

# Congratulations on your new DURALLOY® product!

The DURALLOY range uses latest technology design and engineering to produce welding products that combine market leading value and features with durability. Designed for discerning operators who seek professional results and product quality without the price tag of a full professional setup. Design emphasis is placed on simple, functional design and operation. DURALLOY product is subject to stringent quality control and designed and manufactured to EN60974-1.2012 standards.

Common use of DURALLOY products include:

- Light Engineering
- Automotive
- Home / Hobby Engineering
- Farming
- Industrial Maintenance & Repairs

For industrial welding solutions, check out the DURALLOY at www.duralloy.net.au

DURALLOY is a market leading provider of innovative power equipment solutions to a wide range of industries across Australia. Key product categories are; welding equipment, power generators and cleaning equipment.

# **DURALLOY® ARC 161/201 PFC**OWNER'S MANUAL

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# **DURALLOY**° ARC 161/201 PFC

**OWNER'S MANUAL** 

# ARC 161/201 PFC

240V DC Inverter MMA Welding Machine

PART NO: DA161MMA / DA201MMA





EN60974-1.2012



Most DURALLOY® Welding Machines feature PFC Technology for maximum electrical efficiency and consistent weld output.

### **DIGITAL DISPLAY**

Variable amperage control with digital meter.

#### **TIG MODE**

Capable of welding with Lift TIG mode using optional TIG Torch kit.

#### **EXTRA FUNCTIONS**

Hot Start, Anti-sticking and Arc Force built-in.

# **PROTECTIONS**

Equipped with temperature, voltage and current sensors for greater protection.

#### **GENERATOR FRIENDLY**

Designed to work from power generators (8.5Kva).

# **FEATURES**

- Switchable Voltage Reduction Device (VRD)
- High Duty Cycles 90 & 110 Amps @ 100%
- IP23 Rating
- Industrial cable Connectors (35-50)
- Generator Friendly (8.5kva)
- Protective Front Fascia Cover
- Wide Input Voltage- 160AC-275 AC
- Heavy Duty MMA Lead Set
- Carry Case
- Extension lead friendly up to 100m
- Weight 6.1kg



SPECIFICATIONS					
Power Supply	160VAC - 275VAC				
Supply Plug	15 Amps				
Frequency	50/60Hz				
	ARC 16	61 PFC	ARC 201 PFC		
Input Power KW	1-220/230/240kW ± 10%		1-220/230/240kW ± 10%		
	3.6kW	5.3kW	4.9kW	6.9kW	
Input Current	16.5A	24A	22A	31A	
Duty Cycle 40°C 10min	TIG 160A 30% 120A 60% 90A 100%	MMA 160A 30% 120A 60% 90A 100%	TIG 200A 30% 145A 60% 110A 100%	MMA 160A 30% 145A 60% 110A 100%	
No Load Voltage	66V				
Welding Current	10 - 160A		10 - 200A		
Efficiency	≥ 80%		≥ 80%		
Net Weight	6.1kg				
Dimensions	360mm x 146mm x 278mm				
Protection Class	IP23				
Insulation Class	Н				
Cooling	Auto Fan				
Electrode Diameter	Ø1.6 - Ø3.2				
Electrode Type	6013, 7018, etc.				
Power Factor	0.99				

#### **APPLICATIONS**

- Rural Applications
- General Fabrication
- Stainless Fabrication
- On-site Fabrication

#### **MATERIALS**

- Mild Steel
- Stainless Steel

# **PACKAGE INCLUDES**

- Power Source
- Heavy duty Carry Case
- 3M Earth Lead
- 3M MMA Lead
- Owner's Manual

# **DURALLOY® ARC 161/201 PFC**

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# KNOW YOUR MACHINE

- \* More detailed explanations of function on following pages.
- 1. Power Indicator. Lights when input power connected and machine switched on
- 2. Error/ Overload Indicator\*
- 3. Welding current control knob
- 4. Positive (+) welding power output connection socket
- 5. Negative (-) welding power output connection socket
- 6. Welding output mode button. Sets Power Source in MMA, MMA with VRD & Lift TIG Mode
- 7. Lift TIG mode indicator\*
- 8. MMA mode indicator
- 9. Digital current display meter
- 10. VRD mode when light is illuminated the VRD is active



# **FURTHER CONTROLS EXPLAINED**

# Overload/ Error Indicator

Lights when over voltage, over current or electrical overheating (due to exceeding duty cycle) is detected and protection is activated.

When protection is activated, welding output will be disabled until the safety system senses the overload has reduced sufficiently and indicator lamp goes out. May also trigger if machine experiences an internal power circuit failure.

# Lift TIG Mode

Lift TIG is an arc ignition system for basic TIG welding that removes the need to 'scratch' start or strike the tungsten on the work piece to start the arc, which can have a negative effect on the weld quality due to tungsten contamination. Lift arc starting works by gently touching the tungsten on the work piece and then lifting it off. The control circuit will sense when the tungsten is removed from the work piece and send a pulse of electricity through the torch that will cause the TIG arc to initiate.

# **VRD** Function

VRD stands for Voltage Reduction Device. This is a safety system that reduces the output voltage from the welding terminals in MMA mode while the welding output is not in use, to reduce the risk of electric shock from the live output voltage. The disadvantage of this system is that it makes the striking of the arc more difficult, especially on restarts and with some types of electrode such as low hydrogen electrodes.

# **TIPS & TRICKS**

# **Duty Cycle Rating**

Welding duty cycle is the percentage of actual welding time that can occur in a ten minute cycle. E.g. 20% at 160 amps - this means the welder can weld at 160 amps for 2 minutes and then the unit will need to be rested for 8 minutes.

All duty cycle ratings are based on an ambient air temperature of 40°C with 50% humidity, which is the international standard for such a rating. In an environment with temperatures exceeding 40°C, the duty cycle will be less than stated. In ambient temperature less than 40°C, duty cycle performance will be higher.

# DURALLOY® ARC 161/201 PFC OWNER'S MANUAL

# **QUICK START GUIDE - WELDER INSTALLATION**

#### **Electrical Connection**

- ARC 161 is designed to operate on a 10A 230V AC power supply
- ARC 201 is designed to operate on a 15A 230V AC power supply

The DURALLOY Multivoltage technology allows the machine to operate on a very wide range input voltages down as low as 90V. This means that limited capacity power supplies and long extension leads may be used without damaging the welder. However, as the supply voltage decreases, the maximum output current and duty cycle will also decrease. To utilise the full output capacity of the machine using an extension cord, it should be a heavy duty version with a minimum cable core size of 2.5mm².

#### **Operating Environment**

Adequate ventilation is required to provide proper cooling for the DURALLOY ARC 161/201. Ensure that the machine is placed on a stable level surface where clean cool air can easily flow through the unit. The DURALLOY ARC 161/201 has electrical components and control circuit boards which may be damaged by excessive dust and dirt, so a clean operating environment is important.

### **BASIC OPERATION**

# 1. ARC/ MMA Welding Operation

- 1.1 Connect the earth cable quick connector to the negative welding power output socket (5) Connect the earth 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.
- 1.2 Insert an electrode into the electrode holder and connect the electrode holder and work lead to the positive welding power output socket (4).

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.

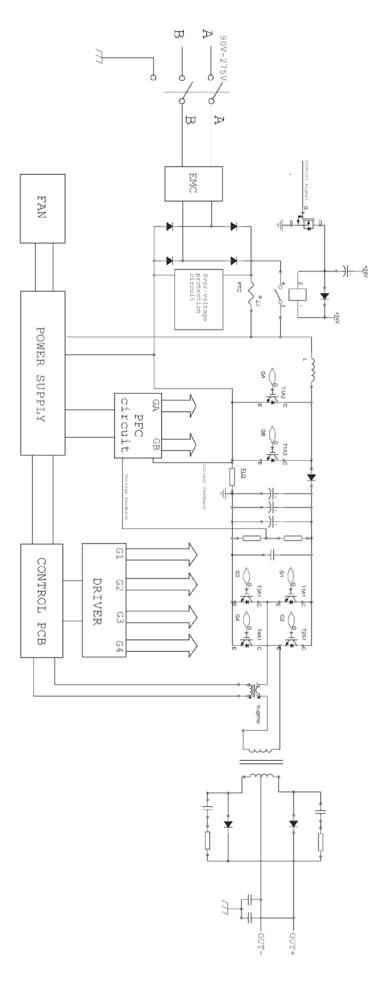
- 1.3 Connect the machine to suitable mains power using the mains input power lead. Switch the mains power switch to 'on' to power up the machine. Select MMA welding mode (7) using the button (8).
- 1.4 Select the required output current using the current control knob (3). You are now ready to weld!

# 2. Lift TIG Operation

Note: Lift TIG operation requires an optional valve control TIG torch, and argon gas cylinder.

- 2.1 Connect the earth cable quick connector to the positive welding power output socket (4). Connect the earth 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.
- 2.2 Insert TIG torch power connection into the negative welding power output socket (4). Connect valve TIG torch gas line to the regulator, ensuring all connections are tight.
- 2.3 Open gas cylinder valve and adjust regulator, flow should be between 5-10 l/min depending on application. Re-check regulator flow pressure with torch valve open as static gas flow setting may drop once gas is flowing.
- 2.4 Connect the machine to suitable mains power using the mains input power lead. Switch the mains power switch to 'on' to power up the machine. Select Lift TIG welding mode (6) using the button (8).
- 2.5 Select the required output current using the current control knob (3). You are now ready to weld!

# **WIRING DIAGRAM**



# **CARE & MAINTENANCE**

# Keep your welding machine in top condition

The DURALLOY ARC 161/201 PFC does not require any special maintenance, however the user should take care of the machine as follows:

- · Regularly clean the ventilation slots.
- Keep the casing clean.
- · Check all cables before use.
- Check electrode holders, work lead/clamps and welding torches before use.
- Replace worn electrode holders and earth clamps, which do not provide a good connection.
- · Replace worn consumable parts in a timely manner.
- Use a soft cloth or brush to clean electrical components.
- Do not use liquid cleaning products, water or especially solvents.
- Do not use compressed air to clean electrical components as this can force dirt and dust further into components, causing electrical short circuits.
- Check for damaged parts. Do not use the welderwith damaged parts.
- A damaged 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. An authorised service centre should properly repair a damaged part. Have your welder repaired by an expert.

This appliance is manufactured in accordance with relevant safety standards. Only experts must 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.

#### Storing the Welder

When not in use the welder should be stored in the dry and frostfree environment.

# $\Lambda$

#### WARNING!

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

# **ELECTRODES**

#### Size of Electrodes

The electrode size is determined by the thickness of metals being joined and can also be governed by the type of welding machine available. Small welding machines will only provide current (amperage) to run smaller sized electrodes.

For thin sections, it is necessary to use smaller electrodes otherwise the arc may burn holes through the job. A little practice will soon establish the most suitable electrode for a given application.

# Storage of Electrodes

Always store electrodes in a dry place and in their original containers.

# **Electrode Polarity**

Electrodes are generally connected to the electrode holder with the electrode holder connected positive polarity.

The work lead is connected to the negative polarity and is connected to the work piece. If in doubt consult the electrode data sheet.

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# EFFECTS OF MMA WELDING VARIOUS MATERIALS

# High Tensile and Alloy Steels

The two most prominent effects of welding these steels are the formation of a hardened zone in the weld area, and, if suitable precautions are not taken, the occurrence in this zone of underbead cracks. Hardened zone and underbead cracks in the weld area may be reduced by using the correct electrodes, preheating, using higher current settings, using larger electrodes sizes, short runs for larger electrode deposits or tempering in a furnace.

#### Manganese Steels

The effect on manganese steel of slow cooling from high temperatures causes embrittlement. For this reason it is absolutely essential to keep manganese steel cool during welding by quenching after each weld or skip welding to distribute the heat.

#### Cast Iron

Most types of cast iron, except white iron, are weldable. White iron, because of its extreme brittleness, generally cracks when attempts are made to weld it. Trouble may also be experienced when welding white-heart malleable, due to the porosity caused by gas held in this type of iron.

# Copper and Alloys

The most important factor is the high rate of heat conductivity of copper, making pre-heating of heavy sections necessary to give proper fusion of weld and base metal.

# Types of Electrodes

ARC Welding electrodes are classified into a number of groups depending on their applications. There are a great number of electrodes used for specialised industrial purposes which are not of particular interest for everyday general work. These include some low hydrogen types for high tensile steel, cellulose types for welding large diameter pipes, etc. The range of electrodes dealt with in this publication will cover the vast majority of applications likely to be encountered; are all easy to use.

# **SAFETY**

#### Store and Retain this Manual

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

#### Important Safety Information

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



This is the safety alert symbol to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol 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.

# **General Safety Warnings**

- Maintain labels and nameplates on the welder. These carry important information. If unreadable or missing, contact DURALLOY for a replacement.
- 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 energised**. Turn power off before leaving the welder unattended.
- Do not touch live electrical parts. Wear dry, insulating gloves.
   Do not touch the electrode or the conductor tong with bare hands. Do not wear wet or damaged gloves.
- 6. Protect yourself from electric shock. Do not use the welder outdoors. Insulate yourself from the work piece and the ground. Use non-flammable, dry insulating material if possible, or use dry rubber mats, dry wood or plywood, or other dry insulating material large enough to cover the area of contact with the work or the ground.
- 7. Avoid inhaling dust. Some dust created by power sanding, sawing, grinding, drilling, cutting, welding and other construction activities, 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, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.
- 8. People with pacemakers should consult their physician(s) before using this machine.



#### WARNING!

Electromagnetic fields in close proximity to a heart pacemaker could cause interference, or failure of the pacemaker. The use of a Welder is NOT RECOMMENDED for pacemaker wearers. Consult your doctor.

9. Ensure that the unit is placed on a stable 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 conductors from deenergized supply line 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.

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# 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 practices are outlined in the European Standard EN60974-1 entitled: Safety in welding and allied processes.



## 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!

Always wear AS/NZS compliant safety glasses and full face shield fitted with appropriate filter shade number. (Refer Filter Table in this safety section)



#### CAUTION

Heavy-duty work gloves, non-skid safety shoes 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.

#### 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, trash, and other debris. Do not use equipment in areas near flammable chemicals, dust, and vapours. Do not use this product in a damp or wet location.

- Stay alert, watch what you are doing and use common sense when operating equipment. Do not use a tool 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.

# Arc Rays can Burn Eyes and Skin



#### DANGER!

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

- 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 later in this section)
- 2. Wear approved 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 and leather) and foot safety protection.
- 5. Never wear contact lenses while welding.

# 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.

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# Work Environment Safety



#### **CAUTION**

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

- 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.
- 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.
- 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 flame 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, vapours, liquids, and dust. Provide adequate ventilation in work areas to prevent accumulation of flammable gases, vapours, 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 vapours. Clean and purge containers before applying heat. Vent closed containers, including castings, before preheating, welding, or cutting.

# **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 semi-automatic or automatic 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.
- Do not use worn, damaged, undersized, or poorly spliced cables.
- 9. Do not wrap cables around your body.
- 10. Connect work piece 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 reducer.

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 Protective Filters for Electric Weldin	g
Description of Process	Approximate Range of Welding Current in Amps	Minimum Shade Number of Filter(s)
Manual Metal Arc Welding - Covered Electrodes (MMA)	Less than or equal to 100	8
	100 to 200	10
	200 to 300	11
	300 to 400	12
	Greater than 400	13
Gas Metal Arc Welding (GWAW) (MIG) other than Aluminium And Stainless Steel	Less than or equal to 150	10
	150 to 250	11
	250 to 300	12
	300 to 400	13
	Greater than 400	14
Gas Metal Arc Welding(GWAW) (MIG) Aluminium and Stainless Steel	Less than or equal to 250	12
	250 to 350	13
	Less than or equal to 100	10
	100 to 200	11
Gas Tungsten Arc Welding (GTAW) (TIG)	200 to 250	12
	250 to 350	13
	Greater than 350	14
	Less than or equal to 300	11
Flux-Cored Arc Welding (FCAW) - with or without Shielding Gas	300 to 400	12
	400 to 500	13
	Greater than 500	14
Air - Arc Gouging	Less than or equal to 400	12
Plasma - Arc Cutting	50 to 100	10
	100 to 400	12
	400 to 800	14
Plasma - Arc Spraying	1-2	15
	Less than or equal to 20	8
Diagram Ara Waldian	20 to 100	10
Plasma - Arc Welding	100 to 400	12
	400 to 800	14
Submerged - Arc Welding	_	2 (5)
Resistance Welding	_	Safety Spectacles or Eye Shield

Refer to standard AS/NZS 1338.1 for comprehensive information regarding the above table.

# **Fumes And Gases**



# WARNING!

Welding produces fumes and gases. Breathing these fumes and gases can be hazardous to your health.

- 1. Keep your head out of the fumes. Do not breathe the fumes.
- 2. If inside, ventilate the area and/or use an exhaust at the arc to remove welding fumes and gases.
- 3. If ventilation is poor, use an approved air-supplied respirator.
- Read the Safety Data Sheets (SDS) and the manufacturer's instruction for the metals, consumables, coatings, and cleaners.

- Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Shielding ga es used for welding can displace air causing injury or death. Be sure the breathing air is safe.
- 6. Do not weld 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.
- 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, and if necessary, while wearing an air- supplied respirator. The coatings and any metals containing these elements can give of toxic fumes if welded.

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### 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.
- Do not weld where flying sparks can strike flammable material.
- 3. Remove all flammables within 10m of the welding site.
- 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.
- 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 travelling 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.

# Sparks & Hot Metal



#### WARNING!

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

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

#### Cylinders



#### WARNING!

Gas cylinders contain gas under high pressure. If damaged, a cylinder can explode. Since gas cylinders are normally part of the welding

- 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.

# WARRANTY

# **Duralloy Welding Equipment / Plasma Cutting Range**

# 3 year Warranty\*

Duralloy Industrial Supply warrants the original retail purchaser that the Duralloy Welding and Cutting machines purchased will be free from defects in materials and workmanship for a period of 3 years\* from the date of purchase by the customer. If a defect in material or workmanship becomes evident during this period, Duralloy Industrial Supply will at its option;

- Repair the product (or pay for the repair of the product)
- Replace the product

In case of warranty claim the product should be returned to the original place of purchase, with proof of purchase.

Any handling and transport costs (or other expenses) incurred in claiming warranty are not covered by this warranty. The warranty schedule is:

Duralloy Power source only\* 3 years
 Duralloy Regulator 3 months
 MIG Torches 3 months
 TIG Torches 3 months
 Plasma Torches 3 months
 Ancillary Equipment 3 months

The Obligation of Duralloy Industrial Supply under this warranty is limited to the circumstance set out above and is subject to:

- The customer being able to provide proof of purchase of the relevant equipment.
- A defect in either material or workmanship.
- The customer returning the product to Duralloy Industrial supply or an authorized repair agent.
- The product not having been altered or tampered with.
- The product not having been used outside the normal operating parameters of this equipment.
- The product to be in good condition and not damaged which may cause a fault

All goods come with a guarantee that cannot be excluded under the Australian Consumer laws. You as a consumer are entitled to a replacement or a refund for a major failure . You are also entitled to have the goods repaired or replaced if the products fail to be of acceptable quality.

This Warranty Provided by:

Duralloy Industrial Supply  $\,$  ABN  $\,$  81 831 839 268  $\,$ 

2 Hollylea Road Leumeah NSW 2560

1300 369 456

