

A welder wearing a protective mask and gear is working on a large steel beam. Sparks are visible from the welding process. The background shows a concrete wall and other steel beams.

# Construction Solutions

Maximize productivity. Optimize weld quality.  
Improve your bottom line.

## > Solutions Designed for Structural and Pipe Welding in the Shop or Field

Whatever and wherever you build, there are Miller, Hobart and Bernard solutions specifically developed to support you — so you can effectively manage your labor pool, achieve productivity goals, maintain quality and reduce expenses.







### Structural welding

In the shop, the ability to handle a wide variety of ever-changing projects — and quickly adapt to new ones — is key to success. In the field, each jobsite has unique challenges that require versatile equipment and materials to get work done on time, under budget and according to spec. In either environment, you'll do the best work with equipment and solutions created with your success in mind.

### Pipe welding

Fabricating pipe requires the flexibility to work with multiple material types and thicknesses while always producing excellent results. In the field, successfully making critical pipe welds that pass rigorous codes is a make-or-break situation where cost overruns must be avoided. Anywhere you weld pipe, versatility and consistent performance are essential.

**You win the jobs. We provide the solutions to get them done.**

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# Induction Heating

## Fast, consistent heating

Traditional weld heating methods have numerous drawbacks. Open-flame heating carries significant fuel expenses, delivers inconsistent results and poses safety risks. Resistance heating requires long setup/teardown times with high maintenance costs. Improve weld quality and your bottom line with Miller® induction heating.

### Miller® ProHeat™ 35

This flexible induction heating system delivers more consistent results and improves safety, while maximizing the productivity you need. It's available in three different configurations:

#### Liquid-cooled cables —

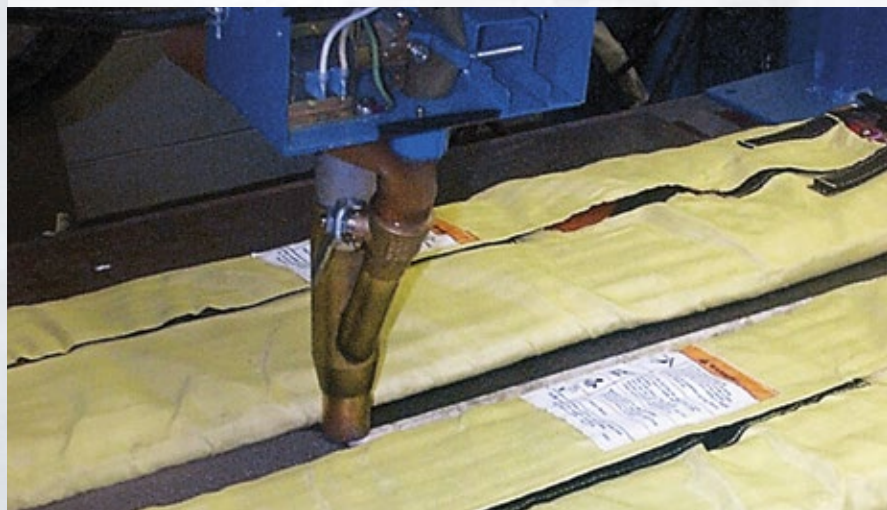
Ideal for applications that have higher-temperature requirements or geometries preventing the use of air-cooled blankets, these versatile cables can be used for preheating, post-weld heat treatment, localized stress relieving and hydrogen bake out.



**Rolling induction system** — A simple, cost-effective heating solution that delivers fast and consistent heat for pipe, plate and pressure vessel fabricators. The rolling inductor quickly delivers up to 600 degrees Fahrenheit for preheat applications on moving parts, so welders can be more productive.

**Air-cooled blankets** — Uniformly preheat pipe and plate up to 400 degrees Fahrenheit. Blankets apply easily and are available in a wide variety of diameters and lengths to fit most applications; rugged material withstands tough conditions in industrial and construction settings.

**For induction-heating inquiries:**  
**1-844-463-4328**  
**InductionSales@MillerWelds.com**





# Submerged Arc Welding

Get the productivity and deposition rates you need for every submerged arc welding project with Miller® welding equipment and Hobart® submerged arc welding wires and fluxes.

## Miller® SubArc Digital Series welders and accessories

Miller SubArc Digital Series equipment integrates quickly and easily, supporting advanced weld processes that can maximize productivity and help ensure proper weld deposition.

**Miller SubArc Digital Series welders** — Offering both DC and AC/DC capabilities, SubArc Digital Series welders can handle Submerged Arc (SAW) and Electroslag (ESW) welding applications, from traditional DC single-arc to multi-wire tandem welding.

In the case of ESW welding or other high-current demand, two or more power sources can easily be paralleled.



**SubArc Digital Portable Welding System** — This self-contained system includes the power source, column and boom on a mobile platform, providing a compact, turnkey submerged arc welding solution that's ideal for welding pressure vessels and pipes.

**Sub-Arc 3-Wheel Tractor** — Its compact size makes it easy to configure, allowing greater flexibility and additional SAW setup options. In addition, a new all-in-one interface lets welders control the tractor as well as the welding functions from the same panel, for improved ease of use.



## Hobart® SubCOR™ wires

Cored wire requires greater wire feed speed to achieve given amperage when compared to a solid wire of the same diameter and welding contact-tip-to-work distance. As a result, cored wires can offer increased deposition rates without significantly changing amperage and voltage. When the deposition rate is increased, it's often possible to use higher travel speeds than solid wires and still maintain a given weld size.

This presents an opportunity for improved productivity by speeding up the process and reducing the time it takes to complete a weld. Since labor is the largest cost of any welding operation, even a small reduction in cycle time can provide a huge cost savings in the long run — without sacrificing weld quality.

## Hobart® fluxes

Available in active and neutral formulations, Hobart fluxes are available to meet a wide variety of submerged arc welding needs. Hobart SWX flux packaging is resistant to breaking and doesn't allow the flux to pick up moisture.

**Active fluxes** — Ideal for single- or two-pass welds and often has a more easily removed slag. It's also more tolerant of rust and mill scale.

**Neutral fluxes** — Preferred for welding on heavy, thick sections of materials that require multiple passes.





# Structural Welding / Shop Work

*To meet tight timelines and deliver quality products, a shop must work precisely and efficiently. Achieving these targets requires power sources designed for big output and versatility, filler metals that optimize weld quality and equipment that can handle demanding conditions.*

*Miller® welders, Hobart® wire and Bernard™ MIG guns deliver just that — the consistent, reliable performance you need to help your shop succeed.*

## **Dimension™ 650 Multiprocess Welder**

Built for reliable performance in harsh environmental conditions, this versatile welder can handle a wide range of jobs — all while drawing less amperage and using less than 40 percent of the floor space of previous models.

**Flexibility, power and precision** — Gouge with up to 3/8-inch carbons at up to 800 amps, get precise short-arc MIG welding with less risk of distortion/burn-through on thin metals and achieve outstanding results with flux-cored wires.

**93% power efficiency rating** — Get more done and waste less power.

**Durable inside and out** — All-aluminum to resist corrosion, and protected from electrical power spikes by an exclusive input inductor. Fan-On-Demand™ cooling and Wind Tunnel Technology™ protect the machine's internal components from airborne contaminants.



## Metal-cored wires

Metal-cored wires offer higher deposition rates than solid wires with no increase in heat input, leading to increased productivity and reduced distortion.

### Hobart® FabCOR® 86R —

This wire has high welder appeal as added deoxidizers offer improved performance and enhanced bead profile over mill scale and dirty base metal.



### Hobart® FabCOR® Edge™ —

FabCOR Edge offers an excellent weld bead profile on clean and lightly scaled base material. Silicon islands clump in large deposits, away from the weld toes, allowing for easy removal.



## Gas-shielded flux-cored

### Hobart® FabCO® Excel-Arc™ 71 —

This all-position wire is a great choice for mild steel applications often found in shop welding, either in single- or multiple-pass applications.



## Bernard™ BTB semi-automatic air-cooled MIG guns

BTB means “Best of the Best”:

MIG guns that use the best handles, necks, consumables, liners and cables for comfortable, smooth, reliable operation that can handle hard use and tough conditions. Designed to solve problems, maximize productivity and improve your bottom line, these industrial-duty guns include an industry-leading one-year manufacturer’s warranty.



# Structural Welding / Field Work

*Welding in the field presents many challenges that can decrease productivity and limit your ability to get quality work done on schedule and within budget — from excessive walks to the power source and time-consuming rework, to unreliable MIG guns and the high cost of fuel to operate engine-driven welders and generators. Count on Miller, Hobart and Bernard to deliver the flexible solutions you need for high-quality, profitable, safer field work.*

## Miller® Trailblazer® and Big Blue® welder/generators with ArcReach® technology

These powerful engine-driven welder/generators are ideal for multiprocess field structural welding — whether you have a need for the smaller, lighter-weight Trailblazer or quieter and fuel-efficient Big Blue.



**Trailblazer® 325** — Delivers big welding power, up to 12,000 watts of auxiliary power, and exceptional arc quality in a small footprint. A wide amperage range and precise arc control allow fine-tuning to the welder's preferences, Auto-Speed™ technology matches engine rpm to the job, and Excel™ power delivers 2,400 watts of 120-volt inverter-based, pure sine wave power at all speeds (including idle) to reduce operating costs and refueling downtime.

**Big Blue® 400/500 Pro** — Durable machines designed for heavy industrial applications where fuel efficiency and less noise are a priority over machine footprint. The 400 model delivers 10,000 watts of generator power, while the 500 Pro provides 20,000 watts — so you can plug in an extra inverter-based power source for a second welding arc. Superior arc control makes it easier to fine-tune for hard-to-weld materials.

## Miller® XMT® 350 FieldPro™ systems with ArcReach® technology

Unnecessary walks to the power source cost you thousands of dollars. XMT 350 FieldPro systems keep welders at the arc and offer numerous benefits to maximize weld quality and field productivity.



**Cable Length Compensation (CLC™)** — Automatically adjusts voltage based on weld cable length — the voltage you set is the voltage you get.

**Adjust While Welding (AWW™)** — Make adjustments at the wire feeder or remote without stopping the arc. Eliminating the walk to the power source to change parameters improves productivity, quality and safety.

**Auto-Line™ technology** — Automatically connects to any primary input voltage from 208 to 575 volts, single- or three-phase, 50 or 60 Hz — no manual linking required. Ideal when only “dirty” input power is available; manages dips and spikes for consistently smooth, powerful arcs.



## Bernard™ Dura-Flux™ MIG guns

Built to meet the demands of heavy-duty, self-shielded, flux-cored applications, Dura-Flux MIG guns deliver multiple advantages to improve productivity and comfort while reducing costs.



**Easier and more comfortable to use** — A small trigger guard can be used instead of the optional heat shield, aiding maneuverability. The kink-resistant power cable makes wire feeding exceptionally smooth, while the non-metallic trigger absorbs less heat.

**Longer life, easier maintenance** — Sealed trigger switch keeps out dirt and is easy to replace. Neck liner replacement is easy — it doesn't use set screws. Fast-change, drop-in Centerfire™ contact tips last up to three times longer than other tips.

## Hobart® 418 stick electrodes

This general-purpose electrode is formulated to minimize hydrogen formation and help eliminate cracking. It's easy to use in all positions and delivers excellent arc stability, low spatter levels and easy slag removal.



## Hobart® Fabshield® XLR-8 Self-Shielded FCAW wires

A self-shielded, flux-cored wire designed especially for outdoor applications. XLR-8 offers an H8 low hydrogen designator along with excellent CVN toughness. This product meets D1.8 seismic requirements and offers excellent welder appeal in all positions, and in both single- or multiple-pass applications.



# DONT WALK WELD

## Miller® ArcReach® technology and accessories for structural welding

When welders make too many trips to the power source for adjustments, they waste time and cost you money. ArcReach technology delivers remote control of the power source without a control cord, using the weld cables to communicate parameters between the power source and the accessories. With ArcReach technology, you get:

- **More productivity and safety** — Welders can make adjustments at the weld joint, so there's no need for long walks to and from the power source, decreasing the chance of slips, trips and falls.
- **Better weld quality** — There's no need for a welder to weld outside of optimal settings just to avoid a long walk to the power source.
- **More control at the weld joint** — Power source controls are disabled, preventing accidental changes by personnel other than the welder.
- **Time savings** — Auto-Process Select™ saves time by sensing electrode polarity and automatically engaging the correct mode.

## Accessories

**ArcReach® SuitCase® wire feeder** — Delivers smooth wire feeding with accurate, consistent speeds; supports a wide voltage range for a variety of wires.



**ArcReach® Stick/TIG remote** — Provides full control of stick and TIG welding parameters at the weld joint; easy to adjust amperage control and arc control to fine-tune arc characteristics.



# Pipe Welding / Shop Work

*A successful pipe fabrication shop handles a wide variety of projects and processes to produce excellent welds every time — but outdated welding equipment and less-productive welding processes can keep you from achieving productivity goals and completing quality work.*

*Pipe fabrication solutions from Miller, Hobart and Bernard can maximize your shop's productivity and weld quality to give you a real competitive edge.*

## PipeWorx 400 Welding System

This simplified system delivers fast setup and process changeovers to reduce training time. Weld processes are optimized to deliver superior arc performance and stability specifically for root, fill and cap passes on pipe.

**Simple to set up and save processes** — Requires just a few basic steps to set up a new weld process with clearly labeled controls in easy-to-understand welder terminology. The memory feature stores four programs for each selection: stick, DC TIG and MIG (left and right side of feeder), which is beneficial when using multiple procedures, process parameters or welders.

**Quick process changeover** — No manual switching of polarity, cables or hoses between processes. Simply push a process selection button and PipeWorx “Quick Select” technology automatically selects the correct welding process, polarity, cable outputs, gas solenoid and welding parameters to reduce set-up time and costly reworks.

**Conventional and advanced processes** — MIG, flux-cored, stick and DC TIG (Lift-Arc™ or HF start) — plus pulsed MIG and Regulated Metal Deposition (RMD®). RMD easily bridges gaps up to 3/16-inch wide and creates more-consistent root reinforcement on the inside of the pipe. Pulsed MIG reduces the risk of burn-through on thin pipes and improves results on stainless steel. Utilizing RMD for the root pass and pulsed MIG for the remaining passes also saves time, since one wire and gas can be used from root to cap.





## Hobart® Quantum Arc™ 6 wire

A formulation that includes more deoxidizers makes this wire ideal for metal that has light rust or mill scale. Excellent for welding applications with wire-feed speeds ranging from moderately slow to very fast.



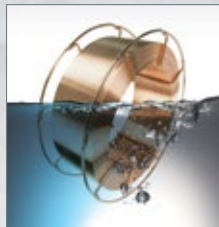
## Hobart® FabCO® Excel-Arc™ 71 wire

This all-position wire is a great choice for mild steel often found in shop welding, either in single- or multiple-pass applications. For more critical mechanical properties or lower diffusible hydrogen needs, please reference FabCO XL 550, FabCO 712M or FabCO XL 525.



## Hobart® MEGAFIL® wire

These seamless wires are available in both metal-cored and flux-cored options. By eliminating the seam in flux-cored wires, there's little to no opportunity for moisture pickup, resulting in extremely low diffusible hydrogen values and reducing the chance for hydrogen cracking. The use of the MEGAFIL metal-cored wires offers a one-wire solution from root to cap with exceptional mechanical properties.



## Bernard™ PipeWorx MIG guns

Designed for use with all PipeWorx welding systems, these versatile guns can be used on MIG, pulsed MIG and flux-cored processes.

**Easy to use** — Compact and lightweight to reduce welder fatigue.

**Designed for visibility** — The combination of tapered tips and nozzles plus a 60-degree neck provides excellent visibility on pipe joint root passes.

**High-amperage capability** — Improves productivity and handles big jobs.



# Pipe Welding / Field Work

*Field conditions present unique challenges to pipe welding. Welders often must work long distances from their power sources, making parameter changes more difficult. Outdated machines that don't support advanced processes reduce productivity and weld quality. And filler metals that are prone to moisture absorption can cause hydrogen cracking in the weld.*

*There's a better way — get the improvements in productivity and weld quality you need with advanced solutions from Miller, Hobart and Bernard.*

## Miller® Big Blue® welder/generators

These powerful engine-driven welder/generators are an ideal choice for reliable, high-amperage pipe welding in the field.



**Big Blue® 400 PipePro®** — Delivers ease of use, reliability and fuel economy with up to 400 amps of welding power at 100 percent duty cycle, in addition to 10,000 watts continuous/12,000 watts peak generator power. Dynamic DIG is a Miller-exclusive technology that automatically adjusts the amount of current required to clear a short. Created specifically with the pipe welder in mind, it results in a smoother, more-consistent arc.

**Big Blue® 800 Duo Pro** — The most powerful T4F diesel welder/generator in the industry, offering robust output for welding and power generation. Provides multi-welder capabilities for labor-intensive jobsites with limited space. Capable of running 800 amps for a single welder or 400 amps each for two welders — with 20,000 watts of continuous three-phase auxiliary power and 12,000 watts of single-phase power available at the same time.

## Miller® PipeWorx 350 FieldPro™ Welding System

The PipeWorx 350 FieldPro system delivers arc performance optimized for critical pipe welding in the field. This true multiprocess system provides conventional stick, TIG, flux-cored and MIG welding as well as advanced processes. With multiple wire feeder and remote accessory options, the PipeWorx 350 FieldPro provides the ability to weld and change parameters up to 200 feet away from the power source with no control cables. This eliminates the hassle and expense of special control cables and reduces jobsite clutter. It also makes process changeover easier — eliminating the need to get by with less than optimal settings — and helps reduce weld defects and rework.



**Auto-Line™ technology** — Automatically connects to any primary input voltage from 208 to 575 volts, single- or three-phase, 50 or 60 Hz — no manual linking required. Ideal when only “dirty” input power is available; manages dips and spikes for consistently smooth, powerful arcs.

**Delivers pulsed MIG and Regulated Metal Deposition (RMD®)** — Bring advanced wire processes to the field. RMD easily bridges gaps up to 3/16-inch wide and creates more-consistent root reinforcement on the inside of the pipe. Pulsed MIG reduces the risk of burn-through on thin pipes and improves results on stainless steel. Weld up to 200 feet away from the power source with no special cables.



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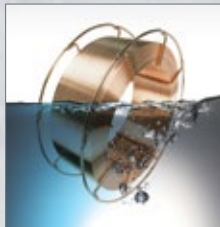
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**More control at the weld joint** — Power source controls are disabled, preventing accidental changes by personnel other than the welder.

**Time savings** — Auto-Process Select™ saves time by sensing electrode polarity and automatically engaging the correct mode.

## Accessories

### ArcReach® Smart Feeder

Provides full remote-control capabilities for RMD®, pulsed MIG and flux-cored welding at the weld joint, including control of weld process selection, material type and wire diameter, gas type, wire feed speed and voltage. Impact-resistant case and the elimination of feeder control cables deliver a durable solution in harsh environments.



### ArcReach® Stick/TIG remote

**with polarity reversing** — Provides full control of stick and TIG welding parameters at the weld joint; easy to adjust amperage (heat) control and arc control to fine tune arc characteristics; change polarity with the push of a button using the remote.





## > Optimize Your Welding Operation.

Despite the different demands within the construction world, some of the same challenges exist: maintaining a skilled labor pool, controlling costs, meeting deadlines and producing the results your customers demand.

You can meet those challenges. Help your workers maximize productivity, minimize expenses and get jobs done on time with exceptional quality by using the best welding equipment and consumables.

ITW Welding

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