

# Copilot™

## Collaborative Welding Systems

### Quick Specs

#### Industrial Applications

Contract and OEM manufacturing of components for automotive, recreational vehicles, farm and construction machinery, marine, furniture, and more. Confab, jobsite, and field fabrication.

#### Processes

MIG (GMAW), Accu-Pulse®, Versa-Pulse™\* and RMD®\*

\*With Auto-Continuum power source only.

#### Product Type

Collaborative welding robot or cobot provides a combined station for:

- A) Welding envelope
- B) Loading and unloading
- C) Programming
- D) Tool installation and change

#### MIG Gun Options

Air-cooled and water-cooled

#### Machine Dimensions (H x W x D)

84 x 48 x 52 in. (2,134 x 1,219 x 1,321 mm)

#### Payload Capacity

1,500 lb. (680 kg) with feet  
750 lb. (340 kg) on casters

#### Input Power

Copilot: 110 V  
See page 2 for Auto Deltaweld™ and Auto-Continuum™ requirements

**Copilot is our entry-level collaborative welding cell for welders new to robotic welding. It's available in air-cooled and water-cooled configurations.**

#### Entry-level collaborative welding cell.

Operator loads and unloads from a single station that can be shared with the robot envelope. Great for new-to-automation welding challenges and for experienced robotic welders who need affordability and the ability to address high-mix, low-volume operating scenarios in a small footprint.

#### Welding-centric software and programming that is easy to use.

**Ships partially assembled** with a video setup guide and instructions. Copilot is mounted on castor wheels for easy positioning and placement.

**Easy to relocate.** Relocate your cobot workstation in four easy steps: unplug equipment and raise leveling feet, push by hand, re-level feet, and plug in equipment.



**Air-cooled system with Auto Deltaweld 350, touch sensing and through-arc seam tracking shown.**

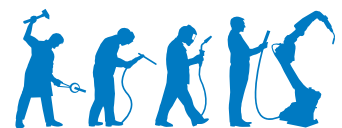
#### Miller recommends



Visit [HobartBrothers.com](http://HobartBrothers.com) for your filler metal solutions.



Major components except torches, consumables, and power supplies. Refer to specific component warranty for more information.



**Evolve Your Welding™**



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# Copilot™ System

**Programming puck** reduces the need to interact with the pendant.

**Tregaskiss® TOUGH GUN® CA3 robotic MIG gun with AccuLock™ consumables** is engineered for accurate, reliable and repeatable performance that maximizes production uptime and throughput.

**Weld-ready tool surface** is 48 x 48 inches and outfitted with 5/8-inch tooling holes that are spaced 2 x 2 inches in a 42 x 30 inch pattern on center. Compatible with Bluco® and Strong Hand Tools®, among others.

*Note: Bluco® is a registered trademark of Bluco® Corporation. Strong Hand Tools® is a registered trademark of Strong Hand Tools®.*

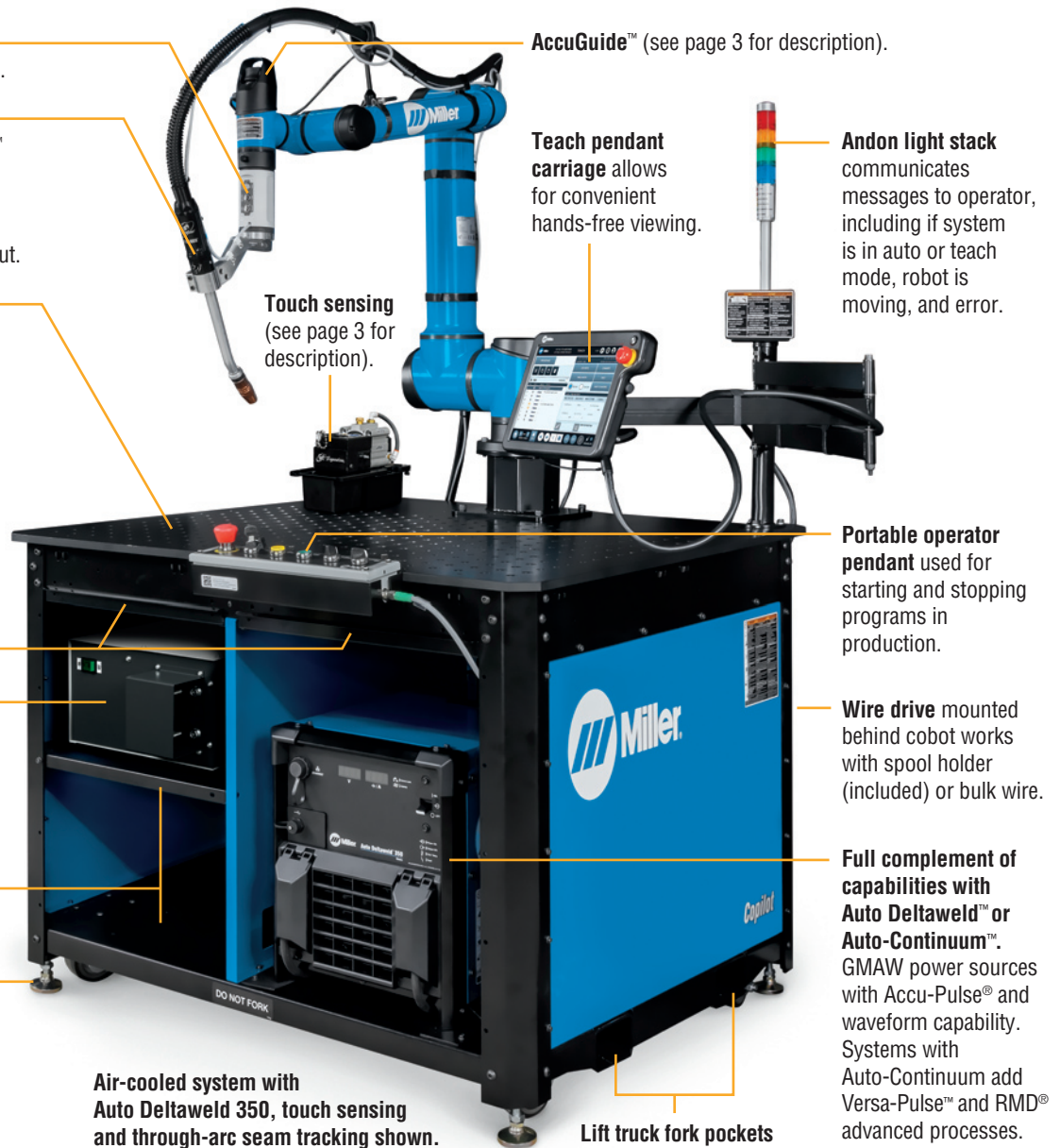
**Debris catch trays**

**Through-arc seam tracking** (see page 3 for description).

**Shelves** for storage or to hold extra components.

**Caster wheels and leveling feet**

**46-piece Strong Hand Tools® kit (not shown)** including clamps and stops for flexible fixturing needs (see page 4).



**AccuGuide™** (see page 3 for description).

**Teach pendant carriage** allows for convenient hands-free viewing.

**Andon light stack** communicates messages to operator, including if system is in auto or teach mode, robot is moving, and error.

**Touch sensing** (see page 3 for description).

**Portable operator pendant** used for starting and stopping programs in production.

**Wire drive** mounted behind cobot works with spool holder (included) or bulk wire.

**Full complement of capabilities with Auto Deltaweld™ or Auto-Continuum™.** GMAW power sources with Accu-Pulse® and waveform capability. Systems with Auto-Continuum add Versa-Pulse™ and RMD® advanced processes.

**Air-cooled system with Auto Deltaweld 350, touch sensing and through-arc seam tracking shown.**

**Lift truck fork pockets**

## Copilot™ System Specifications

Power Supply	Input Power	Rated Output	Wire Feed Speed	Payload Capacity	Approximate Dimensions		Approximate Shipping Weight
Auto Deltaweld 350	208/230/460 V, 3-phase, or 230 V, 1-phase, 60 Hz	350 A at 60% duty cycle	50–780 ipm (1.3–19.8 m/min.)	1,500 lb. (680 kg) with feet 750 lb. (340 kg) with casters	H: 84 in. (2,134 mm) W: 48 in. (1,219 mm) D: 52 in. (1,321 mm)	Max. tool height: Contact Miller Load height: 37 in. (940 mm)	1,700 lb. (771 kg)
Auto Deltaweld 500	575 V, 3-phase, 60 Hz	500 A at 100% duty cycle					
Auto-Continuum 350	Auto-Line™ 230–575 V 3-phase, 50/60 Hz	350 A at 100% duty cycle	50–1,000 ipm (1.27–25.4 m/min.)				
Auto-Continuum 500	Auto-Line™ 230–575 V 3-phase, 50/60 Hz	500 A at 39 V, 100% duty cycle					

*Note: Some filler metal wires with lower column strength may need additional considerations for feeding. Discuss with our team what challenges the Copilot is ready to tackle.*

## AccuGuide™ and IntelliSet™ (Standard on all systems)

**AccuGuide positioning control** allows the welder to fine-tune the position of the torch during programming versus only using the free-jogging feature of the cobot.

**IntelliSet setting management system** reduces the steps required while programming by simplifying the process of choosing or revising settings.

## Touch Sensing (Standard on all Auto Deltaweld™ Copilot™ systems)

**Touch sensing** provides a means of detecting welding workpiece location by utilizing voltage sensing along with programmed torch “sweeps” to positively locate the workpiece position prior to welding.

**Retrofit of touch sensing to existing systems is available by contacting Miller for a quote.**



## Through-Arc Seam Tracking (Available on select Auto Deltaweld™ Copilot™ systems)

**Through-arc seam tracking** corrects the robot arc path to accommodate subtle variations in the workpiece geometry. Using feedback from the arc, combined with a weave pattern, the robot can compensate for subtle irregularities from the intended weld path to successfully weld the joint with proper bead appearance and penetration.

**Retrofit of through-arc seam tracking to existing systems is available by contacting Miller for a quote.**



## Water-Cooling (Available on 500-amp Copilot™ systems)

**Water-cooled Copilot** provides the power for hotter and heavier welding challenges requiring up to 500 amps at 100% duty cycle.

**Tregaskiss® TOUGH GUN® CA3 robotic MIG gun with I.C.E.® technology and AccuLock™ consumables** is engineered for accurate, reliable and repeatable performance that maximizes production uptime and throughput.

**Coolmate™ 1.3** provides added cooling for hotter applications. Water-cooled Copilot systems ship with four gallons of coolant 11. Includes pull-out shelf.

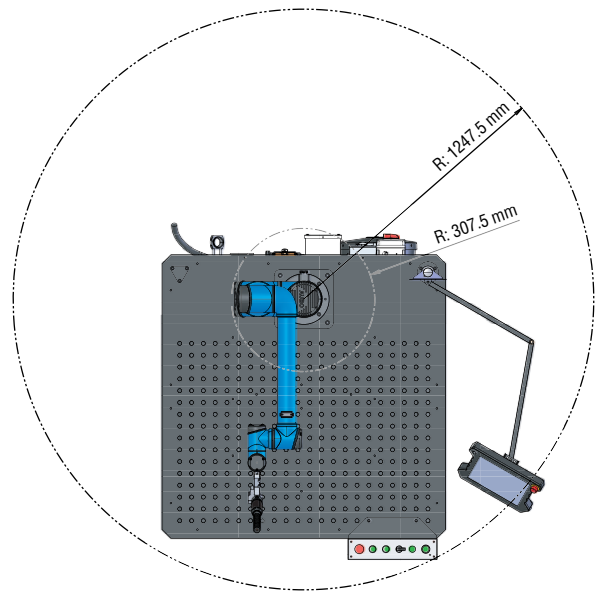


## Strong Hand Tools® Kit



All Copilot systems ship with a 46-piece Strong Hand Tools® kit that includes locating pins, pliers, clamps, edges, and blocks.

## Copilot™ Work Envelope



Note: Approximate dimensions, contact us if you are building tooling.

## Ordering Information To order, call us toll-free at 888-843-7693 or email MWA.Sales@Millerwelds.com

Systems	Stock No.	Description	Qty.	Price
Air-Cooled	<b>Copilot™ with Auto Deltaweld™</b>	<b>951000110</b> With Auto Deltaweld 350 and Auto Deltaweld Basic fixed wire drive, plus touch sensing		
	<b>951000115</b> Same as 951000110 plus through-arc seam tracking			
	<b>951000111 (Available in Canada only)</b> With Auto Deltaweld 500 (575 V) and Auto Deltaweld Basic fixed wire drive, plus touch sensing			
	<b>951000131 (Available in Canada only)</b> Same as 951000111 plus through-arc seam tracking			
	<b>Copilot™ with Auto Continuum™</b>	<b>951000108</b> With Auto-Continuum 350 and Auto-Continuum wire drive motor assembly		
Water-Cooled	<b>Copilot™ with Auto Deltaweld™</b>	<b>951000134</b> With Auto Deltaweld 500 (230/460 V) and Auto Deltaweld Basic fixed wire drive, plus touch sensing		
	<b>951000135</b> Same as 951000134 plus through-arc seam tracking			
	<b>951000132 (Available in Canada only)</b> With Auto Deltaweld 500 (575 V) and Auto Deltaweld Basic fixed wire drive, plus touch sensing			
	<b>951000133 (Available in Canada only)</b> Same as 951000132 plus through-arc seam tracking			
	<b>Copilot™ with Auto Continuum™</b>	<b>951000105</b> Includes Auto-Continuum 500 and Auto-Continuum wire drive motor assembly		

Air-cooled systems include welding robot, TOUGH GUN® CA3 robotic MIG gun, integrated welding table, Strong Hand Tools® kit, and all required interconnecting cables

Water-cooled systems add I.C.E.® technology to the TOUGH GUN® CA3 robotic MIG gun, Coolmate™ 1.3 (301617) with four gallons of coolant 11, pullout shelf for Coolmate, water lines, and cable sleeve

Date:

Total Quoted Price:

Distributed by:

