

Copilot™ Builder™

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™, RMD® and Profile Pulse™

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

Input Power

Copilot Builder: 110 V (see page 4 for Auto Deltaweld™ requirements)

Air-Cooled and Water-Cooled MIG Torch Options

Tregaskiss® CA3 MIG torch OR XR-Aluma-Pro™ CB push-pull MIG torch for aluminum welding

Configurable cobot that is our smallest, most versatile welding system. Delivers the productivity and repeatability of robotic welding, utilizing straightforward software programming and collaborative robotics.

Copilot Builder collaborative welding systems come on a pallet, allowing components to be detached and rearranged to suit the challenges of your application. Builder model allows for table, horizontal, flat and inverted mount options. Further customize your Builder with cable length options. Great for new-to-automation welding challenges and for experienced robotic welders who need the ability to address high-mix, low-volume operating scenarios in a customizable footprint.



Water-cooled Copilot Builder shown with Auto Deltaweld 500, touch sensing and through-arc seam tracking.

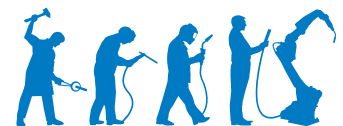
Miller recommends



Visit HobartBrothers.com for your filler metal solutions.



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



Evolve Your Welding™



Miller Electric Mfg. LLC
An ITW Welding Company
281 E. Lies Rd.
Carol Stream, IL 60188 USA

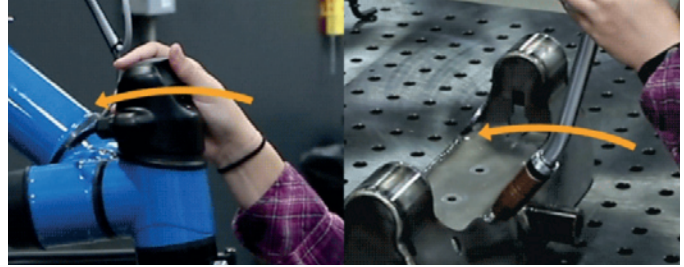
Equipment Sales
Phone: 630-653-6819
Email: MWA.Sales@millerwelds.com

MillerWelds.com



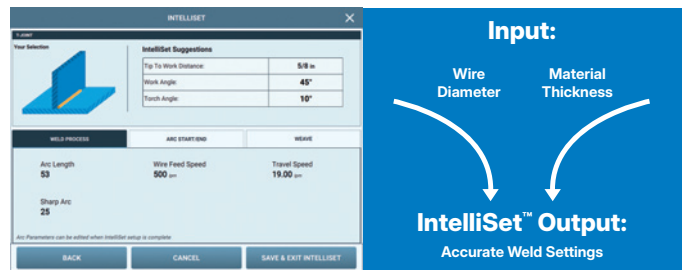
AccuGuide™ (Standard on all systems.)

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.



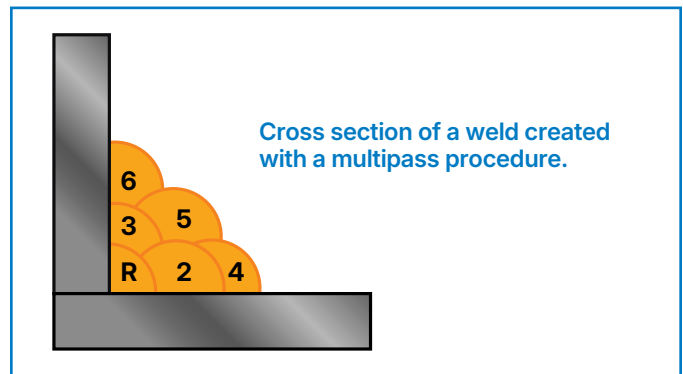
IntelliSet™ (Standard on all systems.)

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



Multipass (Standard on all systems.)

Multipass welding is a technique used in welding processes where a weld joint requires more than one pass to achieve the desired weld size, strength and quality. This method is often employed in applications where the joint thickness is greater than what can be effectively welded in a single pass.



Touch Sensing (Available on select 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.



Through-Arc Seam Tracking (Available on select 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.

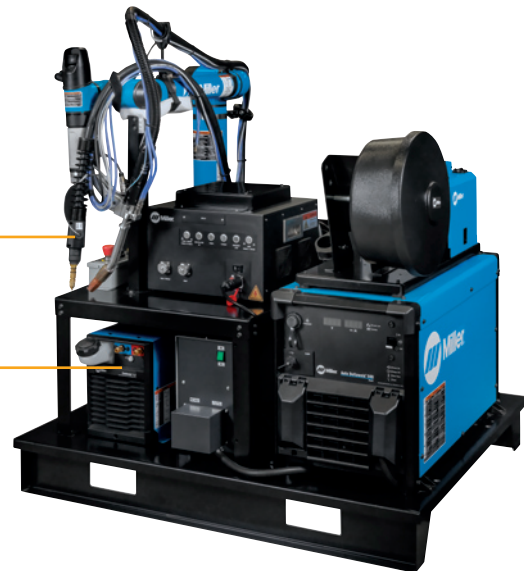


Water-Cooling (Available on 500-amp systems.)

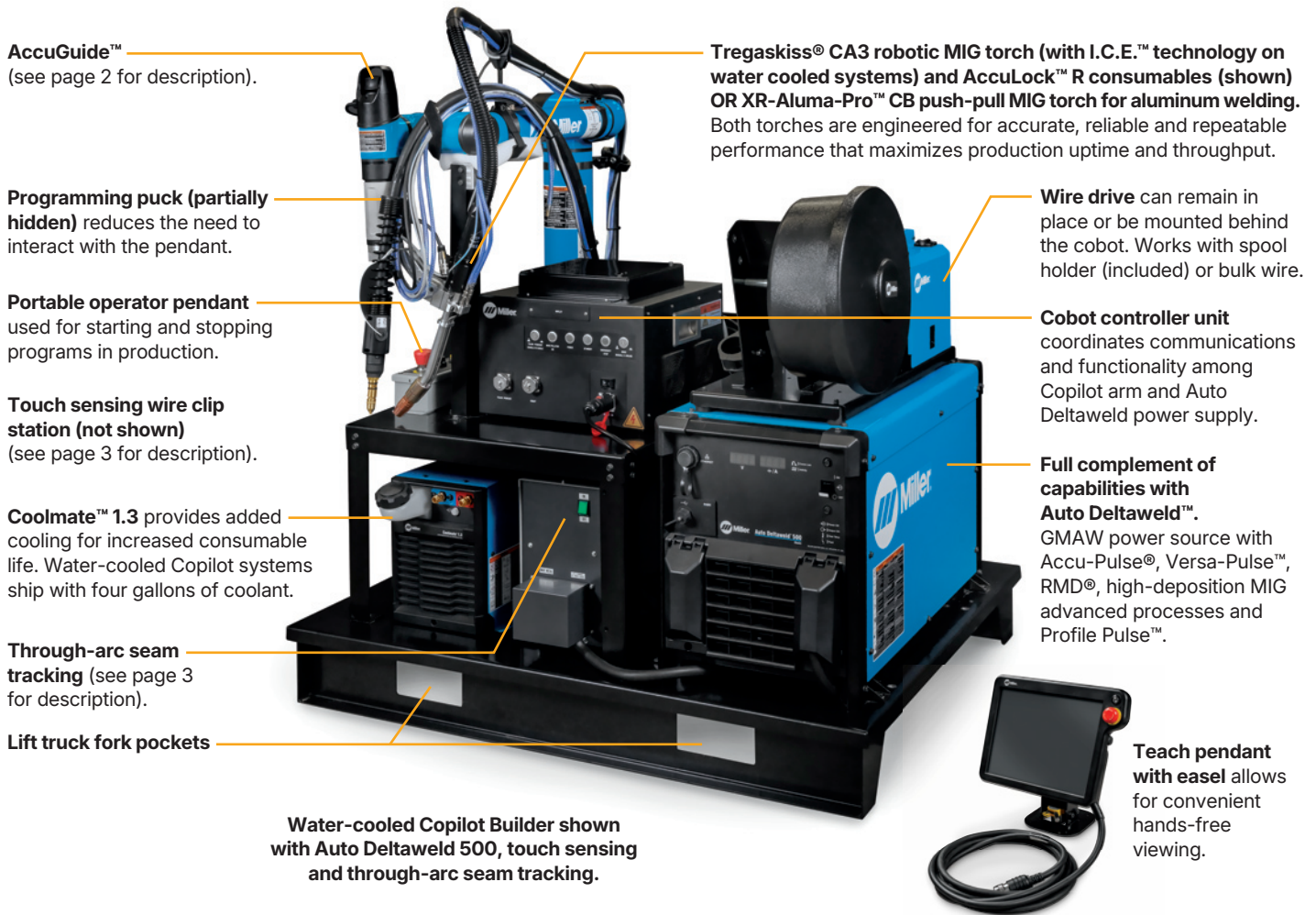
Tregaskiss® CA3 robotic MIG torch with I.C.E.™ technology and AccuLock™ R consumables (shown) OR XR-W Aluma-Pro™ CB push-pull MIG torch for aluminum welding.

Note: XR-W Aluma-Pro CB torch is not available on FANUC® arm systems.

Coolmate™ 1.3 provides added cooling for increased consumable life. Water-cooled Copilot™ Builder™ systems ship with four gallons of coolant.



Copilot™ Builder™ System



AccuGuide™ (see page 2 for description).

Programming puck (partially hidden) reduces the need to interact with the pendant.

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

Touch sensing wire clip station (not shown) (see page 3 for description).

Coolmate™ 1.3 provides added cooling for increased consumable life. Water-cooled Copilot systems ship with four gallons of coolant.

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

Lift truck fork pockets

Tregaskiss® CA3 robotic MIG torch (with I.C.E.™ technology on water cooled systems) and AccuLock™ R consumables (shown) OR XR-Aluma-Pro™ CB push-pull MIG torch for aluminum welding. Both torches are engineered for accurate, reliable and repeatable performance that maximizes production uptime and throughput.

Wire drive can remain in place or be mounted behind the cobot. Works with spool holder (included) or bulk wire.

Cobot controller unit coordinates communications and functionality among Copilot arm and Auto Deltaweld power supply.

Full complement of capabilities with Auto Deltaweld™. GMAW power source with Accu-Pulse®, Versa-Pulse™, RMD®, high-deposition MIG advanced processes and Profile Pulse™.

Teach pendant with easel allows for convenient hands-free viewing.

Water-cooled Copilot Builder shown with Auto Deltaweld 500, touch sensing and through-arc seam tracking.

Copilot™ Builder™ System Specifications (Subject to change without notice.)

| POWER SUPPLY | INPUT POWER | RATED OUTPUT | WIRE FEED SPEED | PALLET DIMENSIONS | APPROXIMATE SHIPPING WEIGHT |
|--------------------|--|----------------------------------|---------------------------------|------------------------------|-----------------------------|
| Auto Deltaweld 350 | 208/230/460 V, 3-phase or 230 V, 1-phase or 575 V*, 3-phase, 60 Hz | 300 A at 29 V 100% duty cycle | 50–780 ipm (1.3–19.8 m/min.) | 48 x 38 in. (1,219 x 965 mm) | 1,178 lb. (534 kg) |
| Auto Deltaweld 500 | 208/230/460 V or 575 V*, 3-phase, 60 Hz | 500 A at 39 V 100% duty cycle | | | |

*575 V model is available in Canada only.

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

Copilot™ Builder™ System with FANUC® Long Arm

Copilot Builder with FANUC® long arm system is available in either air- or water-cooled versions. It includes the same features as the Copilot Builder system with Tregaskiss® CA3 robotic MIG torch, with touch sensing and through-arc seam tracking built into the FANUC arm.

Note: Only available with the Auto Deltaweld™ 500 power source.

FANUC® long arm has touch sensing and through-arc seam tracking built in and provides a longer arm reach of 1,778 mm (70 in.).



Air-cooled Copilot Builder with FANUC long arm shown with Auto Deltaweld 500, touch sensing and through-arc seam tracking.

Torch Options



Tregaskiss® CA3 Robotic MIG Torch
 Standard automation torch to support steel, stainless steel, and other ferrous weld wire. Available in air- and water-cooled models. For more information, see Tregaskiss® literature SP-CA3.



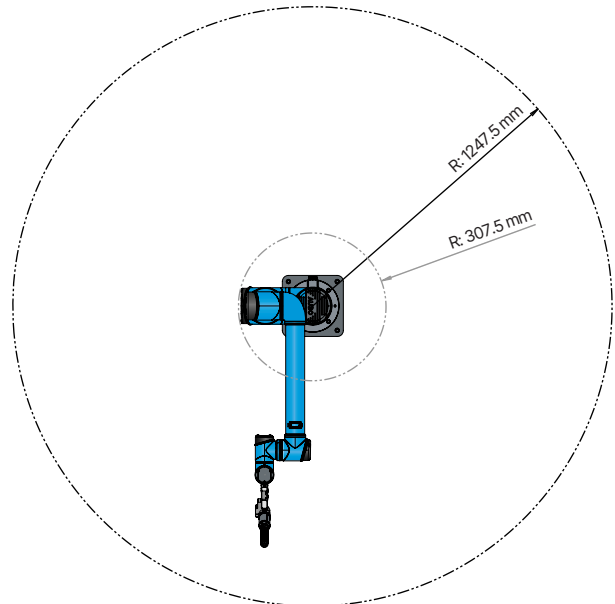
XR-Aluma-Pro™ CB Push-Pull MIG Torch
 A push-pull aluminum torch designed for collaborative welding systems. Available in air- and water-cooled models. For more information, see Miller® literature AU/62.0.
Note: Not available on FANUC® arm systems.

Copilot™ Builder™ Mounting Options

| | |
|---|--------------------------------|
| <p><i>Note: Shown with user-supplied table.</i></p> | |
| <p>Table mount</p> | <p>Horizontal mount</p> |
| | |
| <p>Flat mount</p> | <p>Inverted mount</p> |

Note: For mounting the Copilot Builder with FANUC® outside a table or in a flat position, please call MWA service at 1-630-653-6819.

Copilot™ Builder™ Work Envelope



Note: Approximate dimensions for standard arm only. See page 5 for Copilot with FANUC® arm radius. Contact us if you are building tooling.

Genuine Miller® Accessories and Consumables

Copilot™ Builder™ Extension Cable Bundle

301839 16.4 ft. (5 m)

301840 26.2 Ft. (8 m)

301841 52.5 Ft. (16 m)

Cable bundle includes cobot and wire feeder communication cables, ground cable and work leads for wire feeder and power source.

Magswitch 88002010

Kit, MagBase 10 2.0, Miller, full assembly.

For use with flat mounting option. For more information, visit magswitch.com

Tregaskiss® CA3 Torch Consumables

AccuLock™ R Contact Tips (10 per package)

T-A045CH .045 in. (1.2 mm)

T-A062CH .062 in. (1.6 mm)

AccuLock™ R Copper Nozzles

401-81-62 Slip-On, 5/8 in. ID, 1/8 in. stickout

401-14-62 Thread-On, 5/8 in. ID, 1/8 in. recessed

AccuLock™ R Diffusers

D-ATSH Slip-On

D-ATTH Thread-On

Conventional Liner (15 ft.)

415-35-15 .035–.045 in. (0.9–1.2 mm)

415-116-15 .045–1/16 in. (1.2–1.6 mm)

QUICK LOAD® Liner (15 ft.)

415-35-15Q .035–.045 in. (0.9–1.2 mm)

Wire Brake Jump Liner

495-18-116 .052–1/16 in. (1.4–1.6 mm)

Wire Brake Kit

WB-599-045 .045 in. (1.2 mm)

See Tregaskiss® CA3 literature SP-CA3 for additional consumables and accessories.

XR-Aluma-Pro™ CB Torch Consumables

T Series Contact Tips (10 per package)

T-035AL .035 in. (0.9 mm)

T-047AL .047 in. (1.2 mm)

T-062AL 1/16 in. (1.6 mm)

AccuLock™ R Copper Nozzle

401-6-62 Thread-On, 5/8 in. ID, 1/8 in. recessed

AccuLock™ R Diffuser

D-ATSH Slip-On

Liner (15 ft.)

229887 .035–.045 in. (0.9–1.2 mm)

See XR-Aluma-Pro™ CB literature AU/62.0 for additional consumables and accessories.

Copilot™ Builder™ System w/Aluma-Pro™ CB Torch Ordering Information

| SYSTEM | STOCK NO. | DESCRIPTION | QTY. | PRICE |
|--------------|--|---|--|-------|
| Air-Cooled | Copilot Builder with Auto Deltaweld™ 350 | 951000226 With 16.4 ft. (5 m) cables | Air-cooled systems include Auto Deltaweld fixed wire drive, welding robot, XR-Aluma-Pro CB push-pull MIG torch, and all required interconnecting cables | |
| | | 951000227 With 26.2 ft. (8 m) cables | | |
| | Copilot Builder with Auto Deltaweld™ 350 (575 V) (Available in Canada only) | 951000229 With 16.4 ft. (5 m) cables | | |
| | | 951000230 With 26.2 ft. (8 m) cables | | |
| Water-Cooled | Copilot Builder with Auto Deltaweld™ 500 | 951000232 With 16.4 ft. (5 m) cables | Water-cooled systems use XR-W Aluma-Pro CB push-pull MIG torch, and add Coolmate™ 1.3 (301617) with four gallons of coolant, water lines, and cable sleeve | |
| | | 951000233 With 26.2 ft. (8 m) cables | | |
| | Copilot Builder with Auto Deltaweld™ 500 (575 V) (Available in Canada only) | 951000235 With 16.4 ft. (5 m) cables | | |
| | | 951000236 With 26.2 ft. (8 m) cables | | |

DATE:

TOTAL QUOTED PRICE:

Note: See page 8 for Copilot Builder system with Tregaskiss® CA3 torch ordering information and see Copilot™ literature AU/60.0 for our table-based cobot systems.

To order or inquire about accessories, call us toll-free at 1-630-653-6819 or email MWA.Sales@MillerWelds.com.

Copilot™ Builder™ System w/Tregaskiss® CA3 Torch Ordering Information

| SYSTEM | STOCK NO. | DESCRIPTION | QTY. | PRICE | |
|--------------|--|--|--|-------|--|
| Air-Cooled | Copilot Builder with Auto Deltaweld™ 350 | 951000161 | With 16.4 ft. (5 m) cables and touch sensing | | |
| | | 951000179 | Same as 951000161 plus through-arc seam tracking | | |
| | | 951000162 | With 26.2 ft. (8 m) cables and touch sensing | | |
| | | 951000180 | Same as 951000162 plus through-arc seam tracking | | |
| | Copilot Builder with Auto Deltaweld™ 350 (575 V) (Available in Canada only) | 951000164 | With 16.4 ft. (5 m) cables and touch sensing | | |
| | | 951000182 | Same as 951000164 plus through-arc seam tracking | | |
| | | 951000165 | With 26.2 ft. (8 m) cables and touch sensing | | |
| | | 951000183 | Same as 951000165 plus through-arc seam tracking | | |
| | Copilot Builder with Auto Deltaweld™ 500 | 951000167 | With 16.4 ft. (5 m) cables and touch sensing | | |
| | | 951000185 | Same as 951000167 plus through-arc seam tracking | | |
| | | 951000168 | With 26.2 ft. (8 m) cables and touch sensing | | |
| | | 951000186 | Same as 951000168 plus through-arc seam tracking | | |
| | | 951000241 | With FANUC® long arm, 22.9 ft. (7 m) cables, touch sensing and through-arc seam tracking | | |
| | | 951000242 | Same as 951000241, but with 45.9 ft. (14 m) cables | | |
| | Copilot Builder with Auto Deltaweld™ 500 (575 V) (Available in Canada only) | 951000170 | With 16.4 ft. (5 m) cables and touch sensing | | |
| | | 951000188 | Same as 951000170 plus through-arc seam tracking | | |
| | | 951000171 | With 26.2 ft. (8 m) cables and touch sensing | | |
| | | 951000189 | Same as 951000171 plus through-arc seam tracking | | |
| | | 951000245 | With FANUC® long arm, 22.9 ft. (7 m) cables, touch sensing and through-arc seam tracking | | |
| | | 951000246 | Same as 951000245, but with 45.9 ft. (14 m) cables | | |
| Water-Cooled | Copilot Builder with Auto Deltaweld™ 500 | 951000173 | With 16.4 ft. (5 m) cables and touch sensing | | |
| | | 951000191 | Same as 951000173 plus through-arc seam tracking | | |
| | | 951000174 | With 26.2 ft. (8 m) cables and touch sensing | | |
| | | 951000192 | Same as 951000174 plus through-arc seam tracking | | |
| | | 951000243 | With FANUC® long arm, 22.9 ft. (7 m) cables, touch sensing and through-arc seam tracking | | |
| | | 951000244 | Same as 951000243, but with 45.9 ft. (14 m) cables | | |
| | Copilot Builder with Auto Deltaweld™ 500 (575 V) (Available in Canada only) | 951000176 | With 16.4 ft. (5 m) cables and touch sensing | | |
| | | 951000194 | Same as 951000176 plus through-arc seam tracking | | |
| | | 951000177 | With 26.2 ft. (8 m) cables and touch sensing | | |
| | | 951000195 | Same as 951000177 plus through-arc seam tracking | | |
| 951000247 | | With FANUC® long arm, 22.9 ft. (7 m) cables, touch sensing and through-arc seam tracking | | | |
| | 951000248 | Same as 951000247, but with 45.9 ft. (14 m) cables | | | |

Air-cooled systems include Auto Deltaweld fixed wire drive, welding robot, Tregaskiss® CA3 robotic MIG torch, and all required interconnecting cables

Water-cooled systems add I.C.E.™ technology to the Tregaskiss® CA3 robotic MIG torch, Coolmate™ 1.3 (301617) with four gallons of coolant, water lines, and cable sleeve

DATE: _____ TOTAL QUOTED PRICE: _____

Note: See page 7 for Copilot Builder system with Aluma-Pro™ CB torch ordering information and see Copilot™ literature AU/60.0 for our table-based cobot systems.

To order or inquire about accessories, call us toll-free at 1-630-653-6819 or email MWA.Sales@MillerWelds.com.

Distributed by:

