

# Continuum™ Systems

**Advanced MIG  
Welding Systems** 

## Quick Specs

### Heavy Industrial Manufacturing

Construction equipment  
Automotive components  
Recreational vehicles  
Farm machinery  
Office furniture  
Mining machinery  
Industrial fabrication

### Processes

Advanced MIG processes:  
Accu-Pulse® pulsed MIG (GMAW-P)  
Versa-Pulse™  
RMD®  
MIG (GMAW)  
High-deposition MIG (GMAW)  
Flux-cored (FCAW)  
Air carbon arc (CAC-A)  
**350:** Rated for 1/4-inch carbons  
**500:** Rated for 3/8-inch carbons

**Input Power** Auto-Line™ 230–575 V  
3-phase, 50/60 Hz

### Rated Output

**350:** 350 A at 100% duty cycle  
**500:** 500 A at 100% duty cycle

### Output Range

**350:** 20–400 A, 10–44 V  
**500:** 20–600 A, 10–44 V

## Take your welding to the next level

*Advanced industrial welding solution improves productivity through weld quality, ease of use and system flexibility.*

The Continuum system delivers exceptional arc performance with less spatter and higher-quality welds on both thin and thick metals. With user-friendly controls and system modularity, Continuum will make challenging jobs easier, and improve productivity — giving you a competitive advantage.

## Insight

Integrated Welding Intelligence™ solutions deliver information to measure and improve your welding operation. See page 5 for more information.



**New standard for productivity and weld quality**



**Reduce set-up time**



**Easy to add capabilities**

Continuum 500 MIGRunner™ package shown (MIG 4/0 kit and motor cable not pictured). Filler metal sold separately.



Power source is warranted for three years, parts and labor.  
Original main power rectifier parts are warranted for five years.  
Gun warranted for 90 days, parts and labor.



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An ITW Welding Company  
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Appleton, WI 54912-1079 USA

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**MillerWelds.com**  




## Introducing the next generation of advanced industrial welding systems.

*The excellent welding performance you expect from Miller's advanced welding systems is taken to the next level with Continuum, which delivers easier arc starts and more-stable arc performance — providing better results from weld operators of all skill levels.*



### Power source design

**Smart and powerful digital design** has the fast response needed to deliver the most stable welding performance for better welding results.

**Developed as a platform** to meet current and future needs with integrated expansion capabilities.

**Welding information management systems**, Insight Core™ (standard) and Insight Centerpoint™ (optional), improve your welding operations by increasing productivity, improving quality and managing costs.

### Feeder design

**Tru-Feed™ technology** provides precise feeding operation for stable arc performance.

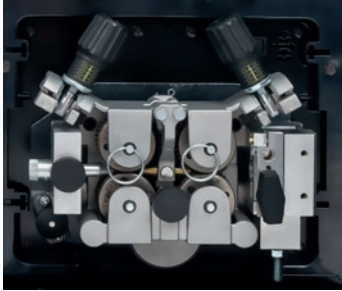
- **Low-inertia motor** provides faster response for the best arc starts with the least amount of spatter.
- **Balanced-pressure drive-roll design and tensioners** feed wire in its truest and straightest form for consistent feedability, resulting in better welding performance.

**User interface** makes the system easy to set up and adjust with minimal training.



**Superior  
arc  
performance**

# Continuum™ System Features



**Tru-Feed™ technology** provides precise feeding operation for stable arc performance.

- **Low-inertia motor** provides faster response for the best arc starts with the least amount of spatter.
- **Balanced-pressure drive-roll design and tensioners** feed wire in its truest and straightest form for consistent feedability, resulting in better welding performance.

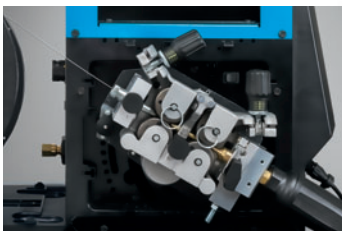
**Spring-loaded Accu-Mate™ connection** aligns gun perfectly in the drive-roll carrier — preventing the gun from being pulled loose and providing consistent wire feeding.



**Quick-change dual-bearing drive rolls** give you more consistent wire feeding.

**Drive rolls and guides are common** with other Miller industrial feeders (use existing, not new parts).

**Inlet guide installation is toolless.**



**Toolless positive-locking rotatable drive assembly** allows operator to rotate the drive, eliminating severe bends in the wire feed path. This extends gun-liner life and aids in feeding difficult wires.



**Display and controls** for program select, volts/arc length and wire feed speed

**Memory buttons** for quick program recall

**LCD setup screen**

- For easy selection of welding processes and functions
- Industrial design, full color display

**Arc control** to fine tune the welding arc

**Trigger hold, jog and purge buttons**



**Quality-engineered rear cable management** protects your connections to keep you productive.

**Wind Tunnel Technology™**

Internal air flow that protects electrical components and PC boards from dirt, dust, debris — greatly improving reliability.

**Fan-On-Demand™** operates only when needed reducing noise, power consumption, and the amount of airborne contaminants pulled through the machine.



**Auto-Line™ power management** technology allows for any input voltage hook-up (230–575 V) with no manual linking, providing convenience in any job setting. Eliminates weld defects caused by dirty or unreliable power.



# Continuum™ System Advantages

## Intuitive user interface makes Continuum easier to use



Reduce set-up time

**Simple to set up** and adjust with minimal training.

**LCD display** shows complete words, graphics and numeric values.

**Memory buttons** allow weld operators to quickly and easily change programs.

**Remote connection** to easily view and adjust machine parameters from virtually anywhere in the world using any Web-enabled device.

**Easily update firmware**, configure machine settings, view diagnostics and more.

**USB functionality** allows custom settings to be saved on a USB flash drive for duplicating settings for a specific operator, job, or to manage fleet configurations. The USB port is also used to update software.

**Ability to set locks and limits** for improved quality control using webpages.

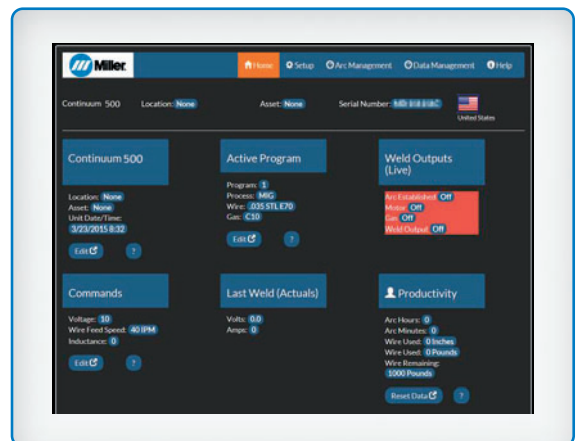





*The Continuum user interface makes machine operation easier than ever.*

## Easy system interface and configuration via the Continuum webpage interface



Shown with direct connection to PC.



- **To use the webpage interface connect to the Continuum power source one of three ways:**
  -  Connect to factory network via Wi-Fi
  -  Connect to factory network via Ethernet cable
  -  Direct connect to PC via Ethernet cable (see page 9 for recommended Ethernet cable)
- **Select language preference**
- **Check system status and vital information**
- **Configure machine settings**
  - Locks and limits
  - Enable programs
  - Enable processes
- **Set up programs**
- **View productivity information and various logs**
  - Resettable/lifetime arc hours
  - Error logs
  - Heat input
  - And more
- **Great for validating proper system setup as well as troubleshooting issues**

# Continuum™ System Advantages

## Continuum grows with your business needs



Easy to add capabilities

**Adaptable** to a variety of weld cell configurations and requirements.

**Control interface** can be located on the bench feeder or on the remote operator interface (ROI) (see page 11 for configurations).

**Welding Intelligence™** Improve your welding operations by increasing productivity, improving quality and managing costs.

**Easily add processes and programs** via the USB interface.

**Wire feeder is easily configurable** for standard spool sizes, 60-pound spools or bulk-feeding systems.

**Auxiliary power outlets** (factory option) for convenient operation of 120-volt electrical devices.

## Insight Welding Intelligence™



### Insight Core™ (Standard)

Simplified, internet-based solution—reports operator productivity and verifies weld parameters.

### Insight Centerpoint™ (Optional)

Advanced, real-time operator feedback solution—prevents missed welds, enforces proper weld sequences and ensures consistent weld quality.

Learn more at [MillerWelds.com/insight](http://MillerWelds.com/insight)

## Insight Centerpoint Ordering Information



**Ethernet Cable**  
See page 9 for available lengths



Insight Centerpoint consists of two required components— a capability pack and a Centerpoint license.

### Capability Pack (power source)

- 301297** Standard capability
  - 301322** Standard and advanced capability
  - 301257** Advanced capability (requires standard capability)
- A capability pack is required to activate Centerpoint in the welding power source. One capability pack is required per Continuum System.

### Centerpoint License (PC)

- 301255** Version 9.0 single license (one per PC)
  - 301256** Version 9.0 site license (for one physical facility)
- One license is required for each computer running Centerpoint.

### Insight LTD Gun Q401JS3EML

Gun provides built-in controls for Insight Centerpoint.

### Insight LTD Remote 301383

Wired remote that can be added to any MIG gun. Provides controls for Insight Centerpoint

# Continuum™ System Processes

## Take the performance of each process to the highest level

### Accu-Pulse®

- The most popular process for majority of industrial welding applications
- Most adaptive arc on 16 gauge (1.6 mm) and thicker
- Designed for all weld positions

### Versa-Pulse™

- Fast, low-heat, low-spatter process — for materials 1/4 inch (6.35 mm) and thinner
- Great for gap filling
- Shortest arc length/lowest pulse voltage for lower heat and lower spatter at higher speeds

### RMD®

- Lowest heat process, best for gap handling
- Limited travel speed

### MIG (short circuit)

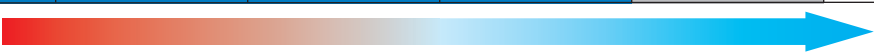
- Lower spatter than traditional MIG welders
- Better arc performance with silicon bronze and coated materials

### High-deposition MIG

- Higher deposition rates than standard spray transfer on thicker materials
- Designed for welding applications in which spray transfer is preferred



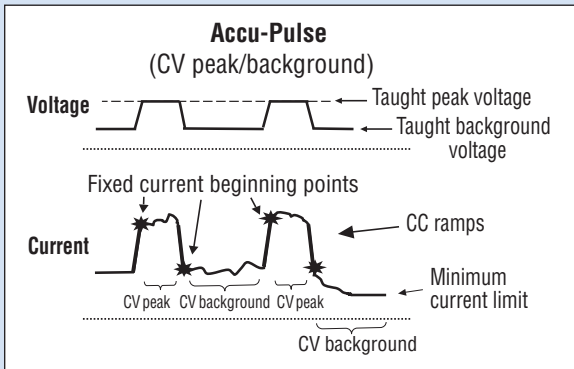
Best For	Standard Spray	High-Deposition MIG	Accu-Pulse	Versa-Pulse	Short Circuit	RMD
Deposition	A	A	A	B	D	D
Gap Filing	D	D	B	B	A	A
Low Heat Input	D	C	B	A	A	A
Out-of-Position Welds			A	B	B	B
Low Spatter	A	A	A	B	C	B
Thick Metals	A	A	A	C	D	D
Thin Metals			B	A	A	A
Increased Travel Speed	A	A	A	A	B	C

HOT  COLD

Ratings A, B, C, and D are relative values. An "A" rating indicates a best fit between your performance needs and process. A "blank" rating indicates that the process is not recommended for that application.

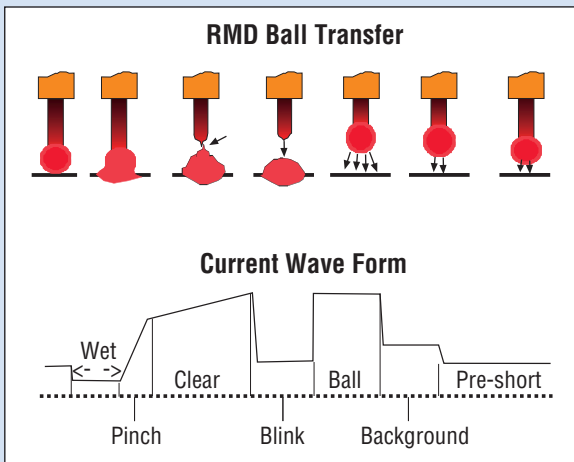
# Multi-MIG® Process Capability Through Software-Based Programs

## Accu-Pulse®



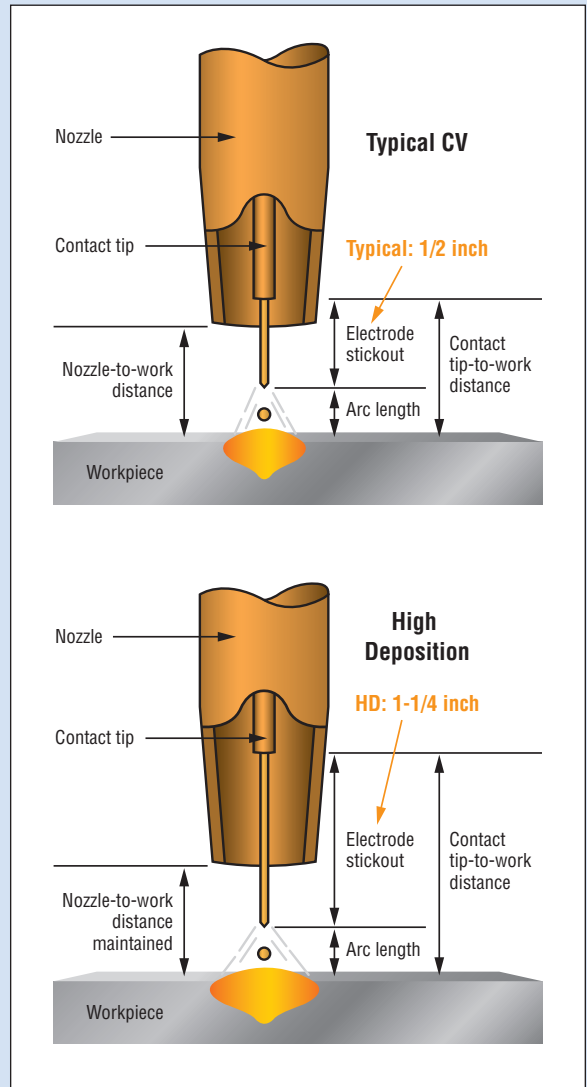
The Accu-Pulse process allows for precise control of the pulse arc. Accu-Pulse provides optimum molten puddle control and has power to increase wire feed speeds and deposition 20 to 25 percent in many applications. In most cases, slightly different ratios of gas mixtures will perform well using a similar program and adjusting arc length or the appropriate arc control for the selected process. Contact Miller for more information on less common materials and gas combinations.

## RMD® (regulated metal deposition)



The RMD process is a precisely controlled short-circuit transfer. It is a method of detecting when the short is going to clear and then rapidly reacting to this data changing the current (amperage) levels. Features proactive dynamic puddle control.

## High-deposition MIG



High-deposition MIG is a constant voltage (CV), gas metal arc welding (GMAW) process. The unique process utilizes a slightly longer wire stick-out creating a preheat condition of the wire with lower average voltage. Wire feed speed rates are increased to achieve the same current levels allowing for increased deposition and faster travel speeds — all with reduced heat input. Thicker plate material applications will benefit from the process by providing greater operator appeal, improved stability, quality penetration and cleaner surface profiles.

# Continuum™ Power Source Specifications (Subject to change without notice.)



Model	Amp/Volt Ranges	Rated Output	Amps Input at Rated Output, 50/60 Hz, 3-Phase							Max. Open-Circuit Voltage	Dimensions	Net Weight
			230 V	380 V	400 V	460 V	575 V	KVA	KW			
Continuum 350	20–400 A 10–44 V	350 A at 31.5 VDC, 100% duty cycle	36.7 0–1*	21.8 0–1*	20.8 0–1*	18.8 0–1*	14.6 0–1*	14.4 0.8*	13.8 0.17*	75 VDC	H: 27.19 in. (691 mm) (including lift eye) W: 17.5 in. (444 mm) D: 28.13 in. (714 mm)	127 lb. (57.6 kg)
Continuum 500	20–600 A 10–44 V	500 A at 39 VDC, 100% duty cycle	57.6 0–1*	34.7 0–1*	33.2 0–1*	28.9 0–1*	23.3 0–1*	23.1 0.8*	21.9 0.17*	75 VDC		148 lb. (67.1 kg)

\*While idling.

Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

# Continuum™ Feeder Specifications (Subject to change without notice.)

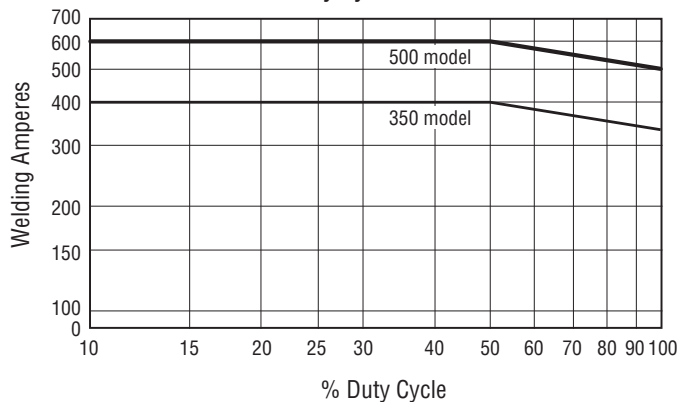


Input Power	Welding Power Source	Input Welding Circuit Rating	Wire Feed Speed	Wire Diameter Capacity	Maximum Spool Size Capacity	Dimensions	Net Weight
50 VDC	Continuum 350 or 500	500 A at 100% duty cycle	<b>Standard</b> 50–1,000 ipm (1.27–25.4 m/min.)	.035–5/64 in. (0.9–2.0 mm)	18 in. (457 mm) 60 lb. (27 kg)	H: 13.81 in. (351 mm) Single W: 16.31 in. (414 mm) Dual W: 17 in. (432 mm) D: 29.69 in. (754 mm)	<b>Single</b> 43 lb. (19.5 kg) <b>Dual</b> 61.5 lb. (27.9 kg)

Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

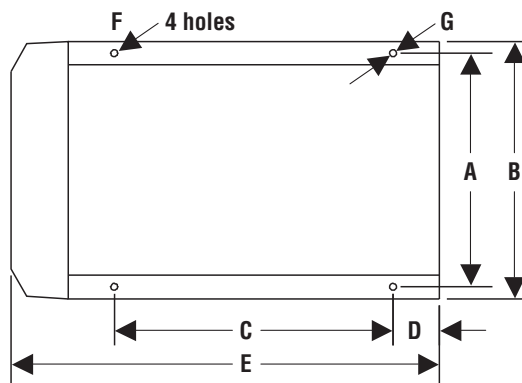
# Performance Data

Duty Cycle Chart



# Mounting Specifications

Bottom View



- A. 16.093 in. (409 mm)
- B. 17.5 in. (444 mm)
- C. 17.375 in. (441 mm)
- D. 2.281 in. (58 mm)
- E. 26.172 in. (665 mm)
- F. .468 in. (12 mm) dia.
- G. .468 in. x 1 in. (12 x 25 mm)

**Height:** 27.187 in. (691 mm)  
**Width:** 17.5 in. (444 mm)  
**Depth:** 28.125 in. (714 mm)



## Genuine Miller® Accessories



### Continuum™ Running Gear/Cylinder Rack 301264

Small footprint and easily maneuverable, with cylinder rack low enough that you do not have to lift bottles.



### Industrial MIG 4/0 Kit

**300390** For single-wire feeders

**300957** For dual-wire feeders

Consists of flowmeter regulator with 10-foot (3 m) gas hose, 10-foot (3 m) 4/0 feeder weld cable with lugs, and 15-foot (4.6 m) work cable with 600-amp C-clamp. Dual kit comes with two flowmeter regulators and gas hoses.



### Continuum Cable Hanger 301213

Used to hang welding cables or MIG guns when not welding.



### Hanging Bail 058435

Used for suspending feeder over work area.

### Continuum Control/Motor Cables

**263368003** 3 ft. (0.9 m)

**263368015** 15 ft. (4.6 m)

**263368020** 20 ft. (6.1 m)

**263368025** 25 ft. (7.6 m)

**263368050** 50 ft. (15.2 m)

**263368080** 80 ft. (24.4 m)

Connects power source to feeder or remote operator interface. Also connects remote operator interface to remote motor drive.



### Ethernet Cables

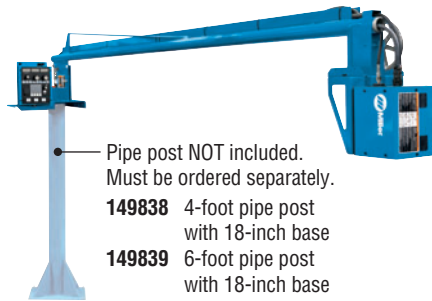
**300734** 9.8 ft. (3 m)

**300735** 16.4 ft. (5 m)

**300736** 32.8 ft. (10 m)

Ethernet cables with M12/RJ45 connectors.

Connects power source to Ethernet port of PC or network. For use with webpages and Insight Centerpoint™.



Pipe post NOT included. Must be ordered separately.

**149838** 4-foot pipe post with 18-inch base

**149839** 6-foot pipe post with 18-inch base

### Continuum Swingarc™ Boom-Mounted Wire Feeders

**951634** 8 ft. (2.4 m) single-wire

**951635** 12 ft. (3.7 m) single-wire

**951725** 12 ft. (3.7 m) dual-wire

**951636** 16 ft. (4.9 m) single-wire

## Coolant Systems



### Continuum Cooler 301214

For use with water-cooled torches rated up to 500 amps. Integrated coolant flow switch ensures coolant is flowing in the system. The Continuum cooler mounts to the bottom of the Continuum power source. Power is supplied via an internal connection with the power source.

### Low-Conductivity Coolant 043810

Sold in cases of four one-gallon recyclable plastic bottles. Miller coolants contain a base of ethylene glycol and deionized water to protect against freezing to -37 degrees Fahrenheit (-38°C) or boiling to 227 degrees Fahrenheit (108°C). Also contains a compound that resists algae growth.

## Bernard™ Best of the Best (BTB) MIG Gun



Ergonomic handle with rubber grip and rear ball and socket swivel to maximize comfort while welding.

Fixed 60-degree neck with aluminum armor.



The Bernard BTB MIG gun (with limited release straight handle) that ships with Continuum has the best of all Bernard options. This 400-amp, air-cooled MIG gun is recommended for heavy manufacturing environments.

Standard QUICK LOAD™ liner AutoLength™ system.

- QUICK LOAD liners require less than half the time and effort to replace (compared to conventional liners)
- The liner feeds from the front of the MIG gun — no need to remove the gun from the feeder or to cut and waste wire
- The AutoLength power pin contains a spring-loaded module that applies constant pressure on the liner, keeping it seated properly in the retaining head
- Allows for up to one-inch (2.54 cm) forgiveness if the liner is too short or moves during welding
- Reduces burnbacks and improves wire feedability by aligning wire from liner with contact tip

## Continuum™ Swingarc™

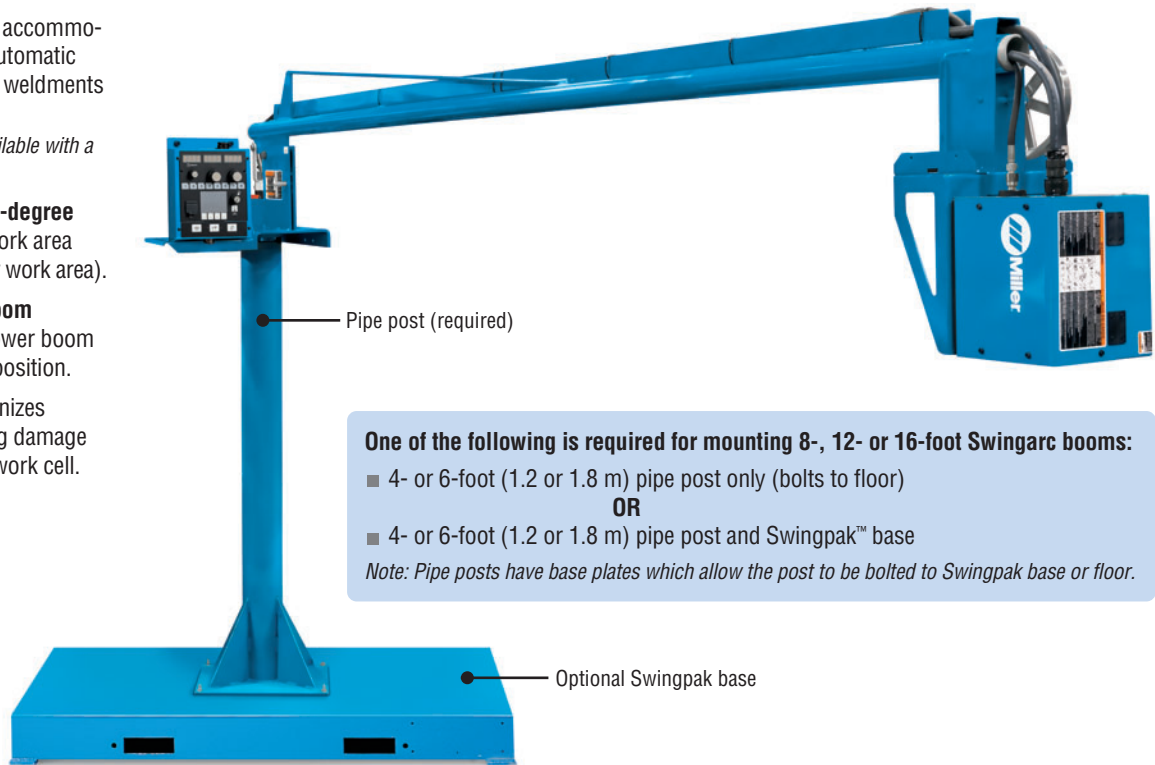
8-, 12- or 16-foot booms to accommodate a wide variety of semiautomatic applications, including large weldments and hard to reach areas.

Note: Dual-wire model only available with a 12-foot boom.

360-degree rotation and 60-degree lift angle maximizes your work area (16-, 24- or 32-foot diameter work area).

Unique counterbalanced boom makes it easy to raise and lower boom and automatically holds its position.

In-boom cable routing organizes hoses and cables, preventing damage and maintaining an orderly work cell.



One of the following is required for mounting 8-, 12- or 16-foot Swingarc booms:

- 4- or 6-foot (1.2 or 1.8 m) pipe post only (bolts to floor)
- OR
- 4- or 6-foot (1.2 or 1.8 m) pipe post and Swingpak™ base

Note: Pipe posts have base plates which allow the post to be bolted to Swingpak base or floor.

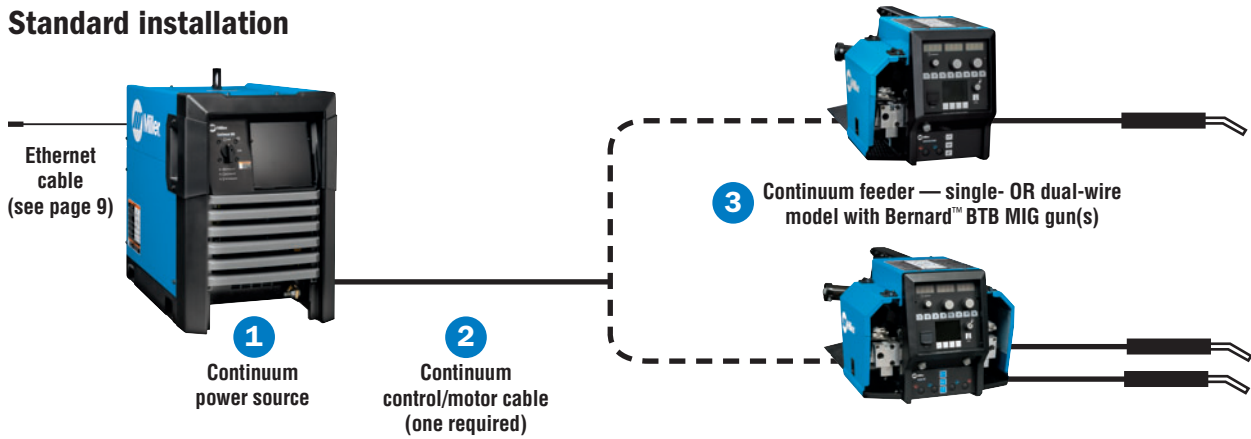
### Specifications and Usage (Subject to change without notice.)

Usage	Model	Stock No.	Dimensions	Net Weight
For 8-, 12- or 16-ft. Swingarc	4 ft. pipe post	149838	H: 4 ft. (1.2 m)	110 lb. (49.9 kg)
	6 ft. pipe post	149839	H: 6 ft. (1.8 m)	130 lb. (59 kg)
	Swingpak base	183997	L: 65 in. (1.7 m), W: 50.875 in. (1.3 m)	285 lb. (129 kg)

Note: Swingarc includes 10-foot gas hose and 10-foot weld cable for the operator to hook up.

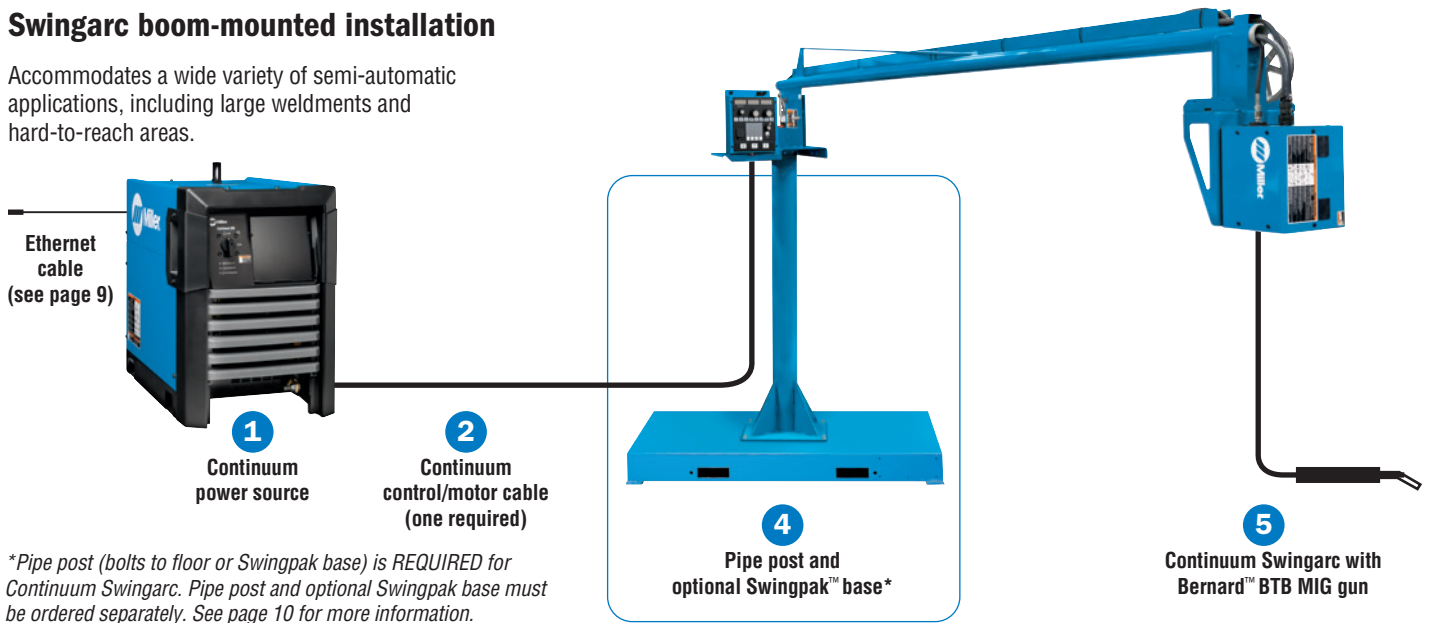
# Typical Continuum™ Installations

## Standard installation



## Swingarc boom-mounted installation

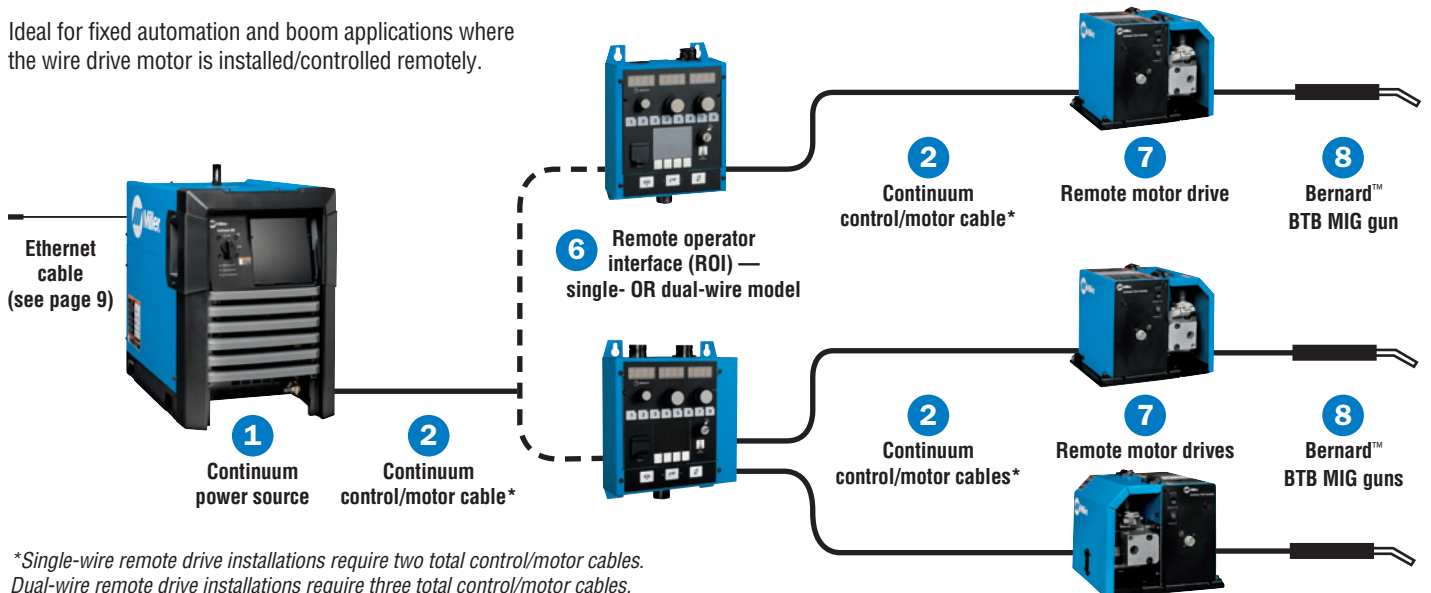
Accommodates a wide variety of semi-automatic applications, including large weldments and hard-to-reach areas.



\*Pipe post (bolts to floor or Swingpak base) is **REQUIRED** for Continuum Swingarc. Pipe post and optional Swingpak base must be ordered separately. See page 10 for more information.

## Remote drive motor installation

Ideal for fixed automation and boom applications where the wire drive motor is installed/controlled remotely.



\*Single-wire remote drive installations require two total control/motor cables. Dual-wire remote drive installations require three total control/motor cables.

# Ordering Information

Note: As the technological advances offered by Continuum extend beyond the capability of Axxess systems, the two systems are not compatible. Continuum systems are designed to allow future upgradability, to expand with your operation's needs.

Complete Continuum System	Stock No.	Description	Qty.	Price
Continuum™ 350 MIGRunner™	951671	Consists of Continuum power source on running gear, Continuum single bench feeder, 3 ft. control/motor cable, Bernard™ BTB Gun, cable hanger, .035/.045 in. V-grooved drive rolls and single-wire feeder industrial MIG 4/0 kit (see page 9 for kit contents)		
Continuum™ 500 MIGRunner™	951672			

Configure a Custom Continuum System (See corresponding item numbers in Typical Continuum Installations on page 11.)

Power Sources					
1	Continuum™ 350	907636	Power source only		
		907636001	Power source with running gear/cylinder rack		
		907637	Power source with auxiliary power		
Continuum™ 500	907640	Power source only			
	907640001	Power source with running gear/cylinder rack			
	907641	Power source with auxiliary power			
Wire Feeders and Gun					
3	Continuum™ Bench-Style Wire Feeders	951631	Single-wire model with Bernard™ BTB Gun 400 A and .035/.045 in. V-groove drive rolls		
		951673	Dual-wire model with two Bernard BTB Guns 400 A and .035/.045 in. V-groove drive rolls		
5	Continuum™ Swingarc™ Boom-Mounted Wire Feeders	951634	8 ft. single-wire model with Bernard BTB Gun 400 A and .035/.045 in. V-groove drive rolls		
		951635	12 ft. single-wire model with Bernard BTB Gun 400 A and .035/.045 in. V-groove drive rolls		
		951636	16 ft. single-wire model with Bernard BTB Gun 400 A and .035/.045 in. V-groove drive rolls		
		951725	12 ft. dual-wire model with two Bernard BTB Guns 400 A and .035/.045 in. V-groove drive rolls		
6	Remote Operator Interface	301227	Control box for single-wire drive assembly		
		301434	Control box for dual-wire drive assembly		
7	Remote Motor Drive	301216	Left-hand single-wire drive assembly		
		301215	Right-hand single-wire drive assembly		
8	Bernard™ BTB Gun	Q4015VS3EML	400 A, 15 ft. (4.6 m). TOUGH LOCK™ HD consumables and QUICK LOAD™ liner AutoLength™ system		
Cables					
2	Continuum Control/Motor Cables		See page 9 for available lengths		
			Ethernet Cables	See page 9 for available lengths	
Swingarc Mounting Equipment					
4	Pipe Post		See page 10 for available lengths		
		183997	Optional mounting platform for pipe post		
Welding Information Solutions					
Insight Centerpoint™		301297	Standard capability		
		301322	Standard and advanced capability		
		301257	Advanced capability (requires standard capability)		
		301255	Version 9.0 single license		
		301256	Version 9.0 site license		
Insight Reporter™		300709	Management reporting system client software		
Insight Reporter™ SQL Database		300710	Management reporting system database software (one required per server)		
Insight LTD Gun		Q4015JS3EML	Gun provides built-in controls for Insight Centerpoint™		
Insight LTD Remote		301383	Wired remote that can be added to any MIG gun. Provides controls for Insight Centerpoint		
Options and Accessories					
Running Gear/Cylinder Rack		301264	For Continuum power source		
Industrial MIG 4/0 Kit			Available for single and dual bench feeders. See page 9 for stock numbers and contents		
Continuum Cable Hanger		301213	Used to hang welding cables or MIG guns when not welding		
Hanging Bail		058435	Used for suspending feeder over work area		
Continuum Cooler		301214	Integrated 2-gallon capacity cooler for water-cooled MIG guns		
Coolant		043810	1-gallon plastic bottle (must be ordered in quantities of 4)		
DSS-9M		041793	Dual schedule switch that can be added to any MIG gun		

Date: \_\_\_\_\_ Total Quoted Price: \_\_\_\_\_

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