Weldclass®

FURY 165/185/205 MPST

Multi-process Welding Machine with Pulse Welding in all modes.

- Pulse MIG
- Pulse STICK
- Pulse Lift DC-TIG

INSTRUCTION MANUAL

Multiprocess Inverter Welding Machine - Edition 1.2 April 2026

Congratulations & Thank You

Congratulations – you're now the proud owner of a Weldclass Fury 165/185/205 MPST welding machine. You've opened the door to building almost anything you can imagine.

Founded in regional Australia in 1979, Weldclass has focused on developing industry-first solutions and has grown into a leading welding equipment brand across Australasia and beyond.

From all of us at Weldclass – welcome and thanks for joining our club!

Join the Owners Club!

Register Your Warranty

Standard warranty without registration is 3 years.
To qualify for the **extended conditional 7-year warranty** on your purchase you must register within 30 days of purchase.

Please register your warranty now by going to:
http://www.weldclass.com.au/WarrantyRegistration

Register Now!

You will need;

a) A copy of your purchase invoice / receipt.
b) Your machine serial number which can be found on the back of the machine or underneath the machine.

Making a Warranty Claim

Step 1: Gather required information

- **Proof of purchase:** This can be your receipt, delivery docket, or invoice.
- **Serial number:** Find this on the machine itself.
- **Description of the fault:** Detail the problem you are experiencing. The more Photo's and information about the fault the quicker the claim will be processed.

Step 2: Submit the claim

- Email the information collected above to sales@weldclass.com.au

Step 3: Finding Resolution

- A Weldclass technician will respond to your claim, typically within one business day.
- The Weldclass technician will assist you throughout the claim until a resolution is found.

Warranty Terms and Conditions

Refer to https://www.weldclass.com.au/WarrantyTermsAndConditions for warranty terms and conditions.

1 CONTENTS

2 SAFETY

2.1 Store and Retain this Manual

Retain this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number on the front and keep this manual and the receipt in a safe and dry place for future reference.

2.2 Important Safety Information

Failure to follow the warnings and instructions may result in electric shock, fire, serious injury or death. Save all warnings and instructions for future reference.

Obey all safety messages that follow these symbols to avoid possible injury or death.

 **DANGER!** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING!** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

 **NOTE,** used to address practices not related to personal injury.

2.3 Welding Operation

1. **Maintain labels and nameplates on the welder.** These carry important information. If unreadable or missing, contact Weldclass for a replacement.
2. **Avoid unintentional starting.** Make sure the welder is setup correctly and you are prepared to begin work before turning on the welder.
3. **Unplug before performing maintenance.** Always unplug the welder from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.
4. **Never leave the welder unattended while connected to power supply.** Turn power off before leaving the welder unattended. Always turn off Gas Cylinders at the Cylinder Valve when not being used.
5. **Do not touch live electrical parts.** Wear dry, insulating gloves. Do not touch the electrode/wire, output terminals, or the live ends of MIG Guns, TIG & Plasma Torches, or Electrode Holders with bare hands. Do not wear wet or damaged gloves.
6. **Protect yourself from electric shock.** Do not use the welder in wet, rain or drizzly conditions outdoors. Insulate yourself from the work piece and the ground. Use non-flammable, dry insulating material if possible, or use dry rubber mats, or other dry insulating material, such as welding blankets, large enough to cover the area of contact with the work or the ground.

7. **Avoid inhaling fume.** Many fumes are created by welding contain **chemicals known to cause cancer, birth defects or other harm**. Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, using correct extraction equipment, and work with approved safety equipment, such as **P2 Respirator masks** or Powered Air-Purifying Respirator (PAPR) welding helmets that are specially designed to filter out microscopic particles.

8. **Failure to follow the warnings and instructions may result in electric shock, fire, serious injury and or death.**

 ***WARNING!*** *Electromagnetic fields from welding equipment can interfere with some medical implants and may cause malfunction. The use of welding equipment may not be suitable for pacemaker wearers. Follow your doctor's advice and the medical device manufacturer's instructions.*

---

9. **Ensure that the unit is placed on a stable flat location before use.**

 ***WARNING!*** *If this unit falls while plugged in, severe injury, electric shock, or fire may result.*

---

10. **Transportation Methods.** Lift unit with the handles provided, or use a handcart or similar device of adequate capacity. If using a fork lift vehicle, secure the unit to a skid before transporting.

 ***CAUTION!*** *Disconnect input power leads from de-energized supply line/outlets before moving the welding power source.*

---

11. **Exercise good work practices.** The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be considered by the operator.
12. **Do not use this machine for pipe thawing.** This machine was not designed for pipe thawing and will be a significant electrical & heat hazard if attempt is made to use for thawing pipe.

2.4 Welding Safety Instructions & Warnings

WARNING! *Protect yourself and others from possible serious injury or death. Keep children away. Read the operating/Instruction manual before installing, operating or servicing this equipment. Have all installation, operation, maintenance, and repair work performed by qualified people.*

If an operator does not strictly observe all safety rules and take precautionary actions, welding products and welding processes can cause serious injury or death, or damage to other equipment or property.

Safe practices have developed from past experience in the use of welding and cutting. These practices must be learned through study and training before using this equipment. Some of these practices apply to equipment connected to power lines; other practices apply to engine driven equipment. Anyone not having extensive training in welding and cutting practices should not attempt to weld.

Safe welding practices are outlined in Australian Standard AS 1674.2 *Safety in welding and allied processes* and related standards. Also check the Safe Work Australia website, for handy free safety information relating to welding. https://www.safeworkaustralia.gov.au/doc/model-code-practice-welding-processes Refer to these documents and any applicable AS/NZS PPE standards for detailed safety requirements.

WARNING! *Only use safety equipment that has been approved by an appropriate standards agency. Unapproved safety equipment may not provide adequate protection. Eye and breathing protection must be AS/NZS compliant for the specific hazards in the work area.*

DANGER! A*lways wear AS/NZS compliant safety glasses and a welding helmet or welding face shield fitted with an appropriate filter shade number for the welding process and current. Refer to the* ***"Recommended Eye Protection Filters"*** *table in this manual.*

CAUTION! *Heavy-duty work gloves, long heavy weight cotton drill pants, long sleeve cotton shirts and appropriate welding jackets, non-skid safety shoes/boots and hearing protection used for appropriate conditions will reduce personal injuries.*

CAUTION! *Have the equipment serviced by a qualified repair person using identical replacement parts. This will ensure that the safety of the power tool is maintained.*

2.4.1 Personal Safety

CAUTION! *Keep the work area well lit. Make sure there is adequate space surrounding the work area. Always keep the work area free of obstructions, grease, oil, rubbish, and other debris. Do not use equipment in areas near flammable materials, such as chemicals, fuels, paints, oils, cardboard, carpet, timber floors, dust, and vapors etc. Do not use this product in a damp or wet location.*

1. **Stay alert, watch what you are doing and use common sense when operating equipment.** Do not use welders or tools while you are tired or under the influence of drugs, alcohol or medication. A moment of distraction when operating equipment may result in serious personal injury.
2. **Do not overreach.** Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

2.4.2 Arc Rays can Burn Eyes and Skin

CAUTION! *Arc rays from the welding process produce intense heat and strong ultraviolet rays that can burn eyes and skin.*

1. Use a Welding Helmet or Welding Face Shield fitted with a proper shade filter (refer AS 60974-1, AS/NZS 1337.1 and AS/NZS 1338.1 Safety Standards) to protect your face and eyes when welding or watching. (See Filter Table on Page17).
2. Wear approved wrap around safety glasses. Side shields are recommended.
3. Use protective screens or barriers to protect others from flash and glare; warn others not to watch the arc.
4. Wear protective clothing made from durable, flame-resistant material (wool, heavy weight cotton and leather) and foot safety protection.
5. Never wear contact lenses while welding.

Arc rays from the welding process produce intense heat and strong ultraviolet rays that can burn eyes and skin. Use the following table to select the appropriate shade number for a Welding Helmet or Welding Face Shield.

Recommended Eye Protection Filters For Electric Welding		
Welding Process / Application	**Approximate Range of Welding Current in Amps**	**Minimum Shade Number of Filter Lens**
Stick (MMA)	Up to 100	9
	100 to 200	11
MIG (other than Aluminium and Stainless Steel)	Up to 150	10
	150 to 250	12
MIG of Aluminium and Stainless Steel	Up to 250	12
MIG, Flux-Cored Arc Welding (FCAW) – with or without Shielding Gas	Up to 300	13
TIG	Up to 100	10
	100 to 200	11

2.4.3 Noise Can Damage Hearing

CAUTION! *Noise from some processes can damage hearing. Use AS/NZS compliant ear plugs or ear muffs if the noise level is high.*

2.4.4 Work Environment Safety

DANGER! *Remove any combustible material from the work area.*

1. When possible, move the work to a location well away from combustible materials. If relocation is not possible, protect the combustibles with a cover made of fire resistant material.
2. Remove or make safe all combustible materials for a radius of 10 metres around the work area. Use a fire resistant material to cover or block all doorways, windows, cracks, and other openings.
3. Enclose the work area with portable fire resistant screens. Protect combustible walls, ceilings, floors, etc., from sparks and heat with fire resistant covers.
4. If working on a metal wall, ceiling, etc., prevent ignition of combustibles on the other side by moving the combustibles to a safe location. If relocation of combustibles is not possible, designate someone to serve as a fire watch, equipped with a fire extinguisher, during the welding process and well after the welding is completed.
5. Do not weld or cut on materials having a combustible coating or combustible internal structure, as in walls or ceilings, without an approved method for eliminating the hazard.
6. After welding, make a thorough examination for evidence of fire. Be aware that visible smoke or flames may not be present for some time after the fire has started. Do not weld or cut in atmospheres containing dangerously reactive or flammable gases, vapors, liquids, and dust, like aluminium grinding and sanding dust. Provide adequate ventilation in work areas to prevent accumulation of flammable gases, vapors, and dust.
7. Do not apply heat to a container that has held an unknown substance or a combustible material whose contents, when heated, can produce flammable or explosive vapors, such as liquid fuel, petrol, tinners & paint containers and LPG/Propane Gas Cylinders/tanks. Clean and purge containers before applying heat. Vent closed containers, including castings, before preheating, welding, or cutting.

2.4.5 Electricity Can Kill

DANGER! *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 machine internal circuits are also live when power is on. In semiautomatic or automatic MIG wire welding, the wire, wire reel, drive roll housing, and all metal parts touching the welding wire are electrically live. Incorrectly installed or improperly grounded equipment is a hazard.

1. Do not touch live electrical parts.
2. Wear dry, hole-free insulating gloves and body protection.
3. Insulate yourself from the work and the ground using dry insulating mats or covers.
4. Disconnect input power before installing or servicing this equipment. Lock input power, disconnect switch open, or remove line fuses so power cannot be turned on accidentally.
5. Properly install and ground this equipment according to national, state, and local codes.
6. Turn off all equipment when not in use. Disconnect power to equipment if it will be left unattended or out of service.
7. Use fully insulated electrode holders. Never dip the holder in water to cool it or lay it down on the ground or the work surface. Do not touch holders connected to two welding machines at the same time or touch other people with the holder or electrode.
8. Do not use worn, damaged, undersized cables.
9. Do not wrap cables around your body.
10. Connect work pieces to a good electrical ground.
11. Do not touch the electrode while in contact with the work (ground) circuit.
12. Use only well-maintained equipment. Repair or replace damaged parts as soon as practical.
13. In confined spaces or damp locations, do not use a welder with AC output unless equipped with a Voltage Reduction Device (VRD).

2.4.6 Fumes And Gases

WARNING! *Welding produces fumes and gases. Breathing these fumes and gases is hazardous to your health and normally contains known Carcinogens. Ensure adequate ventilation or use local exhaust and respiratory protection as required. Refer to* ***Work Safe Australia guidance on welding fume exposure and the Workplace Exposure Limits*** *(WEL) for airborne contaminants.*

1. Keep your head out of the fumes. Do not breathe the fumes.
2. Ventilate the area and or use an exhaust at the arc to remove welding fumes and gases.
3. Use an approved powered air-purifying respirator (PAPR) or disposable P2 Respirators.
4. Read the Safety Data Sheets (SDS) and the manufacturer's instruction for the metals, consumables, coatings, and cleaners.

5. Work in a confined space only if it is well ventilated, you must have a designated assistant/lookout, or while wearing an air-supplied respirator. Shielding gases used for welding can displace air causing injury or death. Be sure the breathing air is safe. Always turn off Gas Cylinders at the Cylinder Valve when not being used.
6. Do not weld in locations near degreasing, cleaning, or spraying operations. The heat and rays of the arc can react with vapors to form highly toxic and irritating gases.
7. Do not weld on coated metals, such as galvanized, lead, or cadmium plated steel, unless the coating is removed from the weld area, the area is well ventilated, to protect you and others in the work area. The coatings and any metals containing these elements can give off toxic fumes if welded.

2.4.7 Fire & Explosive Risks

WARNING! *Sparks and spatter fly off from the welding arc. The flying sparks and hot metal, weld spatter, work piece, and hot equipment can cause fires and burns.*

Accidental contact of electrode or welding wire to metal objects can cause sparks, overheating, or fire.

1. Protect yourself and others from flying sparks and hot metal.
2. Do not weld where flying sparks can strike flammable material.
3. Remove all flammable materials within at least 10 m of the welding area wherever practicable. Where this is not possible, cover flammable materials with fire-resistant blankets or screens.
4. Be alert that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas.
5. Watch for fire and keep a fire extinguisher nearby.
6. Be aware that welding on a ceiling, floor, bulkhead, or partition can cause fire on the hidden side.
7. Do not weld on closed containers such as tanks or drums.
8. Connect the work lead/clamp to the job as close to the welding area as practical to prevent welding current from traveling long, possibly unknown paths and causing electric shock and fire hazards.
9. Do not use a welder to thaw frozen pipes.

10. Remove the stick electrode from the holder or cut off the welding wire at the contact tip when not in use.

2.4.8 Sparks & Hot Metal

WARNING! *Chipping and grinding causes flying metal, and as welds cool they can throw off slag.*

1. Wear an AS/NZS approved face shield or safety goggles. Side shields are recommended.
2. Wear appropriate safety equipment to protect the skin and body.

2.4.9 Gas Cylinders

WARNING! *Gas cylinders contain gas under high pressure. If damaged, a cylinder can explode. Since gas cylinders are normally part of the welding process, be sure to treat them carefully.*

1. Protect compressed gas cylinders from excessive heat, mechanical shocks, and arcs.
2. Install and secure cylinders in an upright position by chaining them to a stationary support or equipment cylinder rack to prevent falling or tipping.
3. Keep cylinders away from any welding or other electrical circuits.
4. Never allow a welding electrode to touch any cylinder.
5. Use appropriate shielding gas regulators, hoses, and fittings designed for the specific application; maintain them and their associated parts in good condition.
6. Turn your face away from the valve outlet when opening the cylinder valve.
7. Welding Shielding gases contain Argon, Carbon Dioxide, Helium, and sometimes small parts of Oxygen, so Shielding Gases can be mixtures of the previously listed gases. Shielding Gases whilst not harmful to the skin, can displace AIR in enclosed/confined spaces, which possess the risk of asphyxiation to people and pets if they enter these hazardous areas.
8. Always turn off Gas Cylinders at the Cylinder Valve when not being used.

3 MACHINE SPECIFICATIONS

Model	Fury 165 MPST	Fury 185 MPST	Fury 205 MPST
Product Code (kit):	WFY165MK1	WFY185MK1	WFY205MK1
Standard	AS 60974.1-2020		
Power Supply	~230V +/- 10% 50hz Single Phase		
Factory Fitted Supply Plug Rating	10A Household Supply		
Generator Rating - Minimum	8kVa	9kVa	10kVa
Effective Input Current (I_{1eff})	10A	10A	10A
Maximum Input Current (I_{1max})	26.8A	30.6A	32.8A
Nominal Open Circuit Voltage (MIG and MMA)	63.5V	63.5V	63.5V
Output Terminals	Dinse style 35-50		
Protection Class	IP21S		
Weight (Machine Only)	9.9kg	10.5kg	10.7kg
Dimensions	L465 x W225 x H320mm	L465 x W225 x H320mm	L465 x W225 x H320mm
MIG Welding	**Fury 165 MPST**	**Fury 185 MPST**	**Fury 205 MPST**
Welding Output (A/V)	40A/16.0V - 165A/22.3V	40A/16.0V - 185A/23.3V	40A/16.0V - 205A/24.3V
Duty Cycle	165A / 22.3V @ 14% 80A / 18.0V @ 60% 62A / 17.1V @ 100%	185A / 23.3V @ 10% 76A / 17.8V @ 60% 59A / 16.9V @ 100%	205A / 24.3V @ 9% 79A / 18.0V @ 60% 62A / 17.1V @ 100%
Spool Size (Dia. & Weight)	100mm (1kg) & 200mm (5kg)		
MIG Wire Sizes	0.6, 0.8, 0.9, 1.0mm		
MIG Wire Types	Gasless, Aluminium, Bronze, Carbon Steel and Stainless Steel		
Stick (MMA) Welding	**Fury 165 MPST**	**Fury 185 MPST**	**Fury 205 MPST**
Welding Output (A/V)	20/20.8V – 150A/26.0V	20/20.8V – 160A/26.4V	20/20.8V – 170A/26.8V
Duty Cycle	150A / 26.0V @ 16% 77A / 23.1V @ 60% 60A / 22.4V @ 100%	160A / 26.4V @ 11% 69A / 22.7V @ 60% 53A / 22.1V @ 100%	170A / 26.8V @ 10% 69A / 22.8.0V @ 60% 54A / 22.2V @ 100%
MMA Electrode Size	1.6 – 3.2mm		1.6 – 4.0mm
TIG Welding	**Fury 165 MPST**	**Fury 185 MPST**	**Fury 205 MPST**
Welding Output (A/V)	10/10.4V – 150A/16.0V	10/10.4V – 160A/16.4V	10/10.4V – 170A/16.8V
Duty Cycle	150A / 16.0V @ 18% 82A / 13.3V @ 60% 64A / 12.5V @ 100%	160A / 16.4V @ 13% 74A / 13.0V @ 60% 58A / 12.3V @ 100%	170A / 16.8V @ 13% 79A / 13.2V @ 60% 61A / 12.5V @ 100%
TIG Tungsten Size	1.6 – 2.4mm	1.6mm – 3.2mm	1.6mm – 3.2mm

For full machine details go to:
http://www.weldclass.com.au/165MPST
http://www.weldclass.com.au/185MPST
http://www.weldclass.com.au/205MPST

4 KIT CONTENTS

Value Pack Kit:

- Fury MPST Welding machine
- PROMAX 130 Auto
- Darkening Welding Helmet
- MIG Gun BZL24 x 3m
- Work return Lead & Clamp
- Stick Welding Lead with
- Twist-Lock Holder
- Gas Regulator and Hose
- Welding Gloves
- MIG Pliers
- Wire Feed Rollers:
- Solid 0.8-0.9mm,
- Flux-Cored 0.8-0.9mm,
- Aluminium 0.9-1.0mm
- Cooler Bag- For Hot
- Days & Cold Drinks

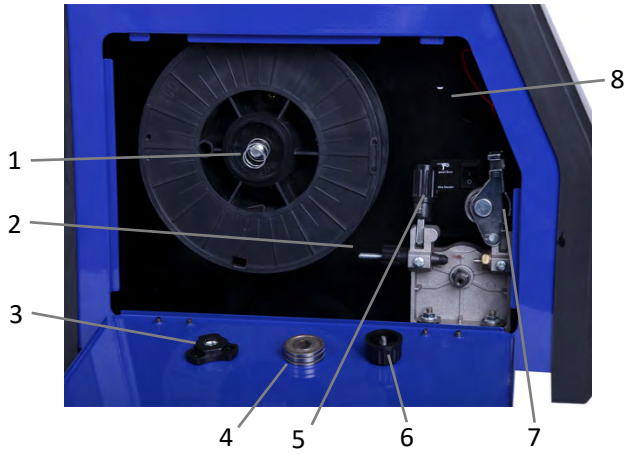
5 KNOW YOUR MACHINE

5.1 Front

1. Control panel
2. Negative (-) Cable Connection Socket
3. Positive (+) Cable Connection Socket
4. Polarity Cable for MIG Gun
5. MIG Gun Euro Connection
6. Spool Gun Pin Connector

5.2 Side / Wire Feeder Compartment

1. Spool Hub
2. Wire Inlet Guide
3. Spool Screw-on Lock Nut
4. Drive Roller (Partially visible)
5. Wire Feed Tension Adjustment Lever
6. Drive Roller Retaining Screw
7. Wire Feed Tension Arm/Top Roller
8. Spool Gun On/Off Control

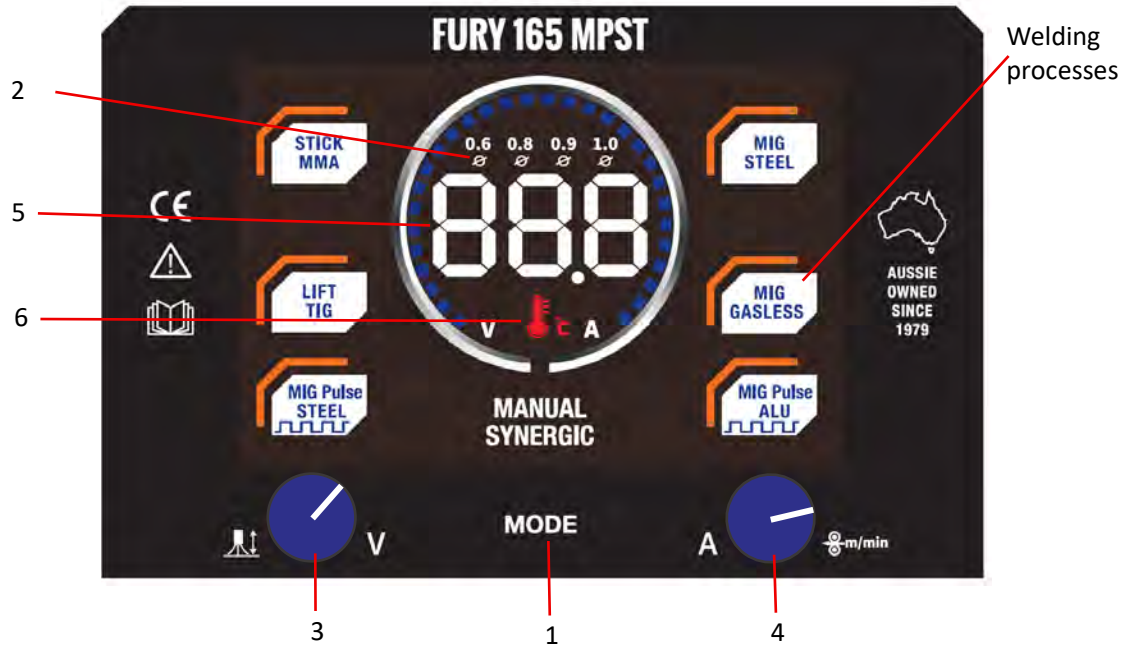


5.3 Rear

1. 230V Mains Power Input Lead
2. Mains Power Switch
3. MIG Gas Inlet Connection, male quick connector

6 CONTROLS

6.1 Control Panel/User Interface



1. **Process Mode Selection**
   Push to scroll through the available processes. Note: Each process requires a specific work lead and torch polarity. Refer to the polarity chart inside the wire-feeder door and the relevant sections of this manual for correct polarity settings.

2. **MIG Wire Size Selection**
   Press the right-hand control knob (A) to scroll through the available wire sizes.

3. **Voltage Control (V)**

   In SYNERGIC MIG: this control provides fine adjustment, known as "**Trim**" and has a range from -5 to +5, which adjusts the arc-length, to improve weld-size and helps minimize spatter.
   Higher voltage → longer arc = wider bead and less penetration.
   Lower voltage → shorter arc = narrower bead and deeper penetration, and also prevents the wire burning back to the contact tip.

   In MANUAL MIG: this control adjusts the Voltage and Heat generated. Higher voltage produces a flatter, wider bead, Lower voltage creates a more convex, narrow bead.
   Maximum Voltage, combined with maximum Wire Feed Speed produces the maximum current Amperage (A)

4. **Amperage (A) and Wire Feed Speed Control (m/min)**

   SYNERGIC MIG: Adjusts amperage (Voltage & Wire Feed Speed in combination = synergy).

   MANUAL MIG: Adjusts wire feed speed, which has the most direct effect on Amperage.

   STICK: Adjusts main current (amperage), press in to change between Standard and Pulse

   TIG: Adjusts main current (amperage), press in to change between Standard and Pulse

   Pulse Mode in TIG or STICK

   Press the mode button to select the process LIFT TIG or STICK MMA. Press the Right-Hand Control Knob (A, m/min) so the Orange bar flashes. Turning the Right-Hand Control knob; Clockwise = Faster Pulse, Anit-clockwise = Slower Pulse.

   In both TIG & STICK Pulse, the Pulse Rang in Hz (Pulses per second) is from 1- 10 Hz.

5. **LED Digital Display**

6. **Thermal Overload**: If LED displays, this indicates that max duty-cycle has been reached. Welding output will be disabled and will remain displayed until machine cools. In a high over current event, the machine may also switch itself completely off, internally. You will know because the power will still be on at the wall socket. Switch the machine off at the rear panel, wait for 15mins and turn the machine back-on.

7 BASIC OPERATION

Note: For advanced instructions on how to weld visit: weldclass.com.au/howtoweld

7.1 MIG Welding

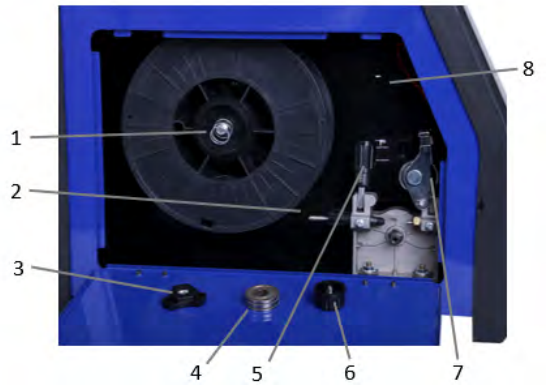
WARNING! *Before changing the feed roller or wire spool, ensure that the mains power is switched off.*

7.1.1 Fitting Wire Spools & Loading the Wire Feeder

Drive roller selection chart

Steel & Stainless	Gasless (Flux Cored)	Aluminium
V Groove	K Groove (Knurled)	U Groove
		

1. Open the wire feeder compartment door.
2. Remove the Spool Twist-Lock Retainer 'Nut' (5.2.3) & spring
3. Fit the wire spool to the Spool Post, ensuring that the wire exits the spool from bottom of the spool.
4. Replace the Spool Twist-Lock Retainer 'Nut' (5.2.3) & spring
5. Feed the wire from the spool through the Wire Inlet Guide (5.2.2) into the wire feeder.
6. Release the Wire Feed Tension Arm (5.2.7) by pivoting the Wire Feed Tension Adjustment Lever (5.2.5) towards you from the vertical 'locked' position.



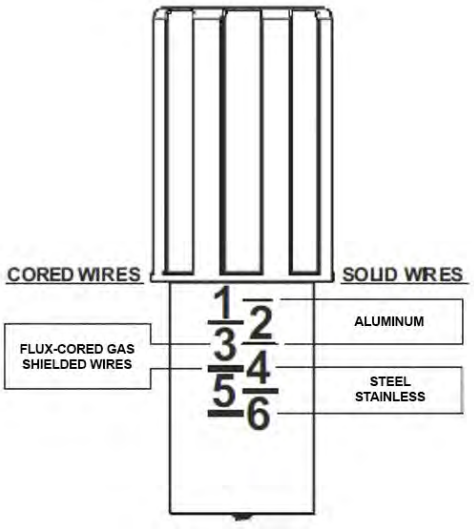
7. Check the wire Drive Roller (5.2.4) groove matches the selected MIG wire type and size. The drive roller will have two different sized grooves; the size of the groove in use is stamped on the side of the drive roller. For gasless flux-cored wire the drive roller groove should have a serrated / knurled groove. For solid steel or stainless MIG wire, the drive roller groove should have a 'V' shaped profile. For Aluminum wire the drive roller groove should be a smooth 'U' shape.
8. If necessary, remove and change the drive roller by removing the Drive Roller Retainer Nut (5.2.6). Once the correct drive roller is selected and fitted and the Drive Roller Retainer Nut is secured in place, manually feed the wire through the Wire Inlet Guide (5.2.2), over the drive roller groove and into the outlet wire liner (on the RH-Side closest to the front panel) and push the wire so it goes 300mm inside the MIG Gun cable.
9. Ensuring that the wire is correctly seated in the center of the drive roller groove, replace the Wire Feed Tension Arm (5.2.7) and lock it into place by pivoting the Wire Feed Tension Adjustment Lever (5.2.5) back to the vertical position.
10. Adjust wire feed tension by winding the knob on the Wire Feed Tension Adjustment Lever (5.2.5). Clockwise will increase tension, anticlockwise will decrease drive tension.
11. Double check that the MIG wire, drive roller (5.2.4) and MIG Gun tip sizes are fitted.
12. Connect the machine to suitable mains power using the mains input power lead (5.3.1). Switch the mains power switch (5.3.2) ON to power up the machine.
13. Set welding process selector to 'MIG'
14. Remove the contact tip from the torch and lay the torch cable out as straight as possible.
15. Pull the MIG Gun trigger until the wire feeds out through the end of the MIG Gun.
16. Replace the tip on the MIG Gun and trim off any excess wire.

WARNING! The use of excessive feed tension will cause rapid and premature wear of the drive roller, the support bearing and the drive motor/gearbox.

TIP! Ideal tension is as little as possible, while maintaining consistent wire feed without drive roller slippage.

7.1.2 Setting your drive roller tension

1. Feed wire through the Gun until about 50 mm extends past the torch contact tip.
2. Turn the tensioner arms anticlockwise until the rollers spin but the wire slips when you pull the trigger.
3. Before touching the exposed wire, disconnect the Work Return Lead with Clamp from the Welding Machine (by unscrewing the twist-lock connector) and put on dry welding gloves. Turn the tension knob about a half-turn clockwise, lightly pinching the exposed wire between your thumb and forefinger through the gloves.
4. While still wearing welding gloves and with the Work Return Lead disconnected, pull the trigger as you hold the wire. If the wire slips, add a little more tension and test again. Continue increasing tension in small steps until the wire cannot be stopped with your fingers and feeds smoothly without slipping.



NOTE: Wear leather gloves, ensure the MIG Gun is cold and the work return lead is disconnected.

7.1.3 Gasless Welding

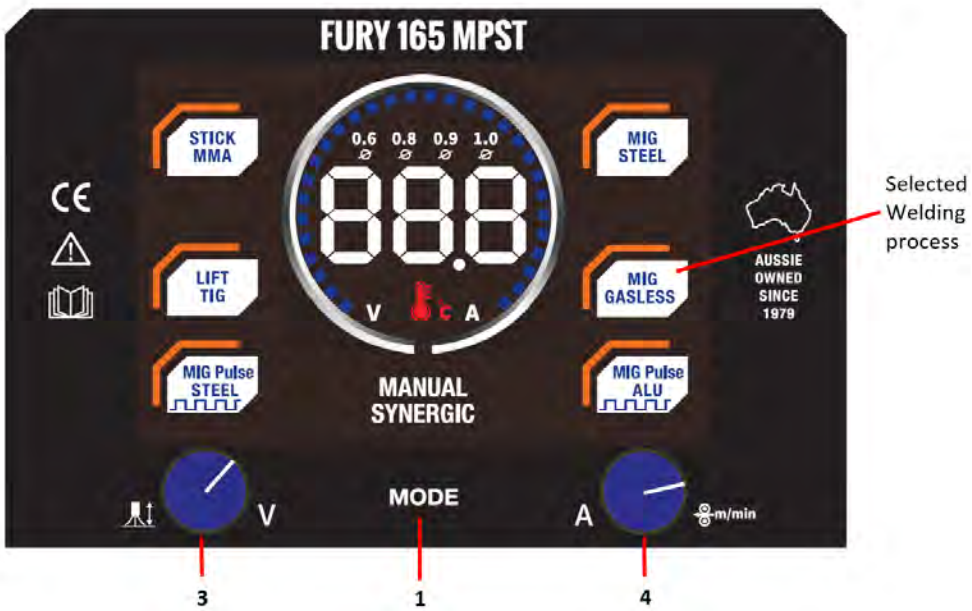
1. Connect the work return cable with clamp to the Positive (+) output twist-lock socket (5.1.3). Push the cable connector into the outlet and twist clockwise until it is very firm, so you have a good electrical connection.
2. Connect the work return lead and clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint, or rusty mill scale at the contact point.
3. Connect the MIG Gun Polarity Cable (5.1.4) to the Negative (-) output twist-lock socket (5.1.2). **Note**: if this connection is not made, there will be no electrical connection to the welding Gun!

MIG Gun Polarity Cable, Negative (-)

MIG Gun Polarity Cable, Positive (+)

4. Set process selector using the Mode button (1) to ‘MIG Gasless’
5. Press the Voltage Control (V) control button to switch between Synergic and Manual mode.

a. Synergic Mode: You control the Amperage and the machine sets matching parameters automatically. Best for fast setup and consistent everyday welding.



b. Manual Mode: You set the voltage and wire feed independently, with full control. Best for experienced welders, giving you ultimate control.

6. You're now ready to weld!

a. Synergic Mode: Adjust the Amperage (4) according to your material thickness, refer to reference chart inside wire feeder door for a guide to plate thickness settings. For fine turning use the Voltage (3). This will show a value from -5 to 5, this is your trim value.

b. Manual Mode: Adjust Wire Feed Speed m/min (4) and Voltage (3) according to your material thickness and refer to reference chart inside wire feeder door.

This configuration provides **DC electrode negative (DCEN)**, which is required for gasless flux-cored wires.

IMPORTANT: With gasless welding, 'Drag' the torch so the wire is pointing back at the completed weld metal/joint, away from direction of travel. **Remember "if there's slag, you drag"!**

7.1.4 Gas Shielded MIG Welding

1. Connect the work return cable with clamp quick connector to the Negative (-) output socket (5.1.2). Push the cable connector into the outlet and twist clockwise until it is very firm, so you have a good electrical connection.

2. Connect the work return lead and clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint, or rusty mill scale at the contact point. **HANDY HINT:** be careful not to push the braided copper strip in the Clamp up against the metal as this will burn out the braided copper strip.

3. Connect the MIG Gun Polarity Cable (5.1.4) to the Positive (+) output socket (5.1.3).
Note: if this connection is not made, there will be no electrical connection to the welding Gun!

MIG Gun Polarity Cable, Positive (+)

MIG Gun Polarity Cable, Negative (-)

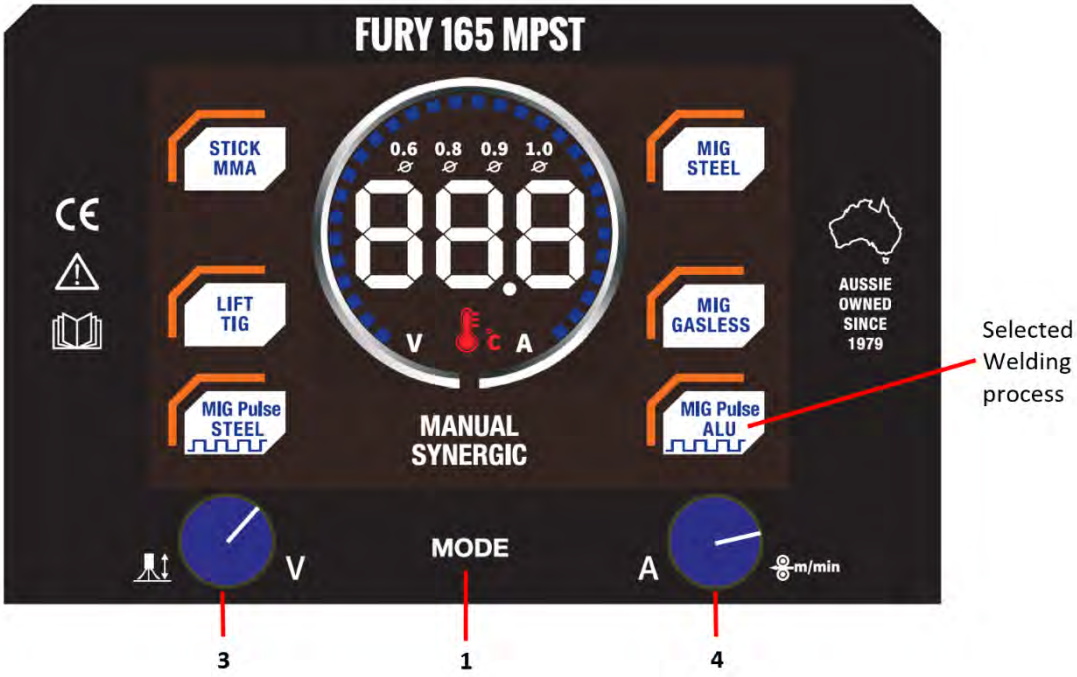
4. Connect the gas regulator to a suitable gas cylinder and connect the gas hose from the regulator to the gas inlet connection (5.3.3) on the rear of the machine. Ensure all hose connections are tight.
5. Open gas cylinder valve slowly and adjust regulator. Set gas flow between 10–20 L/min, depending on wire size, material, and wind/draft conditions.
6. Set process selector using the Mode button (6.1.1) to 'MIG Steel'
7. Press the Voltage Control (V) control button to switch between Synergic and Manual mode.
    a. Synergic Mode: You control the Amperage and the machine sets matching parameters automatically. Best for fast setup and consistent everyday welding.
    b. Manual Mode: You set the voltage and wire feed independently, with full control. Best for experienced welders giving you ultimate control.
8. You're now ready to weld!
    a. Synergic Mode: Adjust the Amperage (4) according to your material thickness, refer to reference chart inside wire feeder door for a guide to plate thickness settings. For fine turning use the Voltage (3). This will show a value from -5 to 5, this is your trim value.
    b. Manual Mode: Adjust Wire Feed Speed m/min (4) and Voltage (3) according to your material thickness and refer to reference chart inside wire feeder door.

This configuration provides **DC electrode positive (DCEP)**, which is required for most solid Carbon Steel and Stainless-Steel MIG wires.

HANDY HINT:

With gas-shielded MIG welding, 'Push' the torch so the wire is pointing away from the completed weld metal/joint and into the direction of travel. This provides the best gas shielding to the weld pool and allows better viewing of the weld joint ahead.

7.1.5 Pulse Aluminium MIG Welding (Synergic settings only)



1. Connect the work return cable with clamp quick connector to the Negative (-) output socket (5.1.2). Push the cable connector into the outlet and twist clockwise until it is very firm, so you have a good electrical connection.
2. Connect the work return lead and clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint, or scale at the contact point.
3. **Fit a Nylon-Aluminium liner to the MIG Gun** (this does not come in the kit, you will need to purchase this. See the Spares and Accessories section for more details, 10.1)
4. Connect the MIG Gun Polarity Cable (5.1.4) to the Positive (+) output socket (5.1.3).

   Note: if this connection is not made, there will be no electrical connection to the welding Gun!
5. Connect the gas regulator to a suitable gas cylinder and connect the gas hose from the regulator to the gas inlet connection (5.3.3) on the rear of the machine. Ensure all hose connections are tight.
6. Open gas cylinder valve and adjust regulator. Set gas flow between 10–20 L/min, depending on wire size, material, and wind/draft conditions.
7. Set process selector using the Mode button (1) to ‘MIG Pulse ALU’
8. Set the Wire Diameter using the Amperage dial (4)
9. You’re now ready to weld! Adjust the Amperage (4) according to your material thickness. For fine turning use the Voltage (3). This will show a value from -5 to 5, this is your trim value.

This configuration provides **DC electrode positive (DCEP)**, which is required for most solid Aluminium MIG wires, with Grades 5356, 5183, 4043 and 4047 being the most popular.

Single Pulse MIG –using the Jump Technique where you push & jump the welding arc to the front of the weld pool to obtain each ripple, for the whole length of the weld joint.

For the best results when welding Aluminium with this machine; use 1.0mm AL5356 Wire and **Pure Welding Grade Argon** with the MIG Gun set to Electrode Positive.
Use the U-Groove Feed Roller so the alloy wire does not get deformed plus a Carbon-Nylon Liner so the soft Alloy wire doesn't get marked/abraded by a steel liner.
Also use oversize contact tips to allow for the Aluminium wire expansion when the wire is powered-up. Specially made Aluminium Contact Tips are available and are normally marked as the correct wire size with "A" at the end. This indicates that the tip is actually oversized. i.e. 1.0A

HANDY HINTS:

A) With Pulse MIG welding Aluminium, 'Push' the torch so the wire is pointing away from the completed weld metal/joint and into the direction of travel. Torch angle between 10-15^{o}.

B) Remove the Black Oxide Smoke/Fume deposit, called Smut, straight after welding, so it doesn't bake on and ruin the welded job appearance. Once you have welded the Aluminium joint, use a clean white cotton rage (not nylon, it will melt) and wipe off the black Smut straight away, being careful to still use welding gloves whilst using the cotton rag.

C) **Use oversize contact tips** when welding Aluminium, as Aluminium expands quickly and can get stuck in standard steel contact tips. The rule is to use tip Sizes 10-20% larger than the wire. E.g. if your welding wire size is 0.9mm, then use 1.0mm Contact Tips, if you are using 1.0mm wire use 1.1mm or 1.2mm contact tips.

D) Using a **Spool Gun** to weld Aluminium is easier to use, delivering smoother consistent welds. A standard MIG Gun is 3m long, the feed area on a Spool Gun is ~300mm in length – so reducing wire feedability problems, especially birds-nesting (tangles) and burn back to the contact tip.

The Weldclass Spool Gun is an optional accessory product.

Ask your local Welding Supply Distributor to order Product Code: W06316, which is a complete Spool Gun - BZL25 x 5m Euro Connection with 4-Pin Plug.

You can use the Spool Gun with the Pulse MIG welding modes.

7.1.6 Pulse Steel MIG Welding (Synergic settings only)

1. Connect the work return cable with clamp quick connector to the Negative (-) output socket (5.1.2). Push the cable connector into the outlet and twist clockwise until it is very firm, so you have a good electrical connection.
2. Connect the work return lead and clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint, or scale at the contact point.
3. Connect the MIG Gun Polarity Cable (5.1.4) to the Positive (+) output socket (5.1.3).

   Note: if this connection is not made, there will be no electrical connection to the welding Gun!

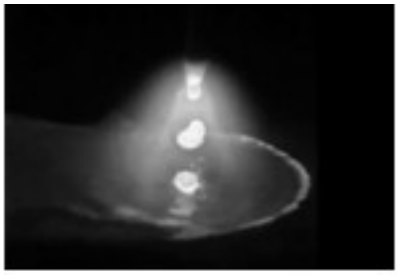
4. Connect the gas regulator to a suitable gas cylinder and connect the gas hose from the regulator to the gas inlet connection (5.3.3) on the rear of the machine. Ensure all hose connections are tight.
5. Open gas cylinder valve and adjust regulator. Set gas flow between 10–20 L/min, depending on wire size, material, and wind/draft conditions.
6. Set process selector using the Mode button (1) to 'MIG Pulse Steel" You can use Mild Steel or Stainless Steels wires on this setting.
7. Set the Wire Diameter using the Amperage dial (4)
8. You're now ready to weld! Adjust the Amperage (4) according to your material thickness. For fine turning use the Voltage (3). This will show a value from -5 to 5, this is your trim value.

   This configuration provides **DC electrode positive (DCEP)**, which is required for most solid Carbon Steel and Stainless-Steel MIG wires.

   HANDY HINT: With Pulse MIG welding Steel, 'Push' the torch so the wire is pointing away from the completed weld metal/joint and into the direction of travel. Torch angle between 5-15°.

Steel RHS welded with Single Pulse MIG, the person who completed this weld was a Left-hander, so they pushed from Left to right!

Fillet weld on steel (sectioned and etched with acid) completed using Argon+10% CO2 Shielding Gas



Pulsed spray metal transfer, is a highly controlled variant of axial spray transfer, in which the welding current is cycled between high peak current levels to a low background current levels

7.2 STICK (MMA) Welding

1. Connect the work return cable with clamp quick connector to the Negative (-) output socket (5.1.2). Push the cable connector into the outlet and twist clockwise until it is very firm, so you have a good electrical connection.
2. Connect the work return lead and clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint, or scale at the contact point.
3. Insert an electrode into the electrode holder and connect the electrode holder and work lead to the Positive (+) output socket (5.1.3).

NOTE: *This polarity connection configuration is valid for most GP (General Purpose) MMA electrodes. There are variances to this. If in doubt, check the electrode specifications or consult the electrode manufacturer.*

---

4. Connect the machine to suitable power. Switch the mains power switch (5.3.2) to 'on' to power up the machine.

5. Set process selector using the Mode button (6.1.1) to ‘STICK MMA’.
6. You are now ready to weld!
7. Select the required output current using the Amperage control (6.1.4). The LED display (5.1.6) will display the set amperage output.

   To select **Pulse Stick MMA**, press the Amperage control until the orange indicator flashes. To turn it off, press the Amperage control and wind down the Pulses Per Sec to “0” zero, so the orange indicator stops flashing.

Correct Run placement when STICK welding is important to avoid slag entrapment.

7.3 TIG Welding (TIG DC-, is not suitable for Aluminium)

NOTE: TIG operation requires an optional TIG torch and Gas Cylinder (Welding Grade Argon).

NOTE: This machine is a DC (Direct Current) output welder only, this means that it is unable to TIG weld ‘reactive metals’ such as Aluminium alloys and Brass (which require AC output). DC TIG output is suitable for steel, stainless steel, titanium and copper.

1. Connect the work return cable with clamp quick connector to the Positive (+) output socket (5.1.3). Push the cable connector into the outlet and twist clockwise until it is very firm, so you have a good electrical connection.
2. Connect the work return lead and clamp to the work piece. Contact with the work piece must be firm contact with clean, bare metal, with no corrosion, paint or scale at the contact point.
3. Insert TIG torch power connection into the Negative (-) output socket (5.1.2).
4. Connect TIG torch gas line directly to the gas regulator, and ensure all connections are tight.
5. Open gas cylinder valve slowly and adjust regulator. Flow should be between 5-15 L/min depending on the application.

6. Connect the machine to suitable power. Switch the mains power switch (5.3.1) to 'I' to power up the machine.
7. Set process selector using the Mode button (1) to 'LIFT TIG'.
8. You are now ready to weld!
9. Select the required output current using the Amperage control (4). The LED display (6) will display the set amperage output.
10. To select Pulse Lift TIG, press the Amperage control until the orange indicator flashes. To turn it off, press the Amperage control and wind down the Pulses Per Sec to "0" zero, so the orange indicator stops flashing.

Why TIG Weld and its Benefits

Visually the best looking welds

Can weld any commercial metal

Cleanest weld metal possible

Excellent mechanical properties

Excellent puddle control

Very small weld bead

Virtually no clean up

The disadvantages of TIG Welding

Slow travel speed, that requires a lot of concentration (good eye-hand coordination)

Not just anybody can TIG Weld, it takes a lot of training, skill and patience.

Low deposition rates (means other welding processes are much quicker at depositing metal)

Slower welding times means, higher labor cost

TIG Welding Stainless Steel, is an art. Welds should be Silver, Gold or Silver-Blue in colour. Black welds do not have enough Argon shielding gas.

7.4 Troubleshooting

Code	Issue	Fix
E1	**Overcurrent (output current too high)**	- Stop welding/cutting and release the trigger. - Check for short circuits between electrode/torch and workpiece - Inspect work clamp and cables for damage or loose connections. - Reset the machine. If the fault returns, have the unit inspected by a qualified service technician.
E2	**Overtemperature (unit too hot)**	- Stop welding/cutting immediately. - Keep the machine switched on to allow the fan to cool it (if fan-cooled). - Ensure air vents are not blocked and there is adequate clearance around the unit. - Check that the duty cycle has not been exceeded – reduce welding time or current if necessary. - Allow the unit to cool fully before using again. - If the fault persists, contact an authorised service centre.
E3	**Overcurrent and overtemperature**	- Perform all checks listed for E1 (overcurrent) and E2 (overtemperature). - After cooling and correcting settings/load, reset the machine. - If the code appears again under normal use, remove the unit from service and have it checked by a qualified technician.

Troubleshooting, continued...

E4	**Input supply undervoltage (mains voltage too low)**	- Stop welding/cutting. - Check that the mains supply matches the voltage rating on the nameplate. - Avoid using undersized or excessively long extension leads. - If using a generator, verify it is correctly rated and providing stable voltage. - Check supply connections for looseness or damage (by a licensed electrician where required). - Once the supply is within range, reset the machine. If the code remains, contact service.
E6	**Overtemperature and undervoltage**	- Stop welding/cutting immediately. - Allow the unit to cool fully and ensure vents are clear (as per E2). - Check and correct the input supply conditions (as per E4). - Reduce welding/cutting load (current and duty cycle) after restarting. - If the fault continues under correct supply and normal duty cycle, have the unit inspected by a qualified technician.

Note: For troubleshooting MIG, Stick and TIG processes visit the relevant section in our How to Weld guide: weldclass.com.au/howtoweld

8 POWER SUPPLY

8.1 Electrical Connection

This machine is designed to operate on a **10A** 230V-240V AC Domestic power supply.

NOTE *Avoid damaging your machine or creating hazards such as tripping or fire by using the correct input current, cable, and plug. Never modify plugs or earth pins — doing so will void your warranty.*

8.2 Extension Leads

If an extension cord must be used, it should be minimum cable core size 2.0mm^2 for length of up to 10m, or minimum 2.5mm^2 for lengths over 30m.

8.3 Generator Use

This machine can be used with a suitable generator. Generator size should be not less than the rating plate specifications (3. Machine Specifications). Avoid using poor, low-quality generators as these have the greatest risk of power spikes etc. A suitable quality generator should have a THD (total harmonic distortion) rating of NOT more than 6%. Most reputable generator suppliers will be able to specify the THD ratings on their product.
Any damage caused by poor quality generator power or incorrect use is not covered under warranty.

Model	Fury 165 MPST	Fury 185 MPST	Fury 205 MPST
Generator Rating - Minimum	8kVa	9kVa	10kVa

IMPORTANT 'GOLDEN RULES' FOR GENERATOR USE:
Following these rules will significantly reduce the risk of damage caused by generator power supply. Damage caused by poor-quality or incorrect generator use is not covered under warranty.

1. Do NOT plug welder into generator until AFTER generator has started and is running smoothly.
2. UNPLUG welder from generator BEFORE shutting generator down/turning generator off.
3. NEVER let your generator run out of fuel whilst the welder is plugged in.

Following these Golden Rules will significantly reduce the risk of any damage resulting from generator power supply.

9 OPERATING ENVIRONMENT

9.1 Location

The machine has electrical components and control circuit boards which may be damaged by excessive moisture, dust and dirt, so a clean and dry operating environment is essential for reliable product life.

9.2 Ventilation

Adequate ventilation is required to provide proper cooling for the machine. Ensure that the machine is placed on a stable level surface where clean cool air can easily flow through the unit.

10 ACCESSORIES & SPARE PARTS

10.1 Spares & Accessories:

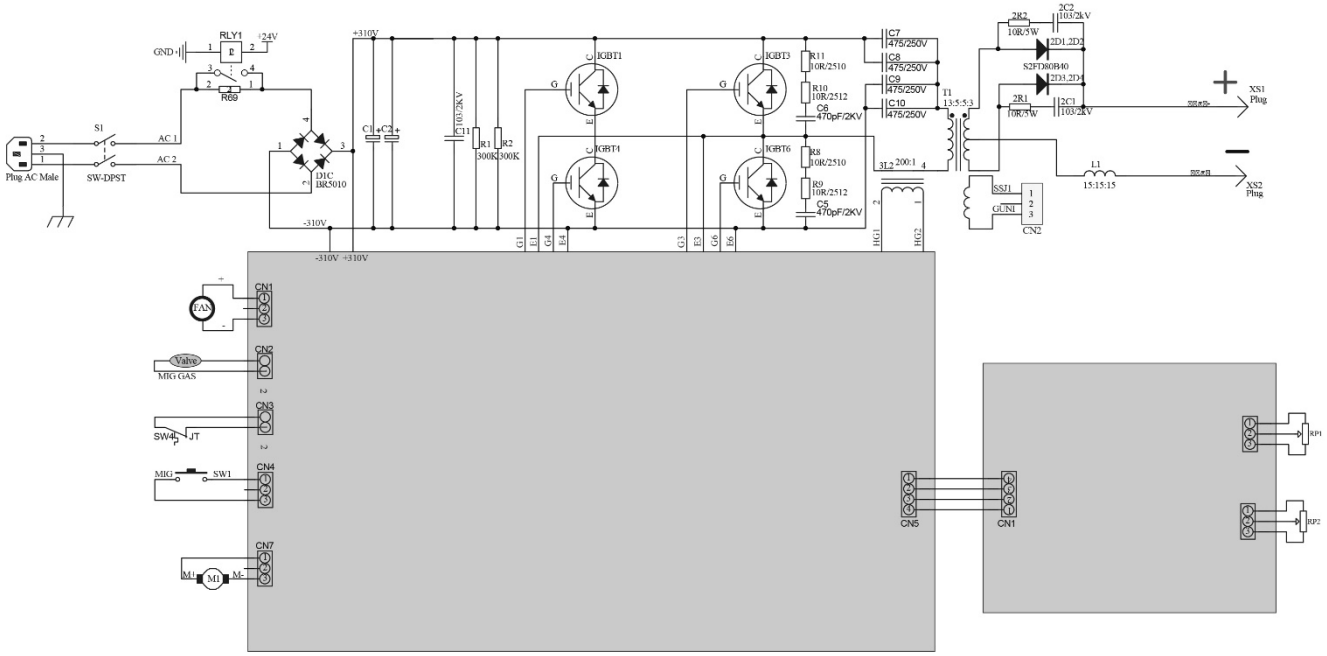
Refer to following table for information on spares and accessories available for this machine:

Part / Accessory	Code / Details	Refer To
MIG Gun Spares	BZL 15 Series (165) BZL 24 Series (185 & 205)	Weldclass.com.au/BZL15 Weldclass.com.au/BZL24
TIG Torch	WC-00992	Weldclass.com.au/Tig17v
Drive Rollers		Weldclass.com.au/3022roller
Gas Regulator	W06768	Weldclass.com.au/regulators
Gas Hose	WC-03338	Weldclass.com.au/03338
Trolley T100	WC-06235	Weldclass.com.au/t100
Internal Parts		Weldclass.com.au/MachineParts
Carbon Teflon Liner	P3-CTUL09	
MIG Pliers	P6-MPLY	
Aluminium Welding Starter Kit	W06786	**Contains:** Roll of 1.0mm Aluminium 5356 Wire, MIG Gun Aluminium liner kit, U-Drive Feed roller for Aluminium Wire, Stainless Steel Wire brush.

Suitable Feed Rollers for the FURY Machines are the wedding band type D30mm x ID22mm x W10mm

Front End parts kits are available from your local Authorised Weldclass Distributor that will suit you MIG Gun supplied with this welding machine.

10.2 Primary Circuit Diagram



11 CARE & MAINTENANCE

11.1 Keep your Welding Machine in Top Condition

The user should take care of the machine as follows:

1. Regularly clean the ventilation slots
2. Keep the casing clean.
3. Check all cables before use.
4. Check electrode holders, work lead/clamps and welding torches before use.
5. Replace worn electrode holders and work clamps, which do not provide a good connection.

6. Replace worn torch consumable parts in a timely manner
7. Replace worn wire drive components in a timely manner
8. Use a soft cloth or brush to clean electrical components. Do not use liquid cleaning products, water or especially solvents
9. Do not use high-pressure compressed air to clean electrical components, as this can force dirt and dust further into the components and may cause electrical short circuits.
10. Check for damaged parts

WARNING! *Before performing cleaning/maintenance, replacing cables/connections, make sure the welding machine is switched off and disconnected from the power supply.*

If damaged, before further use, the welder must be carefully checked by a qualified person to determine that it will operate properly. Check for breakage of parts, mountings and other conditions that may affect its operation.

Have your welder repaired by an expert. An authorised service center should properly repair a damaged part.

This appliance is manufactured in accordance with relevant safety standards. Only qualified people should carry out repairing of electrical appliances, otherwise considerable danger for the user may result.
Use only genuine replacement parts. Do not use modified or non-genuine parts.

11.2 Storing the Welder

When not in use the welder should be stored in a dry, dust-free and frost-free environment.

12 WARRANTY

12.1 Warranty period

Without product registration: **3 years**
With online product registration within 30 days of purchase: **conditional 7-year warranty** (see full warranty terms for conditions and exclusions).

12.2 Warranty Terms and Conditions

Refer to https://www.weldclass.com.au/WarrantyTermsAndConditions for warranty terms and conditions.

Weldclass®

7 YEAR WARRANTY OFFER*

AUSTRALIAN SINCE 1979*

SIMPLE PULSE WELDING TECHNOLOGY

For more information, visit us at **www.weldclass.com.au**