanced		●	●	
Database Reporter				
Insight Reporter (one per PC)	●	●	●	
Insight Reporter SQL (one per facility)	●	●	●	

¹ This is a single module. Includes hardware connection and software.

² High resolution not available with Dynasty 280 DX with Insight.

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