
Miller
Unchain Your Productivity
AUTO-LINE™
Power Management Technology

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Experience the Freedom of Auto-Line™

Now you can set yourself free from the handcuffs of primary power limitations. With Miller's patented Auto-Line technology, primary power management begins at the plug. And ends in your wallet. You get:

- Better weld quality, uninterrupted production
- Universal location flexibility: plug in anywhere
- Lower primary amperage draw
- More welding output on 115 V primary
- Lower utility bills and potential for rebates

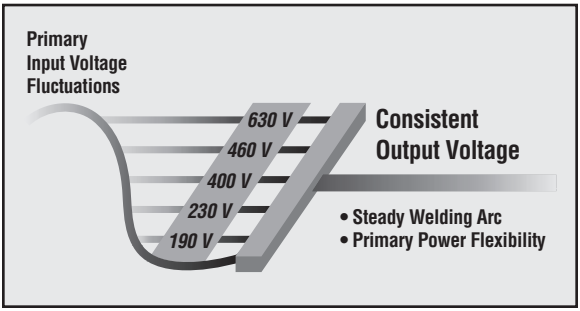
NOT a Linking Technology

Only Miller inverters feature Auto-Line. And make no mistake: Auto-Line significantly raises the performance bar over the older technology of automatic linking. With automatic linking, the power source senses the incoming voltage and automatically configures or "links" the power switching transistors for 230 or 460 V primary. While a step up from removing the machine cover and manually linking jumpers, it still involves mechanical components that are subject to failure. And it can't compensate for voltage spikes or dips beyond ±10 % of nominal.

Primary Power Management

Auto-Line lets you manage primary power for the first time ever. No longer do you have to accept what comes out of the receptacle. Auto-Line provides so many benefits because it essentially enables the welder or plasma cutter to create its own source of primary power.

Here's how it works: Auto-Line technology uses what's known as a "boost converter." This circuit boosts primary input power — from 115 to 575 V or anywhere in between — to a higher voltage. This voltage then charges a capacitor, which is a device used to store and quickly discharge energy. Power for the actual inverter section of the welder comes from this capacitor. In short, it's like drawing water from a well that's always full.



The Auto-Line circuit boosts primary power to a higher, constant voltage. Even if incoming voltage varies widely, the Auto-Line circuit ensures a rock-steady welding or cutting arc.

Better Weld Quality, Uninterrupted Production

Know how your kitchen lights dim when the refrigerator's compressor kicks in? The same thing happens on job sites, in fab shops, manufacturing facilities or when running off generator power. And here's the scary part: you might not even know it until the QA/QC department rejects your weld. Then again, you might know it when a power surge or dip causes your arc to flicker and your inverters to shut down for self protection. In extreme situations, machines with automatic linking have been known to re-link to the wrong power and fail.

But there's no worry with Auto-Line™. It lets you ride effortlessly through "dirty" power. Auto-Line gives you a rock steady arc, "on spec" welding parameters and equipment with an incredibly dynamic, link-free operating range. For products like the XMT® 350 or Axcess™, Auto-Line provides a +37%, -59% operating range — that's an effective 630 VAC surge to a 190 VAC Volt droop on a 460 V line.

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Auto-Line can assist in maintaining weld specifications and deliver uninterrupted production.

"The ability of the XMT 350 to ride through the voltage drop that shut down (other inverters) was proof positive to me of Auto-Line's benefits," says the owner of this fab shop.

Universal Location Flexibility

Auto-Line permits direct connection to almost any type of input power. 115 V through 575 V. Single- or three-phase. 50 or 60 Hz. Even the third rail of a subway. You'll appreciate the flexibility of Auto-Line when you can't predict the location of your next job. Want to use the same welder in the shop and in the field? Have multi-national production facilities? Or are you just tired of waiting for an electrician to run wiring? Check out these Miller inverters and their Auto-Line capabilities:

- XMT 350 (190 V – 630 V, 1- or 3-phase, 50 or 60 Hz)
- Axcess™ Series (190 V – 630 V, 1- or 3-phase, 50 or 60 Hz)
- Spectrum® 2050 (190 V – 630 V, 1- or 3-phase, 50 or 60 Hz)
- Dynasty® 200 (120 – 460 V, 1- or 3-phase, 50 or 60 Hz)
- Maxstar® 200 (120 – 460 V, 1- or 3-phase, 50 or 60 Hz)
- Maxstar® 150 (115– 230 V, 1-phase only, 50 or 60 Hz)

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With a Miller inverter featuring Auto-Line, simply connect the right plug and you're ready to weld or cut anywhere in the world.

The Spectrum 2050, the first inverter ever to feature Auto-Line, gained the respect of contractors for its ability to work wherever they do.

Draw Fewer Amps

Construction sites are notoriously starved for power. Successful fabricators and manufacturers also face the same problem. They've added so much new equipment that there's no power left to run more welding machines without changes to incoming electrical service. That's a problem that could easily cost you $10,000 – $50,000. Or maybe not. As an added benefit, Miller inverters with Auto-Line™ draw far less primary current than other machines.

As a general rule, you can add two Auto-Line CC/CV inverters by retiring just one transformer-type welder. Even in an "apples-to-apples" comparison, it's no contest: On 460 V primary, the XMT 350 draws only 17.8 amps. That's a 25% advantage over competitive inverters, and a big bonus for you. On a 100-amp breaker, you can add five XMTs, but just four competitive machines.

When it comes to Miller TIG inverters, Auto-Line rewrites the primary power rule book. In fact, you can run four Dynasty 200s on less power than it takes to run a 250-amp conventional TIG unit. That's because the Dynasty 200 draws a mere 16 amps on a 230 V, single-phase line. And remember that Auto-Line enables using three-phase power, which further improves efficiency.

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Low primary amp draw benefits contractors, too. If you run an Auto-Line inverter off a generator, or if you run long secondary weld cables, there's much less worry about tripping the breaker.

The low amp draw of the Dynasty 200 DX with Auto-Line enabled this fabricator to add eight more TIG machines without any changes to an already stressed primary service.

The Most Power Per Pound

Miller's Auto-Line circuit provides near perfect Power Factor. In everyday terms, this means you get the maximum output for a given primary current draw. As a result, the Maxstar 150 can produce 30 percent more welding power than competitive machines on 115 V primary. The Maxstar 150 can weld at approximately 110 amps, or enough power to run 1/8-in. E7018 Stick electrode — a feat no other inverter in its class can accomplish. For the same reason, the Dynasty 200 is the only inverter than can weld aluminum at up to 125 amps on 115 V primary.

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Miller TIG inverters with Auto-Line offer unmatched portability and convenience. The Maxstar 150 weighs less than 14 lbs. and the Dynasty 200 weighs just 45 lbs.

The Maxstar 150 with Auto-Line gives this mechanical contractor the power to run larger Stick electrodes that other inverters simply can't handle.

Utility Rebates, Anyone?

Near perfect power factor may have another benefit, too. Utility companies often reward those who use energy efficiently. They do this through rebates for purchasing efficient equipment, and more often through cost penalties for inefficiency. Since no other welding equipment can match the performance of Auto-Line, Miller inverters put you in the best position possible.

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Miller inverters with Auto-Line could lower your utility bill by hundreds or thousands of dollars, and you might be in a position to get utility rebates.

Benefits by Market Segment

Power Source	Manufacturing/ Fabrication	Structural Construction	Mechanical Contractor	Maintenance Repair
XMT 350	~ ∞ ⬇ $	~ ∞ ⬇	~ ∞ ⬇	∞ ⬇
Spectrum 2050	~ ∞	~ ∞ ⬇	~ ∞ ⬇	∞ ⬇
Maxstar 200	~ ∞ ⬇ $		∞ ⬇ ⬆	∞ ⬇ ⬆
Maxstar 150			∞ ⬇ ⬆	∞ ⬇ ⬆
Dynasty 200	~ ∞ ⬇ $		∞ ⬆	∞ ⬇ ⬆
Axcess Series	~ ⬇ $			

Key

- ~ Ride through power dips and spikes
- ∞ Universal location flexibility; plug in anywhere
- ⬇ Lower primary amperage draw
- ⬆ More welding output on 115 V primary
- $ Potential for utility rebates


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