

Access® Systems

Software Driven Multi-MIG® Process Platform

Issued February 2007 • Index No. AU/8.0

Digital Semi-Automatic and Robotic Welding Systems 

Quick Specs

Manufacturing Applications

Construction Equipment
Automotive Components
Recreational Vehicles
Farm Machinery
Office Furniture
Mining Machinery

Processes

Multi-MIG®
Accu-Pulse® MIG (GMAW-P)
- Accu-Curve™ MIG (GMAW-P)
- Accu-Speed™ MIG (GMAW-P)
Pulsed MIG (GMAW-P)
MIG (GMAW)
Metal Core
Carbon Arc Gouging (CAC-A) can also be activated (Access only)

FREE TRIAL! See page 2 for details
RMD™ (GMAW-SCT) *Optional*

Rated Output 300: 300 A at 32 VDC, 60% Duty Cycle
(225 A at 29 VDC, 100% Duty Cycle)
450: 450 A at 44 VDC, 100% Duty Cycle
675: 675 A at 44 VDC, 100% Duty Cycle

Voltage Range 10–44 V

Auxiliary Power 120 VAC, 10 A Duplex

Ship Weight 300: 116 lb (52.6 kg)
450: 163 lb (72.9 kg)
675: 208 lb (94.3 kg)

The Power of Blue.®

Flexible, Expandable and Upgradeable

Multi-MIG capable welding systems are precise, digitally controlled and software-driven. For additional information visit MillerWelds.com/AMS.

Access Power Systems for Semi-Automatic Applications



Shown with Access feeders

Access four-drive-roll wire drive feeder is combined with operator interface leaving no controls back at the power source. Provides positive feeding for the appropriate preprogrammed wire diameters from 50–1400 IPM and operates from 40 VDC supplied by Access power source.



Go to the online Access System Configurator at MillerWelds.com/AMS

Auto-Access Power Systems for Robotic/Automation Applications



Shown with AA-40GB with OCP wire drive motor assemblies

AA-40GB motor connections.

Access digital control technology combined with inverter welding power source is designed to reduce complexity of a semi-automatic or robotic pulsed MIG system, simplify installation and provide superior welding performance.

“Access” the ability to accommodate welding data file exchange through downloadable upgrades and new hybrid welding processes using e-mail, or the Web and a Palm™ handheld (PDA).

AA-40GB Wire Drive Motor Assembly with OCP (Over Current Protection) to protect against current surges. New design utilizes an improved sheet metal enclosure including printed circuit board. It features a threaded gas connection and a direct-panel-mounted, quarter-turn motor control cable connection that eliminates motion stress on the motor's power and tachometer feedback wires.



Power source is warranted for 3 years, parts and labor.

DESIGNED AND BUILT IN **USA**



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An Illinois Tool Works Company
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Appleton, WI 54914 USA

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Phone: 920-735-4505
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Web Site
www.MillerWelds.com



Features and Benefits (Common to all Access Systems.)

HARDWARE (Standard)



Miller's patented technology allows for **any** input voltage hook-up (190–630 V) with no manual linking. Assures rock-solid, consistent output on fluctuating primary lines.

Wind Tunnel Technology™	Circulates air over components that require cooling, not over electronic circuitry, which reduces contaminants and improves reliability in harsh welding environments.
1/4-turn steel connectors	Allow for faster installation of system and eliminates thread stripping.
Fan-On-Demand™	Cooling system operates only when needed. Reduces amount of airborne contaminants pulled through the machine.
115 VAC duplex receptacle	Provides 10 amp circuit-breaker-protected auxiliary power regardless of primary power.
Dual removable lifting eyes	For moving with overhead lifts. Removability allows for flat-top feeder or storage on top.
Forklift slots	Slots cut into the frame for forklift transportation.
Matching footprints	All models use common stacked power modules allowing small footprint.
Flexible feeding options	Several different wire feeding and operator interface options are available and configurable to desired application.
9-pin Palm™ handheld (PDA) and 9-pin RS-232 serial communication port	Separate ports provide Access with data transfer and optional program downloads.

SOFTWARE (Standard)

FREE 8 Hour Trial of RMD™ with Every New Access or Auto-Access Power Supply

Multi-MIG® capability	Includes common carbon steel, aluminum and stainless welding programs, including new patented Accu-Pulse® , standard or adaptive pulse, conventional MIG and metal core programs using the most popular wire diameters and gas combinations. Now with Accu-Curve™ and Accu-Speed™ .
Accu-Pulse®	MIG process that delivers precise control of the arc even over tack welds and in tight corners. Provides optimum molten puddle control for out-of-position welding.
SureStart™	Provides consistent arc starts by electronically assuring a ball is not left on the wire when welding is stopped. This provides a predictable condition for the next arc start and combines this with precisely tuned arc starting routines.
Arc Control	Control offers a simple way to tailor factory pulse weld programs by adjusting the arc plasma cone to accommodate a variety of welding applications without the need for any reprogramming or changing any hardware.
Arc Adjust	Allows a simple method that controls arc length for pulse processes and wetting action for RMD.
Remote/trigger program select	Allows changing weld programs to take advantage of up to 8 programs of Multi-MIG welding process capabilities.
Optional Access-able software	RMD™ (Regulated Metal Deposition), Palm™ Access file management system, WaveWriter™ Palm pulse wave shaping.

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 be “Access”-ed either 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 below shows from left (hottest) to right (coolest) all the possible arc mode transfer ranges of

“Access”-able MIG processes. This shows compatible spray gas combinations such as 90 Ar/10 CO₂ (90% Argon and 10% Carbon Dioxide) on steel using the same wire-feed speed and also gives an indication of puddle control characteristics based on arc type selected.

Process	Standard Spray	Pulsed Spray	Accu-Pulse® Accu-Speed™ Accu-Curve™	Standard Short Circuit	RMD™ Regulated Metal Deposition (Optional)
Weld Puddle Control	Flat/Horizontal	All Position Performance		Thin Materials/Gap Filling	

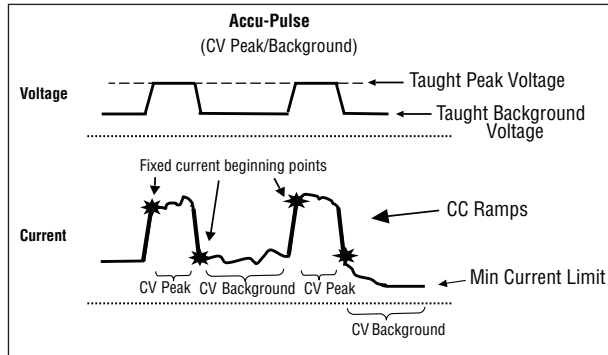
Note: To achieve optimum performance, 4/0 welding power secondary cable is recommended and the supplied work-sense lead must be connected as close to arc as possible.

Featured Welding Process

Accu-Pulse®

STANDARD pre-programmed welding processes include patented Accu-Pulse, 2 **new** Accu-Pulse programs called Accu-Curve™ and Accu-Speed™, conventional MIG and pulsed MIG optimized for the most common steel, stainless steel, aluminum and metal-cored wires, using the most common wire diameters and gas combinations. Programs for new processes and different materials are planned and

currently in development. 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.



Benefits of Accu-Pulse®

(Compared to conventional pulse)

- Shorter arc lengths possible
- Better puddle control
- More tolerant of contact tip to work variation
- Less audible noise
- No arc wandering in tight corners
- Narrow arc plasma column
- Allows weld to fill in at toes increasing travel speed and deposition
- More tolerant of poor fit up and gaps (compared to standard pulse)
- Ideal for robot seam tracking applications

New! Accu-Curve™

STANDARD on all Axxess models — Accu-Curve is a variation of the Accu-Pulse process. The transitions from peaks to background voltage are “curved”. The curved transitions provide a “softer” feel without sacrificing the tight arc lengths that allow for better puddle control that have become the hallmark of the Accu-Pulse process.



Benefits of NEW! Accu-Curve™

- “Softer” feel than Accu-Pulse
- Maintains tight arc lengths
- Maintains better puddle control

New! Accu-Speed™

STANDARD on all Axxess models — Accu-Speed is a variation of the Accu-Pulse process and was developed for the type of arcs needed in automated welding applications. Accu-Speed has a tighter driving arc that can be directed into the joint, yet still remains stable at the higher travel speeds used in automated welding. In general, Accu-Speed has lower average voltage and amperage when compared to Accu-Pulse.

Note: Accu-Curve and Accu-Speed can be added to existing Axxess or Auto-Axxess systems for FREE by updating code online at MillerWelds.com/AMS/axcess. Requires Palm handheld to transfer code from PC to Axxess.

Benefits of NEW! Accu-Speed™

- Up to 20% greater travel speed than Accu-Pulse
- Lower average voltage/amperage than Accu-Pulse
- Tight, driving arc
- Remains stable at higher travel speeds

Software-Based Welding Process Option

RMD™ (Regulated Metal Deposition)

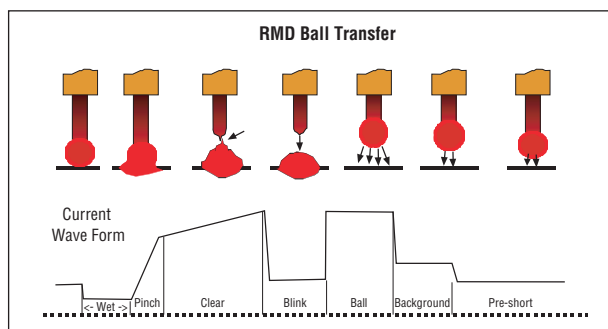
Field #195 252

(serial # must be provided)
Field installation requires Palm handheld.

Note: Factory-installed software can be ordered as a combo-number option with power supply. See power source stock number listings on page 12.

The unique patented design of RMD (Regulated Metal Deposition) 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 levels. Features Proactive Dynamic Puddle Control.

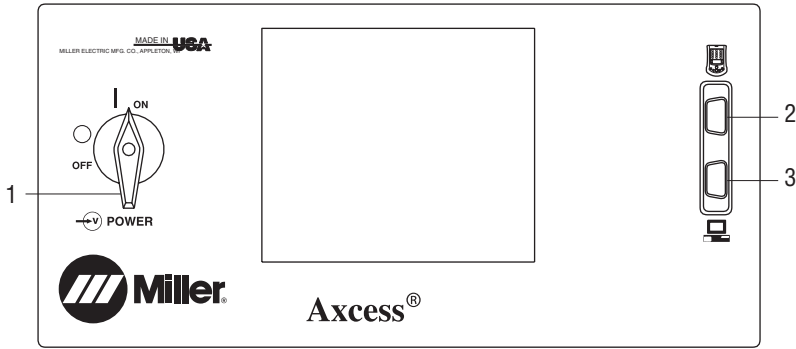
Note: Palm handheld required for field option installation — Field kit includes connection for Palm to connect to Axxess.



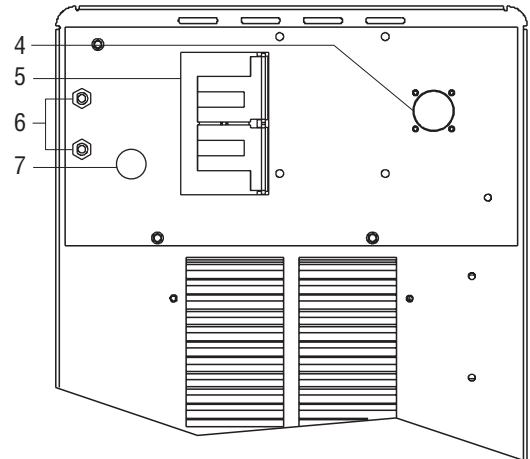
Benefits of RMD

- Weld suited to thin materials
- Can replace TIG process in some applications
- Gap filling
- Spatter reduction
- Provides less heat into work piece
- Excellent performance on stainless steel
- Can be combined with other Axxess®-related programs
- Minimize distortion
- Use larger diameter wire on thin materials

Front Panel

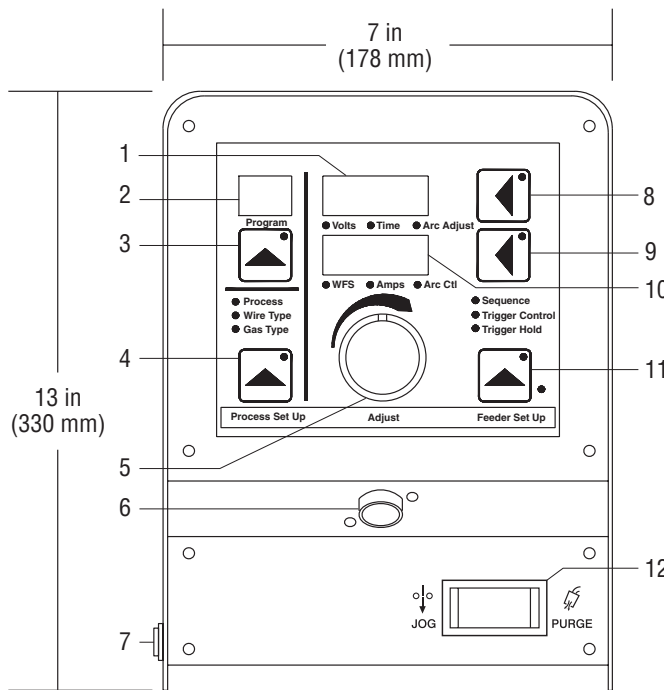


Rear Panel



- 1. Power Switch
- 2. Handheld RS-232 Port
- 3. PC-Communication RS-232 Port (Future use)
- 4. Network Feeder Connector
- 5. 115 VAC, 10 A Duplex Receptacle
- 6. Circuit Breakers
- 7. DeviceNet Connector (Optional)

Single Access Feeder and Remote Operator Interface (ROI)



- 1. Voltage/Arc Adjust Display Meter
- 2. Program Display
- 3. Program # Select
- 4. Process Setup Button
- 5. Control Knob
- 6. Trigger Receptacle
- 7. On/Off Button
- 8. Voltage Setup Button
- 9. Wire Speed Setup Button
- 10. Wire Speed/Amperage Display Meter
- 11. Feeder Setup Button
- 12. Jog/Purge Switch

Capabilities

Dual Schedule—Toggle between two settings using a single wire.

4T—When trigger is released, output will operate at different ranges.

Trigger Program Select (TPS)—Provides the ability to “Access” any of the Multi-MIG® processes or any of the eight active programs.

Trigger Dual Schedule (TDS)—When activated allow selection between predetermined program pairs (e.g. 1,2 – 3,4 – 5,6 – 7,8).

Trigger Hold (TH)—When activated, allows gun trigger release and continuous welding until trigger is pulled again.

Carbon Arc Gouging (CAC-A)—Can be activated.

Sequence

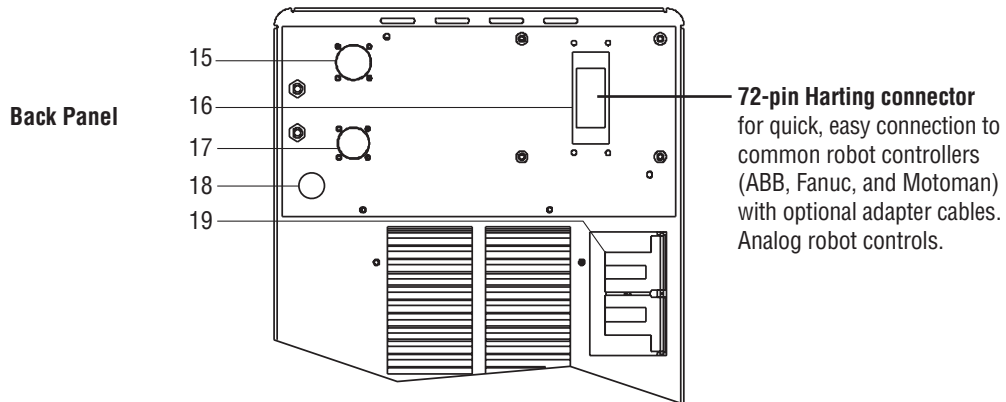
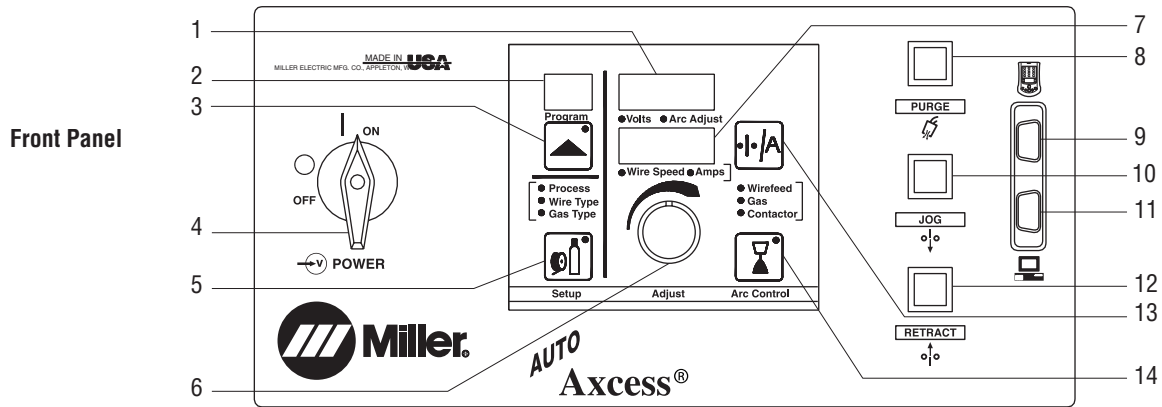
- Preflow: 0.1–5 sec
- Start Power: 0.1–5 sec
- Crater: 0.1–5 sec
- Postflow: 0.1–5 sec

Arc Adjust—Arc length (Trim)

Arc Control—Arc force or focus (SharpArc®)

Process Selection—Accu-Pulse®, Pulsed MIG, MIG, Metal Core, RMD™ (Optional)

Auto-Access® Control Panels



- | | | |
|---|--|---|
| <ul style="list-style-type: none"> 1. Voltage/Arc Adjust Display Meter 2. Program Display 3. Program # Select 4. Power Switch 5. Process Setup Button 6. Control Knob 7. Wire Speed/Amperage Display Meter | <ul style="list-style-type: none"> 8. Purge Pushbutton 9. Handheld RS-232 Port 10. Jog Forward Pushbutton 11. PC-Communication RS-232 Port (Future use) 12. Jog Retract Pushbutton 13. Wire Feed/Amperage Select | <ul style="list-style-type: none"> 14. Arc Control 15. Peripheral Connector 16. Robot Connection 17. Motor Connector 18. DeviceNet Connector (Optional) 19. 115 VAC, 10 A Duplex Receptacle |
|---|--|---|

Capabilities

Auto-CAL (Automatic Calibration) — Patented software-based feature exclusive to Auto-Access. Allows simple, quick and accurate wire feed speed and voltage commands from most robots using analog signals. Auto-Access calibrates itself to deliver exact responses to commands from robots. This allows Auto-Access to be used interchangeably with many brands of robots, and allows quick replacement of competitive power supplies without the need to change wire feed speeds.

Remote Program Select — Allows changing weld programs from the robot controller to take advantage of up to eight programs or Multi-MIG® welding process capabilities.

Integrated 80 V Touch Sensor — To be used with external circuitry or peripheral equipment when touch sensing.

Front Panel Features

- Weld Process Selection
- Wire Size and Type
- Gas Type
- Wire Jog Forward Button
- Wire Jog Reverse Button
- Purge Button
- Digital Display Meters:
 - Voltage/Arc Adjust (Trim)
 - Wire Feed Speed/Amperage
- Program Number
- Arc Control (SharpArc® and Inductance)

Analog Outputs

- Voltage
- Current

Analog Inputs

- Voltage/Arc Adjust (Trim)
- Wire Feed Speed

Digital Outputs

- Arc On
- Wire Stick
- Welder Ready

Digital Inputs

- Start
- Jog Forward
- Jog Reverse
- Purge
- Program Select
- E-Stop

Auto Setup

- Robot Specific

Sequence

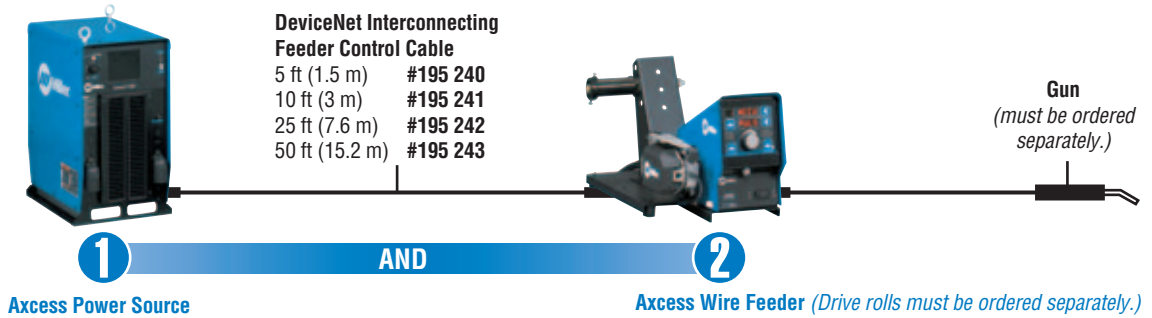
- Prewflow: 0–9.9 sec
- Start Power: 0–2.5 sec
- Voltage: 10–44
- IPM: 50–1400
- Crater: 0–2.5 sec
- Retract
- Postflow: 0–9.9 sec

Typical Access® Installations (Semi-Automatic Pulsed MIG or Conventional MIG)

The Access platform is designed to provide multiple wire feeding configurations suited to the unique needs of modern manufacturing applications and industries. It utilizes many common components to minimize both part and maintenance complexity. All motors operate on 40 VDC provided by the Access power supply and have a wire feed speed range of 50–1400 inches per minute. A common operator interface is used on all (see page 4).

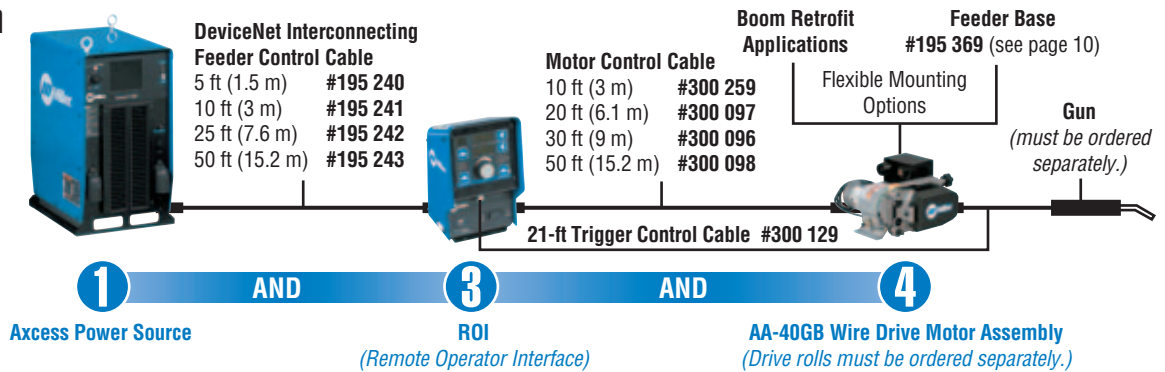
Standard Installation

A typical bench/sled feeder installation. For use when the feeder is placed on the power supply, a bench or an optional cart.



ROI Option Installation

Allows feeder motor drive to be placed away from power supply and operator interface. Ideal for fixed automation applications and updating or replacing equipment on booms or other applications where separate location of power source, ROI, and wire drive motor is desirable.



1 Access Semi-Automatic Power Source



Model	Rated Output	Voltage Range	Amperage Range	Max. Open-Circuit Voltage	Amps Input at Rated Output, 50/60 Hz, 3-Phase	Dimensions	Net Weight
Access 300	300 A at 32 VDC, 60% Duty Cycle (225 A at 29 VDC, 100% Duty Cycle)	10–44 V	5–400 A	80 VDC	208 V 33 230 V 29.7 400 V 16.9 460 V 14.6 575 V 11.6 11.7 11.2	300 H: 23 in (584 mm) 450 H: 31 in (787 mm) 675 H: 39 in (991 mm) W: 17 in (432 mm) D: 22-1/2 in (572 mm)	116 lb (52.6 kg)
Access 450	450 A at 44 VDC, 100% Duty Cycle	10–44 V	5–600 A	80 VDC	— 60 33.7 28.8 22.8 22.2 23.1		163 lb (73.9 kg)
Access 675*	675 A at 44 VDC, 100% Duty Cycle	10–44 V	5–900 A	80 VDC	— 89.7 — 43.7 34.8 35.7 34.4		208 lb (94.3 kg)

Certified to both the Canadian and U.S. Standards for welding equipment. *Access 675 is not CSA approved.

2 Wire Feeder Options



Wire feeders do NOT include drive rolls or required DeviceNet Interconnecting Feeder Control Cable. These must be ordered separately.

Access Single Feeder #195 182

Access Dual Feeder #195 325

Feeder is designed specifically for Access. Provides single-range control of 50–1400 inches per minute. Dual-wire model provides the same functionality as single-wire version, but is ideal when two different wire types need to be available at the same time. Digitally communicates with Access power source via DeviceNet Interconnecting Feeder Control Cable.

Model	Gas Valve	Type of Input Power	Connection to Power Source	Wire Feed Speed Range*	Wire Diameter Range	Single Feeder Dimensions	Dual Feeder Dimensions	Ship Weight
Access Bench/Sled Feeder	Included	40 VDC (from Access)	DeviceNet Interconnecting Feeder Control Cable — 5, 10, 25, or 50 ft (Order separately)	50–1400 IPM (1.3–35.56 MPM)	.035–3/32 in (0.9–1.6 mm)	H: 14-1/2 in (368 mm) W: 12-1/2 in (318 mm) D: 27 in (686 mm)	H: 15 in (381 mm) W: 19 in (483 mm) D: 34 in (863 mm)	Single Feeder 49 lb (22 kg) Dual Feeder 124 lb (56 kg)

*This is the wire feed speed range while using MIG. With pulsed MIG, the wire feed speed range may be more limited.

3 ROI (Remote Operator Interface) Options

ROI does NOT include AA-40GB Wire Drive Motor Assembly, Motor Control Cable or DeviceNet Interconnecting Feeder Control Cable. These must be ordered separately.

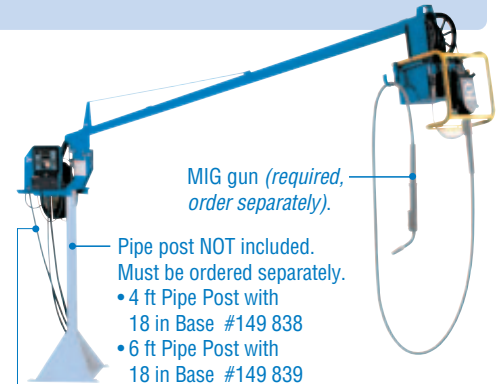


Single ROI

Dual ROI



Auto ROI back panel showing connections for input and output signals.



MIG gun (required, order separately).

Pipe post NOT included. Must be ordered separately.

- 4 ft Pipe Post with 18 in Base #149 838
- 6 ft Pipe Post with 18 in Base #149 839

DeviceNet Interconnecting Cable NOT included (required, order separately).

Single ROI #195 238
Dual ROI #195 433

The ROI allows the Axxess power supply, wire drive motor assembly and operator interface (ROI) to be located in three separate places. This is desirable for mounting to custom jibs, booms or other extended-reach applications. Since an ROI system can incorporate separate components providing the most flexibility for custom applications, it's an ideal way to obtain the many benefits of the Axxess while retaining an existing boom or other structural asset. The dual-wire ROI provides the same functionality as the single, but controls two separate wire drive motor assemblies. Four programs are available per side.

Note: For non-Miller boom and jib mounting, see ROI installation diagram on page 6 and select desired cable lengths.

Auto ROI #195 239*

(Contact Applications for assistance at 920-954-3814 prior to any new installation.)

The Auto ROI is to be used with an Axxess power supply with the E-Stop option. Provides functionality of the ROI, but replaces sequence and trigger functions with two programmable inputs and outputs. To be used in simple dedicated/fixated/hard automation applications. Features arc established output. Includes 30 ft cable for wiring to other external devices.

**Requires Axxess power supply with E-Stop function option. E-Stop is not intended for continuous interruption applications. Axxess systems require approximately 30 seconds to reboot or come back online after recovering from an E-Stop condition.*

Note: For non-Miller boom and jib mounting, see ROI installation diagram on page 6 and select desired cable lengths.

Access® ROI Swingarc™ Boom-Mounted Wire Feeders

#195 484 12 ft (3.7 m) Single-Wire
#195 434 12 ft (3.7 m) Dual-Wire
#195 346 16 ft (4.9 m) Single-Wire
#195 435 16 ft (4.9 m) Dual-Wire
Swingarc boom-mounted semiautomatic wire feeders bring an extra dimension of flexibility and efficiency to high-production MIG welding stations. You get an effective solution that maximizes output, especially when dealing with large weldments and hard-to-reach places.

Dual Swingarc Retrofit Kit #300 032

Kit is required when replacing motors on older Miller Dual 60 Series Swingarc booms. Provides all of the Axxess benefits, but maintains existing dual-boom hardware.

21-ft Trigger Control Cable #300 129

Required when retrofitting non-Miller booms with an ROI option.

Model	Type of Input Power	Connection to Motor	Connection to Power Source	Single ROI Dimensions	Dual ROI Dimensions	Ship Weight
ROI	Supplied from power source	Motor Control Cable— 20, 30, or 50 ft (Order separately)	DeviceNet Interconnecting Feeder Control Cable— 5, 10, 25, or 50 ft (Order separately)	H: 13 in (330 mm) W: 7 in (178 mm) D: 7 in (178 mm)	H: 13 in (330 mm) W: 9 in (229 mm) D: 10 in (254 mm)	Single ROI 12 lb (5.4 kg) Dual ROI 15 lb (6.8 kg)

4 Wire Drive Motor Assembly Options (To be used with Remote Operator Interface.)

Wire drive motor assemblies do NOT include drive rolls or required Motor Control Cable. These must be ordered separately.

Note: Left- and right-hand drives are determined by facing the wire feed gun outlet.



AA-40GB Wire Drive Motor Assembly

#195 426 Left-Hand Drive

#195 515 Right-Hand Drive

The AA-40GB Wire Drive Motor Assembly with OCP (Over Current Protection) is an improved version of the AA-40G. The motor control cable

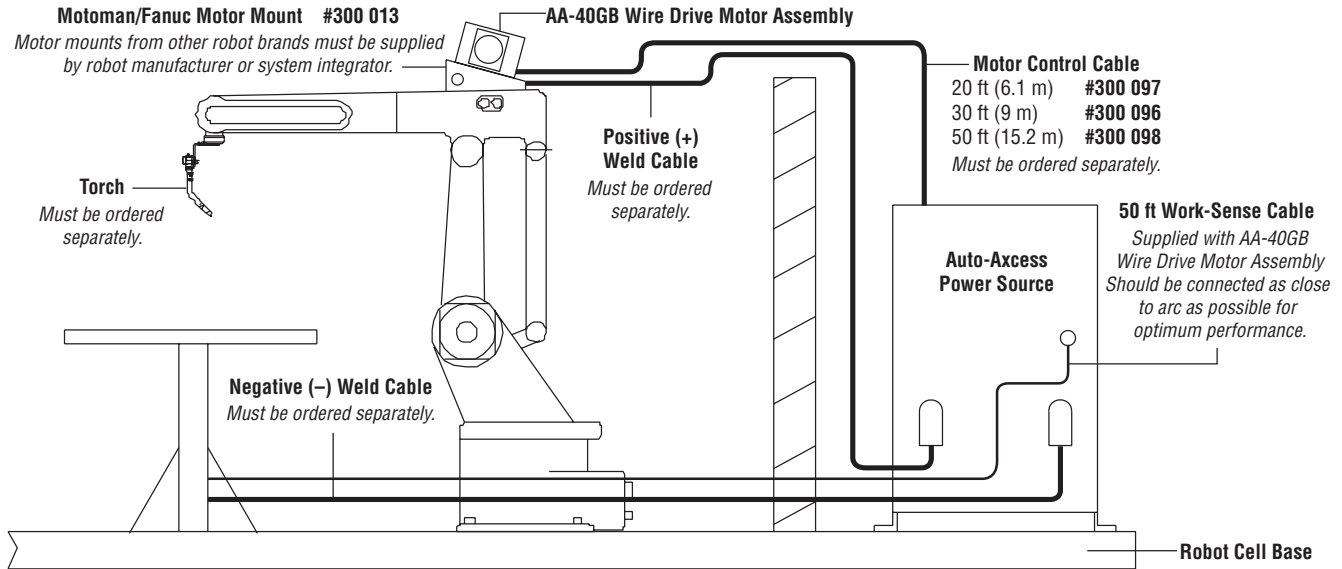
now mounts directly to the gas box, reducing strain on the tachometer wires. OCP provides another layer of protection in the event a cable is damaged or shorted, reducing downtime and motor damage. Motors include a 50 ft volt-sense lead.

Model	Gas Valve	Type of Input Power	Connection to ROI	Wire Feed Speed Range*	Wire Diameter Range	AA-40GB Dimensions	Ship Weight
AA-40GB	Included and enclosed	40 VDC (from Axxess)	Motor Control Cable— 20, 30, or 50 ft (Order separately)	50–1400 IPM (1.3–35.56 MPM)	.035–3/32 in (0.9–1.6 mm)	H: 8 in (203 mm) W: 12 in (305 mm) D: 10 in (254 mm)	23 lb (10.4 kg)

**This is the wire feed speed range while using MIG. With pulsed MIG, the wire feed speed range may be more limited.*

Typical Auto-Access® Installation (Robotic/Automation Pulsed MIG or Conventional MIG)

The Auto-Access platform is designed to bring the benefits of digital control technology to manufacturers who currently use analog robot control. When combined with a Smart Cable (#300 012) and AA-40GB wire drive motor assembly the Auto-Access will automatically reconfigure itself to function as a semi-automatic, thereby providing for single asset management and simplicity. *Contact Robot Manufacturers for fully-digital versions of the Access compatible with specific robot controllers.*



Auto-Access Power Source



Model	Rated Output	Voltage Range	Amperage Range	Max. Open-Circuit Voltage	Amps Input at Rated Output, 50/60 Hz, 3-Phase							Dimensions	Net Weight
					208 V	230 V	400 V	460 V	575 V	KVA	KW		
Auto-Access 300	300 A at 32 VDC, 60% Duty Cycle (225 A at 29 VDC, 100% Duty Cycle)	10–44 V	5–400 A	80 VDC	33	29.7	16.9	14.6	11.6	11.7	11.2	300 H: 23 in (584 mm) 450 H: 31 in (787 mm) 675 H: 39 in (991 mm) W: 17 in (432 mm) D: 22-1/2 in (572 mm)	116 lb (52.6 kg)
Auto-Access 450	450 A at 44 VDC, 100% Duty Cycle	10–44 V	5–600 A	80 VDC	—	60	33.7	28.8	22.8	22.2	23.1		163 lb (73.9 kg)
Auto-Access 675*	675 A at 44 VDC, 100% Duty Cycle	10–44 V	5–900 A	80 VDC	—	89.7	—	43.7	34.8	35.7	34.4		208 lb (94.3 kg)

Certified to both the Canadian and U.S. Standards for welding equipment. *Auto-Access 675 is not CSA approved.

Wire Drive Motor Assembly

Wire drive motor assemblies do NOT include drive rolls or required Motor Control Cable. These must be ordered separately.
Note: Left- and right-hand drives are determined by facing the wire feed gun outlet.



AA-40GB Wire Drive Motor Assembly

#195 426 Left-Hand Drive

#195 515 Right-Hand Drive

The AA-40GB Wire Drive Motor Assembly with OCP (Over Current Protection) is an improved version of the AA-40G. The motor control cable

now mounts directly to the gas box, reducing strain on the tachometer wires. OCP provides another layer of protection in the event a cable is damaged or shorted, reducing downtime and motor damage. Motors include a 50 ft volt-sense lead.

Model	Gas Valve	Type of Input Power	Connection to Power Source	Wire Feed Speed Range*	Wire Diameter Range	AA-40GB Dimensions	Ship Weight
AA-40GB	Included and enclosed	40 VDC (from Auto-Access)	Motor Control Cable—20, 30, or 50 ft (Order separately)	50–1400 IPM (1.3–35.56 MPM)	.035–3/32 in (0.9–1.6 mm)	H: 8 in (203 mm) W: 12 in (305 mm) D: 10 in (254 mm)	23 lb (10.4 kg)

*This is the wire feed speed range while using MIG. With pulsed MIG, the wire feed speed range may be more limited.

Palm OS® Based Software Options

Palm™ Convenience Package (Access File Management and WaveWriter software not included)



#195 517 Includes a compatible Palm™ handheld loaded with Service Pak software and a Palm™ serial cable that connects the Palm and Access®.

Note: Palm model may vary and Access File Management and WaveWriter software are sold separately.

Access® File Management (required Palm Handheld not included)



#195 249 Includes Palm™ serial cable and expansion card.

Simply put, the new Miller (Palm™ OS-based) file management software turns a standard handheld (PDA) into a data card and a remote pendant control for all Access systems. This is in addition to all other functions a handheld is typically used for. By using a handheld in this manner, we have built a powerful

intuitive interface on a common affordable, portable platform. This opens the door to functions and capabilities not previously available from Miller or from the welding industry as a whole.

With Miller's Access File Management installed on your Palm OS handheld you can:

- E-mail Access files anywhere worldwide
- Configure any Access system as desired
- Configure multiple Access systems exactly the same or any way you choose
- Save and store Access files
- Transfer Access files to computers
- Transfer Access files from machine to machine
- Backup Access files and programs
- Set-up and modify Access welding sequences
- Adjust and store welding program Locks & Limits for restricting or limiting operator "Access" to programs
- Enable Auto-Thread™ feature to program torch length into Access memory. When a combination of purge and jog (or jog and retract) are depressed, the Access feeding system delivers exact programmed length of wire. Great for troubleshooting wire feed speed and loading wire into the system.

There are 3 basic types of files:

- 1) **Programs** – Contain all the welding data that create an arc: volts, amps, wire feed rates, wire type, size, gas and appropriate arc control. They also contain all the time-based functions typically used in welding: pre-flow, start conditions, ramps, crater fill, retract, and post-flow.
- 2) **Configuration** – Files contain Locks, Errors and Feeder information that include robot selection type (**Robot Control** – PS Wire and Gas, **Shared Control** – Arc On-Analog, and **Power Source Control** – Arc On-No Analog). Configuration enables error messages, dual schedule, and remote program select to be selected. It also allows for checking software revisions and arc/ cycle time data. Using configuration you can set Auto-Thread™ torch length allowing for pushbutton feed of an exact wire length.
- 3) **Back-up** – Back-up files allow a convenient and simple way to store all files from a welding power source in a Palm handheld.

Each type can reside or be "Access"ed in any of 3 locations:

- 1) **Welder** – The welding power source holds the main library of welding programs.
- 2) **Handheld** – The handheld acts as an interim storage device where files can be pulled from the power source stored or modified.
- 3) **E-mail** – Files can be stored for Email in this location.

Any of the files can be cut, copied, pasted, modified, UN-protected files can also be beamed through IR port. Copyright-protected and Miller proprietary files cannot be transferred such as Palm Access File Management, WaveWriter™, and RMD™ welding process.

WaveWriter™ Wave Shaping

(required Palm Handheld not included)

#195 250 (Includes Palm™ serial cable and expansion card)



WaveWriter is our premium Palm software package for Access systems. For Palm handhelds, it includes all of the Palm Access File Management functions plus a simple, pulsed MIG wave-shaping program for the most demanding pulsed MIG applications. Customers can expect exceptional welding performance from any Access system from the programs for common wire and gas combinations—right out of the box. For those who need to adjust pulse parameters for special situations or to achieve a specific result, WaveWriter will allow anyone to alter a factory program for a specific wire, gas or weld joint configuration. Many welding engineers may find this tool useful in developing their own unique competitive advantage and having their own proprietary weld programs.

With WaveWriter it is possible to change parameters while welding and immediately see the effect of the change in the arc. Real-time feedback helps in understanding the effect of changing the sometimes confusing pulse wave form variables (such as pulse peak, pulse width, background, and rise and fall rates) which saves enormous expense and time in welding procedure development. Most of the essential variables required for process and procedure development are not only precisely controllable and stored, but the upper and lower control limits can be established to assure shop floor control.

Genuine Miller Accessories

DeviceNet Interconnecting Feeder

Control Cables

- #195 240 5 ft (1.5 m)
- #195 241 10 ft (3 m)
- #195 242 25 ft (7.6 m)
- #195 243 50 ft (15.2 m)

These specially designed EMI (Electrical Magnetic Interference) protected and shielded feeder control cables are required, but not included with Access feeders or ROI. Determine length needed and order separately.

Motor Control Cables

- #300 097 20 ft (6.1 m)
- #300 096 30 ft (9 m)
- #300 098 50 ft (15.2 m)

Includes overmolded connections on high-flex cables for optimal service life.

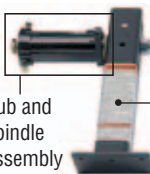


Shown with AA-40GB.

Access® Feeder Base and Spool Support #195 369

Sheet metal construction. Allows mounting of AA-40GB motor (if desired)

when using ROI option or when using an Auto-Access with Smart Cable adapter.



Hub and Spindle Assembly
Spindle Support

Hub and Spindle Assembly #072 094

Spindle Support #092 989



MIGRunner™ XL Cart #195 246

Dimensions: 46-1/2 x W: 42 x D: 35 in
Wide cart with motorcycle-type handle grips. Holds two large gas cylinders and Coolmate™ 3 (when power source is mounted with face toward handles) for water-cooled torches. Power supply can be mounted in several directions while the feeder can be mounted on the top tray. Fits Access 300 and 450 models only.

Note: Dual feeder not recommended for this cart. For dual feeders we recommend using a separate feeder cart (not available).



Wire Reel Assembly #108 008



Spool Covers #057 607

Reel Covers #058 256

For 60 lb (27 kg) coil. Helps to protect the welding wire from dust and other contaminants.

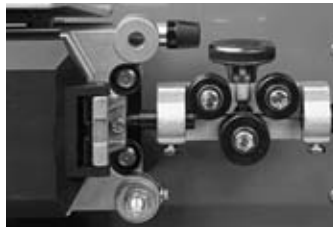
Note: Reel and Spool Covers cannot be installed if the wire drive assembly is in a rotated position.

Turntable Assembly #146 236

Allows rotation of the feeder as the operator changes work positions. Reduces strain and bending on the gun cable.

Hanging Bail (Electrically Isolated)

#058 435
Used for suspending feeder over work area.



Wire Straightener

#141 580
For .035–.045 in (0.9–1.1 mm) dia. wire.

#141 581
For 1/16–1/8 in (1.6–3.2 mm) dia. wire.

Helps reduce the cast in wire to improve wire feeding performance and increase the service life of the gun liner and contact tip.

Dual Schedule Switches



DSS-8 #079 693

A 15 ft, two-position

trigger switch which attaches to the gun handle and is used in place of the standard trigger for dual scheduling.

Adapter Cord #157 364

Required for use with DSS-8. 1ft, Y trigger cable that connects DSS switch and control box to the gun.



DSS-9M #041 793

A 15 ft, two-position slide switch

which attaches to the gun handle and is used to select the desired welding condition for dual schedule purposes. The gun trigger operates as a standard trigger.

Coolant Systems

For more information, see the Miller Coolant Systems literature sheet, Index No. AY/7.2.



Coolmate™ 3

#043 007 115 VAC
#043 008 230 VAC

For use with water-cooled torches rated up to 600 amps. Unique paddle-wheel indicator, external filter and easy-fill spout.

Coolmate™ V3 #043 009 115 VAC

For use with water-cooled torches rated up to 500 amps. Vertical design conveniently mounts to Miller cylinder rack in place of one cylinder.

Coolmate™ 4 #042 288 115 VAC





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 cases of four 1-gallon recyclable plastic bottles. Miller coolants contain a base of ethylene glycol and deionized water to protect against freezing to -37°F (-38°C) or boiling to 227°F (108°C). Also contains a compound that resists algae growth.

Drive Roll Kits (Order from Miller Service Parts.)

Select drive roll kits from chart below according to type and wire size being used. Drive roll kits include 4 drive rolls, the necessary guides and feature an anti-wear sleeve for the inlet guide.

Wire size	"V" groove for hard wire 	"U" groove for soft wire or soft-shelled cored wires 	"V" knurled for hard-shelled cored wires 	"U" coggled for extremely soft wire or soft-shelled cored wires (i.e., hard facing types) 
.035 in (0.9 mm)	#151 026	#151 036	#151 052	—
.040 in (1.0 mm)	#161 190	—	—	—
.045 in (1.1/1.2 mm)	#151 027	#151 037*	#151 053	#151 070
.052 in (1.3/1.4 mm)	#151 028	#151 038	#151 054	#151 071
1/16 in (1.6 mm)	#151 029	#151 039	#151 055	#151 072
.068/.072 in (1.8 mm)	—	—	#151 056	—
5/64 in (2.0 mm)	—	#151 040	#151 057	#151 073
3/32 in (2.4 mm)	—	#151 041	#151 058	#151 074
7/64 in (2.8 mm)	—	#151 042	#151 059	#151 075
1/8 in (3.2 mm)	—	#151 043	#151 060	#151 076

*Accommodates .045 and .047 (3/64 in) wire.

Nylon Wire Guides for Feeding Aluminum Wire

Wire size	Inlet Guide	Intermediate Guide
.047 (3/64) in (1.2 mm)*	#151 203	#151 204
1/16 in (1.6 mm)	#151 205	#151 206
3/32 in (2.4 mm)	#151 207	#151 208

Note: "U groove" drive rolls are recommended when feeding aluminum wire.

*Pushing .047 (3/64) in (1.2 mm) wire is not recommended in torches greater than 10 ft in length.

Wire Guides

Wire size	Inlet Guide	Intermediate Guide
.023–.040 in (0.6–1.0 mm)	#150 993	#149 518
.045–.052 in (1.1–1.4 mm)	#150 994	#149 519
1/16–5/64 in (1.6–2.0 mm)	#150 995	#149 520
1/16–5/64 in (2.4–2.8 mm)	#150 996	#149 521
1/8 in (3.2 mm)	#150 997	#149 522

Genuine Miller Services and Accessories (For robotic/automation applications only.)

Consulting Services

Field Application Support #195 480
Auto-Axcess systems may require factory-trained technical support depending on the complexity of the application and the local availability and capability of qualified welding engineers or robotic experts. You should contact the factory if there are questions. Factory support is available at a flat rate of \$1250.00 per day plus expenses when planned and ordered more than 10 days in advance. Rates and availability of our technical specialists with less than 10 day notice are considerably more. Rates are based on a 10-hour day including travel. One day minimum.

Service and Troubleshooting

Analog Robot Simulator #195 030
Device simulates the analog commands of typical robots. It can be used as a diagnostic tool to determine power source functionality and isolate robot, power source or cable issues.

Fanuc Internal Wiring Kit #300 229
Includes 30 ft cable that connects to the Fanuc controller, and 22 in connector for mounting the wire drive assembly on top of the robot arm.

Receptacle/Adapter Kits #194 793 ABB
#194 791 Fanuc
#194 790 Motoman
#300 056 Panasonic
#195 002 Universal
One required per machine. For analog communication with robot controls via 72-pin Harting connector on Auto-Axcess. 1-ft length.

Smart Adapter #300 012
Allows Auto-Axcess to be configured to function as semi-automatic. To be used when there is a desire to have a common power supply and motor in both robotic and semi-automatic application. Easy asset management. 21-ft trigger control cable is included.

Universal Connector for Analog Control #195 002
Includes mating Harting connector with pins to allow custom configuration for robotic and fixed automation applications.

Fanuc/Motoman Wire Drive Motor Assembly Mounting Bracket #300 013

Shell Connector #194 847
For use by anyone wishing to interface peripherals, but not wanting to source the appropriate female amphenol connector.



Coolant Flow Switch #195 461
To ensure coolant is flowing in the system. Lack of coolant flow may

cause damage to water-cooled guns. Module allows wiring into the peripheral connector port. 50 ft (15.2 m) cable with connector and separate shell connector for simple modification to desired length in the field. It can be mounted on the Auto-Axcess or as desired elsewhere. 1/4-turn quick connection.

Fixed or Hard Automation Accessories

Oscillators and Motorized Cross Slides
Refer to Lit. Index No. AU/6.0.

Welding Guns — see www.bernardwelds.com

Ordering Information

Learn More at MillerWelds.com/AMS

Semi-Automatic Equipment Options	Stock No.	Description	Qty.	Price
Access [®] 300	#907 150 #907 150-01-1	Power source only Power source with RMD™ software upgrade		
Access [®] 450	#907 152 #907 152-01-1	Power source only Power source with RMD™ software upgrade		
Access [®] 675	#907 154	Power source		
Access [®] 300 Packages	#951 038 #951 039	Power source, bench feeder and 5 ft cable Power source with RMD™ software upgrade, bench feeder and 5 ft cable		
Access [®] 450 Packages	#951 031 #951 037	Power source, bench feeder and 5 ft cable Power source with RMD™ software upgrade, bench feeder and 5 ft cable		
Note: Other power sources are available. Consult factory at 1-920-954-3813 for power sources with E-Stop option.				
Wire Feeder Options (see page 6)				
Access [®] Single Feeder	#195 182	Bench/skid feeder — order DeviceNet Interconnecting Feeder Control Cable separately		
Access [®] Dual Feeder	#195 325	Bench/skid feeder — order DeviceNet Interconnecting Feeder Control Cable separately		
ROI Options (see page 7)				
Single ROI	#195 238	See page 6 for connection diagram and required cables		
Dual ROI	#195 433	See page 6 for connection diagram and required cables		
Auto ROI (see note above)	#195 239	See page 6 for connection diagram and required cables. Requires power source with E-Stop option — consult factory at 1-920-954-3813		
Access [®] ROI Swingarc™ Boom		See page 7 for various models		
Dual Swingarc™ Retrofit Kit	#300 032	Required when replacing motors on older Dual 60 Series Swingarc booms		
Wire Drive Assembly Opt. (see page 7)				
AA-40GB Wire Drive Motor Assembly		New-style wire drive assembly. See page 6 for connection diagram and required cables		
Control Cables (see page 10)				
		See page 6 for connection diagram and required cables		
Automatic Equipment Options*				
Auto-Access [®] 300 (Robotic receptacle kit sold separately)	#907 151 #907 151-01-1	190–630 V. Inverter power supply with robotic interface 190–630 V. Inverter power supply, robotic interface, and RMD software upgrade		
Auto-Access [®] 450 (Robotic receptacle kit sold separately)	#907 153 #907 153-01-1	190–630 V. Inverter power supply with robotic interface 190–630 V. Inverter power supply, robotic interface, and RMD software upgrade		
Auto-Access [®] 675	#907 155	190–630 V. Inverter power supply with robotic interface		
Motor/Kit/Cable Options				
Wire Drive Motor Assembly		See page 8		
Motor Control Cable (see page 10)		See page 8 for connection diagram and required cables		
Receptacle/Adapter Kits		See page 11. <i>One required per machine, consult factory</i>		
Palm OS[®] Based Software Options				
Palm™ Convenience Package	#195 517	Palm model may vary (<i>File Management and WaveWriter software NOT included</i>)		
Access [®] File Management	#195 249	File management software (<i>required Palm™ handheld NOT included</i>)		
WaveWriter™ Wave Shaping	#195 250	File management software with wave shaping (<i>required Palm™ handheld NOT included</i>)		
Software-Based Welding Process Opt.				
RMD™ (Regulated Metal Deposition)	#195 252	Field (<i>required Palm™ handheld NOT included</i>)		
Accessories				
Access [®] Feeder Base and Spool Support	#195 369	Allows mounting of AA-40GB motor when using ROI option		
Hub and Spindle Assembly	#072 094			
Spindle Support	#092 989			
MIGRunner™ XL Cart	#195 246	Holds two cylinders, cooler, machine and feeder		
Coolant Systems		See page 10		
Drive Roll Kit (<i>Required</i>)		See page 11		
Inlet/Intermediate Guides		See page 11		
Smart Adapter	#300 012	Robotic/automation. Allows automatic to function as semi-automatic		
Universal Connector for Analog Control	#195 002	Robotic/automation. Allows custom configuration		
Field Application Support	#195 480	Robotic/automation. One day minimum, not subject to discount. See page 11		
Analog Robot Simulator	#195 030	Robotic/automation. See page 11		

Date:

*The Access is a fully digital machine and utilizes DeviceNet protocol for internal system operation. Select robot manufacturers have created unique software for specific controllers which enable them to communicate digitally with an Access power supply. Check with your robot supplier of choice to further understand if there are benefits created by them that can reduce complexity, add value or reduce your total cost of integration and operation. Welding Distributors: you may also inquire with the robot manufacturer about drop-ship programs they may offer for digital or analog versions of the Access platform.

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