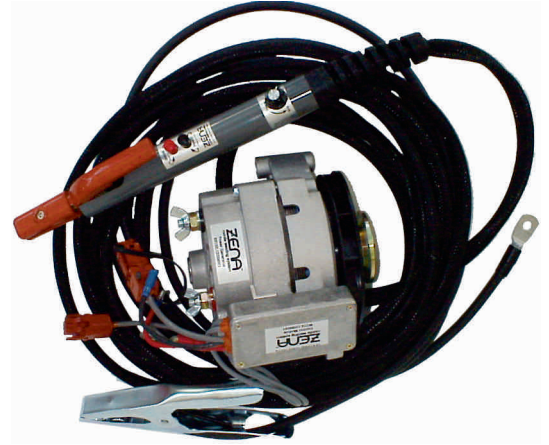


Model MW150 Welding System Components



TO:

Visit our web site: [www.zena.net](http://www.zena.net)

(877-936-2462)

Toll Free Order/Support Line: 877-ZENA INC

e-mail: [contact@zena.net](mailto:contact@zena.net)

Phone: 615-897-2011 • Fax: 615-897-2023

330 Club Springs Road • Elmwood, Tennessee 38560

**ZENA**  
INCORPORATED

Manufactured with pride in the U.S.A. by:

Introducing the

# ZENA™ mobile welding system

The most advanced commercial-duty engine-driven welder in the world. Imagine what you can do with:

- A self-contained, ultra-compact, **DC welder** which can be attached to an existing motor, or to your vehicle engine.
- A welder specifically designed for **100% duty-cycle**, all weather, severe duty, commercial use in the most remote locations.
- A welder with seven plus years of on-the-job proven reliability, backed by a **Three Year Warranty**.
- A welder you can buy for as little as **1/5 the cost of a comparable engine driven welder**.



## Designed & Built in the United States

Our revolutionary patented power control and power generating technology is the key.

- Superior x-ray quality welds, very deep penetration, and an easy to maintain arc.
- Electronic controls make welding safer, easier for the novice, and yet gives the pro unparalleled control of the process.

● **All welding controls are built into the electrode holder.** →

● **You can even adjust power while welding!** →

In addition to our most popular 150, 200, 300, and 400 amp welders, models producing up to 1200 amps are available.

**You can also customize your ZENA welder with adapters for high amp battery charging as well as MIG and TIG welding,**





**Selected Welding Equipment  
Items & Accessories**  
*(not a complete product listing)*

**Mini Price List**

**Effective Date: 6/15/2006**

**Ordering: (877) ZENAINC (936-2462)**

<b>Item</b>	<b>Description</b>	<b>Retail</b>
<b>Self Contained Backpack™ Welders, Hydraulic, &amp; PTO Drive Welders (special order items)</b>		
BPW150T	Ultra-compact/light-weight/portable fully self-contained engine driven 150A 100% duty cycle hi-frequency DC mobile welding system -- under 65lb -- mounted on welded aluminum backpack frame w/20ft. welding/control cables+5 qt fuel tank+harness	\$2,650.00
HW200	200A 100% duty cycle self contained hydraulic drive DC welding system w/20ft. weld. cables/syst. control (requires 12V @ 8A pwr.)	\$3,344.00
HW200F	200A 100% duty cycle self contained open frame hydraulic drive DC welding power generator/welding power control system with maintenance-free silent chain drive gearbox (requires 12V @ 8A)(16-18 gpm @ 2000-2500 psi)	\$3,190.00
HW400F.Man	400A 100% duty cycle self contained open frame hydraulic drive DC Welder Assy. with maintenance-free silent chain drive gearbox -- MANLIFT VERSION (use standard welding cables, panel mount controls, two wire thru boom remote control)(requires 12V @ 16A )	\$3,890.00
PTO200	200A 100% duty cycle self contained PTO driven DC mobile welding system w/20ft. welding cables/system controls (requires 12V @ 8A power from vehicle)	\$4,020.00
<b>Partial Listing ONLY --- Power from 150-400A --- Dual Output Models available for 300A and 400A units</b>		
<b>Special Control Interface Accessories/Options (MIG, TIG, Other)</b>		
PCIM.E	Power Control Interface Assembly w/EXTERNAL control dial -- replaces built-in electrode holder controls to enable use of standard welding electrode holders with ZENA welders	\$165.00
WC.CVR	Constant Voltage Welding Control -- Use with ZENA WC.12 welding system control module to convert ZENA welding system output from CC to CV current for MIG and Flux Core wire welding applications (both voltage and current are operator adjustable)	\$210.00
SFI.V2	MIG Spool Feeder Interface for ZENA mobile welding system -- use to convert/adapt Constant Current compatible spool feeders to work with ZENA welding power generators/control systems	\$180.00
SGPS	MIG Spool Gun Interface for ZENA mobile welding system -- use to convert compatible MIG Spool Guns to work with 150A & 200A ZENA welding power generators/control systems	\$375.00
WC.12B	Welding System Electronic Control Module, 12V, B-Circuit -- use with ZENA welding system controls to control a standard high current automotive or marine alternator suitable for welding power generation -- DO NOT USE W/AVALANCHE DIODE ALTERNATOR	\$180.00
TS101	Electrode Contact Sensor/Switch Module -- automatically switches welder "ON" with good electrical contact between Electrode and Ground Clamp -- use in place of NO switch with PCIM.I, PCIM.E, PCIM.Mod, SFI.V2, SFI.V3, and SGPS Accessories	\$170.00
ZRW10K.CS	Spool Gun Assembly, Ready Welder Model 10000CV factory equipped with a special version ZENA Spool Gun Power Supply/Welding Power Control Interface with plastic carrying case.	\$895.00

*the world's finest portable welding equipment —  
"tools for remote locations"*

**Pricing:** Pricing is FOB Elmwood, Tennessee, and is subject to change without notice.

**Terms:** Payment with order -- Money Order, Bank Check, VISA, MC, or C.O.D. (Add \$10 for C.O.D. orders.)  
Payment with personal check will result in 1 week delay in shipment.  
C.O.D. orders require payment by Money Order or Bank Check.  
All orders are accepted subject to our approval.



**Selected Welding Equipment  
Items & Accessories**  
*(not a complete product listing)*

**Mini Price List**

**Effective Date: 6/15/2006**

**Ordering: (877) ZENAINC (936-2462)**

<b>Item</b>	<b>Description</b>	<b>Retail</b>
<b>150A &amp; 200A Mobile Welding Systems</b>		
MW150	150 Amp 100% duty cycle hi-frequency DC mobile welding system with 20 foot 200A welding/remote control cables -- for use secondary to an existing 12V electrical system -- modular multiprocess power generator system -- stick/TIG/MIG -- use in combination w	\$750.00
MW150K	150A high-frequency DC 100% duty mobile welding system kit for trucks -- Generic Version -- includes 20 ft weld/remote control cables, ASC1 automatic speed cont, Universal Add-A-Pulley kit, A300 universal pivot bracket, A210 Extender Bracket, and TBUCK te	\$950.00
MW150KB	MW150K welding system for trucks with the addition of a Model BJ.150.4 External Welding Cable Quick Disconnect Connector Kit	\$1,030.00
<b>For a 200A Welder --&gt;</b>	Add \$350 to the cost shown for 150A welders above for an equivalent 200A model. 200A welders, accessories supplied will differ from 150A models.	<b>NOTE: For Add \$350.00</b>
CBK.??	Custom BOLT-IN Bracketing Kits are available for Dodge, Chev, Ford, Freightliner, International, Isuzu, Mitsubishi, Peterbilt, and Sterling trucks. Price depends on vehicle -- call for info. and quote.	<b>Call</b>
<b>Time-of-Purchase Cable Extension for 150A &amp; 200A Welder Kits</b>		
WSC.C.??	Custom extension of standard 20 foot 200A current capacity welding cables/controls . Cost shown is per EXTRA foot. Order from 10 to 180 foot in 10 foot increments. For example, order 20 foot of extra length to make 40 foot cables.	\$5.00
WSC.ES.40	40 foot Welding Cable Extension Segment w/high current 200A mating connectors on both ends -- compatible with BJ150.4	\$285.00
<b>Optional Accessories for 150A &amp; 200A Welding Systems (Partial Listing)</b>		
BJ.150.4	External Welding Cable Quick Disconnect Kit for 150 and 200 amp welders -- use to mount a polarized welding cable connector onto an easily accessible location on vehicle -- includes cable connector, and 4 foot remote control/welding cable extension.	\$85.00
ASC1	Automatic Engine Speed Control Kit with Pull Type Vacuum Actuator -- for diesel or gas engines -- w/adjustable actuator, bracket, wiring, throttle chain, universal T fitting, hose, instructions	\$100.00
WC.VR	12 volt/24 volt universal adjustable voltage and current control module -- use in conjunction with WC12 or WC12S control module and SR150.12 or SR200.12 modular welding power generator	\$140.00
WAI35-500-1	External automotive style 12 volt adjustable voltage regulator - use with SR150.12 and SR200.12 welding power generators	\$55.00
<b>Installation Brackets/Pulleys for 150A &amp; 200A Welding Systems (partial listing)</b>		
A300A	Universal Aluminum Bolt-On (Slotted) Pivot Mounting Bracket for ZENA Series 150 power generators (used in 75% of installations)	\$24.00
A215	Curved Belt Tension Bracket for 150A or 200A power generators (1/4" T x 1-1/4" W x 12"L with 3/8" x 7" slot on end)	\$28.00
TBUCK	Turn Buckle Belt Tension Bracket for ZENA welding system Model 150 type power generator installations.	\$14.00
AAPK	Universal Add-A-Pulley Kit for alternators with .669-20, 16mm-1.5, or 14mm-1.5 shafts w/bolt-on V or serpentine pulleys -- use with 3/8 in. 7/16 in. or 1/2 in. V-belts for piggy-back installations	\$85.00
UB2	Universal Piggyback Installation Bracket Kit for 150A Welding Power Generators -- Includes P31325075 idler pulley kit and can also be used with optional RT101 spring loaded belt tensioner	\$185.00

**Call us, OR visit our web site ([www.zena.net](http://www.zena.net)), for more info -- including pricing / specs on 300-800A welders and other accessories**

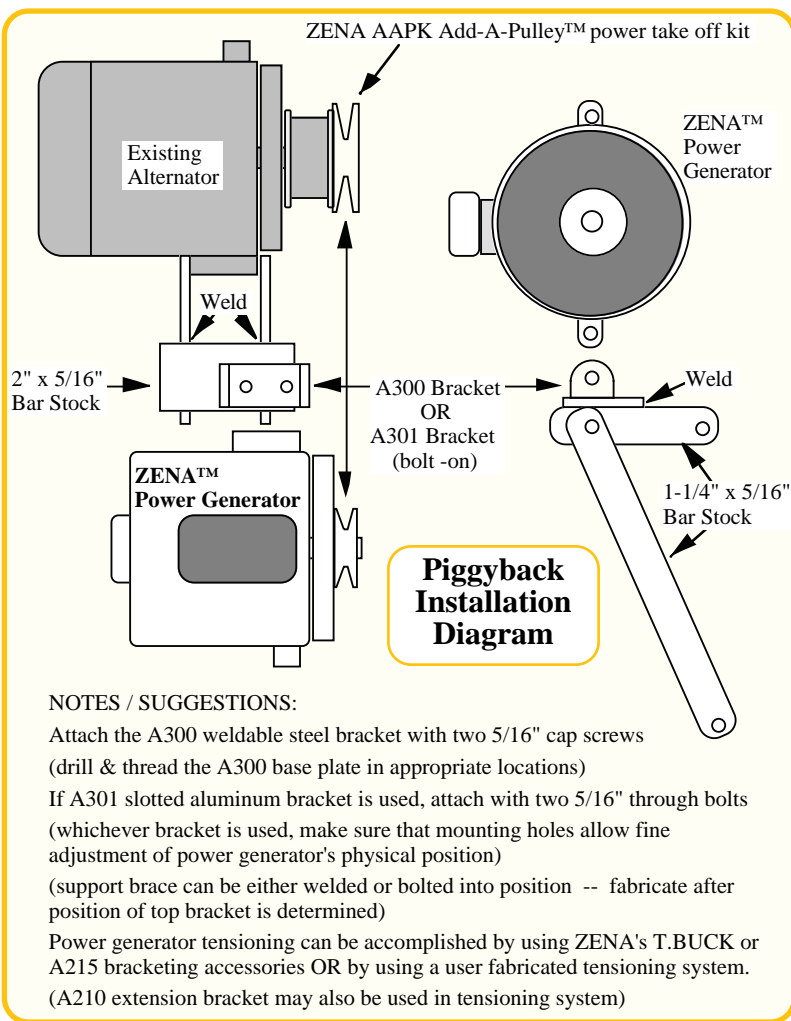
# ZENA Equipment Purchasing Guide

For the ZENA welding system best suited for your needs, look in the list below and find the amount of welding current (or the welding rod size) needed for your application, and the type of vehicle/installation

Welding Amps.	Job / Welding Rods to be Used / Type of Vehicle	Items to Order
<b>150A</b>	<b>Using 1/16" to 1/8" and most 5/32" rods and/or CV or CC Wire Feed Welding Applications</b>	
	Tractors, Free-Standing Motors, Welder Repair Rebuilding, Small Construction Machinery	MW150 + (A300 or A300A) + (TBUCK or A215) + A210
	Trucks and other motor vehicles	MW150K or MW150KB or MW150KD or MW150KBD
	Large Construction Equipment, Watercraft, Other	Call for Quote/Info.
<b>NOTE: 90-95% of ALL stick welding jobs, including repair work on thick metal components, are performed using 1/8" rods with power settings below 120Amps.</b>		
<b>200A</b>	<b>Using 1/16" to 5/32" and most 3/16" rods and/or CV or CC Wire Feed Welding Applications</b>	
	Tractors, Free-Standing Motors, Welder Repair/Rebuilding, Small Construction Machinery	MW200 + A400A + A220
	Trucks and other motor vehicles	MW200K or MW200KB or MW200KD or MW200KBD
	Large Construction Equipment, Watercraft, Other	Call for Quote/Info.
	Hydraulic Fluid Drive Applications OR Tractor PTO Drive Applications	HW200 or HW400F or HW200.Man or PTO200
<b>300A</b>	<b>Using 1/16" to 1/4" (and larger) rods and/or CV or CC Wire Feed Welding -- power for air gouging</b>	
	Tractors, Free-Standing Motors, Welder Repair Rebuilding, Small Construction Machinery	MW150 + MW150S + Misc. Bracketing Accessories
	Trucks and other motor vehicles	(MW150K or MW150KB or MW150KD or MW150KBD) + MW150S + Misc. Bracket Parts
	Large Construction Equipment, Watercraft, Other	Call for Quote/Info.
<b>400A</b>	<b>Using 1/16" to 1/4" (and larger) rods and/or CV or CC Wire Feed Welding -- power for air gouging</b>	
	Tractors, Free-Standing Motors, Welder Repair Rebuilding, Small Construction Machinery	MW200 + MW200S + Misc. Bracketing Accessories
	Trucks and other motor vehicles	(MW200K or MW200KB or MW200KD or MW200KBD) + MW200S + Misc. Bracket Parts
	Large Construction Equipment, Watercraft, Other	Call for Quote/Info.
	Hydraulic Fluid Drive Applications OR Tractor PTO Drive Applications	HW400 or HW400F or HW400.Man or PTO400
150A to 800A+	Welding Power Generators and Accessory Components used to replace and/or to augment alternator power systems	Call for Quote/Info.
Truck Installs	Remember that "bolt-in" custom track installation kits are available for many popular truck/van makes -- including, Dodge, Ford, Chevrolet, Freightliner, International, Isuzu, Peterbilt, Mitsubishi, and Sterling	Call for Quote/Info.
<b>NOTE:</b>	<b>This is not a complete purchasing guide. It's designed to help you see how various ZENA products and accessories apply to the most popular welding applications. CALL US if you don't see your application here.</b>	

[see our web site](http://www.zena.net)  
 for a more complete  
 buyers guide  
**www.zena.net**  
 or call 615-897-2011





**Want to do a piggyback installation? But . . .**

**Don't want to build your own brackets?**

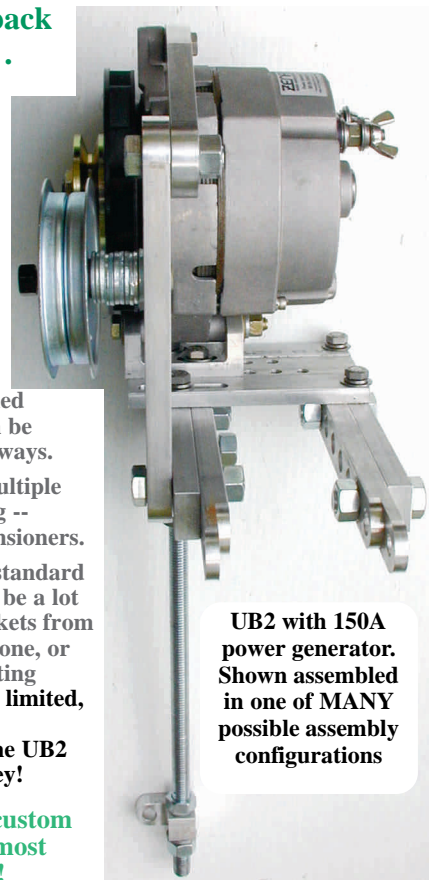
**Look at our model UB2 Universal Bracket Kit!**

The UB2 is designed to provide a huge amount of installation flexibility -- thanks to precisely machined aluminum parts which can be bolted together in various ways.

The UB2 also facilitates multiple methods for belt tensioning -- including spring loaded tensioners.

Of course, your cost for a standard piggyback installation will be a lot less if you make your brackets from scrap steel (possibly using one, or two, of our generic bracketing parts). **But, if your time is limited, or if you're paying for a professional installation, the UB2 may save you a lot of money!**

**We also have complete custom bolt-in bracket kits for most American Made Trucks!**



**A "Piggyback" Installation is the most common installation method used to retrofit ZENA welders to motor vehicles -- particularly for vehicles which use serpentine belt drive for under hood accessories.**

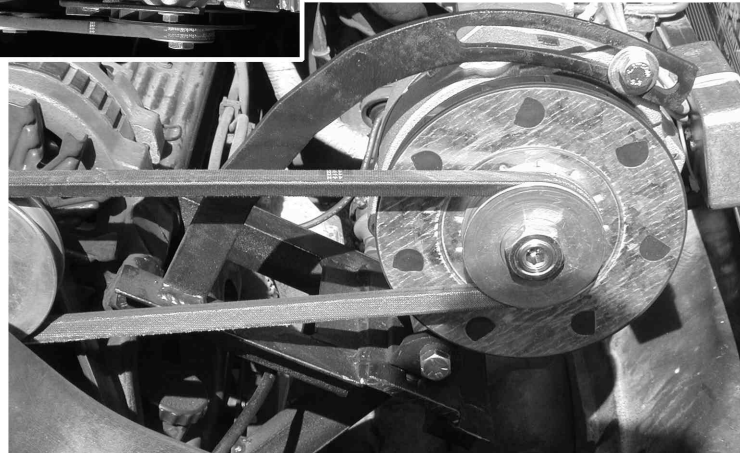
In a piggyback installation, the ZENA™ welding power generator is mounted near the vehicle's existing alternator -- often using the vehicle alternator's mounting bolts for attachment of the welding power generator brackets. The

generator is driven by the ZENA Add-A-Pulley™ alternator power take off accessory which fits in front of the stock alternator pulley.

When installed in this manner, the welder does not interfere, in any way, with the vehicles existing accessories, nor does it affect vehicle serviceability.



**These photos of a professional welder's '94 Chevrolet truck illustrate a typical "piggy back" installation**



## Take a look at a typical ZENA welding system installation:

This Jeep operates far off road and in addition to providing the owner with the ability to fix anything that breaks when 4-wheeling, the vehicle's welder is used frequently to rescue others on the trail.

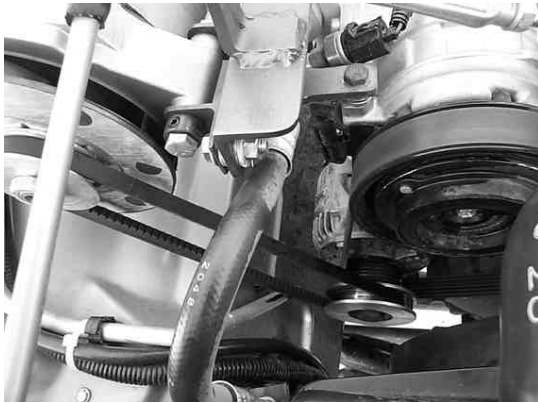
Installation is straightforward:

An Add-A-Pulley™ secondary retrofittable alternator pulley is used to drive the Power Generator. The Power Generator is mounted to the vehicle using a

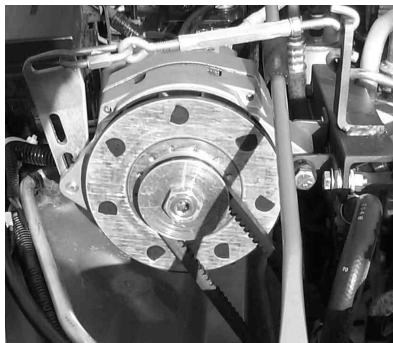
ZENA A300 universal mounting bracket which is attached (using 5/16" bolts) to a bracket fabricated from 2"x1/4" angle and 1-1/4"x1/4" bar stock which is attached to the existing alternator mounting bracket.

V-Belt tensioning is achieved by using an A210 universal extension bracket (which is attached to the Power Generator), a vertical member made from 1-1/4"x1/4" bar stock (which is attached to the fabricated mounting bracket), and two 5/16" turnbuckles in combination.

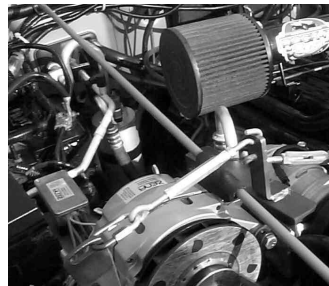
To control engine speed, a ASC1 automatic speed control was installed.



**V-belt attachment, Add-A-Pulley to Power Generator, & bracket fabrication details (top view)**



**Tensioning system (upright, link, & A210 bracket) / Power Gen. to bracket assembly detail**



**Belt tensioning system (turnbuckles, A210 bkt., link, & upright) (frnt. view)**



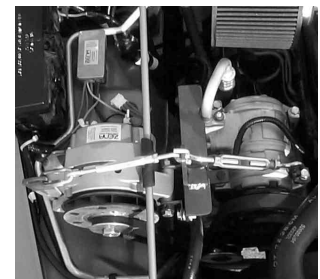
**Detail of belt tensioning upright support (welded to bracket assembly) & bracket assembly**



**Speed control mount (rear view)**



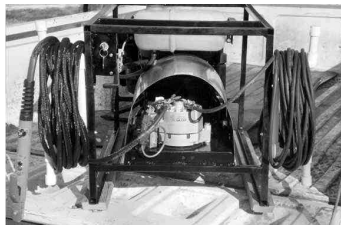
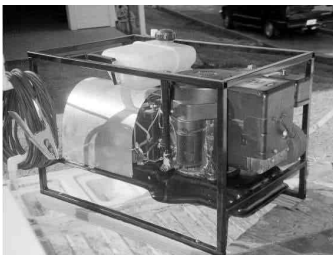
**Speed control to throttle attachment (side view)**



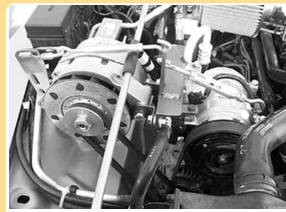
**Belt tensioning system (2 turnbuckles, A210 bkt., chain link, & upright) (top view)**

see more installations on our web site  
[www.zena.net](http://www.zena.net)



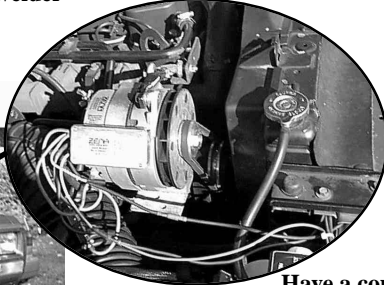


A ZENA™ mobile welding system, an 11 hp electric start motor from a riding lawn mower, and a little work is all it takes to **make yourself a high performance stand-alone mobile welder**



**Add a mobile welder to your 4X4** and you can handle almost any structural damage that comes your way

See how on the next page



Have a commercial duty mobile welding rig on your pickup without loss of payload or cargo space

see more on our web site [www.zen](http://www.zen)



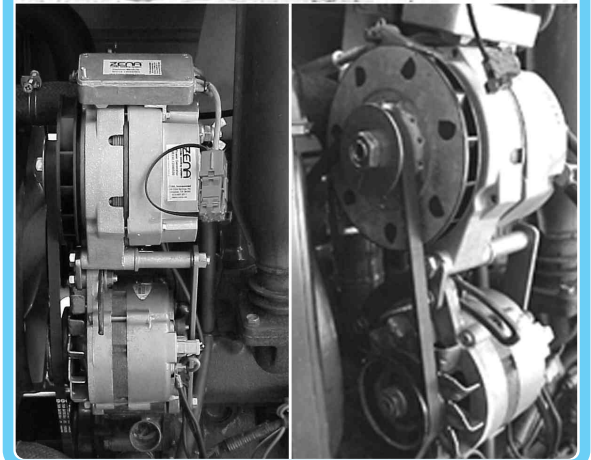
Add utility to your tractor by turning it into a mobile welder



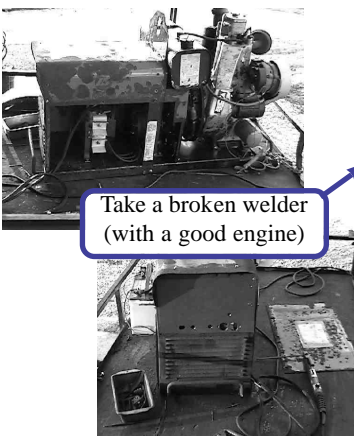
Add more utility to any utility vehicle with a ZENA™ mobile welding system



Turn your lawn tractor into a go anywhere riding welder



## What can YOU do with a ZENA™ mobile welder?

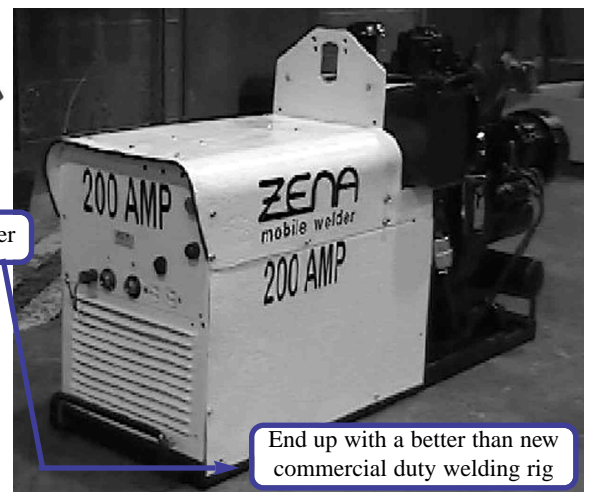


Take a broken welder (with a good engine)

Remove and discard the old generator parts



Add a 200A ZENA™ welder



End up with a better than new commercial duty welding rig

Disruptive technologies often have new features. Often features so new and/or unique that, initially, only a few customers (typically, open minded trend setting customers who are not intimidated by cutting-edge technology) fully realize their value. Disruptive technology products are also typically cheaper to produce, simpler, smaller, better performing, and, frequently, more convenient to use. (The transistor, compared to the vacuum tubes that it subsequently replaced, is an example of this sort of technology. **The ZENA™ mobile welding system is another!**)

## Why am I NOT likely to see a disruptive technology product at my local retail store?

Disruptive technology products are typically simpler, more reliable, and cheaper to mass produce -- yet also typically out perform products based on traditional technologies. They offer a fantastic value to the retail purchaser, when compared to existing, more expensive to produce, established technology. However, less expensive disruptive technology products generally promise retailers and distributors lower per sale dollar returns rather than greater profits.

For example, a typical welding equipment dealer's thought process would follow the following logic:

1. Even ZENA's smallest, and least expensive welders, have the same 100% duty cycle rating as the brand name \$2,500 - \$3,500 engine driven 225-250A DC welders that we sell.
2. The ZENA units don't directly produce AC power. However, they can provide power for ultra low cost on-board DC-AC inverter based 120V AC power systems when not welding.
3. ZENA welders take up virtually no space on a service vehicle -- they are virtually immune to vandalism -- and they can be fitted to much smaller vehicles than can be used for carrying my commercial duty engine driven welders.
4. The ZENA welder has an equal, or longer, warranty than my best engine driven welders. And, with fewer parts, modular components, and built in troubleshooting features, they will be easy for owners to service in the field -- not much work for my service department.
5. With adapters, the ZENA welder can supply power for MIG spool guns, MIG spool feeders, and TIG welding torches -- just like my best engine drive unit -- AND, the ZENA power adapters are half the price.
6. My customers and staff universally report that the ZENA welder actually welds better than my best selling welders.
7. Since the most popular ZENA welder will sell for \$600-800 (depending on type of installation and accessories desired), my customers for \$3,000 - \$4,000 engine driven welder may change their mind and buy a ZENA welder instead.
8. I make the same profit percentage selling the ZENA welder. But, I normally get more than \$1,000 in profits when I sell the conventional engine driven welder. I'll only get \$100-200 from the ZENA sale putting \$800-900 less in my pocket!
9. If I make less on each sale, I just don't think that I can afford to sell a ZENA welder. And, while it's clearly a very fine product, I'm going to make sure that none of my staff do anything to help a customer find out about this profit destroyer!

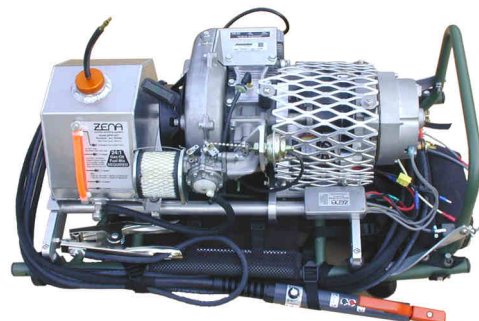


BJ150 Quick Disconnect Kit

## So how are disruptive technology products sold?

Disruptive technology is initially embraced by the least profitable (and usually the least wealthy) customers in a market. For welding, this would be companies and individuals who need a commercial duty welder but who simply cannot afford and/or justify the expense of the equipment that would do the job. For example, in addition to working farmers everywhere, a partial customer list would include:

- Professional weldors, and others, who buy used welding equipment
- Lumbermen, and other outdoor workers, who push equipment to the limit far from conventional support.
- People operating 4x4's and other equipment and/or vehicles in remote areas



More disruptive technology --> 150A, 100% duty, under 65 lb. --> the ZENA BackPak™ Welder

With disruptive technology, old fashioned word of mouth advertising is the key. Happily, the people who purchase and use our welders know a good thing when they see it. They tell their friends and business associates -- and the word gets out!

## ZENA Welding System Owners Agree:

*"out performs the 2,000 lb. welder it replaced"*

*"the best stick welder I've ever used" "better than our \$6,000 shop unit" "the best invention since the hydraulic brake"*

*"used it almost every day for over a year ... still can't believe that 24 lbs. makes 150A of fire ... WOW!"*

*"I'm a PROFESSIONAL welder, working every day on critical structural joints, in all positions, with the top of the line equipment, i.e., Miller\* trailblazer diesel engine driven large frame tow-able welders, and I will swear under oath that the ZENA welder is not only more convenient, but the best running welder I have EVER used"*



## NO BULL! A fantastic deal on a fantastic product!

You can pay from \$3,000, to well over \$6,000, for a top of the line name brand engine driven welder, but it **will not out perform, or out last, a comparable ZENA welder** - which you can purchase now for less 1/5 the cost -- much less than a worn out used welder sold at a local auction. And, this is a product **made in the U.S.A.!**

Yes, we know that this is very, very hard to believe. **Yet, over the past six years, thousands of people, just as skeptical as you may be now, have bought a ZENA welder and found that, to their great pleasure (and not a little surprise), that ALL of our claims are 100% accurate.**

We DO NOT make exaggerations, indulge in marketing hype, or attempt to mislead our customers in any way. If we did, we would not see the phenomenal sales growth that we have experienced over the past six years. Sales due, primarily, to referrals by VERY satisfied, and no longer skeptical, customers!

Just look at the vast amount of straightforward product information offered on our web site -- or call our factory (toll free - 877-936-2462), and ask hard questions. Yes, a real person, who really knows about welding, and our products, will speak to you! (Often, it's our company president!) You WILL NOT be subjected to any sort of high pressure sales pitch. AND, your call WILL NOT be "recorded or monitored for quality control purposes".

**Thanks to our patented power generation and control technology, our welders simply cost much less to build.** So, we don't have to cut corners just to put out an affordable product. Nor are we interested in building a product which will last only as long as its warranty. Instead, we choose to produce a top quality, commercial duty welder without performance or reliability limiting compromises. And, we take great pride in being able to sell top quality commercial welders to our customers for only a fraction of the price charged by other welding equipment manufacturers for low cost hobby welders.

Word-of-mouth is our primary advertising method. Most of our sales are the result of completely satisfied customers demonstrating our product to their friends, customers, and business associates. Check out the customer feedback/owner reports on our web site and, if you buy a welder factory direct, our 60 day satisfaction guarantee.

How is this for a new marketing concept? Don't mislead potential customers and delivers a product which works exactly as advertised. (The only surprise that we want you to have is finding out that our welders work even better than advertised!)

Our welding system and the technology behind it is revolutionary -- but not untried. You're not taking a risk on an unproven product, or a new company. We've been in business for over 18 years, and the reliability of this welding system has been proven, by more than five years of hard commercial use in the U.S.A. -- and in other countries. For example, ZENA welders in daily, multi-shift use in underground mines for over six years are still working -- in conditions where conventional engine driven welders typically fail in less than one year!

## New Patented Technology is the Key

ZENA's new technology, engine driven, DC stick welders are simply superior in performance, and are inherently more reliable than conventional (old fashioned) technology engine driven welders.

Don't be fooled by our welder's relatively low cost and compact size. In addition to better performance and reliability, major innovations and advances in technology almost always result in reductions in the size, and the cost, of the resulting products.



200A Power Generator

**Smaller + Simpler + Better  
Performing + More Reliable +  
More Convenient + Lower Cost**

+

**ZENA™  
mobile welders**

=

**The Harvard Business School's  
textbook definition of a  
Disruptive Technology**

## What is Disruptive Technology?

It's a term popularized by Harvard Business School professor Clayton Christensen in his book *The Innovator's Dilemma*.

He believes that the main reason that successful and apparently well-run and well established organizations lose market share, and sometimes go out of business, is that they fail to recognize the distinction between sustaining and disruptive technologies. Sustaining technologies improve the performance of established products. They are usually developed by successful, well established companies who are often seen as holding a leadership position in their industries. (Adding a new feature to a MIG welder would be an example of a sustaining technology.)

## Build Your Own Engine Driven Welder

### Install a Welder in Your Vehicle

### Rebuild a Worn Out Mobile Welder

### Make Yourself a Riding Welder

The ZENA™ mobile welding system can convert almost any vehicle (large or small tractor, truck, forklift, construction equipment, water craft, mower, etc.) into a self-contained mobile welding station with performance and operating features that equal, or exceed, heavy and expensive transportable engine-driven industrial welders.

- Out performs, and more reliable than, conventional engine powered mobile welders!
- Easy installation!
- ALL welding controls are at your fingertips!
- Can also function as an electrically isolated, fully regulated high amp quick charger!

Forget about paying \$3,000 or more for a commercial duty engine driven welder. Get a new ZENA welder for less than you would pay for a worn out used welder!

### All Welding Controls at your Fingertips

All welding controls are built into the electrode holder (patents pending). There is no need to vary engine speed to control power, nor do you have to go back and forth between the vehicle and your work to make adjustments. With the ZENA system, it's all done with three controls (two push buttons and a dial) that are literally **at your fingertips**. You have total control -- and welding becomes a real pleasure.

- Our **“boost” control** makes it easy to start and maintain a welding arc in difficult conditions -- increasing welding current until your arc can be established.
- For your safety, power is **only** supplied to the electrode holder when you depress and hold the **“power” push-button**. Work in tight spots without accidental arcing. Change rods without getting shocked -- even while standing in water!
- The **power control dial** precisely and instantly controls welding current (adjustments can be made while welding), and allows you to control weld penetration and quality to an unprecedented degree.

### Standard with 20 Foot Welding Cables

High quality 20 foot long welding cables are standard equipment on all models. Longer length cables (from 30 to 200 feet) are available on a custom order basis.

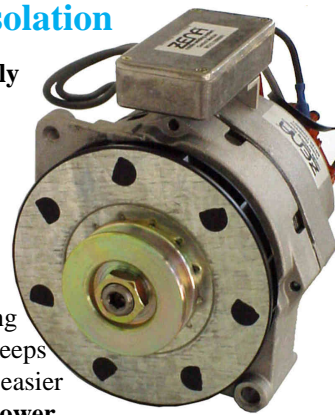
### Improved Welding Characteristics

Generating a unique high frequency DC welding current in both standard and reverse polarity modes, we produce a very smooth, easy to control, deep penetrating arc which yields an extraordinarily fine bead -- making a weld joint with a better appearance, and with less impurities, than any other stick welder. ZENA's high frequency DC welding current also provides greatly increased welding efficiency. Simply stated, a 100 amp. output from the ZENA system is functionally equivalent to 120 amps. (or more) from an ordinary welder!



### Complete Electrical Isolation

All ZENA welders are **electrically isolated** from vehicle and earth grounds. Weld with standard or reverse polarity, without damage to delicate electrical systems.



### NOT an Alternator

Using a modified alternator casing to house our custom built parts keeps costs low and makes installation easier. Otherwise, **start to finish, our power generators are designed and built for commercial welding!**

However, while the power generator is usually installed **in addition** to your existing alternator, if necessary, it can replace an existing alternator -- operating (when not welding) as a high current power source that outperforms any stock alternator.

### Models for Every Application

All ZENA welders are rated for **100% duty cycle operation**. Models range from our popular 150 amp. unit (perfect if you typically use 1/8" rods and don't use rods larger than 5/32"), to monster multi operator 1200+ amp. systems.

**ALL** ZENA arc welders are completely compatible with **all** types of welding rods, and models are available for use with 12 or 24V electrical systems.

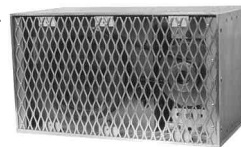
ZENA power generators can also be used to replace existing marine or automotive alternators.



### Hydraulic, Backpack & PTO Models

Unique self-contained welders designed for special commercial and agricultural applications:

- **Our unique Backpack™ Welder** -- At less than 65 lb. - including 20' welding cables, it's possibly the lightest commercial duty welder ever! Completely self contained, this 150A, 100% duty cycle welder is mounted on a fully functional backpack frame!
- **Hydraulic Drive Welders** for modern service vehicles, farm, and construction equipment. Including a model specifically designed for retrofit to man lifts used in the rental trade.
- **PTO shaft driven welders** for any farm tractor with a 3-point hitch and 540 rpm PTO.



### Accessories Include

- Bracketing components
- Automatic engine speed controls and actuators
- Quick disconnects for welding cables
- Adapters for MIG guns/feeders and TIG torches

