

UNIMIG



RAZOR

CUT45 AIR COMPRESSOR

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1. Safety

Welding and 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.

Machine operating safety

- Do not switch the function modes while the machine is operating. Switching of the function modes during welding can damage the machine. Damage caused in this manner will not be covered under warranty.
- Disconnect the electrode-holder cable from the machine before switching on the machine, to avoid arcing should the electrode be in contact with the workpiece.
- Operators should be trained and or qualified.



Electric shock: it can kill

- Touching live electrical parts can cause fatal shocks or severe burns. The electrode 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. In MIG/MAG welding, the wire, drive rollers, wire feed housing, and all metal parts touching the welding wire are electrically live. Incorrectly installed or improperly grounded equipment is dangerous.
- Connect the primary input cable, according to Australian and New Zealand standards and regulations.
- Avoid all contact with live electrical parts of the welding/cutting circuit, electrodes and wires with bare hands.
- The operator must wear dry welding gloves while he/she performs the welding/cutting task.
- The operator should keep the workpiece insulated from himself/herself.
- 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, undersized, 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

- Smoke and gas generated while welding or cutting can be harmful to people's health. Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.
- Do not breathe the smoke and gas generated while welding or cutting, keep your head out of the fumes.
- Keep the working area well ventilated, use fume extraction or ventilation to remove welding/cutting fumes and gases.
- In confined or heavy fume environments always wear an approved air-supplied respirator.
- Welding/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 weld/cut in locations near degreasing, 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 galvanised, lead, or cadmium plated steel, containing elements that can give off toxic fumes when welded/cut. Do not weld/cut these materials unless the area is very well ventilated, and or wearing an air-supplied respirator.



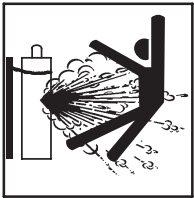
Arc rays: harmful to people's eyes and skin

- Arc rays from the welding/cutting process produce intense visible and invisible ultraviolet and infrared rays that can burn eyes and skin.
- Always wear a welding helmet with the correct shade of filter lens and suitable protective clothing, including welding gloves while the welding/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

- Welding/cutting on closed containers, such as tanks, drums, or pipes, can cause them to explode. Flying sparks from the welding/cutting arc, hot workpiece, and hot equipment can cause fires and burns. Accidental contact of the electrode to metal objects can cause sparks, explosion, overheating, or fire. Check and be sure the area is safe before doing any welding/cutting.
- The welding/cutting sparks & spatter 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/cutting area.
- Do not weld/cut on closed containers such as tanks, drums, or pipes, unless they are correctly prepared according to the required Safety Standards to ensure that flammable or toxic vapours 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 weld/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 welding/cutting sparks and hot materials from welding/cutting can easily go through small cracks and openings to adjacent areas. Be aware that welding/cutting on a ceiling, floor, bulkhead, or partition can cause a fire on the hidden side.



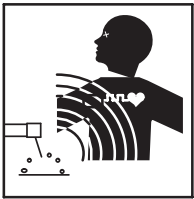
Gas cylinders

- Shielding gas cylinders contain gas under high pressure. If damaged, a cylinder can explode. Because gas cylinders usually are part of the welding/cutting 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.
- Ensure cylinders are held secure and upright to prevent tipping or falling over.
- Never allow the welding/cutting electrode or earth clamp to touch the gas cylinder, do not drape welding cables over the cylinder.
- Never weld/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.



Gas build-up

- The build-up of gas can cause a toxic environment, deplete the oxygen content in the air resulting in death or injury. Many gases use in welding/cutting are invisible and odourless.
- Shut off shielding gas supply when not in use.
- Always ventilate confined spaces or use approved air-supplied respirator.



Electronic magnetic fields

- MAGNETIC FIELDS can affect Implanted Medical Devices.
- 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.
- Wear approved ear protection if noise level is high.



Hot parts

- Items being welded/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 welding/cutting gun. Use insulated welding gloves and clothing to handle hot parts and prevent burns.

Caution

Working environment

- The environment in which this welding/cutting equipment is installed must be free of grinding dust, corrosive chemicals, flammable gas or materials etc., and at no more than a maximum of 80% humidity.
- When using the machine outdoors, protect the machine from direct sunlight, rainwater and snow, etc.; the temperature of the working environment should be maintained within -10°C to +40°C.
- Keep this equipment 30cm distant from the wall.
- Ensure the working environment is well ventilated.

Safety tips

- **Ventilation:** This equipment is small-sized, compact in structure, and of excellent performance in amperage output. The fan is used to dissipate heat generated by this equipment during the welding/cutting operation. Important: Maintain good ventilation of the louvres of this equipment. The minimum distance between this equipment and any other objects in or near the working area should be 30 cm. Good ventilation is of critical importance for the normal performance and service life of this equipment.
- **Thermal Overload Protection:** Should the machine be used to an excessive level, or in a high-temperature environment, poorly ventilated area or if the fan malfunctions the Thermal Overload Switch will be activated, and the machine will cease to operate. Under this circumstance, leave the machine switched on to keep the built-in fan working to bring down the temperature inside the equipment. The machine will be ready for use again when the internal temperature reaches a safe level.
- **Over-Voltage Supply:** Regarding the power supply voltage range of the machine, please refer to the “Main parameter” table. This equipment is of automatic voltage compensation, which enables the maintaining of the voltage range within the given range. In case that the voltage of input power supply amperage exceeds the stipulated value, it is possible to cause damage to the components of this equipment. Please ensure your primary power supply is correct.
- Do not come into contact with the output terminals while the machine is in operation. An electric shock may occur.

Maintenance

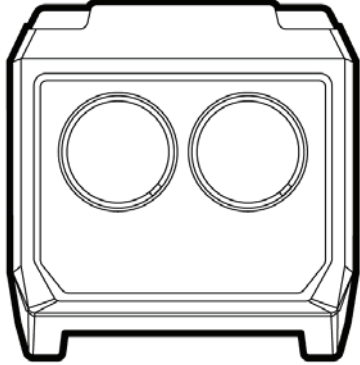
Exposure to extremely dusty, damp, or corrosive air is damaging to the welding/cutting machine. To prevent any possible failure or fault of this welding/cutting equipment, clean the dust at regular intervals with clean and dry compressed air of required pressure.

Please note that: lack of maintenance can result in the cancellation of the guarantee; the guarantee of this welding/cutting equipment will be void if the machine has been modified, attempt to take apart the machine or open the factory-made sealing of the machine without the consent of an authorized representative of the manufacturer.

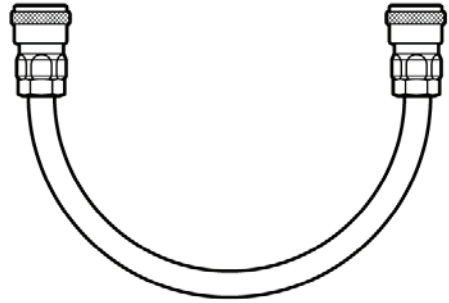
Troubleshooting

Caution: Only qualified technicians are authorized to undertake the repair of this welding/cutting equipment. For your safety and to avoid Electrical Shock, please observe all safety notes and precautions detailed in this manual.

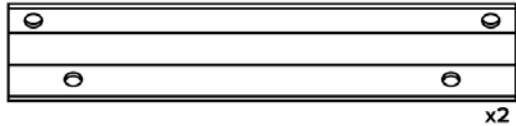
2. Package Contents



RAZOR CUT 45 Air Compressor



Air Hose



⊗ x8

x2

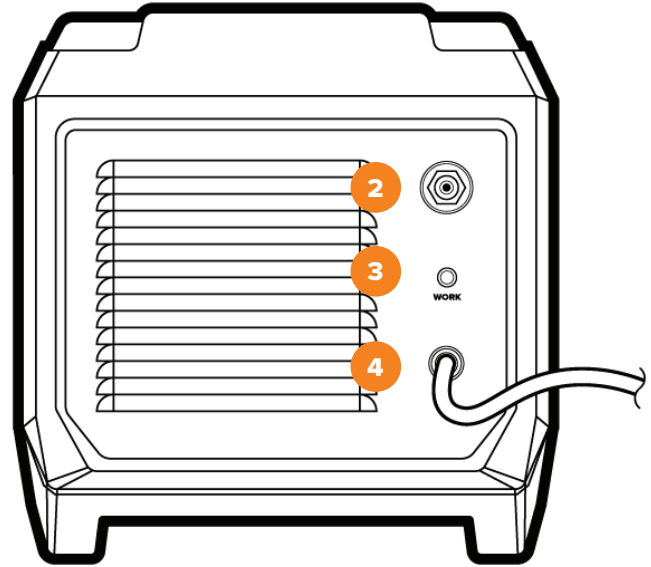
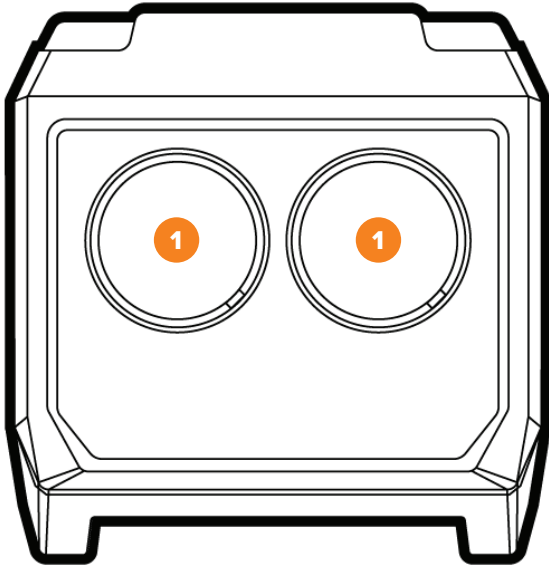
Mounting Brackets & Screws

3. Compressor Specifications

Technical Data

Parameter	Values
SKU	U14007
Input Amperage	3.7 ±5%
Rated Power	780 Watts ±5%
Rated Air Pressure (MPa)	0.25±0.05
Maximum Instantaneous Working Pressure (MPa)	0.4
Dimensions (mm)	463×187×236
Weight (kg)	17.15
Protection Class	IP23S
Insulation Class	H
Warranty (Years)	2

4. Compressor Layout



4.1 Front Panel Layout

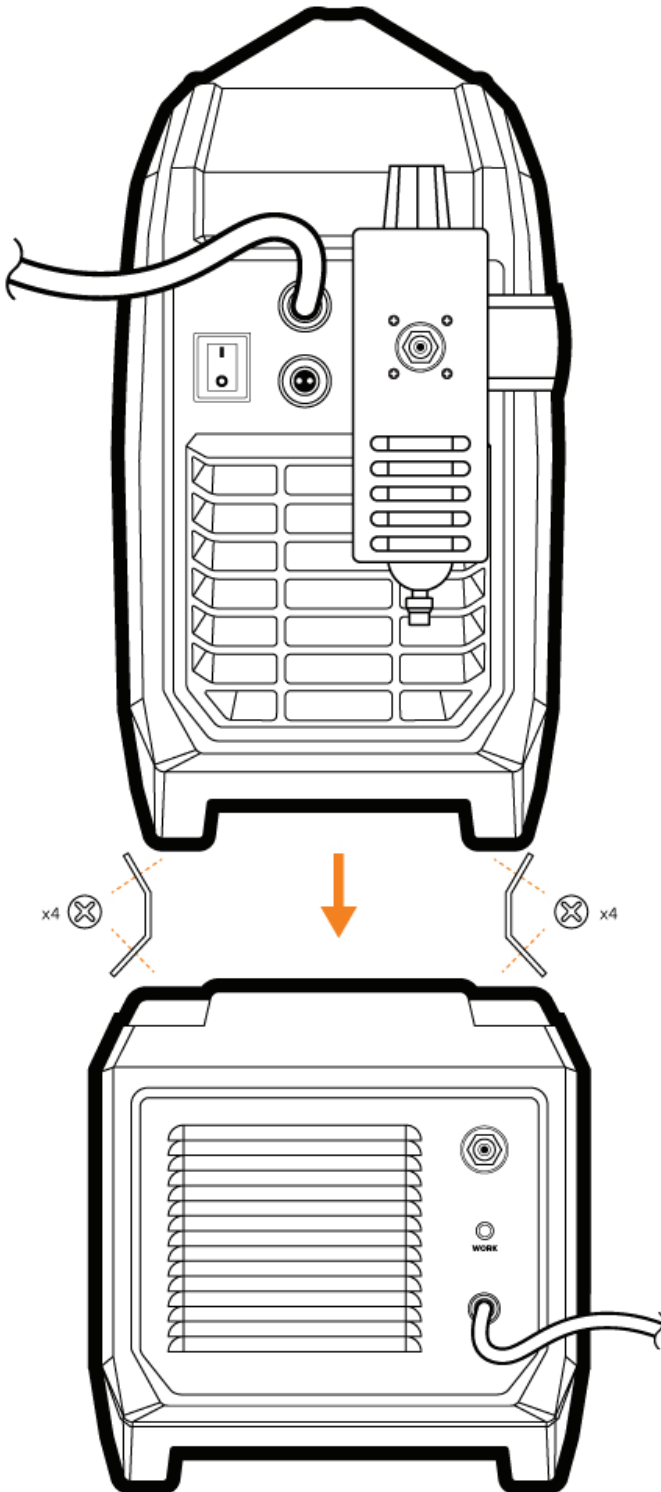
1. Inlet Air Filter Covers

4.2 Rear Panel Layout

2. Air Outlet
3. Compressor Operation Indicator
4. Power Input Cable (for RAZOR CUT 45)

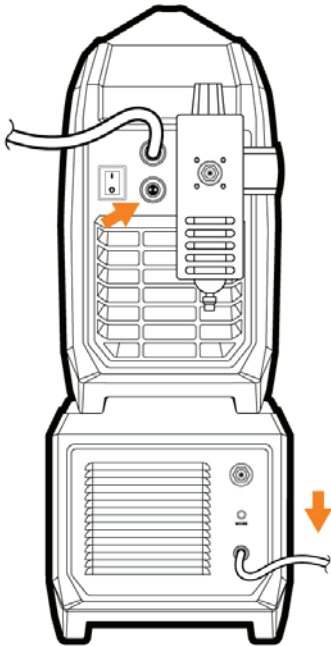
5. Machine Setup

ENSURE YOUR MACHINE IS OFF AND UNPLUGGED BEFORE STARTING ASSEMBLY PROCESS

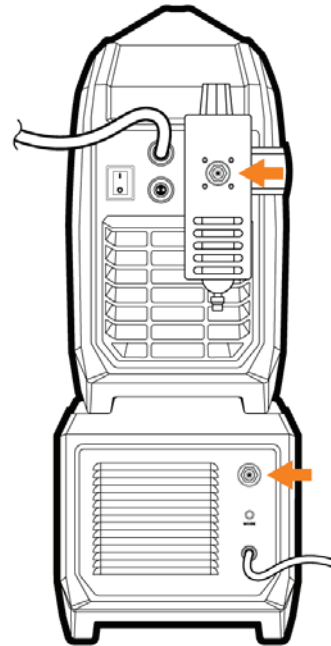


1. Start by installing the brackets to the bottom of the RAZOR CUT 45. Using a philips screw driver, loosely tighten 2 screws on each bracket into the open holes on the base of the CUT 45. (The short side of the bracket is meant for the CUT 45, and the longer side is for the compressor)
2. After installing both brackets on the base of the CUT 45, carefully lower the machine onto the compressor. Ensure the holes on the bottom of the bracket line up to the holes on the compressor.
3. Use the remaining 4 screws (2 per side) to mount the CUT 45 to the compressor. Then retighten all 8 screws.

4. Plug the power cable from the back of the compressor into the back of the RAZOR CUT 45. Simply press the plug in until you hear a click.



5. Plug the supplied air hose in from the compressor to the air regulator located in the back of the RAZOR CUT 45.

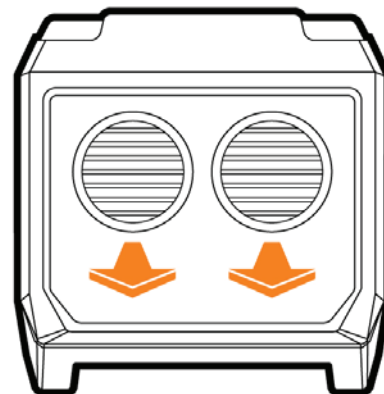
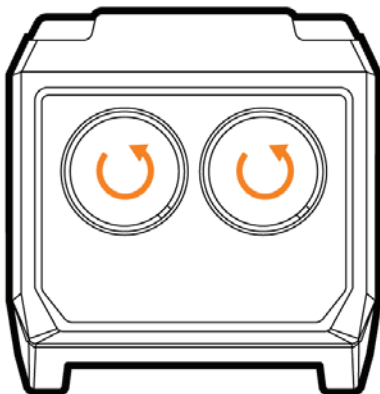


6. You are now ready to plug your RAZOR CUT 45 in and use it. The compressor will automatically kick on when more air flow is needed.

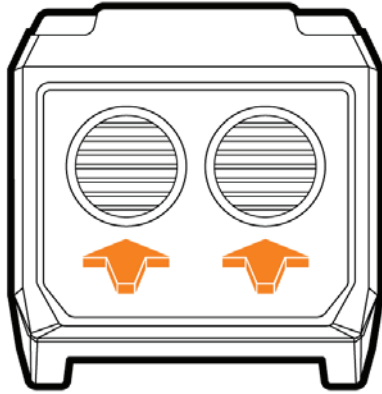
6. Filter Replacement

The RAZOR CUT 45 Air Compressor has two air filters located at the front of the machine. Periodically check these filters to ensure the compressor is running optimally.

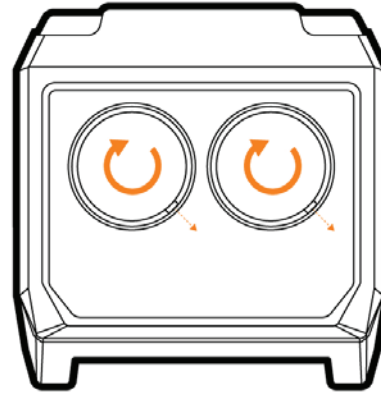
1. On the front of the machine, locate the two filter covers. They can be removed by twisting them anti-clockwise.
2. After removing the covers, the filters will be exposed. Pull each of the filters out forwards.



3. After removing the filters, replace them with two fresh filters. Simply press them in place.



4. Twist the filter covers back on by twisting them clockwise. Ensure the inlet holes are pointed in a downward angle.



Replacement Internal Filters

These are factory replacement filters for your RAZOR CUT 45 Air Compressor. The filters are sold in packets of 2.

SKU: U14010



Add-on Air Filter

The UNIMIG Plasma Cutter Air Filter eliminates contaminants such as sputter caused by moisture and oil from compressed air lines. With new and improved technology, the plasma air filter is able to entrap particles as small as .01 microns. This is crucial as moisture can cause a short circuit within your torch.

SKU: 50500

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