

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

New generation of advanced industrial welding solutions 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.



New!



New standard for productivity and weld quality



Reduce set-up time



Easy to add capabilities



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

Continuum 500 shown with wire feeder, Bernard™ Best of the Best (BTB) MIG Gun and running gear/cylinder rack.



Miller Electric Mfg. Co.
An ITW Welding Company
1635 West Spencer Street
P.O. Box 1079
Appleton, WI 54912-1079 USA

Equipment Sales US and Canada
Phone: 866-931-9730
FAX: 800-637-2315
International Phone: 920-735-4554
International FAX: 920-735-4125

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.



All-new 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.

All-new feeder design

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

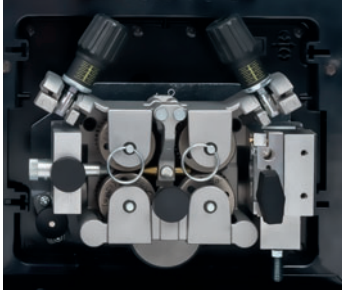
- **New low-inertia motor** provides faster response for the best arc starts with the least amount of spatter.
- **Balanced-pressure drive-roll design and tensioners** feed wire in its truest and straightest form for consistent feedability, resulting in better welding performance.

New 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.

- **New 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.

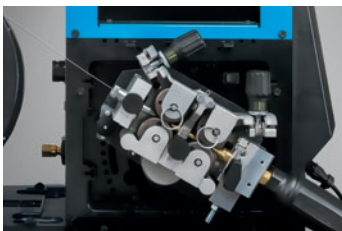
Spring-loaded Accu-Mate™ connection aligns gun perfectly in the drive-roll carrier — preventing the gun from being pulled loose and providing consistent wire feeding.



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.

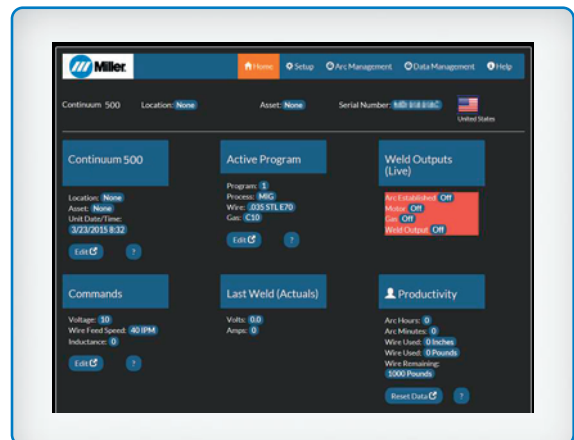
Easily update firmware, configure machine settings, view diagnostics and more.

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.



Easy system interface and configuration via the Continuum webpage interface



- **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 where it's most convenient to the customer including on the power source, on the feeder and on the remote operator interface (ROI).

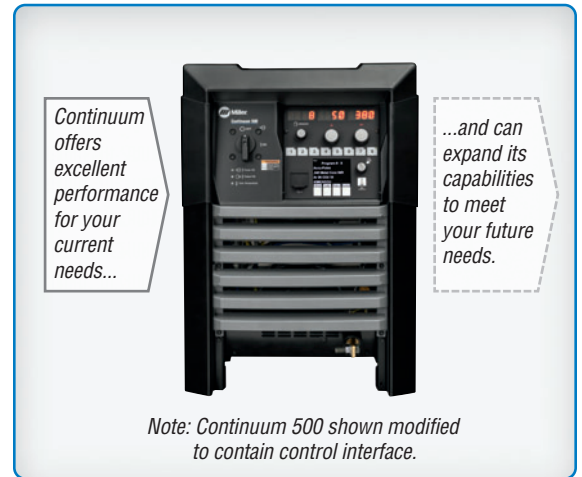
Welding Intelligence™ Improve your welding operations by increasing productivity, improving quality and managing costs with Insight Core (standard) and Insight Centerpoint (optional) welding information management systems.

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.

Key accessories are available to add value to your Continuum system, including running gear and Insight Centerpoint sensors (wire feed speed and gas flow).



Note: Continuum 500 shown modified to contain control interface.

Welding information solutions – knowledge to drive your business forward



Insight Core™

A simplified, Internet-based weld data solution that collects, rapidly transmits, and presents actionable information to any Web-connected device in the world.

Insight Centerpoint™

Advanced, real-time operator feedback to provide process control — to maximize quality and efficiency in welding and fabrication.



Insight LTD Gun. Gun provides built-in controls for Insight Centerpoint™.

Learn more at MillerWelds.com/insight

Take the performance of each process to the highest level.

Improvements to Accu-Pulse®

Improved arc control.

- Allows increased travel speed for improved productivity.
- Improved weld bead and penetration profiles, including better tie-in at the toes of the weld for better weld quality.
- More tolerant of operator variations making it easier to use by weld operators of all skill levels. Weld operators can start producing higher-quality welds faster.

Less spatter.

- Improved arc starts result in less spatter, which is particularly beneficial for parts with many welds.
- Less spatter means less wasted filler metal for reduced material costs.

Less heat input.

- Reduces distortion for better parts fit-up through the welding cycle, and helps keep parts in tolerance.
- Easier to fill gaps with less operator skill.

Improvements to MIG

- Reduces spatter at arc starts.
- Very forgiving with stick-out changes and all joint designs, providing greater operator appeal.
 - Great for poor fit-up
 - Great for out-of-position welding

Improvements to RMD®

- Very forgiving arc makes it easier to weld with regardless of torch angles or location of welding arc to puddle.
- Designed for thin materials and gap filling.

NEW! Versa-Pulse™


- Fast, low-heat, low-spatter process resulting in faster travel speeds and increased productivity for semi-automated and automated welding. Typically used on thin materials up to 1/4 inch.
- Greater wire feed speed (WFS) range than the RMD process.
- Great for gap filling on sheet metal and tube applications.

NEW! High-deposition MIG

- Higher deposition rates than standard spray transfer — resulting in faster welding and increased productivity. Typically used for thicker material and larger welds (6 to 8 mm).
- Lower heat input than standard spray transfer.



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.

Accu-Pulse is the most popular process for majority of industrial welding applications.

Versa-Pulse is a fast, low-heat, low-spatter process designed for thin-material applications.

RMD is a low-heat modified short-circuit process designed to fill gaps with thin-material applications.

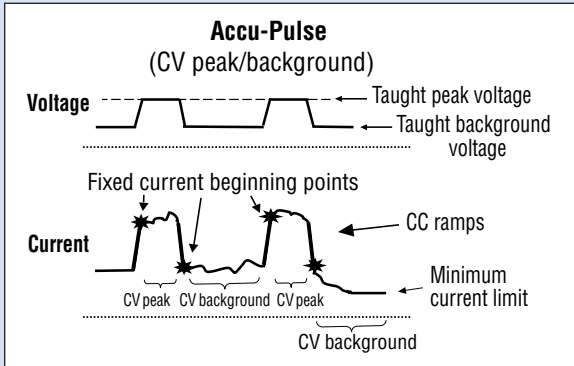
High-deposition MIG provides increased deposition rates over standard spray on thicker materials.

Multi-MIG® Process Capability Through Software-Based Programs

Access the ideal welding process for any weld joint at hand. Whether you need high travel speed combined with high deposition rates or require gaps to be filled, any combination of the available welding processes can either be accessed at the start of a welding sequence or anywhere in the weld while actually welding by using trigger or remote program select.

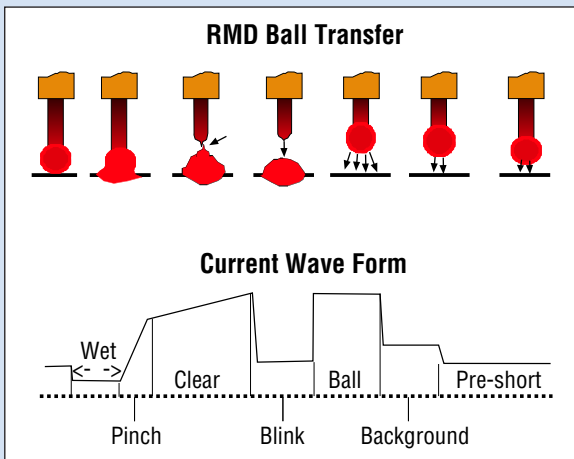
For a given wire feed speed, the chart on page 6 shows from left (hottest) to right (coolest) all the possible arc mode transfer ranges of accessible MIG and pulse processes. This shows compatible shielding gas combinations such as 90 Ar/10 CO₂ (90 percent argon and 10 percent carbon dioxide) on steel using the same wire feed speed and also gives an indication of puddle control characteristics based on arc type selected.

Accu-Pulse® STANDARD on all Continuum™ models



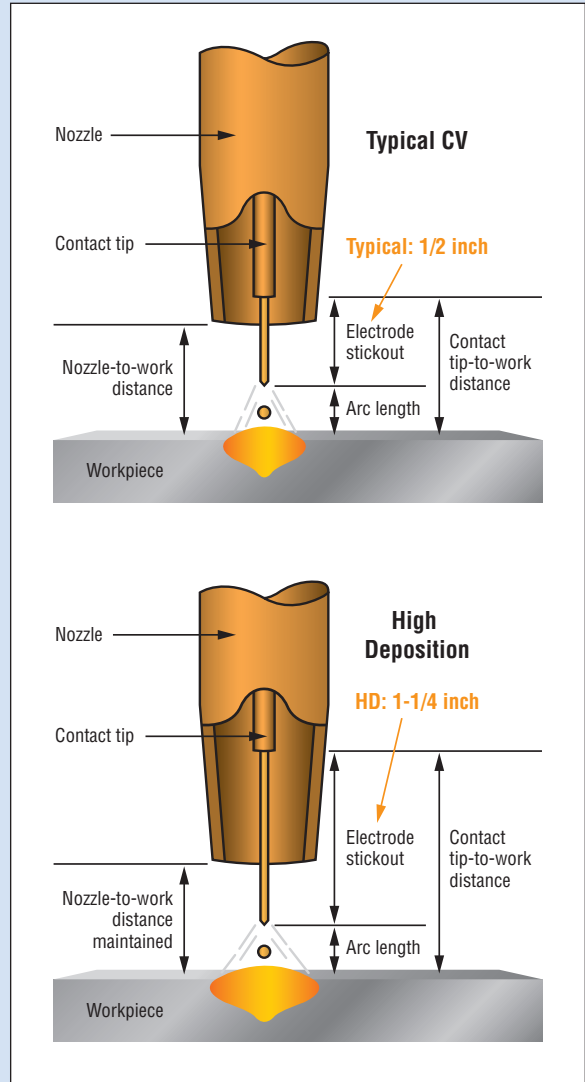
The Accu-Pulse process allows for precise control of the pulse arc. Accu-Pulse provides optimum molten puddle control and has power to increase wire feed speeds and deposition 20 to 25 percent in many applications. In most cases, slightly different ratios of gas mixtures will perform well using a similar 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.

NEW! 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 34 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)	127 lb. (57.6 kg)
Continuum 500	20–600 A 10–44 V	500 A at 40 VDC, 100% duty cycle	34.9 0–1*	—	33.2 0–1*	28.9 0–1*	23.3 0–1*	23.1 0.8*	21.9 0.17*		W: 17.5 in. (444 mm) D: 28.13 in. (714 mm)	148 lb. (67.1 kg)

*While idling.

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

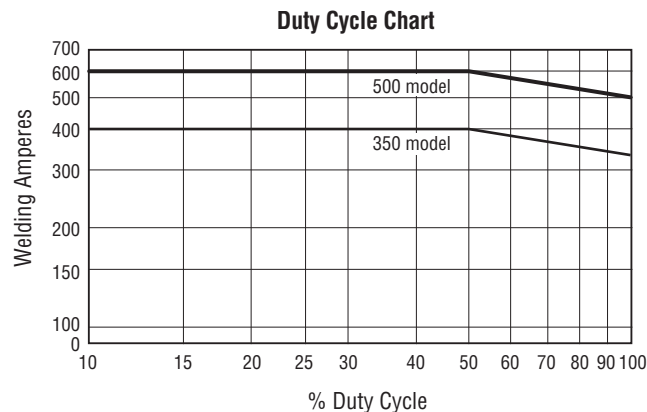
Continuum™ Feeder Specifications (Subject to change without notice.)



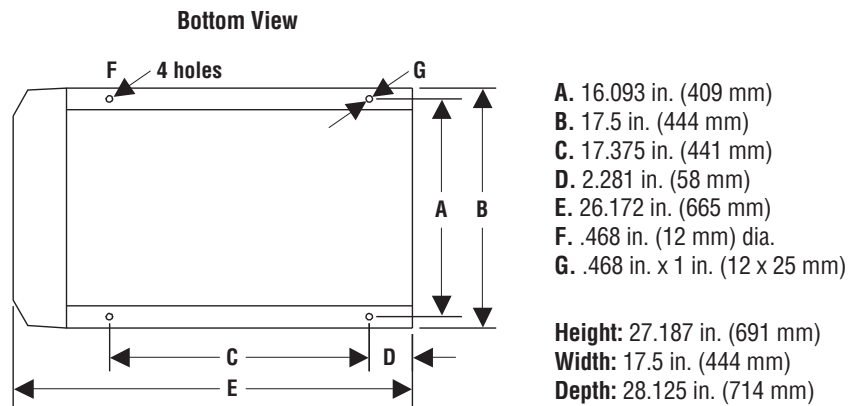
Input Power	Welding Power Source	Input Welding Circuit Rating	Wire Feed Speed	Wire Diameter Capacity	Maximum Spool Size Capacity	Dimensions	Net Weight
50 VDC	Continuum 350 or 500	500 A at 100% duty cycle	Standard 50–1000 ipm (1.27–25.4 m/min.)	.035–5/64 in. (0.9–2.0 mm)	18 in. (457 mm) 60 lb. (27 kg)	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)	Single 43 lb. (19.5 kg) Dual 61.5 lb. (27.9 kg)

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

Performance Data



Mounting Specifications



Genuine Miller® Accessories



Continuum™ Running Gear/Cylinder Rack #301 264

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



Industrial MIG 4/0 Kit #300 390

Includes 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.



Insight LTD Gun #3DM4015-45Q

Gun provides built-in controls for Insight Centerpoint™.



Continuum Cable Hanger #301 213

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



Hanging Bail #058 435

Used for suspending feeder over work area.

Continuum Control/Motor Cables

- #263 368 003 3 ft. (0.9 m)
- #263 368 015 15 ft. (4.6 m)
- #263 368 020 20 ft. (6.1 m)
- #263 368 025 25 ft. (7.6 m)
- #263 368 050 50 ft. (15.2 m)
- #263 368 080 80 ft. (24.4 m)

Connects power source to feeder.

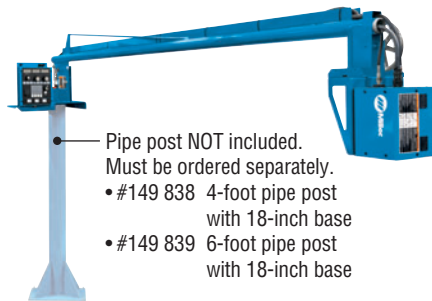


Ethernet Cables

- #300 734 9.8 ft. (3 m)
- #300 735 16.4 ft. (5 m)
- #300 736 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.

- #149 838 4-foot pipe post with 18-inch base
- #149 839 6-foot pipe post with 18-inch base

Continuum Swingarc™ Boom-Mounted Wire Feeders

- #951 634 8 ft. (2.4 m) single-wire
- #951 635 12 ft. (3.7 m) single-wire
- #951 636 16 ft. (4.9 m) single-wire

Coolant Systems

For more information, see the Coolmate Series literature sheet, Index No. AY/7.2.



Coolmate™ 3

#043 007 115 V

#043 008 230 V

For use with water-cooled torches rated up to 500 amps. Unique paddle-wheel indicator, external filter and easy-fill spout.



Coolmate™ 4 #042 288 115 V

For use with water-cooled torches rated up to 600 amps. Tough molded polyethylene case with carrying handle.

Low Conductivity Coolant #043 810

Sold in multiples 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).

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

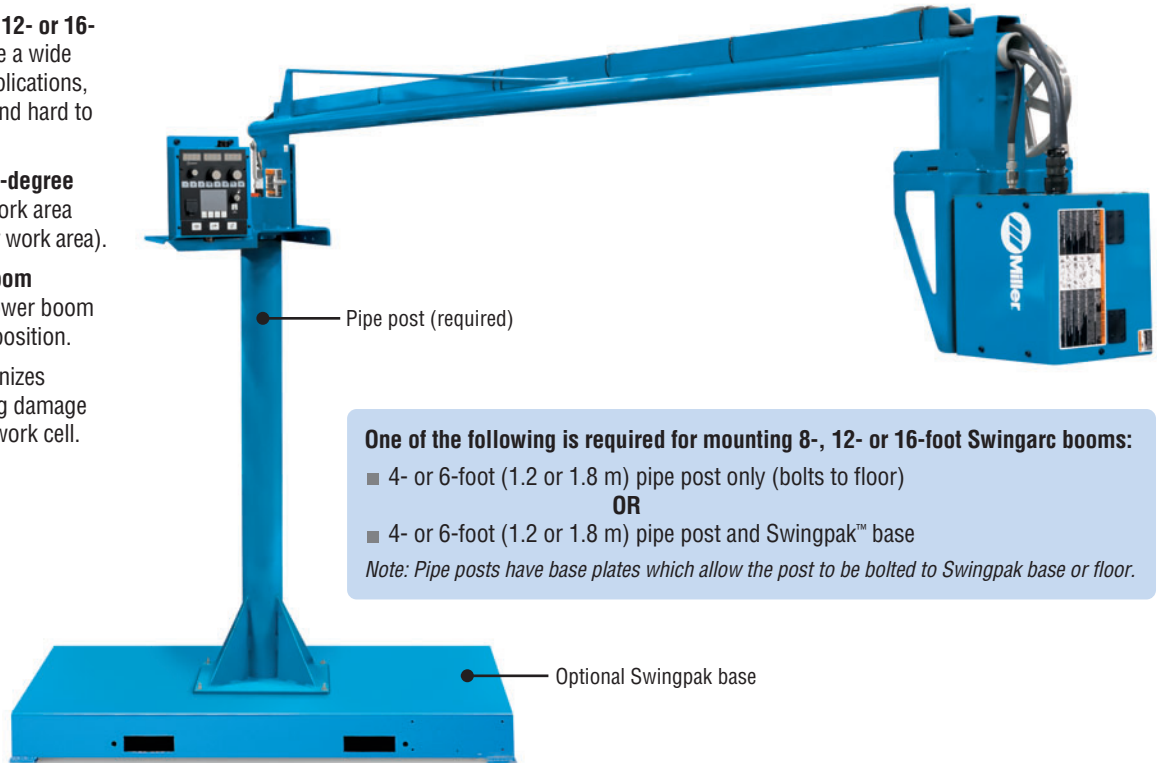
Continuum™ Swingarc™

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

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.

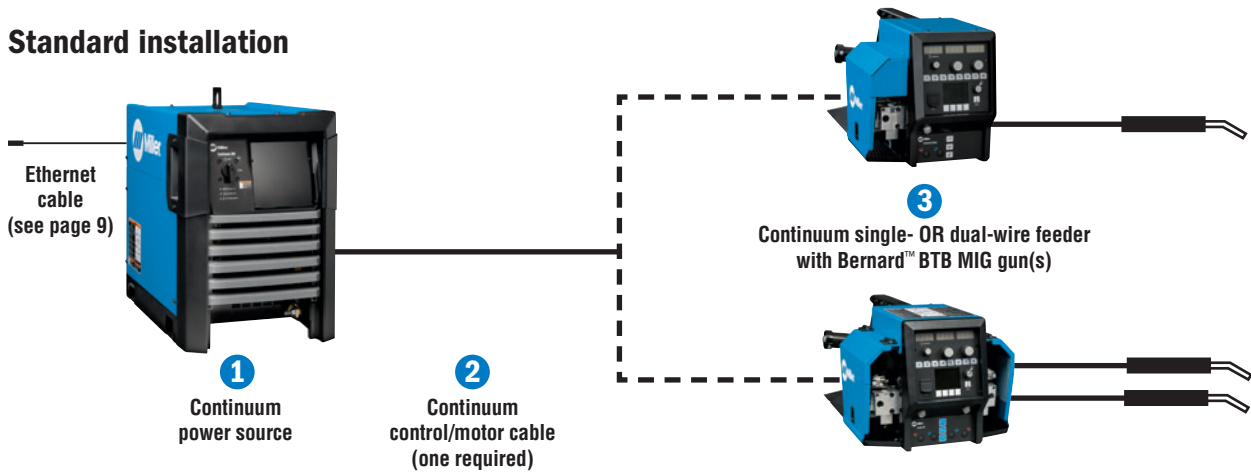
Specifications and Usage (Subject to change without notice.)

Usage	Model	Stock No.	Dimensions	Net Weight
For 8-, 12- or 16-ft. Swingarc	4-ft. pipe post	#149 838	H: 4 ft. (1.2 m)	110 lb. (49.9 kg)
	6-ft. pipe post	#149 839	H: 6 ft. (1.8 m)	130 lb. (59 kg)
	Swingpak base	#183 997	L: 65 in. (1.7 m), W: 50.875 in. (1.3 m)	285 lb. (129 kg)

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

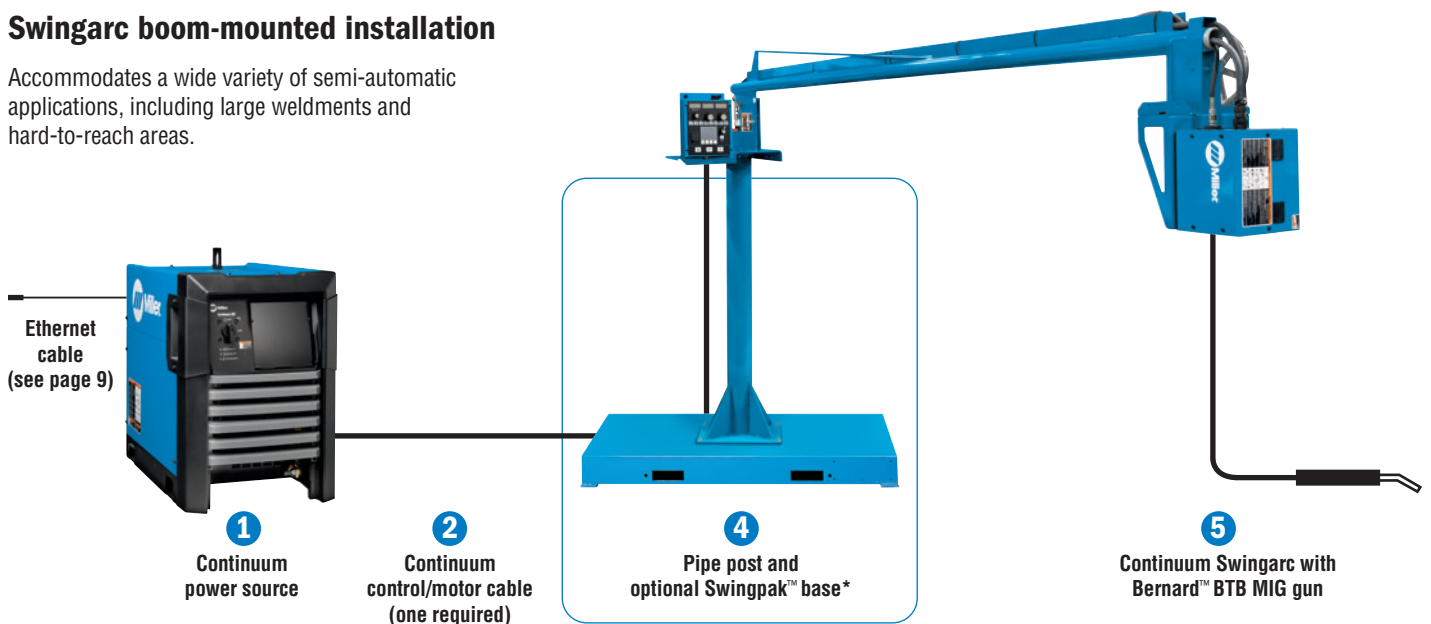
Typical Continuum™ Installations

Standard installation



Swingarc boom-mounted installation

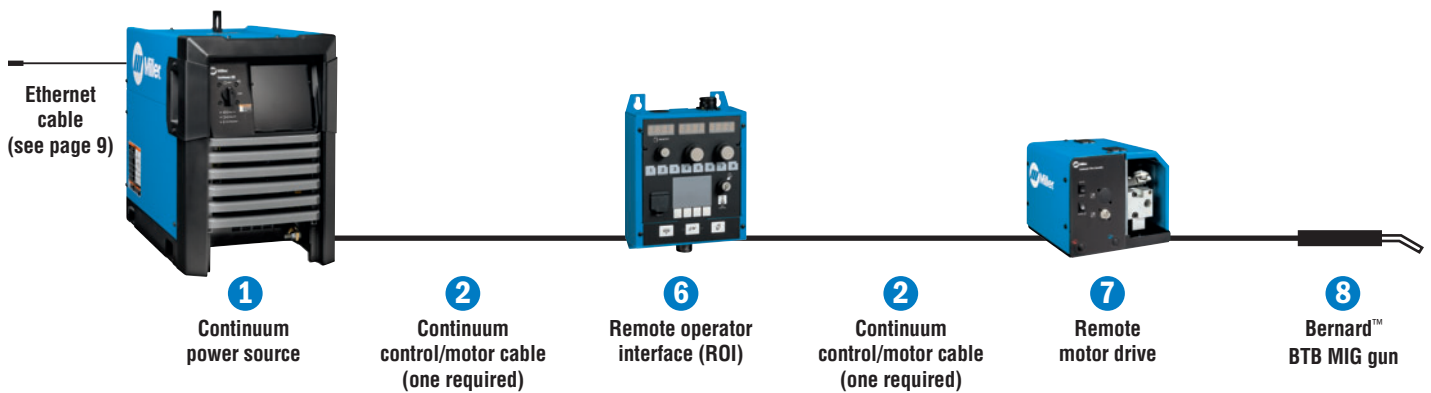
Accommodates a wide variety of semi-automatic applications, including large weldments and hard-to-reach areas.



*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.



Ordering Information

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

See corresponding item numbers in Typical Continuum Installations on page 11.

Equipment and Options	Stock No.	Description	Qty.	Price
1 Continuum™ 350	#907 636 #907 636 001 #907 637	Power source only Power source with running gear/cylinder rack Power source with auxiliary power		
1 Continuum™ 500	#907 640 #907 640 001 #907 641	Power source only Power source with running gear/cylinder rack Power source with auxiliary power		
Wire Feeders and Gun				
3 Continuum™ Bench-Style Wire Feeders	#951 631 #951 673	Single-wire model with Bernard™ BTB Gun 400 A and .035/.045 in. V-groove drive rolls 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	#951 634 #951 635 #951 636	8 ft. single-wire model with Bernard BTB Gun 400 A and .035/.045 in. V-groove drive rolls 12 ft. single-wire model with Bernard BTB Gun 400 A and .035/.045 in. V-groove drive rolls 16 ft. single-wire model with Bernard BTB Gun 400 A and .035/.045 in. V-groove drive rolls		
6 Remote Operator Interface	#301 227	Control box for single-wire drive assembly		
7 Remote Motor Drive	#301 225	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	#263 368 003 #263 368 015 #263 368 020 #263 368 025 #263 368 050 #263 368 080	3 ft. (0.9 m) length 15 ft. (4.6 m) length 20 ft. (6.1 m) length 25 ft. (7.6 m) length 50 ft. (15.2 m) length 80 ft. (24.4 m) length		
Ethernet Cables	#300 734	See page 9		
Swingarc Mounting Equipment				
4 Pipe Post	#149 838 #149 839	4 ft. (1.2 m) height for 8, 12 or 16 ft. Swingarcs 6 ft. (1.8 m) height for 8, 12 or 16 ft. Swingarcs		
4 Swingpak™ Base	#183 997	Optional mounting platform for pipe post		
Software				
Insight Centerpoint™	#301 297 #301 257 #301 322 #301 255 #301 256	Standard capability Advanced capability Standard and advanced capability Version 9.0 single license Version 9.0 site license		
Insight Reporter™	#300 709	Management reporting system client software		
Insight Reporter™ SQL Database	#300 710	Management reporting system database software (one required per server)		
Field Application Support	#195 480	Miller field support (contact distributor for details)		
Options and Accessories				
Running Gear/Cylinder Rack	#301 264	For Continuum power source		
Industrial MIG 4/0 Kit	#300 390	See page 9 for kit contents		
Insight LTD Gun	#3DM4015-45Q	Gun provides built-in controls for Insight Centerpoint™		
Continuum Cable Hanger	#301 213	Used to hang welding cables or MIG guns when not welding.		
Hanging Bail	#058 435	Used for suspending feeder over work area.		
Coolant Systems		See page 9		
TIG Coolant	#043 810	1-gallon plastic bottle (must be ordered in quantities of 4)		
Primary Power Cable				
Secondary Welding Cables				
Work Cable and Clamp				

Date: Total Quoted Price:

Distributed by:

