

DIY TRADE PROFESSIONAL

DIY TRADE

BRAZEN 3000

PORTABLE BRAZING AND HEATING KIT

MANUAL



BOSSWELD

WELD LIKE A BOSS



INDEX	PAGE
GENERAL SAFETY INFORMATION	5
PHYSICAL AND SAFETY PROPERTIES OF GASES	6
GAS SUPPLY	7
SAFETY	8-9
CYLINDER STORAGE, NOZZLE CHART	10
PERSONAL PROTECTIVE EQUIPMENT	11
BOX CONTENTS	12
SETUP AND LIGHTING PROCEDURE	13-15
SHUT DOWN PROCEDURE	16
WARNINGS & MAINTENANCE	17
WARRANTY	18
CONSUMABLES	19

BOSSWELD GAS WELDING EQUIPMENT

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Dear customer,

Thank you for your purchase of our BOSSWELD BRAZEN 3000 portable brazing & heating kit. The BOSSWELD range of gas welding and cutting equipment has been rigorously tested by independent laboratories and conforms to the following Australian Standards for gas welding and cutting processes:

Small heating and brazing kits currently are not covered under the scope of an existing Australian standard (DEC 2018), however the Brazen 3000 kit meets the requirements of the European Standard.

EN 1326 - 1996	Gas welding equipment - small Kits for brazing and welding
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BOSSWELD strives to meet all relevant Australian Standards. Should there be change to existing or creation of new Australian Standards, BOSSWELD will endeavor to ensure that all products and services comply with those standards.

This manual refers to safety measures that must be adhered to for the safe operation of your BOSSWELD BRAZEN 3000 equipment. Please read and understand these warnings and instructions before use. Failure to do so could result in serious injury or death. BOSSWELD brazing and heating equipment should only be used by operators who are properly trained and qualified in the safe use of this type of equipment.

GENERAL SAFETY INFORMATION

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Safety consideration for both the operator and surroundings must be given to the heat source produced by mixing compressed oxygen with a fuel gas and igniting the resulting mixture. When using these processes, particular safety considerations apply with respect to:

- a) Do not leave the Brazen 3000 torch unattended when lit, or put it down
- b) Burns from flames, hot objects, malfunctioning hand-held equipment, molten particles, etc.
- c) Explosions from mixed gas concentrations created by fuel gas leakage from cylinders,
- d) Fire caused by ignition of flammable materials, leakage of fuel gases, contact with hot slag, poor condition of welding equipment, etc. (Plant, building, ship and bush fires have occurred)
- e) Use welding goggles when using the Brazen 3000 kit.
- d) Do not breath welding fumes
- e) Violent rupture or explosion of components due to pressurisation beyond their designed working pressures
- f) Asphyxiation due to the displacement of atmospheric, breathable air by inert or toxic gases. For example, leakages in confined spaces or lack of oxygen resulting from excessive rusting in confined spaces
- g) Radiation damage (to eyes principally and other exposed surfaces)
- h) Fumes originating from the particular materials being welded and heating

PHYSICAL AND SAFETY PROPERTIES OF GASES

- a) **DO NOT use oxygen to refresh air.** There is often a temptation to use oxygen to 'sweeten' air whilst welding or cutting operations are being carried out in confined spaces. Large amounts of oxygen can be released locally in a short time from gas cylinders under pressure. In one situation where this was done, hot work in the form of flame cutting was carried out with a subsequent ignition of worker's clothes and fatal burns.
- b) **TAKE CARE in confined spaces.** Do not leave blowpipes or hoses connected to the supply gases within confined spaces overnight or during work breaks. Slow leaks can result in very hazardous situations, with possible fire and explosion on re-ignition of the blowpipe.
- c) **VENTILATE confined spaces.** In flame cutting not all of the oxygen released from the cutting nozzle is necessarily used in cutting. In confined spaces this may result in a dangerous increase in oxygen content in the air, pointing to the need for adequate ventilation in such situations.
- d) **DO NOT use oxygen as a substitute for compressed air.** There are many examples of this situation where oxygen has been used, such as in cleaning, resulting in serious and fatal accidents due to fire or explosion from spontaneous ignition. NEVER use oxygen to start engines, drive air tools etc.
- e) **DO NOT use oxygen or compressed air to dust off clothes.** Clothes can become readily flammable and even self-igniting through oxygen enrichment.
- f) **DO NOT kink pressure hosing.** Kinking or nipping hose to interrupt gas flows or whilst changing torches is a very dangerous practice. Gas can still bleed through the system, or more seriously, escape rapidly should the hose rupture or the operator lose their grip.
- g) The oxygen cylinder once it is empty can be devalued and the cylinder recycled at a scrap metal merchant.

DO NOT USE BRAZEN 3000 IF THE RUBBER O-RING IS MISSING OR DAMAGED IN THE REGULATORS

GAS SUPPLY

General

Your BOSSWELD gas welding and cutting equipment is designed to be used by gases delivered to the point of use from portable compressed gas cylinders. In all cases, gas supplies may be subject to statutory or regulatory provisions. Many Australian Standards cover the subject.

- a) The Brazen 3000 is fueled with Oxygen and Mapp gas cylinders, Cylinders are generally obtained from gas suppliers.
- b) Do not tamper with the markings or colour coding of cylinders. Do not use non colour coded cylinders or those without safety and information labels.
- c) The Oxygen and Mapp gas cylinders are not refillable.
- d) Gas should only be used for the particular intended purpose, e.g. never use oxygen for cleaning (dusting), or to provide ventilation or to support breathing
- e) Gases should only be identified by their correct name so as to avoid dangerous confusion or misunderstanding.
- f) Valve seats and outlets should be protected by keeping all kinds of dirt and contamination away from cylinders, especially during connection and disconnection. Grit, loose fibers and other dirt may lodge in connectors or valve seats causing leaks or may be picked up by high velocity gas streams, causing hot spots in regulators, potentially resulting in ignition. Organic matter such as oil, grease and hydrocarbon liquids which may ignite spontaneously in high pressure oxygen is another hazard to regulators and other downstream equipment.
- g) Do not tamper with safety devices.

DO NOT CONNECT CYLINDERS BEFORE YOU HAVE READ THIS MANUAL IN FULL AND UNDERSTAND IT.

THE BRAZEN 3000 OXYGEN BOTTLE CONNECTION ONLY CONNECTS TO M12x1 THREAD.

THE BRAZEN 3000 MAP-PRO CONNECTION IS CGA 600.

SAFETY

The regulators supplied ensure a low and constant flow and pressure. Inspect all parts of the equipment for wear or loose connection before use. If you have a leaking hose or connection, close all valves regulators and torch handles, and ensure you ventilate the area you are working in. and remove this equipment from and flammable sources. Do not attempt to fix any damaged parts contact your nearest Bossweld service agent or Bossweld directly.

- Always make sure the flame is fully extinguish after use before place the torch on any surface.
- Check hoses for kinks or bends.
- Keep flame away from cylinders, regulators, hoses and other persons.
- Only use this product in a well ventilated space - never use in a confined area.
- Make sure the cylinder holder is on a flat surface - do not drag the cylinders or cylinder holder by the hoses.
- Ensure the work area is clean and remove all flammable objects and fire hazards.
- Always wear the appropriate PPE equipment when operating this equipment.

IN CASE OF FIRE

- In the event of a fire, if it is safe to do close the oxygen valve, this should extinguish the flame and also if safe close the fuel valve and remove the equipment from the area.
- Extinguish the fire with the appropriate equipment only if it is safe to do so.
- If you are unable to turn of the valves or extinguish the fire leave the area, warn any other persons in the area and contact emergency services
- Phone 000.

SAFETY

TIP REPLACEMENT

Make sure you use the tool supplied and that tips are installed straight as not to wear the thread, this can result in a leak.

- Ensure tip has cooled after use before replacing.
- Do not over tighten
- Ensure tip is clean and dry before installing and is not blocked.

CYLINDER REPLACEMENT

- Make sure the regulator is completely shut off before removing it from the cylinder., Always check condition of the seal in the regulator before replacing on a new cylinder
- Unscrew the empty cylinder and replace with a new one.
- Dispose of empty cylinder at your local recycling center
 - NEVER incinerate empty cylinder.
 - Do NOT puncture.

CYLINDER STORAGE

Storage

In the case where the Brazen 3000 should not be used for a long time or when requiring transport by a motor vehicle, unscrew the cylinders from the regulators, This will ensure that the contents of the cylinder will remain contained and prevent leaks. Do not expose cylinders to a temperature higher than 50°C.

- Always transport in a well ventilated vehicle never transport in a closed vehicle
- It is dangerous to use damaged or incorrectly functioning equipment

NOZZLE CHART

TIP SIZE	ORIFICE	WELDING RANGE
0#	0.7mm	0.5mm - 1mm
1#	0.8mm	1mm - 2mm
2#	0.9mm	2mm - 3mm
3#	1.0mm	3mm - 4mm

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment should be used by all operators of oxy-fuel gas equipment to ensure their protection of body and clothing from:

- a) The heat from the work
- b) Burns which may result from contact with hot components or small globules of hot metal
- c) Radiation which may burn the skin or eyes

This protection is achieved by the use of flame resistant clothing, gloves and footwear that is suitable to prevent the entry of hot particles or objects. Aprons, sleeves, shoulder covers, leggings or spats of pliable flame resistant leather and other suitable materials may also be required where the areas of the body will encounter hot metal. Protection of the eyes from radiation is also very important. The recommended minimum shade numbers are listed below, however if any discomfort is felt, darker filters may be used.

Gas Welding	- Low heat input	Shade 3
	- Light fusion welds	Shade 4
	- Heavy fusion welds	Shade 5

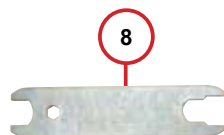
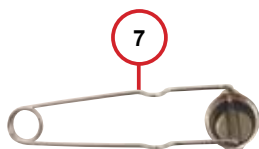
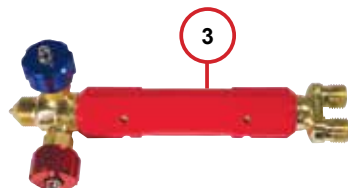
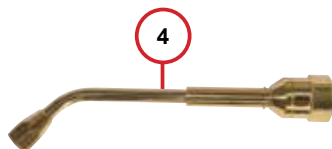
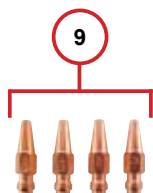
BOX CONTENTS

Kit Contains

1. Fuel gas regulator with gauge.
2. Oxygen regulator with gauge with M12x1mm connection.
3. Hand piece with adjustment values
4. Blowpipe.
5. 2.5m Oxygen / Fuel hose set.
6. Light weight & heavy duty carry case.
7. Flint Lighter.
8. Combination Spanner
9. Brazing nozzle size: 0, 1, 2, 3.
10. Brazing goggles.



- **OXYGEN REGULATOR**
- CONNECTS TO M12x1 THREAD.
- **MAP-PRO REGULATOR**
- CONNECTS TO CGA 600 THREAD

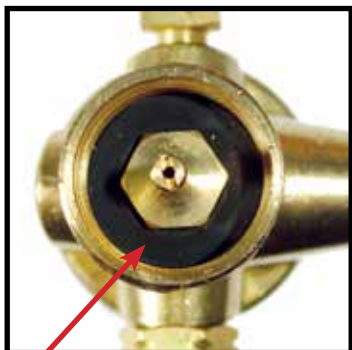


Disposable gas cylinders sold separately

BRAZEN 3000 SETUP



1. Make sure you have the valve on the fuel regulator in the off position.



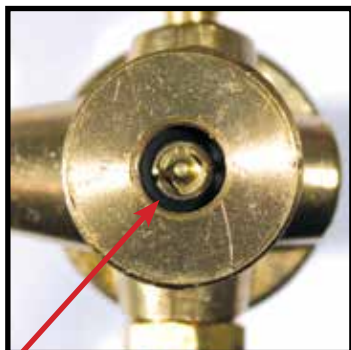
2. Check the seal in the regulator is seated properly and not kinked or raised.



3. Screw the Fuel regulator onto the fuel bottle in a clockwise direction to tighten. And place into the carry case. **CONNECTS TO CGA 600 THREAD**



4. Make sure you have the valve on the Oxygen regulator in the off position.



5. Check the seal in the regulator is seated properly and not kinked or raised.



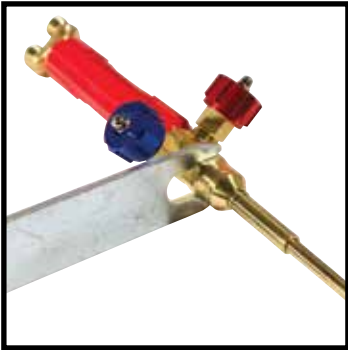
6. Screw the Oxygen regulator onto the Oxygen bottle in a clockwise direction to tighten, and place into the carry case
CONNECTS TO M12x1 THREAD



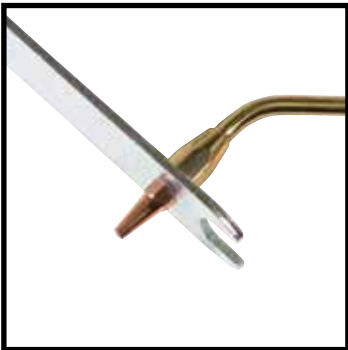
Disposable gas cylinders sold separately

- Oxygen Reg has a M12x1mm Connection
- Map-Pro Reg has CGA 600 Connection

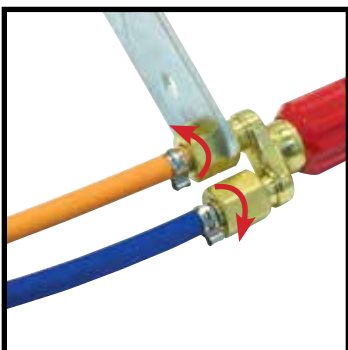
BRAZEN 3000 SETUP - CONTINUED



7. Attach the blowpipe to the handle using the spanner supplied, do not over tighten



8. Screw the required tip onto the blowpipe. Using the spanner supplied, do not over tighten



9. Attach the hose to the handle with the numbers facing up, orange hose on the left, tighten anti-clockwise and blue hose on the right tighten clockwise using the spanner supplied, do not over tighten

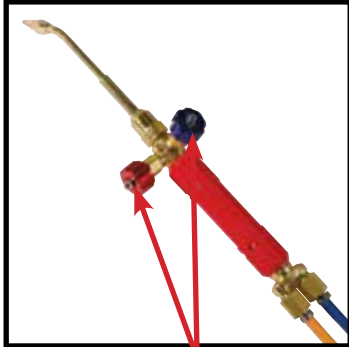


10. Attach the hose to the fuel and oxygen regulators

- Orange hose connected to the fuel regulator tighten anti-clockwise using the spanner supplied, do not over tighten
- Blue hose to the Oxygen regulator tighten clockwise using the spanner supplied, do not over tighten

TIP SIZE	ORIFICE	WELDING RANGE
0#	0.7mm	0.5mm - 1mm
1#	0.8mm	1mm - 2mm
2#	0.9mm	2mm - 3mm
3#	1.0mm	3mm - 4mm

BRAZEN 3000 IGNITING PROCEDURE



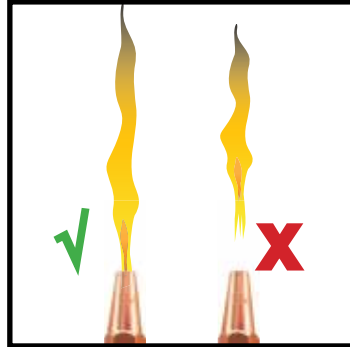
1. Make sure the valves on the torch handle are closed



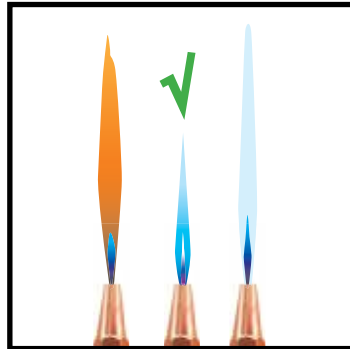
2. Turn the Oxygen regulator on until it is fully open, and Turn the Fuel regulator on until it is fully open.



3. Turn the Red Fuel dial anti-clockwise to open the flow of fuel, and immediately light the torch using the flint lighter provided in the kit



4. Adjust the fuel dial on the torch until the yellow flame flows right from the tip of the nozzle.

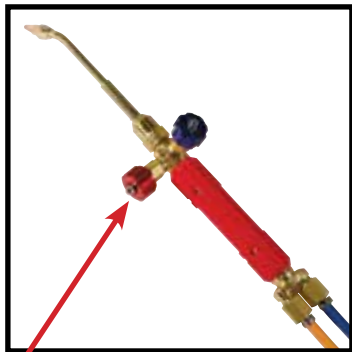


5. Turn the blue dial on the torch handle anti-clockwise to introduce oxygen to the flame.

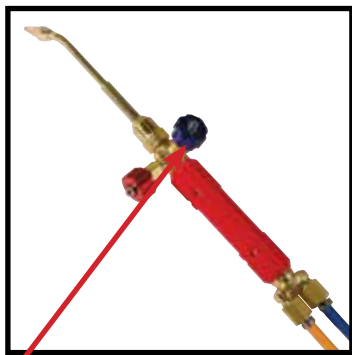
NOTE:

- Not enough oxygen will produce a orange flame
- Excess oxygen will produce a transparent flame.
- The ideal flame is a blue flame with a cone shape.

SHUT DOWN PROCEDURE



1. Turn The Fuel dial off from the torch handle, This will extinguish the flame.



2. Turn the Oxygen dial off from the torch handle.



3. Shut the Fuel regulator off and Shut the Oxygen regulator off.

NOTE:

In the case where the Brazen 3000 should not be used for a long time or when requiring transport by a motor vehicle, unscrew the cylinders from the regulators,

WARNING

- Do not ignite the torch near your body, combustible material or close to regulators and cylinders.
- Caution: the torch can become very hot during and after use, keep away from skin and combustible materials, lay flat on a clean surface after use.
- Make sure you follow the correct shutdown procedures.
- This equipment uses compressed gas cylinders, do not disassemble cylinders, puncture or incinerate.
- Always wear the appropriate personal protective equipment when using this equipment.
- Do not disassemble the regulators, if regulator stops working, contact your Bossweld agent or Bossweld directly.
- Use only recommended parts with this equipment, altering removing or using non genuine part can be very dangerous.
- Only use fuel and oxygen cylinders that pass the AS/NZS standards, compress cylinders can be very dangerous, make sure you follow manufactures operating instructions.

MAINTENANCE

- Only use Bossweld approved replacement parts
- Do not use this equipment if you are unsure of any procedures outline in this manuals, contact your Bossweld agent or Bossweld directly.
- Do not use this equipment if part is damage, replace any damaged parts before use.
- Regularly inspect all parts before use, ensure valves are clean and dry before connecting to the cylinders.
- Do not disassemble any part of the equipment unless stated in this manual.
- Check equipment for any leaks before ignition of the flame.

WARRANTY

BOSSWELD undertakes to repair or replace, at its option, any new BOSSWELD product which fails due to a defect in materials or workmanship during the 12 month warranty period. Any repair work must be carried out by an authorised BOSSWELD repair agent.

This warranty does not apply to, or in any way cover:

1. Normal everyday wear and tear.
2. Failure due to improper use.
3. Failure of, or caused by, parts or components which are not original BOSSWELD parts.
4. Failure arising from accident, abuse, fire, vandalism, contaminated fluids or neglect or failure to store or use the BOSSWELD product in accordance with the instructions provided in this manual.

Note:

The following items are not included in the 12 month warranty period:
Welding tips, welding goggles and flint lighter

DISCLAIMER

Whilst the above information is provided in good faith, BOSSWELD does not warrant the accuracy of the information provided or assume any legal responsibility for it or for any damage which may result from reliance on or use of it or from any negligence of BOSSWELD or other person(s) with respect to it.



CODE	DESCRIPTION
------	-------------

700015M	Bossweld "GoaTig" Tig Welding Glove - Medium
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Bossweld Goat Skin Tig Glove

White goat skin TIG glove, reinforced tipping on back of 2nd and 3rd fingers, yellow cow split cuff, Kevlar stitching, unlined, (32cm for size M).

Features

Reinforced tipping on the back of the 2nd and 3rd fingers
Yellow cow split cuff
Kevlar stitching
Goat skin gloves



CODE	DESCRIPTION
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FLUX602250	Silver Brazing Flux x 250g Jar
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Silver Brazing Flux

Fine paste with excellent suspension & easy to spread.
For low temperature silver brazing, provides quality joints in station less, copper, brass & bronzes

CODE	DESCRIPTION
------	-------------

300201	2.4mm 2% Silver Brazing 1Kg
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300202	2.4mm 5% Silver Brazing 1Kg
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300203	3.2mm 5% Silver Brazing 1Kg
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300204	1.6mm 15% Silver Brazing 1Kg
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300206H	2.4mm 15% Silver Brazing 6 stk
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300206	2.4mm 15% Silver Brazing 1Kg
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Bossweld Silver Brazing Alloys

CAWS A5.8-B CuP5

A filler for brazing copper. Wide molting range for filling loose connections and to build up around finished joints. When heated above liquidus temperature will flow into tight connections. Extensively used on hot water tanks, copper tubing, plumbing or where a strong, ductile joint is required. Not recommended for brazing steel or other ferrous metals.

OTHER PRODUCTS IN OUR RANGE

- ELECTRODES
- TIG RODS
- WELDING HELMETS
- WELDING MACHINES
- TORCH SPARE PARTS
- WELDING ACCESSORIES
- MIG WIRE
- GAS EQUIPMENT
- WELDING SAFETY
- MIG TORCHES
- TIG TORCHES
- WELDING CABLE

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