Operator's Manual
Model AC300
ARC Welder

WARNING: Do not assemble, install, or operate this equipment without reading ALL of this manual and the safety precautions and warnings illustrated in this manual.

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SAFETY PRECAUTIONS AND WARNINGS
PLEASE READ BEFORE USING EQUIPMENT

⚠ WARNING

- Keep children away from this equipment
- Protect your self and others from possible injury
- Pacemaker wearers should consult with their doctor before operating
- Read and follow all instructions in this manual before operating
- All installation, operation, and maintenance procedures are performed only by qualified individuals

ELECTRIC SHOCK CAN KILL.

- The input circuits are live and hot when the power is on
- Do not touch live electrical parts
- Wear dry, hole free insulated work gloves and body protection when operating
- Do not touch torch components if in contact with the work piece or ground
- Always turn off power before cleaning, checking, or changing parts
- Properly ground this piece of equipment per state and federal requirements
- Inspect and replace any worn or damaged torch cables or leads
- Keep all panels and covers securely in place
- Do not touch any part of the welding electrodes (rods) when welding
- Ground the metal or work piece to the ground cable (Earth Clamp)
- Never dip the tip into water to cool or attempt to use cutter in or under water
- This equipment holds a lot of power in the off position, before touching, make sure voltage is near zero on input capacitors before touching any parts.

ARC RAYS CAN BURN SKIN AND EYES

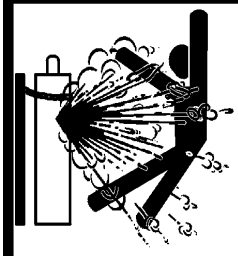
- Arc rays when cutting produce intense ultraviolet and infrared rays that can burn skin and eyes
- Where face protection, either helmet or shield when operating with ANSI Z49.1 approved #10 shade (minimum) recommended for all welding currents less than 300 amperes. The lens should conform to ANSI Z87.1 standards for testing.
- Wear approved safety glasses with side shields under the face protection
- Warn others not to stare at the arc as it can cause damage to the eyes. Provide barriers to protect other workers in the area from the arc while operating
- Wear flame resistant gloves, clothing, and shoes when operating

FUMES AND GASES CAN BE HAZARDOUS

- ARC welding produces fumes and gases and breathing these gases is hazardous to your health
- Keep your head out of the fumes and do not breath the fumes while welding
- Work only in a confined area if it has sufficient ventilation, or while wearing an air supplied respirator. Fumes from welding can deplete the oxygen supply and can be harmful. Always be sure there is ample breathing air
- Read the MSDS sheets and the instructions from manufacturers for metals to be cut, coatings, cleaners, and welding electrodes
- Do not use the welder near hydrocarbon vapors coming from degreasing, cleaning, or spraying operations. The heat and rays can react with solvent vapors to create a gas phosgene, a very toxic gas, as well as other irritating gases
- Do not weld coated metals, such as galvanized, lead, or cadmium plated steel. Before welding, all plating must be removed. The area must be well ventilated or an air supplied hood must be used. The coatings and chemicals when burned cause highly irritating and toxic fumes.
- Do not cut containers with toxic, flammable, or reactive elements stored in them. They must be emptied and properly prepared before cut. They must be cleaned and prepared to cut by the AWS F4.1 guidelines for cutting containers or tubes

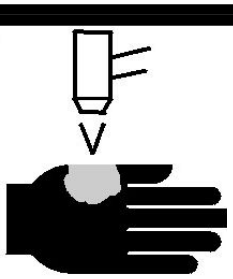
CUTTING SPARKS CAN CAUSE INJURY, FIRE, OR EXPLOSION

- Remove all flammable materials from the welding area
- Always have a charged fire extinguisher available in the cutting area
- When not welding make sure the welding electrode is not grounded, this causes a heat build up and possible fire
- Avoid welding near hydraulic lines, fuel lines, electrical cords, air hoses, or welding guns and cables
- Sparks and hot metal fly out from the arc when welding, wear approved safety glasses with side shields under approved helmets, wear proper body and hand protection, and wear flame resistant ear plugs to keep sparks from entering the ears



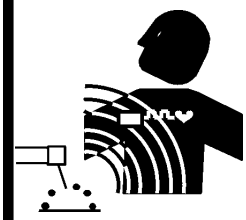
CYLINDERS CAN EXPLODE IF DAMAGED

- Gas cylinders contain gas under very high pressure. If damaged they can result in that cylinder exploding. Gas cylinders are a major part of metalworking and must be treated with care.
- Protect gas cylinders from excessive heat, mechanical shocks, slag, open flames, sparks, and arcs
- Always keep cylinders in an upright position securely fastened to a fixed support
- Valve protection caps should always be in place and hand tight except when the cylinder is in use
- Keep all cylinders away from any cutting or electrical circuits
- Never allow the arc from a welder to contact a cylinder
- Never cut any type of pressurized cylinder, an explosion could result
- Always turn your face away from the valve when opening the cylinder
- Read and follow all instructions on compressed gas cylinders, associated equipment, and CGA publication P-1 listed in the Safety Standards before using



WELDING ARC CAN INJURE

- The heat from the welding arc is very intense and forceful and can burn through protective clothing and pierce skin causing serious burns
- Check your protective clothing for holes, tears, or worn spots before welding. Replace any clothing that is worn or damaged
- Do not hold or grip the material being welded too close to the weld pool
- Always wear protective clothing when operating the welder, cover all exposed body areas
- Turn off power source and unplug unit when dis-assembling electrode holder or ground clamp



ELECTRIC AND MAGNETIC FIELDS MAY BE DANGEROUS

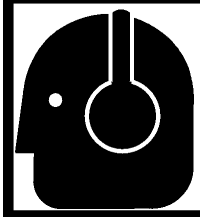
- Electric current used in welding create Electric and Magnetic Fields (EMF)
- Magnetic fields can affect pacemakers and wearers should avoid proximity to EMF. Wearers need to contact their doctors before operating this type of equipment
- Exposure to EMF during operation of this equipment may have other health effects which are not yet known
- Route the work and ground cables together and not around your body
- Do not place your body between the work and ground cable. They both need to be on the same side of your body when operating
- Do not work next to the cutting or welding machine. Provide 3 feet of space between you and the machine

ELECTRICALLY POWERED EQUIPMENT

- Disconnect power source or turn off the circuit breaker before working on any equipment
- Only install equipment using the US National Electrical Code, all local codes, and the manufacturer's recommendations
- Ground the equipment in accordance with the US National Electrical Code

HOT PARTS CAN CAUSE SERIOUS BURNS

- Do not touch hot parts without wearing protection.
- Allow the electrode to cool sufficiently before working with parts that could potentially be hot.



NOISE CAN DAMAGE HEARING

- Prolonged noise exposure from cutting and welding equipment can cause damage if levels of noise exceed the OSHA standards
- Wear approved hearing protectors
- Warn other workers nearby of the high noise level and hazard

CALIFORNIA PROPOSITION 65 WARNINGS

- Welding or cutting equipment produces fumes or gases which contain chemicals known to the State of California to cause birth defects, and in some cases, cancer. (California Health and Safety Code Section 25249.5 et seq.)

PRINCIPAL SAFETY STANDARDS

AMERICAN WELDING SOCIETY

- AWS C5.2, Recommended Practices for Plasma Arc Cutting
- AWS F4.1, Recommended Safe Practices for the Preparation for Welding and Cutting

OSHA STANDARDS

- OSHA 29 CFR 1910, Safety and Health Standards

NATIONAL FIRE PROTECTION ASSOCIATION

- NFPA Standard 70, National Electric Code
- NFPA Standard 51B, Cutting and Welding Processes

AMERICAN NATIONAL STANDARDS INSTITUTE

- ANSI Standard Z87.1, Safe practices for Occupation and Educational Eye and Face Protection
- ANSI Standard Z49.1, Safety in Welding and Cutting

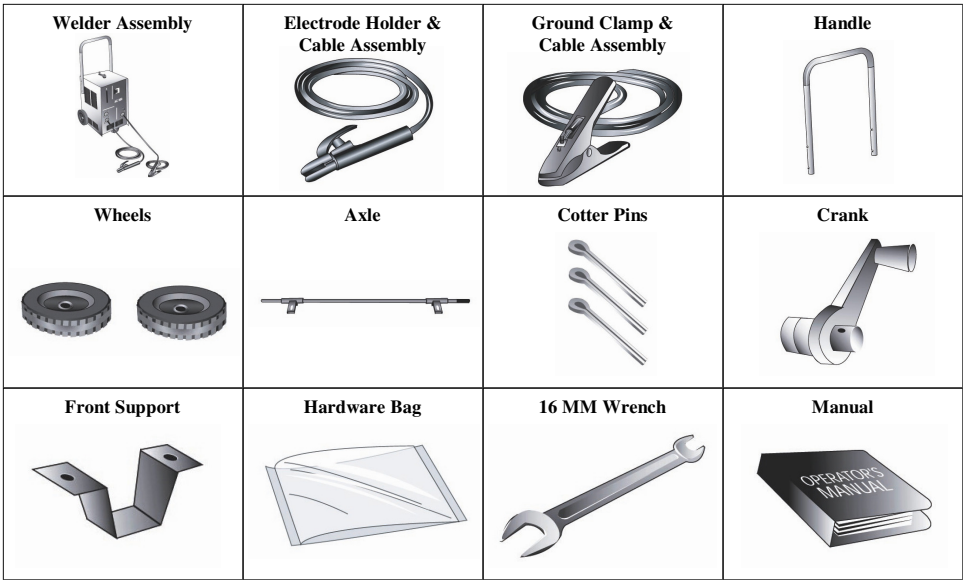
Specifications

MODEL AC300

Input Voltage	220 Volts AC
Input Amps	60
Phase	1
Output Amps (Low)	50 - 210
Output Amps (High)	55 - 250
Open Circuit Voltage (High)	58 V
Working Voltage	29 V
Duty Cycle	100% @ 100 Amps 20% @ 225 Amps

Package Contents

1. Welder Assembly
2. Electrode Holder & Cable Assembly
3. Ground Clamp & Cable Assembly
4. Handle
5. Wheels (2)
6. Axle
7. Cotter Pins (3)
8. Crank
9. Front Support
10. Hardware Bag
11. 16mm Wrench
12. Manual



Hardware Bag Contents

1. (4) 6mm x 35mm Bolts
2. (4) 6mm x 16mm Bolts
3. (8) 6mm Lock Washers
4. (12) 6mm Flat Washers
5. (4) 6mm Nuts
6. (2) 10mm x 16mm Bolts
7. (2) 10mm Lock Washers
8. (4) 10mm Flat Washers
9. (3) Cotter Pins

Assembly Instructions

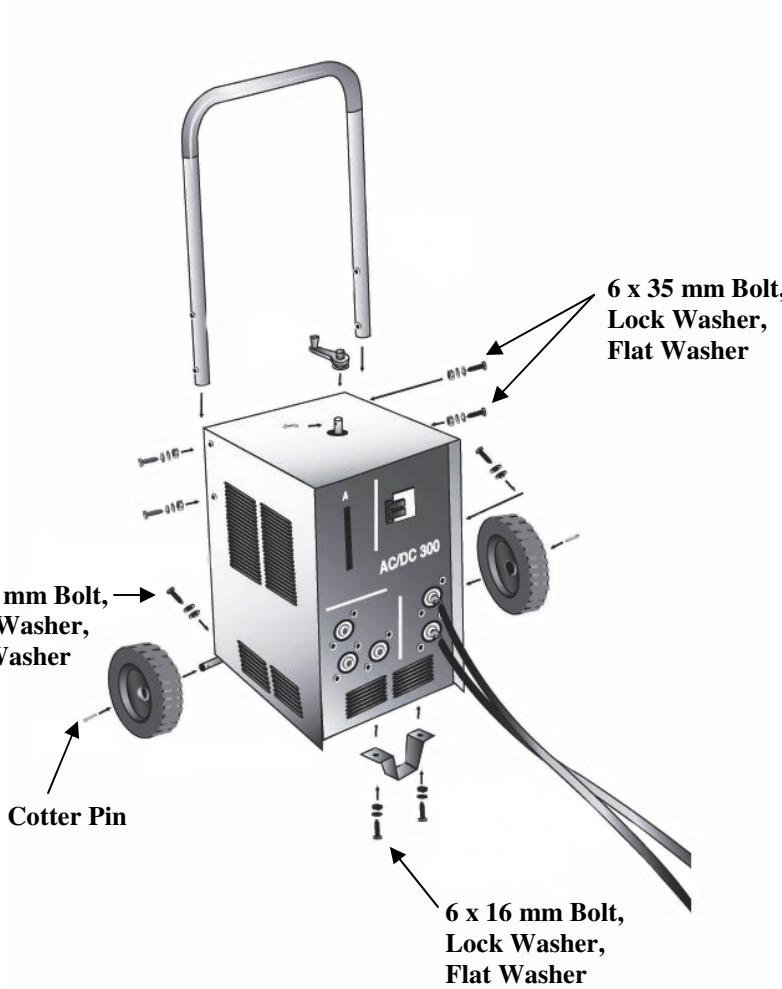
Retain packing material for use during assembly of the welder.

1. Line holes in the handle with the holes in the upper back of the welder. Place a 6mm flat washer on a 6mm x 35mm bolt and place through one of the holes. Repeat for the remaining three 6mm x 35mm bolts. Place a second 6mm flat washer and a 6mm lock washer over the bolt. Thread a 6mm nut on each of the bolts and tighten with a 10mm wrench.

2. Using the corrugated packing blocks to support the top front of the unit, lean the welder forward and rest it on the blocks. Line the holes in the axle tabs with the holes at the bottom of the rear of the welder. Place a 6mm lock washer and 6mm flat washer over a 6mm x 16mm bolt, thread into one of the welded nuts and tighten with a 10mm wrench. Repeat for the other side. **Note: Occasionally paint over spray will accumulate at the opening of axle nuts. Clean the paint away carefully and tread the bolts.**

3. Place one wheel on each end of the axle and thread a cotter pin through the hole at each end of the axle. Bend the longer end of the cotter pin around the axle.

4. Again using the packing block, tip the welder back and support the handle with the packing blocks. Line the holes in the front support bracket with the holes in the bottom front of the welder. Place a 6mm lock washer and 6mm flat washer over the 6mm x 16mm bolt, thread into the welded nut and tighten with 10mm wrench. Repeat for the other side. Stand the unit upright. **Note: Occasionally paint over spray will accumulate at the opening of axle nuts. Clean the paint away carefully and tread the bolts.**



5. Place the crank handle down over the shaft on the top of the welder, lining up the hole in the crank handle body with the hole in the shaft. Slide cotter pin through the hole and bend the longer end of the cotter pin around the handle.

Assembly is now complete.

Plug Installation

Do to the wide variety of 240V plug types, the Hot Max AC300 is shipped with out a plug. The user will have to purchase and install a plug. These welders require a 240V 50 Amp plug.

Please refer to the instructions packaged with the plug for proper installation. The unit is shipped with a 6' three conductor power cord with a blue and red hot conductor and a yellow and green (ground) conductor.

Electrode & Ground Cable Connection

⚠ Warning

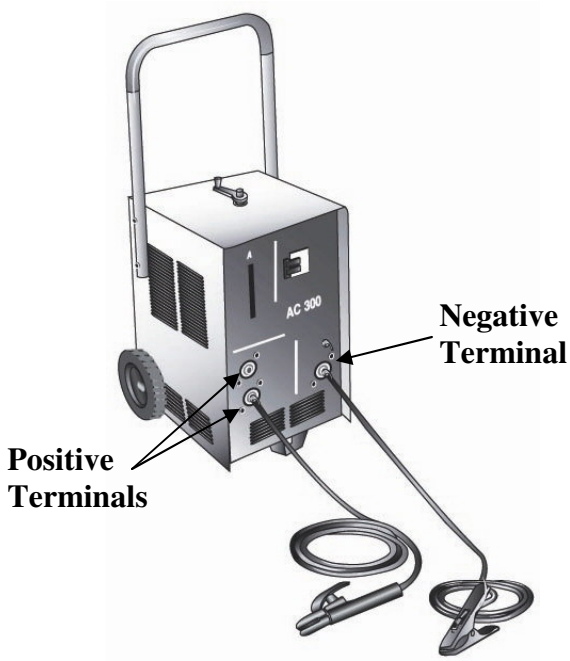
Before connecting the electrode and ground clamp cables be sure the welder is turned off and disconnected from the input power supply.

AC300

1. Slide a 10mm lock washer and 10mm flat washer onto the 10mm x 16mm bolt and attach the ground clamp cable to the negative cable terminal on the right side of the welder (as you face the welder).

2. Slide a 10mm lock washer and 10mm flat washer onto a 10mm x 16mm bolt and attach the electrode cable to the desired positive cable terminal on the left side of the welder (as you face the welder).

   The positive cable terminal selection is determined by the power output required for the welding operation being performed. The lower terminal is for operating ranges of 50 –210 Amps and the upper terminal is for operating ranges of 55 –250 Amps. **Note: Very few operations require amperage as low as 35 , therefore, it is recommended the electrode be connected to the upper terminal.**



Location

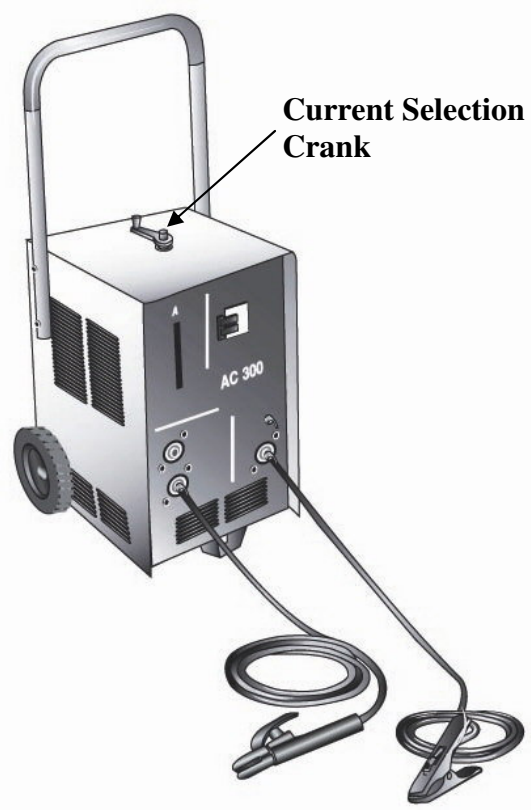
Place the welder in a location that allows the free flow of air through the ventilation louvers

Powering Up the Welder

For most users, and 40Amp, 2 pole, 240V breaker will work for most applications. If you find that you are welding at the upper range of the rated output current or if you find that you are overloading (tripping) the breaker while welding, we suggest upsizing the breaker to a 50 Amp, 2 Pole, 240V breaker. Once the breaker size is confirmed, plug the welder into the appropriate matching receptacle and turn the rotary power switch to the on position.

Welding Current Selection

Welding current selection is made by turning the crank handle on the top of the welder. Turning clockwise increases the amperage and turning counter clockwise decreases the amperage. Amperage selected lines up with the middle of the red indicator.
For the best results, the proper current selection is essential. Check the electrode manufacturer's recommendations for the proper settings.



Ground Clamp

The ground clamp must be connected so that a circuit can be completed in order create the arc required for welding. The ground clamp can be connected directly to the work piece or can be connected to a base metal the work piece is in contact with.

Electrode

To insert the electrode into the 7 position electrode holder, squeeze the holder to open the jaw and put the bare end of the electrode into the desired position in the holder. Release the jaw.

Welding

Strike an arc and begin to weld.

Note: If you are new to welding, KDAR suggests you get instruction from a qualified welder prior to attempting to weld. Welding can be dangerous if proper safety precautions are not followed.

Maintenance

Regular preventative maintenance is not required for the AC300 other than keeping dust/dirt away from the machine. If the louvers become dusty or clogged, simply wipe the cover off to remove the dust/dirt. These welders have no user serviceable parts. Please contact KDAR for any necessary repairs or replacement parts.

Warranty

KDAR Company, and its affiliates, warrants that all welders covered under this warranty is free from defects in material and workmanship for one year from the date of purchase. KDAR also warrants that the electrode holder assembly and ground clamp assembly iss free from defects in material and workmanship for 90 days from the date of purchase. This warranty is extended to the original purchaser who uses the product in a consumer application (personal, residential or household usage). All welders covered under this limited warranty which are used in commercial applications (i.e. income producing) are warranted to be free from defects in material and workmanship for 90 days from the date of original purchase. The products covered under this warranty are the ARC100, ARC200, AC300, and ACDC300/200.

KDAR Company, and its affiliates, will repair or replace, at KDAR's sole discretion, parts found to be defective in material or workmanship within the warranty period. Warranty service will be scheduled according to the normal work flow and business hours of the service center doing the work as well as the availability of replacement parts. All decisions from KDAR Company regarding this limited warranty shall be final.

Original Purchaser's Responsibility:

1. Retain the original cash register receipt as proof of purchase.
2. Follow manual instructions regarding the care and operation of your welder.
3. If warranty work is required, **DO NOT RETURN THIS WELDER TO THE RETAILER.** Contact KDAR Company for instructions. Visit www.hotmaxtorches.com or call KDAR Company M-F 8AM-5PM CST to locate the nearest Authorized Service Center.

Not Covered:

1. Transportation charges for sending or delivering the welder to the Authorized Service Center or returning the repaired or replacement welder back to the customer. These charges are the responsibility of the customer.
2. Damages caused by ordinary wear, abuse, rain, freeze damage, negligence, accident or failure to operate or maintain the welder in accordance with the instructions in the operator's manual supplied with the welder.
3. Damage caused by unauthorized repair or alterations including extending power or electrode cables.

Exclusions and Limitations:

KDAR Company makes no other warranty of any kind, express or implied. Implied warranties, including warranties of merchantability and of fitness for a particular purpose, are hereby disclaimed. The warranty service described above is the exclusive remedy under this warranty; liability for incidental and consequential damages is excluded to the extent permitted by law.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow a disclaimer of implied warranties, or the exclusion of incidental and consequential damages, so the above disclaimers and exclusions may not apply to you.

For warranty service or to obtain service parts or accessories:

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