



# UNI-MIG

## OPERATING MANUAL

### WATER COOLED TROLLEY



**Please read and understand this instruction manual carefully before the installation and operation of this equipment.**

# Announcement

We hereby declare that all products enjoy one year warranty coverage beginning from the purchasing day written on the contract.

Please read this operator's manual carefully before installation and operation.

1. This manual may be revised without prior notice.
2. The operator's manual contents have been carefully checked; please do not hesitate to contact us in case of any possible inaccuracies you may discover in this manual.
3. The operator's manual is issued in March,2015.

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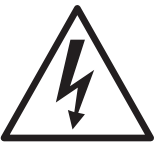
# SAFETY



**IMPORTANT:** BEFORE INSTALLING, OPERATING OR CARRYING OUT MAINTENANCE ON THE PLASMA CUTTER, READ THE CONTENTS OF THIS MANUAL CAREFULLY, WHICH MUST BE STORED IN A PLACE FAMILIAR TO ALL USERS FOR THE ENTIRE OPERATIVE LIFE-SPAN OF THE MACHINE. PAY PARTICULAR ATTENTION TO THE SAFETY RULES. THIS EQUIPMENT MUST BE USED SOLELY FOR PLASMA CUTTING.

## MACHINE OPERATING SAFETY

Plasma cutting equipment can be dangerous to both the operator and people in or near the surrounding working area, if the equipment is not correctly operated. Equipment must only be used under the strict and comprehensive observance of all relevant safety regulations. Read and understand this instruction manual carefully before the installation and operation of this equipment.



**Electric shock: It can kill.** Touching live electrical parts can cause fatal shocks or severe burns. The plasma nozzle and work circuit is electrically live whenever the output is on. The input power circuit and internal machine circuits are also live when power is on. Do not touch live electrical parts or electrodes with bare skin, gloves or wet clothing. Incorrectly installed or improperly grounded equipment is dangerous.

- Connect the primary input cable according to Australian and New Zealand standards and regulations.
- Disconnect power source before performing any service or repairs.
- Avoid all contact with live electrical parts of the welding circuit, torch nozzle and work piece with bare hands. The operator must wear dry welding gloves while he/she performs the plasma cutting task.
- Isolate yourselves from both the earth and the work piece.
- Keep cords dry, free of oil and grease, and protected from hot metal and sparks.
- Frequently inspect input power cable for wear and tear, replace the cable immediately if damaged, bare wiring is dangerous and can kill.
- Do not use damaged, under sized, or badly joined cables.
- Do not drape cables over your body.
- We recommend (RCD) safety switch is used with this equipment to detect any leakage of current to earth.



**Fumes and gases are dangerous.** Plasma cutting produces fumes and gases. Harmful fumes and metallic powders are produced during the cutting operation. Metals which are painted or coated or which contain mercury, zinc, lead and graphite may produce harmful concentrations of toxic fumes during cutting. Breathing these fumes and gases can be hazardous to your health.

- Do not breathe the smoke and gas generated whilst welding or cutting, keep your head out of the fumes
- Keep the working area well ventilated, use fume extraction or ventilation to remove welding fumes and gases.
- In confined or heavy fume environments always wear an approved air-supplied respirator. Cutting fumes and gases can displace air and lower the oxygen level causing injury or death. Be sure the breathing air is safe.
- Do not cut in locations near de-greasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapours to form highly toxic and irritating gases.
- Materials such as galvanized, lead, or cadmium plated steel, containing elements that can give off toxic fumes when cutting. Do not cut these materials unless the area is very well ventilated, and or wearing an air supplied respirator.
- Always read the Material Safety Data Sheets (MSDS) that should be supplied with the material you are using. These MSDS will give you the information regarding the kind and amount of fumes and gases that may be dangerous to your health.



**Arc rays: harmful to people's eyes and skin.** Arc rays from the plasma cutting process produce intense visible and invisible ultraviolet and infrared rays that can burn eyes and skin. Protect your eyes with welding masks or goggles fitted with filtered lenses, and protect your body with appropriate safety garments. Protect others by installing adequate shields or curtains.

- Always wear a helmet or goggles with correct shade of filter lens and suitable protective clothing including welding gloves, apron, leg and foot protection whilst the plasma cutting operation is performed.
- Measures should be taken to protect people in or near the surrounding working area. Use protective screens or barriers to protect others from flash, glare and sparks; warn others not to watch the arc.

**Fire hazard.** Plasma cutting on closed containers, such as tanks, drums, or pipes, can cause them to explode. Flying sparks from the welding arc, hot work piece, and hot equipment can cause fires and burns. Accidental contact of electrode to metal objects can cause sparks, explosion, overheating, or fire. Check and be sure the area is safe before doing any cutting.

- The cutting sparks may cause fire, therefore remove any flammable materials well away from the working area. Cover flammable materials and containers with approved covers if unable to be moved from the welding area.



• Do not Plasma Cut closed containers such as tanks, drums, or pipes, unless they are properly prepared according to the required Safety Standards to insure that flammable or toxic vapors and substances are totally removed, these can cause an explosion even though the vessel has been "cleaned". Vent hollow castings or containers before heating, cutting or welding. They may explode.

- Do not cut where the atmosphere may contain flammable dust, gas, or liquid vapours (such as petrol)
- Have a fire extinguisher nearby and know how to use it. Be alert that cutting sparks and hot materials from cutting can easily go through small cracks and openings to adjacent areas. Be aware that cutting on a ceiling, floor, bulkhead, or partition can cause fire on the hidden side.



**Gas Cylinders.** Do not cut in the vicinity of pressurised gas cylinders or in the presence of explosive dust, gases or fumes. Gas cylinders contain gas under high pressure. If damaged, a cylinder can explode. Because gas cylinders are normally part of the welding process, be sure to treat them carefully. CYLINDERS can explode if damaged.

- Protect gas cylinders from excessive heat, mechanical shocks, physical damage, slag, open flames, sparks, and arcs.
- Insure cylinders are held secure and upright to prevent tipping or falling over.
- Never allow the plasma nozzle or earth clamp to touch the gas cylinder, do not drape welding cables over the cylinder.
- Never plasma cut on a pressurised gas cylinder, it will explode and kill you.
- Open the cylinder valve slowly and turn your face away from the cylinder outlet valve and gas regulator.



**Electronic magnetic fields.** The magnetic fields created by the high currents generated by plasma cutting may affect the operation of pacemakers and other vital electronic medical equipment.

- Wearers of Pacemakers and other Implanted Medical Devices should keep away.
- Implanted Medical Device wearers should consult their doctor and the device manufacturer before going near any electric welding, cutting or heating operation.



**Noise can damage hearing.** Noise from some processes or equipment can damage hearing. This machine does not directly produce noise exceeding 80dB. The plasma cutting/welding procedure may produce noise levels beyond said limit; users must therefore implement all precautions required by law. Wear approved ear protection if noise level is high.



**Hot parts.** Items being plasma cut generate and hold high heat and can cause severe burns. Do not touch hot parts with bare hands. Allow a cooling period before working on the plasma torch. Use insulated welding gloves and clothing to handle hot parts and prevent burns.

## Technical Parameters

Description	4L Water Radiator
Input Voltage	AC220V±10% 50/60H
Motor Power	72W
Radiating Power	1.3GPM(5.0L/Min)
Max Pressure	0.42Mpa
Tank Capacity	4 L
Water Flow	2L/min
Ambient Temperature	5°C~40°C
Dimension	635(L) x 330(W) x 180(H)mm
Weight	16Kg
Protection Class	IP21

## General Description

This matching water radiator is developed based on more than 10 years welding experiences. Equipped with high-pressure diaphragm pump, it can meet the professionals high requirements on quality and performance.

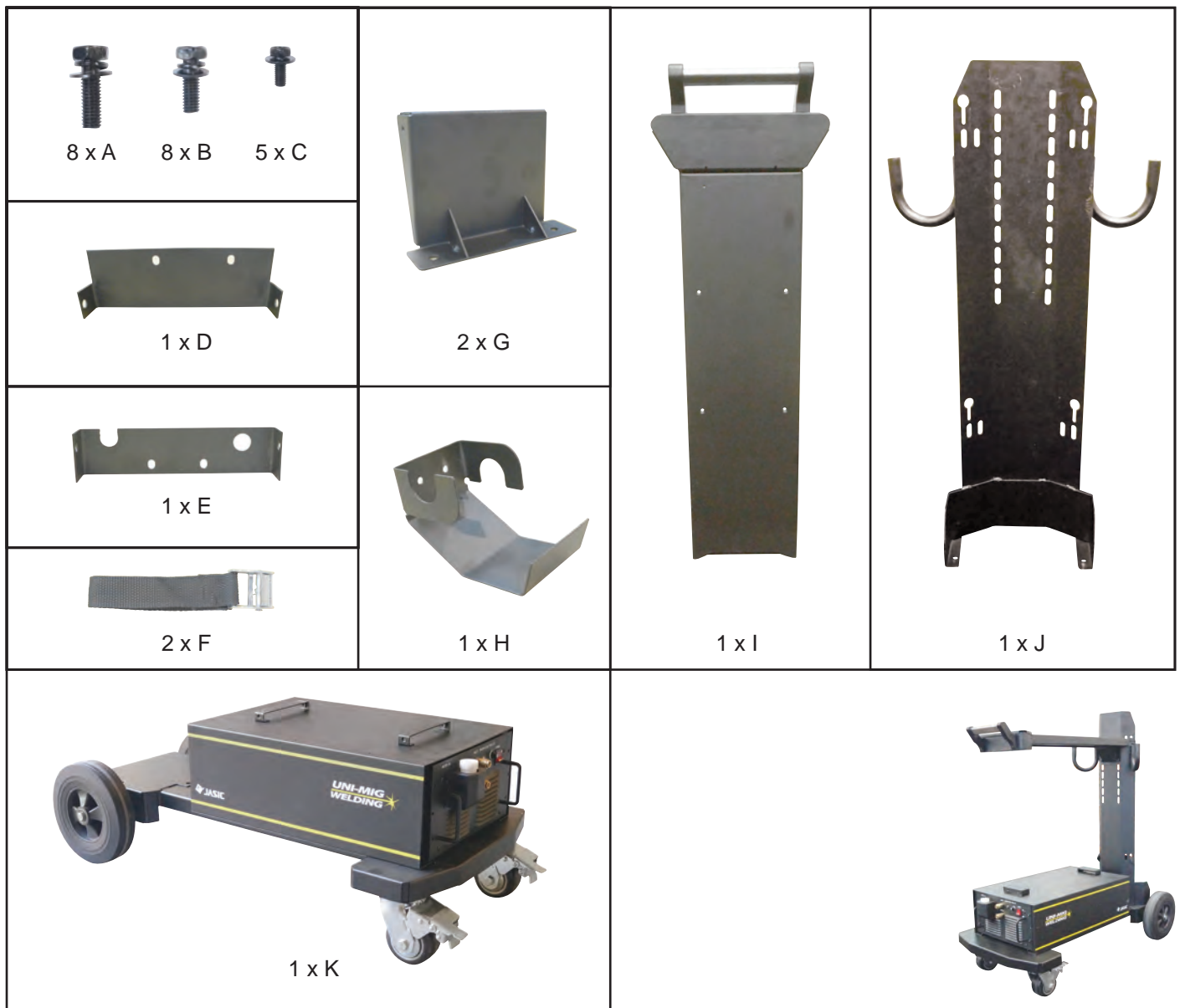
## Product Features:

- A. The high pressure diaphragm can ensure enough circulated cooling water in the radiator during welding, which can largely improve heat dissipation and prolong welder, torch and the consumables lifespan.
- B. Unique design brings you convenience during operation.
  - 1. It can put into operation as long as tank's lowest water level is reached.
  - 2. The special filling, draining, maintaining design makes your operation easier.
- C. The adoption of high quality materials, such as 120mm fan, high-pressure diaphragm, condensing radiator, tight steel bushing, etc. makes the water radiator more durable.
- D. High power water radiator with light weight and small size can bring you extraordinary radiating performances and largely improve cooling efficiency

## Caution

- 1. For newly purchased water radiator or radiator hasn't been used for a long time, please make sure the motor is started and cooling water being pumped out before assembling the torch; otherwise, it's difficult to start the motor
- 2. Please make sure the tank is filled with enough clean water and all connectors are fixed tightly. Refill water to the tank when the torch is completely filled and make sure water is high above the lowest level (if operating with no water, water seal would be damaged due to overheating.)
- 3. Please refer to the water tank's nameplate to make sure of the input voltage.
- 4. If Water pump won't work, please check the following items:
  - A. The input voltage is too low---please recheck the input voltage.
  - B. Water pump is blocked after not been used for a long time
    - Please shut down the power supply.
    - Pump air from the Air compressor to the inlet and outlet for about 20s, and then turn on the pump for around 20s.
  - C. Water pump is burned out.

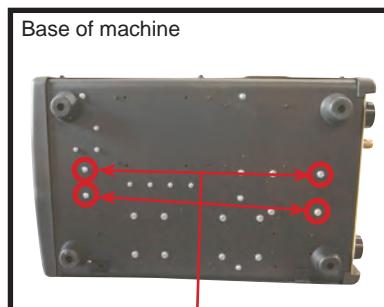
# Assembly Instructions



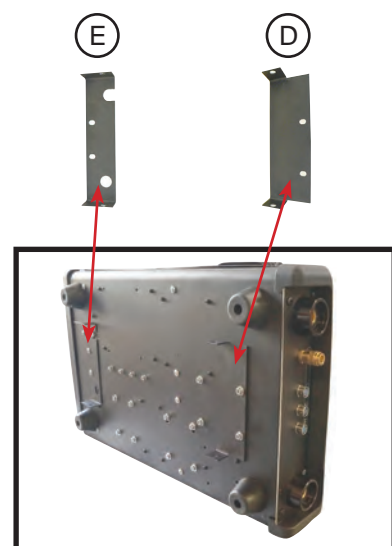
## Step 1



Please check first



Flip machine on side to access base and remove marked screws and set aside.

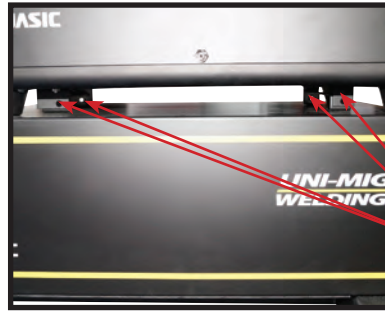




## Step 2



Mount machine on Trolley (Part K)



Line up brackets and tighten into place using 4 x A screws.



## Step 3



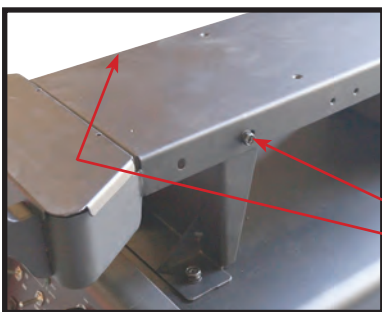
Remove handles and place screws aside.



Replace handles with brackets (Part G) and attach & tighten using screws from handles.



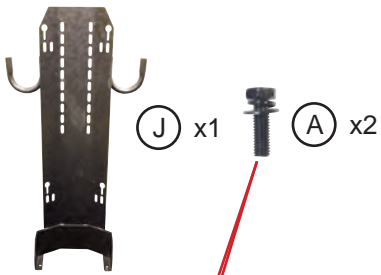
## Step 4



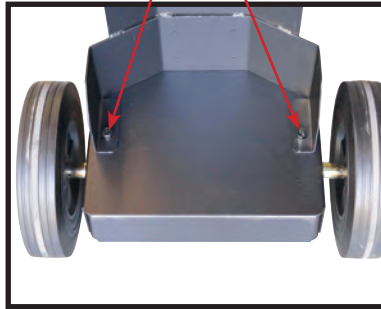
Place trolley handle (Part I) onto Brackets (Part G) and insert two screws (Part B) and tighten.



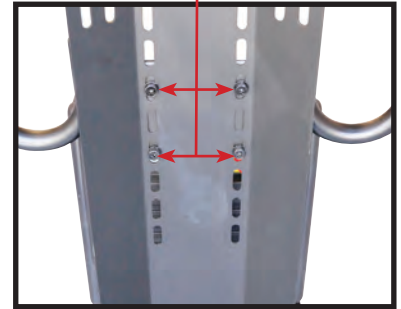
## Step 5



Place gas cylinder Holder (Part J) onto trolley (Part K) and insert two screws (Part A)

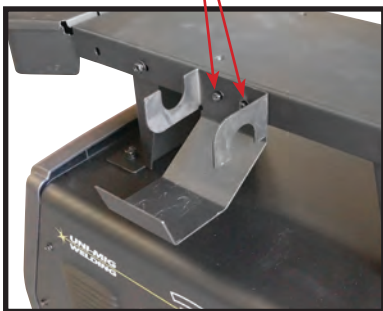


Insert two screws, and tighten (Part A)



Insert four screws (Part B) and tighten to secure Handle bracket to the gas cylinder holder

## Step 6



Attached torch holder to either side of the handle bracket, using 2 x C screws.

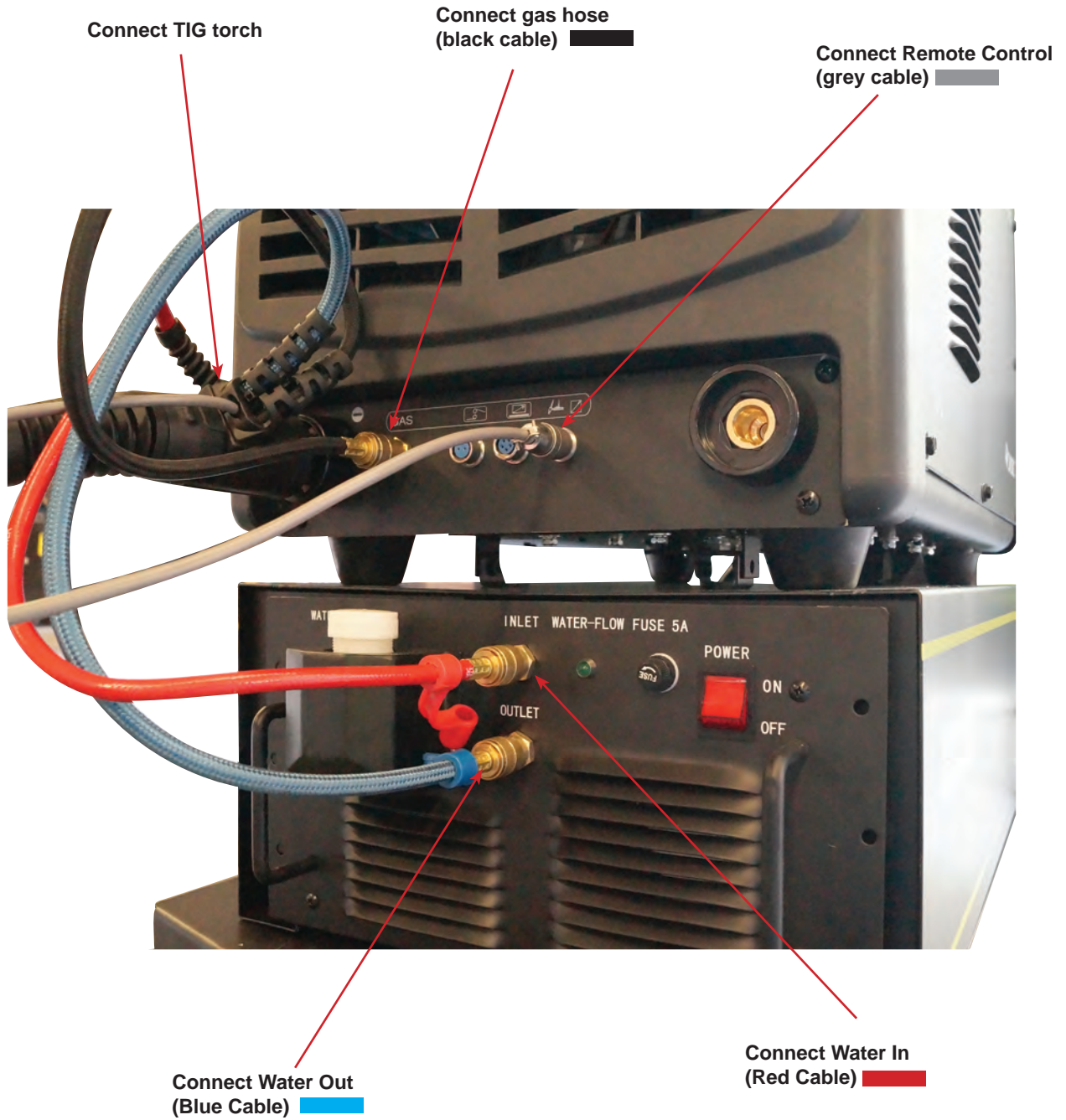


Attach gas cylinders straps, to secure gas cylinder being used.



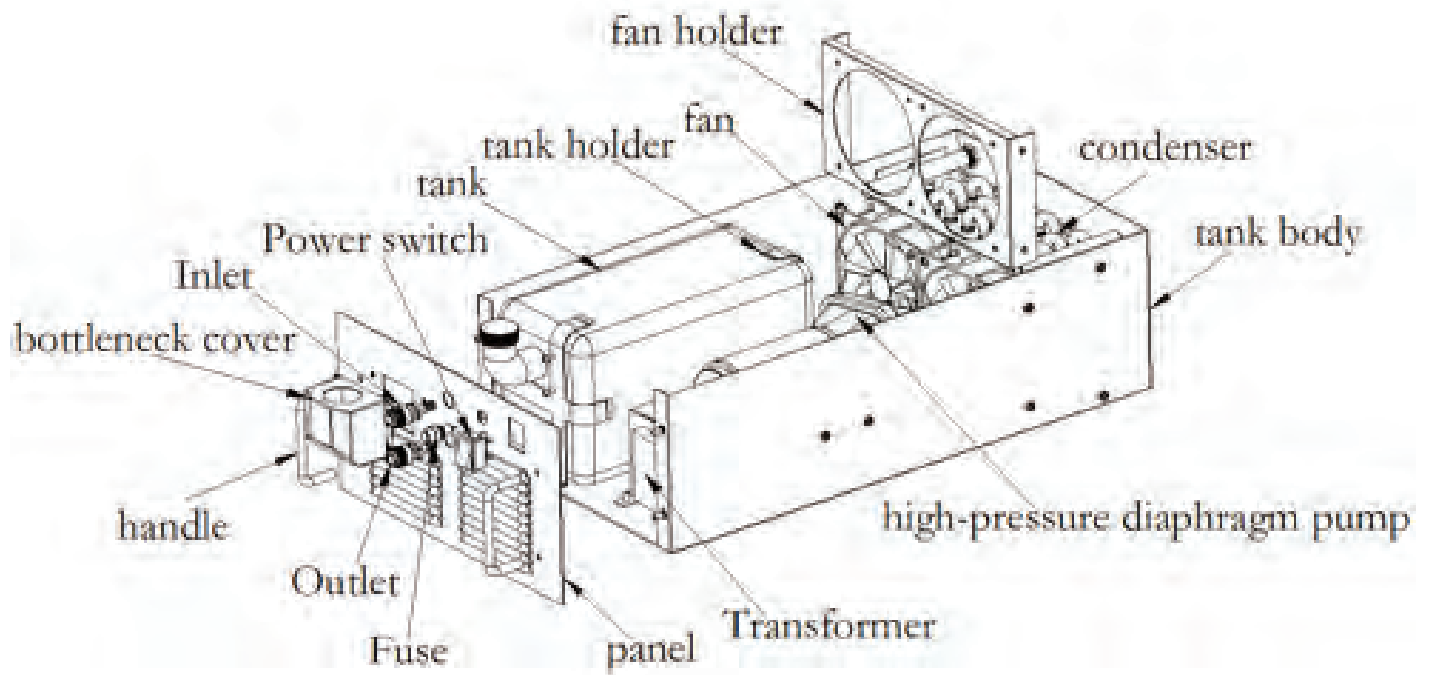


# Installation Setup for SR18 water cooled TIG Torch



## Maintenance

1. Make sure the machine is dry and clean.
2. Refill and refresh cooling water at proper time.
3. Use the air compressor gun to clean the inner machine every 6 months so that to guarantee excellent radiating performance and prolong the lifespan of this machine.







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