

# Auto Invision™-II

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**Robotic Power**  
**Source and Control** 

## Quick Specs



### Automated Industrial Applications

Construction Machinery  
Automotive Manufacturing  
Truck/Trailer Manufacturing  
Recreational Equipment  
Farm Equipment

### Processes

MIG (GMAW)  
Pulsed MIG (GMAW-P)  
Adaptive Pulsed MIG (GMAW-P)  
Flux Cored (FCAW)

**Rated Output** 450 Amps at 38 VDC, 100% Duty Cycle  
565 Amps at 43 VDC, 60% Duty Cycle

**Voltage Range** 10–38 V

**Max. Open-Circuit Voltage** 95 VDC

**Weight** 130 lb (59 kg)

## The Power of Blue.®

**Run-in at program level** gives operator the ability to alter run-in wire speed to accommodate variety of welding parameters.

**Start/crater ramp** allows output power to be tapered from start to weld, and from weld to crater.

**Integrated power source and robotic interface** reduces complexity of the system and simplifies installation and set-up.

**Integrated touch sensor and interface** to be used with external circuitry or peripheral equipment when touch sensing.

**Easy interface of peripheral connections** for programmable outputs, touch sensor, flow switch and remote wire jog signals.

**1/4-turn steel connectors** allow faster installation of system.

**Standard high-flex cable** provides longer life in rigorous robotic work cells.

**Tunnel cooling** circulates air over components that require cooling, not over electronic circuitry, which reduces contaminants and improves reliability.

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



Auto Invision-II package shown



**115 VAC duplex receptacle** provides 10 amp circuit-breaker protected auxiliary power.

**Variable, electronic inductance control** minimizes spatter and optimizes weld bead wetting action — especially for stainless steel, silicon bronze, copper nickel, Inconel and copper silicon.

**Remote program select** allows changing weld programs from robot controller.

**Easy-to-read vacuum fluorescent display** indicates process and operating information.

**Sharp Start™** feature provides consistent arc starts time after time

**SharpArc®** arc control offers a simple way to tailor factory weld programs to accommodate a variety of welding applications.



**AMD-115G four-drive-roll wire feeder** provides positive feed and includes volt sensing, enclosed gas valve and quick-change drive rolls.

**Programmable output relay** included to run a wire straightener, positioner or similar device.

**TRUE BLUE**  
3 YR. WARRANTY

Welder/generator is warranted for 3 years, parts and labor.  
Original main power rectified parts are warranted for 5 years.

MADE IN **USA**  
APPLETON, WI **USA**



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## Auto-Invision-II

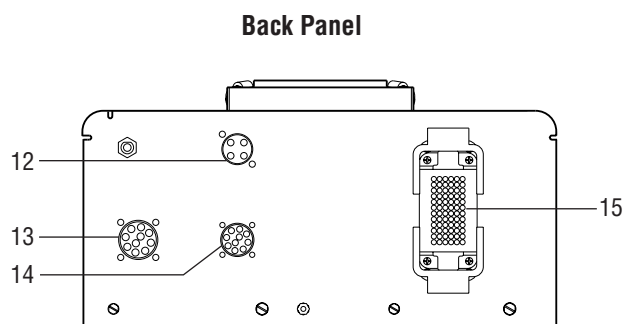
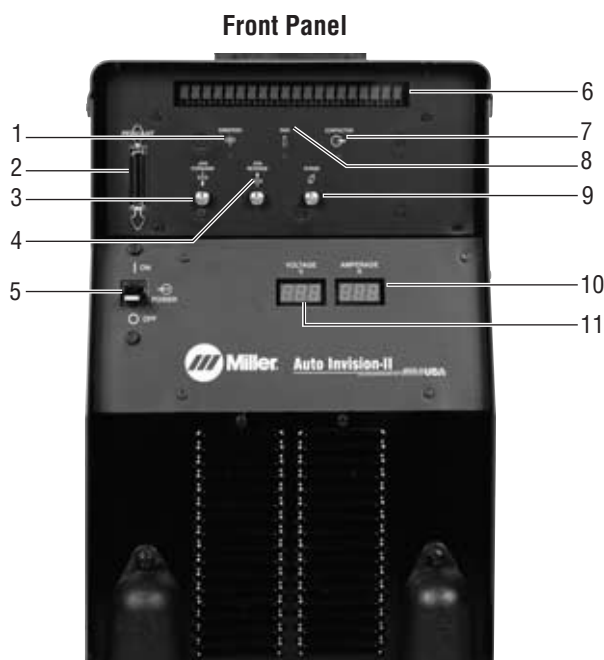
Rated Output	Voltage Range	Max. Open-Circuit Voltage	Amps Input at Rated Output, 50/60 Hz						Dimensions	Net Weight	Ship Weight
			230 V	400 V	460 V	575 V	KVA	KW			
450 A at 38 VDC, 100% Duty Cycle 565 A at 43 VDC, 60% Duty Cycle	10–38 V	95 VDC	50.8	30.6	27.8	24.4	21.2	19.2	H: 25 in (635 mm) W: 15 in (381 mm) D: 28 in (711 mm)	130 lb (59 kg)	135 lb (61 kg)

## AMD-115G Wire Feed Motor with Volt Sense Kit

Gas Valve	Type of Input Power	Interconnect Cable	Wire Feed Speed Range*	Wire Diameter Range	Dimensions	Ship Weight
Included and enclosed	115 VDC (from Auto Invision-II)	50 ft (15.2 m)	50–780 IPM (1.3–19.8 MPM)	.030–1/8 in (0.8–3.2 mm)	H: 10 in (254 mm) W: 12 in (305 mm) D: 15 in (381 mm)	33 lb (15 kg)

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

## Control Panel



- |   |                                |
|---|--------------------------------|
| 1. Wirefeed Indicator LED   | 7. Contactor Indicator LED     |
| 2. Setup Pendant Receptacle   | 8. Gas Indicator LED           |
| 3. Jog Forward Pushbutton   | 9. Purge Pushbutton            |
| 4. Jog Reverse Pushbutton   | 10. Ammeter                    |
| 5. Power Switch   | 11. Voltmeter                  |
| 6. Main Display (displays system state, active program, error messages, and weld parameters at idle and during welding) | 12. Volt Sense Lead Connection |
|   | 13. Peripheral Receptacle      |
|   | 14. Motor Connector            |
|   | 15. Robot Connections          |

## Capabilities

### Setup Pendant Panel Features

- Mode Display
- Parameter Display
- Data Card Reader Slot
- Increase Button
- Decrease Button
- Parameter Select Button

### Front Panel Features

- Wire Jog Forward Button
- Wire Jog Reverse Button
- Purge Button
- Display Meters: Digital Voltage, Digital Wire Feed Speed, Ammeter

### Digital Outputs

- Arc On
- Wire Stick
- Welder Ready

### Digital Inputs

- Start
- Jog Forward
- Jog Reverse
- Purge
- Program Select-8
- E-Stop

### Analog Outputs

- Voltage
- Current

### Analog Inputs

- Voltage/Trim
- Wire Feed Speed

### Auto Setup

- Robot Specific

### Sequence

- Preflow: 0 – 9.9 sec
- Run-in Program Level
- Start Power: 0 – 2.5 sec
- Trim: 0 – 100
- IPM: 50 – 780
- Crater: 0 – 2.5 sec
- Retract: Time and IPM
- Postflow: 0 – 9.9 sec

Note: In MIG, Trim is replaced with Voltage 10–38.

### Software Features





(Accessible with optional Setup Pendant.)

- Welding Process Selection
- Remote Parameter Adjust
- Arc Timer/Counter

- Arc Voltage Monitor
- Wire Stick Check
- Programmable Output
- Software Version Display
- Pulse Welding Capability
- Adaptive A & B
- Wire Type Select (Hard or Soft)
- Wire Retract
- Arc Start  
(Hot, Standard, or Soft)
- Arc Outage Detect
- Ground Current Sensor
- Security Lockout
- Ramp Start and Crater
- SharpArc

## 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 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) 
.030 in (0.8 mm)	#151 025	—	—	—
.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	—

\*3/64 (.047) "U groove."

## Genuine Miller Accessories



### Motor/Volt Sense Robotic Kit #195 042

Includes AMD-115G (left-hand drive, 50–780 IPM, 1.3–19.8 MPM), motor cable, and volt sense lead.



### AMD-115G Motor #194 856

Left-hand drive. 50–780 IPM (1.3–19.8 MPM).

### AMD-115 GH Motor #194 872

Left-hand drive. 80–1400 IPM (2.0–35.6 MPM). High-speed four-drive-roll wire feeder with enclosed gas valve.



### AMD-115GR Motor #194 873

Right-hand drive. 50–780 IPM (1.3–19.8 MPM).

### Volt Sense Lead #200 238

**Hi-Flex Cable #195 044** Field 50 ft (15.2 m) gas/motor cable for longer life in rigorous robotic work cells.

### Adapter Kits

One required per machine.

#194 793 ABB #194 790 Motoman  
 #194 791 Fanuc #194 874 Nachi  
 #194 860 Kawasaki #195 002 Universal

### Cable Adapters

#### #194 788

Allows the use of the Auto Invision peripheral cable to the Auto Invision-II.

#### #194 789

Allows the use of the Auto Invision AMD-4G motor cable to the Auto Invision-II.

#### #194 857

Allows the use of the Auto Invision-II AMD-115G motor cable to the Auto Invision.

### Aluminum Kits

#194 922 1/16 #194 923 3/64

### Shell Connector #194 847

For use by anyone wishing to interface peripherals but not wanting to source the appropriate female amphenol connector.



### Blank Data Card

#### #155 910

Blank card. Allows copying customized program data to other Auto Invisions™,

Robotic Interface II™, Automatic M, or 64M feeders. Also used for security to protect tampering with programs.



### Setup Pendant #194 850

One required per installation site. For setup and teaching pulse arc programs and transferring setup and program data with the optional data card. The pendant also serves as an additional security device to prevent unauthorized program alterations. Minimum of one is required. Should be ordered with first unit. 6 ft cable and card reader included.



### Water Flow Switch #043 576

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 cable with connector and separate shell connector for simple modification to desired length in the field. It can be mounted on the Auto Invision or as desired elsewhere.

# Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
<b>Auto Invision-II™ Package</b>	<b>#951 021</b>	230/460 V Auto Invision-II and motor volt sense kit		
	<b>#951 019</b>	400 V Auto Invision-II and motor volt sense kit <b>CE</b>		
	<b>#951 018</b>	575 V Auto Invision-II and motor volt sense kit		
<b>Auto Invision-II™</b> <i>(Robotic receptacle kit sold separately)</i>	<b>#903 865</b>	230/460 V		
	<b>#903 747</b>	400 V <b>CE</b>		
	<b>#903 893</b>	575 V		
Motor/Volt Sense Robotic Kit	<b>#195 042</b>	Includes AMD-115G, 50 ft (15.2 m) gas motor cable and 50 ft (15.2 m) volt sense lead		
Adapter Kits <i>(One required per machine)</i>	<b>#194 793</b>	ABB		
	<b>#194 791</b>	Fanuc		
	<b>#194 860</b>	Kawasaki		
	<b>#194 790</b>	Motoman		
	<b>#194 874</b>	Nachi		
	<b>#195 002</b>	Universal		
Setup Pendant	<b>#194 850</b>	One required per installation site		
Drive Roll Kit		See page 3		
<b>Motors</b>				
AMD-115G Motor	<b>#194 856</b>	Left-hand drive, 50–780 IPM (1.3–19.8 MPM)		
AMD-115GH Motor	<b>#194 872</b>	Left-hand drive, high speed, 80–1400 IPM (2.0–35.6 MPM)		
AMD-115GR Motor	<b>#194 873</b>	Right-hand drive, 50–780 IPM (1.3–19.8 MPM)		
<b>Cable Adapters</b>				
Auto Invision-II	<b>#194 788</b>	Auto-Invision peripheral cable to the Auto-Invision-II		
AMD-4G to Auto Invision-II	<b>#194 789</b>	Auto-Invision motor cable to the Auto-Invision-II		
AMD-115G to Auto Invision	<b>#194 857</b>	Auto-Invision-II motor cable to the Auto-Invision		
<b>Accessories</b>				
Volt Sense Lead	<b>#200 238</b>	30 ft (9.2 m)		
Hi-Flex Cable	<b>#195 044</b>	50 ft (15.2 m) Gas/motor cable for rigorous applications		
Blank Data Card	<b>#155 910</b>			
Shell Connector	<b>#194 847</b>	For peripheral		
Aluminum Kit	<b>#194 922</b>	1/16		
	<b>#194 923</b>	3/64		
Water Flow Switch	<b>#043 576</b>			

Date:

Total Quoted Price:



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